

KAZAKHSTAN REGIONAL DISCOURSE IN THE POST-SOVIET ERA



Quaisar Alam
Shefalika Narain



|||||

Shefalika Narain



***Kazakhstan Regional Discourse
in the Post-Soviet Era***

Quaisar Alam
Shefalika Narain

Dominant
Publishers & Distributors Pvt Ltd
New Delhi, INDIA



Knowledge is Our Business

KAZAKHSTAN REGIONAL DISCOURSE IN THE POST-SOVIET ERA

By Quaisar Alam, Shefalika Narain

This edition published by Dominant Publishers And Distributors (P) Ltd
4378/4-B, Murarilal Street, Ansari Road, Daryaganj,
New Delhi-110002.

ISBN: 978-93-84161-40-8

Edition: 2023 (Revised)

©Reserved.

This publication may not be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the publishers.

Dominant

Publishers & Distributors Pvt Ltd

Registered Office: 4378/4-B, Murari Lal Street, Ansari Road,
Daryaganj, New Delhi - 110002.
Ph. +91-11-23281685, 41043100, Fax: +91-11-23270680

Production Office: "Dominant House", G - 316, Sector - 63, Noida,
National Capital Region - 201301.
Ph. 0120-4270027, 4273334

e-mail: dominantbooks@gmail.com
info@dominantbooks.com

w w w . d o m i n a n t b o o k s . c o m

CONTENTS

Chapter 1. A Comprehensive Review of Kazakhstan Cultural History	1
— <i>Shefalika Narain</i>	
Chapter 2. Insightful Information on Kazakhstan's Distinct Economic Situation.....	9
— <i>Kshipra Jain</i>	
Chapter 3. Asian Autocracy and Western Pluralism: A Review	17
— <i>Puneet Tulsiyan</i>	
Chapter 4. Aral Region's Post-Soviet Transformation and Environment.....	24
— <i>Thiruchitrambalam</i>	
Chapter 5. A Comprehensive Review of Locating the Ara.....	34
— <i>Thiruchitrambalam</i>	
Chapter 6. A Century of Disasters Brought on by the Aral Sea and Central Asia's Modernization ...	44
— <i>Suresh Kawitkar</i>	
Chapter 7. Seeing Like a Bureaucrat: Issues with Employment and Living Standards	55
— <i>Rajesh Kumar Samala</i>	
Chapter 8. Exploring Problems with Jobs and Living Standards.....	62
— <i>Umesh Daivagna</i>	
Chapter 9. State Socialism, Ocean Fish, and Nostalgia in Aralsk.....	71
— <i>Swarna Kolaventi</i>	
Chapter 10. Continuity and Disintegration in Aral Fishing Settlements.....	80
— <i>Raj Kumar</i>	
Chapter 11. Flounder, Kokaral Dam, and Small Aral Sea: An Overview.....	89
— <i>Shashikant Patil</i>	
Chapter 12. Discussion on Zander and Social Change in Bögen	97
— <i>Somayya Madakam</i>	
Chapter 13. Comprehensive Review of Aral'sk Today: Fish, Money, Ekologiia.....	107
— <i>Rajesh Kumar Samala</i>	

CHAPTER 1

A COMPREHENSIVE REVIEW OF KAZAKHSTAN CULTURAL HISTORY

Shefalika Narain, Professor

Department of ISDI, ATLAS SkillTech University, Mumbai, Maharashtra, India

Email Id-shefalika.narain@atlasuniversity.edu.in

ABSTRACT:

Kazakhstan, a country with stunning scenery, a rich cultural history, and impressive economic growth, is located in the centre of Eurasia. Kazakhstan is the ninth-biggest country in terms of geographical area and the largest landlocked nation in the world, and its physical size is only matched by its variety and potential. This introduction provides as a starting point for exploring Kazakhstan's many dimensions, from its breathtaking natural beauty to its thriving economy and cultural tapestry. The landscape of Kazakhstan offers evidence of its size and variety. The nation provides a wide variety of natural attractions, from the expansive plains of the Kazakh Steppe to the breathtaking peaks of the Tian Shan Mountains. Its western boundary is graced by the Caspian Sea, the biggest inland body of water in the world, and the terrain is characterised by unending steppes, arid deserts, and lush woods. The cultural diversity of the country is also fascinating. Kazakhs, Russians, Uzbeks, and many more ethnic groups coexist side by side in Kazakhstan, which is home to a diverse population. Due to this variety, a thriving cultural scene has emerged where customs, dialects, and cuisines collide to produce a distinctive fusion of East and West. We shall go through Kazakhstan's history, culture, economics, and ambitions throughout this investigation. It will go into detail on the country's attempts to diversify its economy, its place in the world, and the friendliness and hospitality of its people. Kazakhstan is a country with limitless potential and a tale of tenacity, change, and optimism in the centre of Eurasia.

KEYWORDS:

Breathtaking peaks, Caspian Sea, Complex Personality, Independence.

INTRODUCTION

Kazakhstan, which is tucked away at the nexus of Europe and Asia, beckons with a combination of deep history, many cultural traditions, and expansive landscapes that extend from the Caspian Sea to the Altai Mountains. Kazakhstan, the ninth-biggest country in terms of geographical area and the largest landlocked country in the world, provides a variety of experiences that combine timeless customs with cutting-edge goals and breathtaking natural beauty. This introduction provides as a starting point for exploring Kazakhstan's many facets, from its nomadic past to its changing place in the world. The size of Kazakhstan's territory is evidence of its variety. In the east, the stunning geography of the Altai Mountains and the dry deserts of the south replace the endless steppes of the Kazakh Steppe, where nomadic tribes previously roamed. The Caspian Sea, the biggest inland body of water in the world, defines a coastline in the west that is home to both natural gems and energy riches.

As a meeting place for several ethnic groups, including Kazakhs, Russians, Uzbeks, and many more, the nation's cultural legacy reflects this fact. A unique mix of Eastern and Western influences is created by the languages, customs, and cuisines that celebrate this variety. Kazakhstan's culture is a lively testament to its complex personality, from the melodic dombra strums to the colorful yurt tapestries. Kazakhstan has seen transition and aspiration throughout the modern age. In 1991, when it gained independence from the Soviet Union, the nation started on a path of economic diversification and growth. Its economic

expansion has been supported by a wealth of natural resource assets, including oil, gas, and mineral deposits, while tactical decisions have catapulted it into the category of rising economies. Nur-Sultan, previously known as Astana, serves as a representation of Kazakhstan's aspirations for the future. Nur-Sultan is a contemporary, purpose-built city that symbolises the nation's dedication to development, innovation, and global cooperation[1], [2].

This investigation will take us on a tour of Kazakhstan's fascinating history, diverse culture, vibrant economy, and ambitions for the world. It will go into detail about its initiatives to preserve its rich history, participate with the global community, and diversify its economy. In Kazakhstan, history and modernity coexist, and the country's enormous landscapes and limitless prospects are reflected in its contrasts and convergences. It is a place of adventure where the nomadic spirit still exists in a society that is advancing and innovating. The wise Nigerian author Chinua Achebe made remarks on his own nation that are readily applicable to Kazakhstan's present circumstances. Nigeria's problems stem directly from a lack of effective leadership. The Nigerian character is not fundamentally flawed. The land, the temperature, the water, the air, or anything else in Nigeria is perfect. The issue with Nigeria is that its leaders are unable or unable to accept the duty of setting a good example for others, which is a characteristic of effective leadership. Because Kazakhstan is a landlocked country that had severe environmental devastation before becoming independent, it was never as lucky as Nigeria in certain aspects. At least to someone who is not a serious student of Africa and tries to compare the atrocities of the Stalinist system with the shortcomings of British rule, Kazakhstan's colonial legacy is much more unequal than Nigeria's.

However, Kazakhstan had several advantages when it first became an independent nation, both natural and otherwise. By explaining how and why Kazakhstan's first president, Nursultan Nazarbayev, founded the country's family-based system of government and the potential effects of his actions, I want to provide readers a window into Kazakhstan. My objective is to demonstrate the causes of Kazakhstan's leadership failure. I demonstrate why the present system was not predetermined by outlining the political, economic, and social history of Kazakhstan over the first ten years of independence and giving an impression of how the populace of the nation has seen these events. This book is for individuals who want to understand more about Kazakhstan and the specifics of its state-building initiatives. It is also intended for those who are more broadly interested in the process by which the successor governments of the Union of Soviet Socialist Republics (USSR) moved from communism to independence. Kazakhstan doesn't have a strong democratic past, but if its leaders had the self-control, they might have created a pluralistic or quasi-pluralistic political system and a transparent market economy.

The ruling class of the nation at least toyed with the concept of a democratic transition during those early years and backed an extensive macroeconomic reform. However, these encouraging beginnings were eventually abandoned, and now the nation is clearly transitioning towards a family-run state. Furthermore, similar to Nigeria, the US and other Western countries are wary of pushing too hard for political and economic changes because of concern that doing so could limit their access to the nation's priceless natural resources. However, as I contend in this volume, Kazakhstan's recent policy decisions might destabilise local circumstances and make long-term access to the country's wealth all the more challenging. No one book can really capture the challenges of state formation in a nation the size, wealth in natural resources, and ethnically diverse as Kazakhstan. I have studied this former Soviet nation and its people for more than 25 years, and I draw on that research in this book. The history of Kazakhstan (The Kazakhs) and the geopolitics of the region, which were the subjects of Central Asia's New States, are not being repeated or condensed here.

Instead, I want to look more closely at Kazakhstan's recent ten years of progress and draw on my more recent experiences studying and travelling there. This book provides an introduction to the difficulties faced by Kazakhstani leaders when the state attained independence ten years ago, the reasons behind those leaders' reluctance to accept independence, how they attempted to cultivate a politically loyal populace, the political institutions they used to do this, how they attempted to manage the nation's economic resources in the process, and what significant social and political rifts emerged over the past ten years as a result of those political decisions. Finally, I consider what Kazakhstan may look like in the next ten years, especially what might transpire after President Nazarbayev leaves the political scene, as he must unavoidably do[3], [4].

DISCUSSION

The Caspian Sea has attracted the attention of the West due to its enormous oil and gas deposits, which appear even more significant in the wake of the attacks on the Pentagon and World Trade Centre on September 11, 2001. The world's reliance on oil supplies in the Persian Gulf seems to be more problematic as a result of these terrible events, making the new resources in the Caspian Sea and Russia even more appealing. The destiny of Kazakhstan, Turkmenistan, and Azerbaijan, which contain the majority of the Caspian deposits, had already piqued the attention of Western businesspeople and politicians. Although Kazakhstan produces around 80,000 barrels of oil per day and has the largest reserves of the three countries, its officials still believe that during the next twenty years, Kazakhstan will surpass Saudi Arabia in terms of oil production. The nation possesses at least 16.4 billion barrels of oil reserves and 70.52 trillion cubic feet of gas reserves. If Kazakhstan's offshore reserves live up to the most optimistic predictions, the latter number could rise by six times.³ Kazakhstan has been of interest to U.S. policymakers since its independence because it was the only non-Slavic post-Soviet state to inherit nuclear weapons. Additionally, a billions dollar American investment was expected to be made there. Independence meant that Chevron would no longer need the approval of Soviet authorities in Moscow, with whom the venture had initially been negotiated, in order to develop the enormous Tengiz oil field in western Kazakhstan. This was the first enterprise of its sort. This enormous country, which is two-thirds the size of the continental United States, has drawn growing attention from across the world throughout time. The Caspian basin deposits remain a potentially tremendous windfall for Western energy firms and, with Russia, might serve as an essential alternative to the Persian Gulf, even though predictions that Central Asia would become a second Persian Gulf may turn out to be much exaggerated. Although Caspian oil has been explored for over a century, Western specialists had little idea of the size of those deposits throughout the Soviet Union's existence and less hope of being able to actively contribute to their development.

Large Western oil firms now saw the acquisition of some of the Caspian deposits as essential, particularly in light of the fact that the governments of Kazakhstan, Turkmenistan, and Azerbaijan appeared more open to Western investment in their assets than did the government of Russia. As a result, Azerbaijan and the Central Asian republics evolved from being unwelcome entrants to the international stage to potential strategic assets, reversing the common thinking in Western policy circles about them. Due in part to what were seen as the "unstable forces" that may be released, the 1991 collapse of the USSR was considered as a danger to international security up until a few weeks before it actually occurred. The term "arc of crisis," which was frequently used in the late 1970s and 1980s to describe the region from the Indian subcontinent to the Horn of Africa, describes the area where the new states of Central Asia and the Caucasus are located. This region is said to divide the stable Western world from a non-Western Muslim world, and is precisely where Samuel Huntington later saw an impending "clash of civilizations." The USSR was a postimperial multinational state,

not just a continuation of the Russian empire. The repression of the USSR's numerous nationalities by Moscow was seen by the foreign world as part of a larger denial of fundamental political rights to Soviet people, and the democratisation of the USSR was seen as the solution to this problem. There was apprehension that the dissolution of the Soviet Union would generate new hazards and harmful precedents that would exceed the inequities of maintaining the Soviet system. However, once the Soviet Union disintegrated, the notion that Russia should try to reassemble it was rejected by the international community.

In reality, to avoid the dangers involved, many diplomats at first claimed that Russia had genuine geopolitical interests in the adjacent former colonies and could realise them provided it would behave "responsibly." Over time, however, it became more and more difficult to view Russia's activities benignly. Russia's brutal invasion of Chechnya in 1994 provided as a graphic example of what it was capable of when provoked. Although not behaving nearly as ruthlessly beyond its borders as it did within its boundaries, Russia still used heavy-handed pressure to induce reluctant states to join the Commonwealth of Independent States (CIS).⁶ While claiming neutrality, it unabashedly favoured the Abkhaz secessionists over the Georgian government and helped the Armenians in their war against Azerbaijan. In this context, many in the West saw Russia's efforts to impose its economic policies on Kazakhstan, particularly in the oil and gas industries, as going too far. It was said that the Caspian area was crucial to American security. This position was initially made clear by the then-U.S. The United States has a stake in their success, said Deputy Secretary of State Strobe Talbott in a speech he gave in July 1997 under the title *A Farewell to Flashman*. The other New Independent States of the former Soviet Union, including Russia and Ukraine, will be inspired to make comparable advancements if reform in the countries of the Caucasus and Central Asia continues and finally succeeds. It will help maintain peace in a strategically significant area that borders China, Turkey, Iran, and Afghanistan and has expanding linkages to Pakistan and India on the economic and social fronts. If internal and cross-border conflicts occurred in a region that has up to 200 billion barrels of oil, it would be quite important to the US. Conflict resolution must be the first priority of U.S. policy in the region for this reason as well: it is a requirement for both energy development and an accompaniment to it.

The U.S.'s commitment to Kazakhstan and Central Asia has grown over time, and Strobe Talbott's words now seem even more prescient in light of the fact that the country recently sent troops to Uzbekistan as part of an operation in Afghanistan. Nevertheless, despite the heightened strategic significance of the area and the growing global fascination with Kazakhstan's oil riches, the problems of state building in the country have not been made any easier. I contend that the exact reverse is true. The need for mineral reserves has put unprecedented temptations in front of Kazakhstan's authorities, just as it has done for leaders of so many other resource-rich governments, making Western arguments for good governance that much more difficult to sell. Only if continuing access to the Caspian oil can be guaranteed, which with inland resources necessitates that both the host nation and the transit nations all remain stable. As a result, maintaining good relations with the existing leaders of oil-rich governments while attempting to stop them from causing instability in their own society presents a continuing dilemma for U.S. policymakers^{[5], [6]}.

The former job was more crucial for the Clinton administration, and short- and medium-term concerns predominated. Pipeline politics the conflict over the paths this oil would go to the market became the main topic of discussion. As one of his most significant foreign policy achievements in 1999, President Bill Clinton cited the signing of a four-state agreement to build the Baku-Ceyhan pipeline as securing the independence of the Caspian states.⁸ Clinton's message was very different from that delivered in late 1991 and early 1992, when Secretary of State James Baker travelled the region in an effort to persuade the Central Asian

leaders to embrace the union of economic development. To illustrate this argument, it should be noted that when the USSR dissolved, just two embassies in Kazakhstan and Kyrgyzstan were authorised to be opened right away in the Central Asian area. However, official U.S. comments emphasised that both Kazakhstan and Kyrgyzstan were being rewarded for their commitment to democratic and market reform. It is true that the fact that Kazakhstan possessed nuclear weapons had a significant role in U.S. decision-making. The significance of the two-stage procedure through which the United republics established full diplomatic ties was not lost on the region's leaders, despite the fact that embassies were eventually erected in all the newly independent republics. These acts suggested certain requirements for substantial U.S. cooperation. Independence needed to be more than just a handover of authority from Moscow to Communist Party officials at the republican level, who by this point had risen to the position of national leaders. A percentage of the nation's riches had to be distributed to the people in exchange for power. All the authorities in the area felt uneasy when this message was repeatedly reinforced during the early years of independence. The United governments and other donor countries provided these governments with foreign aid that was specifically focused at initiatives meant to encourage structural economic reforms that provide the legal framework required for the rule of law and the preservation of private property. Because of their continued commitment to a dramatic social transformation, Kazakhstan and Kyrgyzstan got an excessive amount of this help. Because the Russians were seen to be the natural leaders in that region of the globe and were thought to be more thoroughly dedicated to the aims of economic and political reforms than these new neighbours, it was also anticipated that Russia would serve as a model for the governments of Central Asia. The degree of social, political, and economic rehabilitation required for any of the newly independent nations to make the transition to sustainable statehood was significantly underestimated by these early measures. It also undervalued Russia's remaining fantasies of empire, or at the very least neo-imperial dominance, as well as the mistrust the new republics had for the country.

The kind of nations that arise in the area are still being impacted by the following shift in U.S. and Western ideas, and not always in a positive way. In the near term, it increases the likelihood that these nations will endure since Russia has essentially been warned not to turn into the local bully. Russian dominance in this area may have always been overstated. Although it could create a security hole, a U.S. military presence in Uzbekistan, however limited, looks assured to lessen any potential military threats from Russia. The biggest causes of instability in the long term are the states themselves. Results of statebuilding are not determined only by geopolitics. Who will protect the region's leaders from their enraged masses and from those neighbours who want to be the patrons of disgruntled elements in the population if the income from the energy sector is not shared with the general population and if the region's leaders choose to use it primarily for their personal benefit? In the next years, the George W. Bush administration may be forced to make challenging decisions in Kazakhstan and other Caspian countries. If only we would heed to history, it wouldn't keep repeating itself, according to the cliché. The United governments' fruitless attempts to support those in power against the more extreme groups that oppose them caused harm to ties with oil-producing governments that took decades to repair. Had U.S. foreign policy in the 1960s and 1970s been more concerned with the long-term political viability of both regimes than with regime stability, the histories of both Iran and Iraq would have been quite different.

False moves with one state may have a significant influence on U.S. ties with a whole region and on the country's overall global strategy, as we have seen in the Middle East. Both the Cold War and the post-Cold War seem to be over. The day when terrorists used passenger aircraft as flying bombs to bring down two of the tallest buildings in the world marked the start of a new age of international vulnerability. It is difficult to think of a more potent illustration of the influence of today's radical forces or of the new business interests eager to finance them. Today's battleground is Afghanistan, and a protracted struggle there would

only raise the probability that radical Islamists seeking to overthrow secularist administrations will also target Central Asian governments. As I make clear in this book, corrupt governments foster the growth and popularity of radical movements, and some of the early indications are unsettling. The transition of power to a new post-Soviet generation will inevitably be difficult for Kazakhstan, which is still led by President Nursultan Nazarbayev, the Soviet era. At the same time, democratic institution building in Kazakhstan has all but stopped after an initial phase in which Kazakh leaders had accepted taking such steps as the price of good relations with the West in general and the United States in particular[7], [8].

The leaders of the region have become better over time at rejecting the underlying conditionality of early American policy in the area, and persistent American pressure has decreased, making these individuals less contrite about their actions. Given that the United States had to rely on the goodwill of President Islam Karimov of strong-man Uzbekistan to undertake a military excursion into Afghanistan, democracy is likely to be more difficult to sell to the region's leaders and the United States will be less loud in its attempts to establish it. All of Central Asia's leaders, including President Nazarbayev, assert that the Asian people are not particularly suited to democracy due to their tradition and temperament. This seems to be an unnecessary defence for the governing class to increase their hold on power. The fact that nearly none of these guys are naturally drawn to democracy is much more apparent; instead, they seem to prefer replacing the huge public facilities of the late Soviet period with bigger and larger presidential palaces, mosques, and museums. Independence has brought along a plethora of new temptations, and this is particularly true in a country like Kazakhstan that is resource-rich. Although the development of Kazakhstan's resources seems to be inevitable, the situation is complicated by corruption. Promised contracts have often fallen through, and companies who seemed to have secured contracts have sometimes been forced into default so that the Kazakh government might get fresh concessions[9], [10].

The rate of growth will be slower and more difficult than first anticipated due to the challenges of exporting oil and gas from the area, forcing the United States to periodically review its support for what may eventually become a less desirable regime. The fighting in Afghanistan during the winter of 2001–2002 only serves to underline the overall deterioration of the security situation in the area, which will undoubtedly provide Washington with an endless supply of policy issues. It is not necessary to draw conclusions about how American policymakers would react to a worsening political or economic situation in Kazakhstan from the decision the US made to build a military presence in Uzbekistan in late 2001. After all, the United States wasn't responding to the Uzbeks' request for assistance in maintaining their internal stability; rather, Uzbekistan was used as a tactical advantage by the United States to further its larger objectives. These states' ongoing task is to increase their own viability. Although the Bush administration looks poised to engage in Central Asia even more than the Clinton administration did during its second term, neither independence nor U.S. policies have significantly improved the lives of Central Asians to yet[11], [12].

Independence must represent more than just a transfer of authority from Moscow to the new national capitals if these nations are to remain secure in the long run. Additionally, a significant transfer of rights and duties to the populace itself must be included. Moscow mainly fell short of elite and popular expectations for the economic and political changes it had promised when the Soviet Union broke apart. The leaders of Kazakhstan have been entrusted with managing billions of dollars' worth of resources in addition to the same difficulties. People who are distributing the prizes must also cope with a populace that has experienced social and political trauma. While it is true that the leaders of Kazakhstan and the other recently independent states may deny responsibility for these traumas, Kazakhstan's leaders are quickly running out of the leeway that independence gave them as income disparities and citizen disenfranchisement grow. The majority of the other ethnicities in the

country feel little political empowerment, in contrast to the nation's Kazakhs who nevertheless feel a strong feeling of pride in their new national homeland. Dreams of a massive national treasure have not yet materialised, despite the fact that foreign investment is slowly rising and the economy may have already past its worst phase. The future is far from certain, but as I explicitly mention here, Kazakhstan's leaders wasted a lot of their chance to swiftly make up for past Soviet mistakes during the first ten years of independence[13], [14].

CONCLUSION

Kazakhstan emerges as a country of great potential and long traditions, a place where history and innovation intersect. The variety of options it provides is mirrored in the vastness of its landscapes, which range from the endless steppes to the spectacular mountains. The amicable cohabitation of many populations is reflected in the varied tapestry of cultures, languages, and cuisines. Kazakhstan is a country dedicated to development and sustainability as it makes its way further into the twenty-first century. Its crucial function as a bridge between East and West and its strategic placement along the Silk Road make it an important participant on the international scene. The nation's capital, Nur-Sultan, serves as an example of its hopes for the future by fusing modernism with tradition. The country's attempts to diversify its economy demonstrate its dedication to long-term development, and its cultural riches, like as the old nomadic customs, deepen its sense of identity. Finally, Kazakhstan welcomes the world to discover its rich cultural heritage and unending natural beauty. It is a country where the past and the present collide to create a vibrant and exciting present.

REFERENCES:

- [1] O. Vitchenko, "Introducing CLIL in Kazakhstan: Researching beliefs and perceptions of university stakeholders," *Electron. J. Foreign Lang. Teach.*, 2017.
- [2] T. Chanturidze, M. Esau, S. Hölzer, and E. Richardson, "Introducing Diagnosis-Related Groups in Kazakhstan: Evolution, achievements, and challenges," *Health Policy (New York)*, 2016, doi: 10.1016/j.healthpol.2016.07.007.
- [3] S. Mirseitova, "Introducing: Kazakhstan and Its People," *World Lit. Today*, 2005, doi: 10.2307/40158692.
- [4] A. Sharman, "A New Paradigm of Primary Health Care in Kazakhstan: Personalized, Community-based, Standardized, and Technology-driven," *Cent. Asian J. Glob. Heal.*, 2014, doi: 10.5195/cajgh.2014.186.
- [5] S. Sabitova, "Implication of voluntary carbon markets for introducing CSR in the forestry sector of Kazakhstan," *Manag. Environ. Qual. An Int. J.*, 2012, doi: 10.1108/14777831211262954.
- [6] N. K. Abishev, Y. Y. Bidaibekov, V. A. Dalinger, and O. V. Knyazyev, "Higher education in Russia and Kazakhstan in modern condition," *Rupkatha J. Interdiscip. Stud. Humanit.*, 2016, doi: 10.21659/rupkatha.v8n2.14.
- [7] A. A. Boltaev, A. P. Deryabina, A. Kusainov, and A. A. Howard, "Evaluation of a Pilot Medication-Assisted Therapy Program in Kazakhstan: Successes, Challenges, and Opportunities for Scaleup," *Adv. Prev. Med.*, 2012, doi: 10.1155/2012/308793.
- [8] G. Madiyev, U. Kerimova, A. Yespolov, A. Bekbossynova, and G. Rakhimzhanova, "Macroeconomic aspects of innovation-driven growth of agribusiness in the Republic of Kazakhstan," *J. Adv. Res. Law Econ.*, 2018, doi: 10.14505/jarle.v92(32).20.
- [9] A. Dulatbekov, "Kazakhstan experience of introducing performance budgeting: Case study on Ministry of education and science," *Life Sci. J.*, 2014.

- [10] G. Kokebayeva and G. Mussabalina, "Experience of Kazakhstan Universities in Implementation of Credit-Modular System of Education," *Procedia - Soc. Behav. Sci.*, 2015, doi: 10.1016/j.sbspro.2015.11.657.
- [11] V. Tsay, D. Kunanbayeva, S. Sataev, and M. Skiba, "Peculiarities of the organizational changes in higher educational institutions," *J. Adv. Res. Law Econ.*, 2018, doi: 10.14505/jarle.v9.1(31).38.
- [12] V. L. Astafyiev and V. A. Golikov, "DETERMINING THE RANGE OF COMBINE HARVESTERS AND HEADERS FOR KAZAKHSTAN REGIONS," *Agric. Mach. Technol.*, 2018, doi: 10.22314/2073-7599-2018-12-4-10-15.
- [13] L. Pivina *et al.*, "Assessment of awareness of Kazakhstan population about influence of radiation on the health status," *Eur. J. Public Health*, 2018, doi: 10.1093/eurpub/cky218.070.
- [14] S. C. Van Kampen *et al.*, "Effect of introducing xpert MTB/RIF to test and treat individuals at risk of multidrug-resistant tuberculosis in Kazakhstan: A prospective cohort study," *PLoS One*, 2015, doi: 10.1371/journal.pone.0132514.

CHAPTER 2

INSIGHTFUL INFORMATION ON KAZAKHSTAN'S DISTINCT ECONOMIC SITUATION

Kshipra Jain, Assistant Professor
Department of ISME, ATLAS SkillTech University, Mumbai, Maharashtra, India
Email Id- kshipra.jain@atlasuniversity.edu.in

ABSTRACT:

This research study explores the insightful information on Kazakhstan's distinct economic situation, which is characterized by a wealth of natural resources and the difficulties brought on by its large terrain, is provided in this abstract. The economic development of Kazakhstan, sometimes described as a country "blessed with resources but cursed by geography," is a remarkable tale of change, diversification, and relevance on a worldwide scale. This investigation dives into Kazakhstan's complicated economic environment, resource-driven development, difficulties it confronts, and its changing place in the world. The story of Kazakhstan's economy and its huge geography are intricately entwined. It struggles with geographic limitations that affect commerce, transportation, and economic connectedness as the biggest landlocked nation in the world. However, behind its rough topography lies a wealth of natural resources, including as oil, gas, minerals, and agricultural potential, which have fueled economic expansion and prosperity. this abstract gives readers a fundamental grasp of Kazakhstan's economic dynamics, which are influenced by the country's abundant natural resources and geographical limitations. It sets the scene for a thorough investigation of the country's attempts to make the most of its advantages and get over its geographical obstacles, demonstrating its potential as a prominent participant in the international economic scene. The economic development of Kazakhstan is an example of tenacity, flexibility, and the pursuit of long-term success despite particular topographical constraints.

KEYWORDS:

Encompasses,Hampered, Geography,Topographical.

INTRODUCTION

Large and mysterious Kazakhstan defies simple classification. Its geographical extent encompasses the whole of the Eurasian continent, including the grandeur of the Caspian Sea, towering mountain ranges, and wide steppes. It looks to be a country endowed with a wealth of natural resources at first sight. However, it is sometimes referred to as being "blessed with resources but cursed by geography," a contradiction that perfectly captures the complex economic structure of this exceptional nation. Kazakhstan's history is one of contrasts and complexity. It struggles with the problems presented by its huge terrain being the biggest landlocked country in the world and the ninth largest by geographical area. However, underlying its arid landscape lies a wealth of natural resources, including oil, gas, minerals, and productive farmland. With the help of these resources, Kazakhstan has become one of the world's growing economies and a major participant in the energy sector.

Kazakhstan's economic development has been characterized by its shift from a planned economy rooted in the Soviet period to a contemporary, diverse, and market-oriented one. This shift has not been without difficulties, but it is a testament to the country's flexibility and perseverance. The dynamics of resource extraction, export-oriented development, and the goal of economic diversification are at the heart of the complex economic systems at work. The driving force behind Kazakhstan's economic development is policy concerns. It takes a

lot of skill to strike a balance between the demands of resource management, environmental sustainability, and lowering reliance on commodity exports. This investigation will focus on the country's economic governance, policy considerations, and their wide-ranging effects. There are several practical obstacles, from managing environmental issues brought on by resource exploitation to promoting innovation and entrepreneurship. The involvement of Kazakhstan in regional and international organisations, such as the Eurasian Economic Union and the Belt and Road Initiative, further complicates the country's economic situation[1], [2].

In essence, this investigation prepares the ground for a thorough analysis of Kazakhstan's economic development. It gives us a clearer insight of how the country manages the complex interactions between abundant resource richness and geographical limitations. The narrative of Kazakhstan is one of perseverance, flexibility, and the pursuit of lasting prosperity in the face of particular difficulties. This tale is still being told on the Eurasian stage. Kazakhstan presents a compelling tale that exceeds the confines of traditional economic paradigms because of its unique combination of resource abundance and topographical difficulties. Although its size presents logistical challenges, it also has the ability to produce a variety of agricultural products and contain ecological treasures. The abundance of its natural resources has supported its economic development, but the country struggles with the need to lessen its dependence on these products and promote a more diverse, innovation-driven economy.

Kazakhstan's transformation from a planned post-Soviet economy to a vibrant developing market is an example of its flexibility and resiliency. The economic forces at work, notably the energy export dynamics, have altered not just the nation's industry but also its position in the world. The involvement of Kazakhstan in regional and international projects demonstrates its dedication to global economic integration. The leaders of Kazakhstan have carefully considered the issues raised by the peculiar economic environment in their decision-making. It takes constant effort to strike the correct balance between resource management, environmental protection, and economic diversification. The interaction between these policies and their results sheds insight on the nation's complicated economic governance system. We will reveal the complexities of resource management, environmental sustainability, and Kazakhstan's pursuit of a thriving, knowledge-based economy as we dive further into the country's economic dynamics. Kazakhstan's experience serves as an intriguing case study in the field of international economics because it demonstrates the capacity for change, adaptation, and sustained progress[3], [4].

DISCUSSION

Kazakhstan is a country with tremendous potential natural riches due to its massive untapped fossil fuel reserves, sizeable gold deposits, and rich unmined veins of copper, chrome, and aluminium. Kazakhstan has enough developed farm and pastureland to meet the immediate needs of its population of close to 15 million, of which today slightly more than half are Kazakhs. Given its natural resources, one would think that Kazakhstan's future is ensured, especially since it also has a diverse industrially based economy (largely in ferrous and nonferrous metals). In fact, a Soviet geologist once boasted that Kazakhstan was capable of exporting the entire periodic table of elements. Despite all of this, Kazakhstan started its life as a fragile state, a nation of contradictions, and a state constrained by both its terrain and its history. While the existing legal system favours the claims of the former, Kazakhstan's three-thousand-mile border with Russia serves as a not-so-subtle reminder of the difficulties involved with these potentially contradictory claims. Both Kazakhs and Russians claim Kazakhstan as their homeland. Because Kazakhstan has a wealth of both natural and human resources, its economic potential is vast. Kazakhstan's economy and industrial facilities were completely integrated with those of Russia at the time of independence. The energy networks and supply lines historically went north-south rather than east-west, and companies on both sides of the border supplied one another as well. The interdependence of the economies of

Kazakhstan and Russia, and to a lesser degree those of Kyrgyzstan and Uzbekistan, was well known to President Nazarbayev. He and his initial set of advisors had little experience with the workings of a market economy, thus it was difficult for him to see how foreign investment and international technical aid might help to sever those linkages.

As I go into Nazarbayev gradually gained a deeper understanding of the economic potential of his nation as a result of a degree of foreign investor interest that well above his early projections. In the CIS, Kazakhstan has the greatest level of per-capita foreign investment. The Kazakh government estimates that in the first ten years of its existence, the nation received about \$13 billion in foreign direct investment (FDI).¹² However, this estimate is somewhat deceptive because it includes both capitals invested in planned projects and FDI that went directly into economic production. Half of these investments were in the oil and gas industry as of the year 2000. As Kazakhstan's new oil fields transition from an exploratory phase to an exploitation phase, the share of investment flowing into that industry is projected to grow. I also go through how Kazakhstan's foreign investment has lagged and been more hesitant than the government had planned outside the oil and gas industry. Investment in the oil and gas industry as a whole has lagged, in part due to the tumultuous state of ties with Russia. The oil and gas industry generated far less royalties, tax income, and employment than anticipated up until the sudden spike in the price of oil.

Kazakhstan has a challenging business environment that deters some prospective investors. Foreign investment is subject to a legal framework that is far from full. While compared to other nations in the area, foreign investor rights are already quite well established, they have not yet been put to the fullest test. Most foreign investments may be at danger due to the regular, although minor, changes in property rules, and most significant projects must negotiate legal exemptions and tax vacations in order to be profitable. The concessions made to investors cannot be guaranteed to last the duration of the projects in the absence of an impartial judicial system and commercial arbitration system. Foreigners haven't always received contracts and rights to resource development in a straightforward manner. Numerous large-scale natural resource extraction projects have been marred by controversy as Western businesses were compelled to back out of agreements, they believed to be solid or enter into pricey new discussions. It's also typical to hear about businesspeople abandoning smaller initiatives. Independent Kazakh business owners have also been hampered by similar issues, creating a strong glass ceiling that those without protection are unable to cross. In certain aspects, and perhaps most concerning, the president, his wife and family, their daughters, and their sons-in-law's influence is growing. In the majority of the important economic sectors, their holdings must now be taken into consideration. The fragile ethnic balance of the nation might potentially be upset by the concentration of economic power in a few hands.

At the time of independence, ethnic Kazakhs made up just approximately 40% of the nation's population, while ethnic Russians made up around 37%. After referring to his country as a bridge between Europe and Asia, President Nazarbayev attempted to use the demographics and geography of the nation as a national asset. The nation spans two continents, has a history entrenched in both civilizations, and has a population that is almost equally made up of European and Asian peoples. Unfortunately, a clever flip of phrase won't be enough to give Kazakhstan a global position. This assertion has shown to be nothing more than a public relations ploy meant to highlight Kazakhstan's demographic and geographic advantages and elevate the status of the man who runs the country. With over a hundred different nationalities represented in the republic, Kazakhstan may claim to be the most multicultural of the former Soviet Union's successor states, but in actuality, over the past ten years, one national group the Kazakhs have gained political power at the expense of all others. Independence is seen by Kazakh nationalists and the general Kazakh populace as the restoration of Kazakh sovereignty.

The Kazakhs were a pastoral, nomadic race descended from the Turko-Mongols who started to unite in the fifteenth century by dividing into three divisions, or zhuzes, sometimes known as hordes. The territory of the Small Horde, Middle Horde, and Great Horde were located in what is now western Kazakhstan, north-central Kazakhstan, and the southern and southeastern regions of Kazakhstan, respectively. Given the nomadic livestock breeding economy, territorial dominance was a relative idea for the Kazakhs, even if each Kazakh aul (the migratory unit) had set routes and pastureland throughout their yearly migratory cycle. From the first part of the sixteenth century until the latter quarter of the seventeenth century, the three hordes were only sporadically united. The khans (chieftains) who oversaw the Small and Middle Hordes sought protection from Russia's ruler when Kalmyk Mongol tribesmen began migrating west and began seizing control of Kazakh pasturelands, pledging allegiance to the Russian tsars in 1731 and 1740, respectively. However, the khans were unaware that this devotion would eventually result in the colonisation of their territory and the erasure of the distinction between their people and the Russians in terms of territorial claims. The Russians saw it as the beginning of broader authority, which was implemented by the violent invasion of the Kazakh territories in the late eighteenth and early nineteenth centuries. The Kazakhs interpreted it as an alliance of a weak king to a stronger one[5], [6].

Up until the Alma Ata Uprising of 1986, when Kazakh protesters were killed during demonstrations sparked by the replacement of longtime Kazakh party leader Dinmuhammad Kunayev by a Russian from outside the republic, many Kazakhs maintain that their ancestors continued to suffer at the hands of the Russians from that point on. This occasion led to December 16 being designated as Kazakhstan's Independence Day. Nationalists in Kazakhstan even went so far as to claim that Russia tried to exterminate the Kazakh people three times. The first was the famine of the 1890s, when Russian immigrants replaced the Kazakhs in their native pasturelands after many bitter winters. Following a failed anti-Russian rebellion in 1916, the second started with the deportation of hundreds of thousands of Kazakhs, which was swiftly followed by the Civil War's starvation and diseases from 1918 to 1922. The policies of collectivization in the 1930s, which led in the deaths of four to six million Kazakhs and irreparably destroyed their traditional pastoral livestock-based lifestyle, were the cause of the worst Russian treatment of the Kazakhs. The Soviet government again forcibly removed Kazakhs from their ancestral lands in the northern section of the republic after World War II to make way for European immigrants during the Virgin Lands programme of the 1950s, and the Kazakhs never completely recovered from this setback. Even the campaign's name irritated many since it falsely represented that these steppe areas were empty until Russian immigrants were dispatched to plough them.

The Kazakh administration has been brainstorming solutions with Kazakh nationalists to make up for the injustices the populace and its forefathers endured. The government has an official demography strategy, which includes initiatives to rehabilitate the Kazakh diaspora and rewards for having big families. These measures are intended to swiftly increase the proportion of Kazakhs who presently make up approximately 54 percent of the population to the overwhelming majority and to guarantee ethnic Kazakh authority over the regions of the nation that were once ethnic Russian enclaves. To achieve Kazakh majorities wherever feasible, the government of Kazakhstan is not beyond gerrymandering election and even territory districts. The new administrative borders in Kazakhstan are intended to maximise control of the new national elite whereas the Soviet ones were created to meet a certain set of goals effective administration by Moscow. The majority of Kazakhs do not think that righting historical wrongs should be the main goal of state development. They recognise Kazakhstan as a multiethnic state and are typically ready to provide Russians the same rights as Kazakhs in exchange for learning about the history, language, and culture of the people who gave this new nation its name.

However, the nation's Russian population is unwilling to do this. Ethnic Russians also feel resentful and are angry that the USSR just vanished, leaving them unjustly transformed from a majority into a minority population. More than a quarter of Kazakhstan's Russian population, upwards of two million since 1992, have left the country in little more than a decade rather than accept this change in status. Most Kazakhs are seen as a late-emerging and underdeveloped people who would have had little to no sense of national identity had the Soviets not "given" them a homeland, according to the majority of the nation's ethnic Russians. In light of the fact that only around half of Kazakhstan's Russian population had roots in the republic dating back more than fifty years at the time of independence, contemporary literature shows that the pre-revolutionary immigrants considered themselves as frontiersmen. The majority of Russians were descended from immigrants who arrived in or were relocated to a rural area of their nation during the Soviet period. However, the majority of local Russians have acquired the mentality of the ancestors of the early immigrants, who saw Kazakhstan as a part of a Russian frontier territory with an ambiguous border. The first post-independence constitution, enacted in January 1993, was particularly painful for the Russians since it referred to Kazakhstan as "the home of the Kazakh people"¹⁶. The Russian community of Kazakhstan had previously believed that it also served as the home of the Russian people. Since Kazakhstan had been a member of the Russian Federation until 1936, many who lived there felt they had been living not only in the Soviet Union but also on Russian land.

The other 20% of the population, who are neither Kazakh nor Russian, have little interest in such historical wars. They are primarily focused on getting the government to protect linguistic and cultural minority' discretionary rights to the fullest extent possible. Even while many non-Kazakhs are sympathetic to the Kazakhs' historical mistreatment at the hands of the Russians, many see these complaints as being against now-defunct regimes and believe that these historical wrongs shouldn't be rectified at their cost. It was described that how the government of Kazakhstan attempted to address the issue of the nation's multiethnicity by creating a constitution that provides the representatives of all nationalities in Kazakhstan with equal protection under the law. But much like the inhabitants, the country's leaders are imprisoned by the remnants of the Soviet conception of nationality. Since nationality is so important in Kazakhstan, ethnic Kazakhs naturally enjoy a position of relative advantage. One of the greatest ironies of the Soviet system was the employment of nationality as the main criterion for classification in Soviet society, despite the fact that nationalism was always seen as a serious danger to the stability of the ostensibly internationalist Soviet state. At the age of sixteen, every young Soviet citizen received an internal passport, and his or her nationality was thus set for life. People of mixed ancestry sometimes had the option to select their nationality, although generally speaking, one adopted the father's.

Even if he (and his parents and grandparents before him) were born in Almaty, a person with two Ukrainian parents, for instance, could not claim to be a Kazakh. Even during the Soviet era, a Ukrainian resident of Kazakhstan would have felt a sense of being "abroad" because local radio and television programmes were only broadcast in Russian or Kazakh, Soviet publications written in Ukrainian might have been available at a cultural center but were not sold at newsstands. The cost of going to Ukraine was low but indirect, and the quality of the phone service was cheap but subpar. Children might be transported to Ukraine to further their education, increasing the possibility that they would be assigned a job there after graduating. Russians and Kazakhs were also welcome there, and many did. In truth, President Nazarbayev unsuccessfully lobbied his parents to let him attend the Kiev¹⁷ Institute of Civilian Aviation in Ukraine¹⁸; but, as was customary for a Kazakh youngster nurtured in a traditional rural environment, his parents pushed him to stay close to home. The USSR was a paradoxical place. The state explicitly declared the objective of achieving cultural and

intellectual homogeneity. But at the same time, the state was set up as a federation, giving ethnic groups in the regions bearing their names much better privileges[7].

The dictatorship therefore unintentionally created a system where the national groups considered the preservation of their cultural and linguistic diversity as their major priority and the borders between ethnic communities were made to look unchangeable. For those groups whose ethnic consciousness had been redefined as a consequence of social engineering during the Stalin period as well as those with historical legacies of nationhood, this system largely levelled the political relevance of nationality. During the late Gorbachev years, when the glasnost and perestroika programmes sparked a heightened national awareness and prompted calls for political independence, few Soviet citizens remained politically compliant. In Kazakhstan, this was not the situation. One of the major obstacles to state creation in Kazakhstan is that independence was not won as the result of a sustained public uprising, as this book emphasises. Nazarbayev was not there when the Soviet republics "awarded" independence. For the majority of people residing in the Soviet Union, the fall of the USSR accentuated the value of nationality above citizenship. Because it happened quickly and unexpectedly, it proved that citizenship is malleable. Ethnic identity based on blood looked unchangeable at the same time and capable of serving as a credible foundation for political strength. Kazakhstan's rulers first made some hesitant attempts to model themselves after multiethnic governments such as the united governments due to the potential instability of Kazakhstan's demographic condition, but they soon grew weary of the endeavor, noting the inappropriateness of the comparison. I contend that this was erroneous. The idea that America is a "melting pot" has long been discredited in favour of the knowledge that certain people were forced to become citizens, transported here as slaves, or had their countries of origin annexed without their consent. Additionally, it is widely acknowledged that not all groups have received equal treatment[8], [9].

The expectation of complete integration has been replaced by a desire to strike a balance between political unity and ethnic diversity. Since citizenship is now supposed to be racially blind and organisations turn to U.S. authorities when they believe the neutrality of the system is being breached, references to "we the people" of the United States no longer instantly conjure a picture of a white Anglo-Saxon person. Nobody actually expects the state to remain neutral in the post-Soviet era; instead, they want it to favour people whose homeland the nation "really" is. This legacy of nationalistic conceptions from the Soviet period places a significant strain on Kazakhstan's leaders. The "Kazakhstani people," a term used in official documents to refer to all state residents, is not how the people of Kazakhstan see themselves. President Nazarbayev and other prominent Kazakh personalities often emphasise the equality of individuals regardless of nationality, which is a principle enshrined in Kazakhstan's constitution. However, few people think that these descriptions really represent the situation in their nation, and it is nearly always considered an ethnic affront when a Kazakh is appointed to replace a non-Kazakh. The local Russians experience everyday slights that the Kazakhs justify as inevitable aspects of the nation-building process. To better represent Kazakh pronunciation, the official spelling of the nation was changed from Kazakhstan to Kazakstan (from Kh to K in the Cyrillic script) in 1995. The spelling was changed back to Kazakhstan in international use two years later, but the official spelling at home remained the same, causing what seems like an unnecessary annoyance.

In retaliation, the Russian mass media maintained the usage of the "Kh" throughout, stating that the alternative was challenging to pronounce. Exacerbating already hurt sentiments are plans to convert written Kazakh from the Cyrillic alphabet to Latin script. The major annoyance for the Russians, however, is that they are required to learn and speak Kazakh, which the Kazakh constitution stipulates must coexist alongside Russian and ultimately take over its use. It was also discussed that the difficulties of making the Kazakh language and

culture equal to Russian, let alone replacing it, because at the time of independence almost no non-Kazakhs, and not even all ethnic Kazakhs, spoke Kazakh. Consequently, those who do not speak Kazakh are not placated by formal declarations that preserve Russian as a language of "international communication." The majority of Kazakhs, however, agree that since Kazakhstan is where the Kazakhs come from, the Kazakh language should be given special consideration. The new laws establishing Kazakh as the state's official language and requiring its usage in a number of public settings, more than any other kind of legislation, unmistakably cause a change in both real and perceived economic and political empowerment[10].

CONCLUSION

With its enormous geographic area and an abundance of natural resources, Kazakhstan's economic development is a story of contradictions. This contrast, which is sometimes summarised as being "blessed with resources but cursed by geography," characterises the country's particular economic environment. We learned about Kazakhstan's vast landscapes, cultural variety, and deep economic interactions with geography and resources in the introduction. Although its size causes logistical difficulties, it also offers chances for agriculture and undiscovered natural gems.

This overview prepared the reader for a more in-depth investigation of Kazakhstan's economic complexity. We consider Kazakhstan's extraordinary history as we come to a close. The country's capacity to adapt and endure throughout the transition from a planned economy based on Soviet technology to an emerging market is shown. By exporting resources, its economic systems have transformed industries and the world's status. Kazakhstan's policy decisions show a comprehensive awareness of the need for diversification, environmental sustainability, and resource management.

The path for Kazakhstan is far from done. It is still negotiating the challenging terrain of resource-driven development, environmental protection, and economic diversification. In the context of the international economy, it serves as a captivating case study, illuminating the possibilities for change, flexibility, and long-term success in a setting where geography and resources are intricately intertwined.

REFERENCES:

- [1] M. Kassen, "Understanding foreign policy strategies of Kazakhstan: a case study of the landlocked and transcontinental country," *Cambridge Rev. Int. Aff.*, 2018, doi: 10.1080/09557571.2018.1520809.
- [2] N. Koch, "Urban 'utopias': The Disney stigma and discourses of 'false modernity,'" *Environ. Plan. A*, 2012, doi: 10.1068/a44647.
- [3] O. N. Shelegina and S. K. Zhetpysbaev, "State Policy of the Republic of Kazakhstan on Exploring its Historical and Cultural Heritage," *Vestn. NSU. Ser. Hist. Philol.*, 2018, doi: 10.25205/1818-7919-2018-17-8-30-37.
- [4] S. Anacker, "Geographies of power in Nazarbayev's Astana," *Eurasian Geogr. Econ.*, 2004, doi: 10.2747/1538-7216.45.7.515.
- [5] Y. Lei, M. Deng, X. Li, Y. Zhang, and A. Long, "Analysis of water resources development in Kazakhstan," in *2012 International Symposium on Geomatics for Integrated Water Resources Management, GIWRM 2012*, 2012. doi: 10.1109/GIWRM.2012.6349620.
- [6] A. C. Sattarov, "Problems and prospects of development of Kazakhstan's economy," *Econ. Ser. Bull. L.N. GUMILYOV ENU*, 2018, doi: 10.32523/2079-620x-2018-4-8-13.

- [7] L. Parks, "Satellites, oil, and footprints: Eutelsat, Kzsat, and post-communist territories in central Asia," in *Down to Earth: Satellite Technologies, Industries, and Cultures*, 2012. doi: 10.36019/9780813553337-008.
- [8] G. Mostafa, "The concept of 'Eurasia': Kazakhstan's Eurasian policy and its implications," *J. Eurasian Stud.*, 2013, doi: 10.1016/j.euras.2013.03.006.
- [9] L. W. Perna, K. Orosz, and Z. Jumakulov, "Understanding the human capital benefits of a government-funded international scholarship program: An exploration of Kazakhstan's Bolashak program," *Int. J. Educ. Dev.*, 2015, doi: 10.1016/j.ijedudev.2014.12.003.
- [10] A. Patalakh, "Kazakhstan's EU policies: a critical review of underlying motives and enabling factors," *Asian J. Ger. Eur. Stud.*, 2018, doi: 10.1186/s40856-018-0026-9.

CHAPTER 3

ASIAN AUTOCRACY AND WESTERN PLURALISM: A REVIEW

Puneet Tulsian, Associate Professor

Department of ISME, ATLAS SkillTech University, Mumbai, Maharashtra, India

Email Id- puneet.tulsian@atlasuniversity.edu.in

ABSTRACT:

This abstract offers a detailed perspective of Kazakhstan's complicated geopolitical situation, which is influenced by both Asian despotism and Western liberalism. Kazakhstan, which is situated at the intersection of Europe and Asia, has managed to strike a delicate balance by retaining ties with both Western democracies and despotic Eastern governments. This investigation dives into Kazakhstan's complex foreign policy dynamics, its diplomatic difficulties, and the results of its geopolitical decisions. Kazakhstan has a key role on the international scene due to its physical placement near the centre of the Eurasian landmass. Russia and China, two powerful nations with different political systems and beliefs, border it on both sides. The foreign policy decisions and diplomatic interactions of Kazakhstan have been influenced by its geographic situation. This summary provides insights into the complex dynamics that shape Kazakhstan's foreign policy environment. The diplomatic decisions Kazakhstan makes while trapped between Asian despotism and Western liberalism have repercussions on a global scale. It is a country that perfectly encapsulates the difficulties of geopolitics in a multipolar world, where pragmatism in diplomacy and strategic positioning are essential for navigating the complicated web of international interactions.

KEYWORDS:

Asian Autocracy, Trapped, Pluralism, Western.

INTRODUCTION

Kazakhstan, a country tucked between Europe and Asia, finds itself in a distinctive and complicated geopolitical situation. This introduction serves as a starting point for examining the complex dynamics of Kazakhstan's foreign policy, a fine line that situates the country between the spheres of Western liberalism and Asian despotism. Kazakhstan, which is located in the centre of the enormous Eurasian continent, borders two significant neighbours, Russia and China, each of which represents a different governmental system and set of ideas. The decisions Kazakhstan makes regarding its foreign policy and diplomatic interactions are significantly impacted by this geographic reality. The country's foreign policy is characterised by pragmatism and a desire for balance. While keeping links with authoritarian nations in the East like Russia and China, Kazakhstan has developed partnerships with Western democracies like the United States and the European Union. This strategy demonstrates Kazakhstan's diplomatic skill and its function as a mediator in regional disputes [1], [2].

Beyond Kazakhstan's boundaries, the complex geopolitical balancing act Kazakhstan has performed is significant. It negotiates economic alliances with Western countries, reaping the rewards of foreign direct investments and technological transfers, but it also has to deal with regional pressures to support despotic governments. This dynamic calls into question issues such as political liberties, human rights, and the challenges of formulating foreign policy. The difficulties that countries with different political systems encounter are reflected in Kazakhstan's experience in handling these geopolitical conflicts. Its strategic position in regional organisations like the Collective Security Treaty Organisation and the Shanghai

Cooperation Organisation highlights its impact on determining regional dynamics. In summary, this investigation prepares the ground for a thorough analysis of Kazakhstan's distinct foreign policy environment. It gives us a clearer comprehension of the diplomatic decisions, difficulties, and repercussions that a country that is "trapped" between the ideals of Western pluralism and the reality of Asian dictatorship must confront. The experience of Kazakhstan is a monument to the difficulties of geopolitics in a multipolar world, where practical diplomacy and strategic positioning are essential for negotiating the complicated web of international interactions. International relations are shaped by the interaction between democratic ideals and authoritarian institutions, as seen in Kazakhstan's complex geopolitical location. Kazakhstan is a country with a varied cultural history and a fast-growing economy, so its diplomatic decisions have an impact on not just its own inhabitants but also the stability of the region and the world.

Kazakhstan's diplomatic strategy presents chances and problems that are typical of the difficulties that many countries currently confront. In the field of foreign policy, the pursuit of political stability, economic growth, and the defence of human rights sometimes collide and conflict. Kazakhstan's dedication to upholding peace and security in its neighbourhood is shown by its position as a mediator in regional disputes. We shall enlarge on certain facets of Kazakhstan's foreign policy, its diplomatic interactions, and the consequences of its geopolitical decisions in the chapters that follow. We will look at how Kazakhstan manages to maintain its national interests while also making a positive impact on regional and global peace. Kazakhstan must strike a careful balance between the East and the West. The history of Kazakhstan may be seen as a miniature representation of the complicated web of international relations, where countries must carefully navigate the challenging field of geopolitics[3], [4].

DISCUSSION

Over time, Nazarbayev came to understand that while Kazakhstan was being stronger, Russia was becoming weaker. International impressions of both Russia and Kazakhstan have changed recently, which has contributed to these beliefs. The development of political institutions, and is a true and detrimental effect of the increased international interest in Kazakhstan. Over the last several years, Kazakhstan has received mixed messages from foreign powers. On the one hand, Kazakhstan has been urged to establish a government that preserves fundamental democratic traditions by Western nations, particularly the United States and other more cautious nations. These nations urge Kazakhstan to adhere to principles such complete universal suffrage, equal civil rights for all ethnic groups, fair competition for political power among rival groups, and equality of economic and social opportunity across ethnic boundaries. Ahead of developing Kazakhstan's oil riches, Western authorities are keen to make sure that their corporations are in a strong position.

These leaders are therefore unlikely to do much more than issue mild rebukes to the offending Kazakhs, and occasionally they are reluctant to do even that, even though they may be sympathetic to human rights and other political opposition groups whose area of influence has been drastically reduced in recent years. Consider President Nazarbayev's state visit to the United Kingdom in November 2000, when he was presented with the Order of St. Michael and St. George by Queen Elizabeth II. At the same time, Western newspapers were flooded with stories about the Kazakh president and other members of his family stealing state property. Of course, the Kazakh leader has never acknowledged any wrongdoing. He argues that the Western media purposefully twists the facts and employs Western attorneys, lobbyists, and public relations companies to manage his reputation abroad. The Kazakh leader argues in public that any change in political focus is important for the nation to define its national character, and that the country cannot sustain a succession issue until that happens. The fact is that Kazakhstan's leaders now believe that their nation has the freedom

to establish its supremacy and to personally profit from Kazakhstan's enormous riches due to the country's precious resources and the heightened Western interest in them.

The administration has responded by implementing a state-building policy that emphasizes the need of maintaining political stability, even at the price of political engagement. The Kazakh government has gradually begun to limit the potential of electoral politics out of a growing sense of fear for what public empowerment may bring. According to my argument, there is no benefit to restricting political participation, and the best way for Kazakhstan to develop a strong state is to provide all of its ethnic groups equal access to the institutions of power. This will encourage allegiance to the state. This does not imply that the government should not or does not want political loyalty from the populace. But it aims to shield political results from public opinion. Even more significant is the fact that few of Kazakhstan's leaders really think that public engagement is required for governmental legitimacy. The majority of them continue to have the same view as the old Soviets that the public will can be molded via ideological indoctrination and they only underrate how difficult the effort would be. Media, education, and the arts were all used to forward the objectives of the state in the Soviet Union, which had an ideological framework that was totally integrated.

The Kazakh elite today has significantly less resources at its disposal. This is due in part to their desire to expand the reach of their economy internationally. The restoration of Kazakh nationhood has been used to justify a large portion of the elite consolidation of power. However, it is still unclear what kind of distinctive historical role the Kazakhs want to play. The Kazakh government claims that it aims to blend European and Asian traditions, which leaves open the symbolic significance of its message. The Asian way of thinking, in the eyes of the Kazakhs, justifies political repression when it serves the interests of economic reform. They pledge to enact political democracy when the economy has recovered. It is sometimes said that the development of South Korea, Taiwan, and Singapore serves as evidence of the viability of such a policy, but as I contend, it is also unclear if Kazakhs possess the same level of self-control that the "Asian tigers" have frequently shown. Leaders in Kazakhstan are attempting to compromise due process in the name of economic need, but they have not yet accepted the need to be European or the idea that a civil society can provide the legal framework required for the preservation of private property.

Ironically, a concentration of authority in the executive branch was first justified by the government's steadfast commitment to pursuing macroeconomic transformation. Without such a consolidation, President Nazarbayev said, Kazakhstan would be unable to build the legal framework required to protect private property and attract international investment. The reason Kazakhstan would remain a strong presidential republic for a long time, according to Nazarbayev, is that "we lack a parliamentary culture and traditions and a well-developed multiparty system." In the spring and summer of 1995, when he dissolved parliament and urged amending the constitution to make the parliament less fractious. Since his reelection as president in January 1999, there has been more discussion about expanding the powers of the President and even making it hereditary; if this choice is made, it will not be the subject of a public discussion. By their very nature, parliaments serve as a check on executive authority, and what President Nazarbayev saw as a divided parliament, others saw as a legislature attempting out how to perform its job. The Kazakhstani parliament undoubtedly opposed the government's attempts to privatise the economy, but many legislators did so not so much out of mistrust for the concept of private property as out of disapproval of abuses in the allocation process. There is no institution in Kazakhstan that can provide legal protection or act as a check on the president's authority.

A Russian expert dispatched from Moscow to assist with the difficulties of developing political institutions reportedly reprimanded Nazarbayev over cocktails during a meal in 1990, stating that he appeared more like a benign despot than a democracy. According to

reports, the president of Kazakhstan retorted that he only comprehended the term "dictator" out of the three. Nazarbayev appears to have grown weary of textbook democracy soon after seeing how hard it is to govern, even if the story is fictitious. The Kazakh government insists that the populace has backed it in these initiatives, often citing surveys that demonstrate people's greater concern for maintaining public order than for having a significant influence in the direction their nation is headed. However, President Nazarbayev has made an effort to uphold the lie that Kazakhstan has a quasi-participatory system of government. He has extended his time in office through open referendums, and he has changed the constitution to replace a weak bicameral legislature with a considerably more powerful unicameral one. He subsequently decided to run for president "on a competitive basis," after making sure he wouldn't face any real opposition. Nazarbayev vowed to hold more democratic legislative elections in 1999 after receiving harsh criticism from the West, only for those elections to once again fall short of international standards. He has since started to try to establish a dynastic succession[5], [6].

Instead of enabling the populace to express their own preferences, President Nazarbayev and his advisors have been attempting to lay the groundwork for patriotism in Kazakhstan by speculating on what the populace wants. They use the possibility that popular rule can exacerbate ethnic strife to defend their position. Although it is true that Kazakhstan is an ethnically split state, the claim that if the populace were given more self-government powers, ethnic tensions would escalate into violence is often based on unsuitable parallels. With the exception of the rebellion in 1916, Russians and Kazakhs have almost always coexisted peacefully next to one another, and no one has ever held common Russians accountable for the excesses of the former official policy. Promoting political exclusion always carries a risk since it needs a population of subjects who are either obedient or passive. In the absence of such, the government must be confident in its ability to employ force effectively enough to assure the populace's obedience. Whether Kazakhstan meets any of these requirements is not quite obvious. The many divides that are starting to characterise Kazakhstan include: widening rich-poor inequalities, escalating regional differences, and the rising alienation of Islamic activists.

These divisions might exacerbate existing interethnic ones among the Kazakh community. Kazakhstan has a security infrastructure that is expanding and becoming more apparent, but its efficacy has not yet been proven, and there is no proof that it will be able to do more than stifle occasional incidents of protest. The foundation of Western democratic thought is the idea that engaging in politics makes people stakeholders and that doing so contributes to the development of the feeling of political community that serves as the basis for political loyalty and patriotism. The methods used by regimes in oil- or resource-rich states to shield themselves from public pressure may occasionally be convenient for Western leaders to ignore, but the affected populations do not have to indefinitely remain a submissive party to the indifference of their leaders and of other nations to their fates. Public order will only be maintained for as long as there is indifference among the populace if there is no feeling of political community among them. But unlike patriotism, apathy is a far less dependable political force. The Kazakh elite has successfully slowed down the process of creating a new Kazakh state by prioritising stability over participation. As a result, the Kazakh independence may ultimately need to be guaranteed by the international community[7], [8].

Gaining Confidence with Time

In this book, I explain how Kazakhstan's leaders have gained confidence over time in furthering the interests of the Kazakh people as a whole and are doing so in a manner that increasingly benefits them personally. I discuss how Kazakhstan's leaders originally believed that their nation's state-building strategy had to be determined by its geographic position and that Kazakhstan had to continue to show sensitivity to Russia's preferences for the kind of

state that Kazakhstan was the most economically reliant former Soviet country on Russia at the time of its independence. Even while Kazakhstan's reliance is being both lessened and redefined, it will be harder to avoid the requirement to carry commodities over Russia in both an eastward and westward direction. Shipping over China to Asia, across the Caspian to Azerbaijan, and through Iran to Europe is now made easier by new or expanded transport connections, although their freight capacity will continue to be constrained for some time to come. It will be difficult to use the majority of the new routes to transport fossil fuel to markets until at least 2005 or even later. I look at how Kazakhstan's government had only a limited amount of influence over the nation's economic prosperity during its early years of independence. The development of the Tengiz oil field by Chevron was put off for many years until the key participants in the deal offered Russia an economic incentive to support the project's success. Additional issues were the unresolved Caspian Sea status and Russia's prior resistance to Kazakhstan's plan to put the development rights to these deposits up for bid. Leading Russian industrial interests also claimed ownership stakes in projects in other industries in Kazakhstan. Due to the initial level of uncertainty, Western investors were initially very wary of making investments in Kazakhstan. Despite the fact that Kazakhstan is building strong new economic strategic partnerships, Russia continues to be crucial because it can assert its influence by capitalising on the complaints of the local Russian community. In the early years after the fall of the Soviet Union, Russian officials were outspoken in claiming that they should have postimperialist rights and advantages, including the authority to decide on the destiny of their stranded co-citizens. Russia had little interest in sending ethnic Russians living in Kazakhstan back home and was far more concerned with pressuring Kazakhstan's authorities to accept fair conditions for ethnic Russians living in Kazakhstan to get citizenship.

Kazakhstan's weak point is its people of Russian ancestry. Ethnic Russians, who made up the bulk of employees in Kazakhstan's industries and mines, were put out of work when established trading patterns between Russian and Kazakh enterprises were disrupted. The amount of tolerance for declining standards of life among any segment of the population could not be determined by the Kazakh government. While improved trade ties with Russia benefited Kazakhstan in the near term, they seemed likely to be detrimental to the nation's long-term economic growth. The goal of Kazakhstan's development strategy has been to strike a balance between the two, encouraging Russian economic links while institutionalising Western investment and engagement. Stabilising economic relations with Russia may well require accepting the economic interdependence of the two states and establishing preferential relations that foreign investors may find unsettling, even though maximising foreign investment necessitates implementing a free trade or at least a lowtariff regime. Although these two approaches may be in conflict, Kazakhstan's economy is developing without properly resolving this fundamental inconsistency. Kazakhstan's goal to avoid provoking Russia and its desire to merge with it originally dominated its foreign policy. Long after most other leaders had lost interest in the CIS, the Kazakh government continued to support it. In addition, the Kazakhs backed a number of other schemes that called for closer ties with Russia. However, due to the Kazakh demand that the planned or existing CIS institutions be constituted of equal partners, the Kazakhs were often at differences with Russia's leadership.

The armed forces of the two countries were interwoven during the early years of independence, and it was obvious that Kazakhstan would be driven by Russia's security concerns. In recent years, Kazakhstan's posture has become increasingly autonomous. The Nazarbayev administration has worked hard to build relationships with the US and other Western countries, but it has also come to appreciate the constraints of geography and has taken care not to restrict its choices with regard to Moscow. As the US prepared for war in Afghanistan in 2001, Kazakhstan joined the Partnership for Peace, participated actively in the

NATO-sponsored Central Asian Peacekeeping Battalion (CENTRASBAT), and granted the US access to its airspace and military facilities. The Nazarbayev administration has also been negotiating a number of ever-broader accords with Russia that address both economic and security-related matters. Additionally, Kazakhstan has joined the brand-new Shanghai Cooperation Organisation with enthusiasm. Over the last ten years Kazakhstan's leadership has grown less focused on placating Russia and less responsive to the worries of the ethnic Russian population there. Nazarbayev's decision to transfer the nation's capital from Almaty to Akmola (later called Astana) on December 10, 1997, was a significant gesture in this respect. Shifting the centre of power from the southeast corner of the nation to the north-central region, bringing it considerably closer to Russia. It was no coincidence that Nazarbayev announced the transfer of power in Kazakhstan during the visit of Viktor Chernomyrdin, the Russian prime minister at the time[9], [10].

CONCLUSION

The peculiar geopolitical situation of Kazakhstan, which is sometimes referred to as being "trapped between Western pluralism and Asian autocracy," perfectly captures the complex dynamics of its foreign policy. A comment on Kazakhstan's difficult circumstances and the results of its diplomatic decisions is provided in this conclusion. Kazakhstan's foreign policy has been significantly influenced by its advantageous position at the nexus of Europe and Asia. Russia and China, two superpowers with different political systems and varying levels of global influence, border it. Kazakhstan has shown diplomatic aplomb and pragmatism in negotiating this geopolitical landscape. The country's foreign policy is characterised by a careful balance between interacting with authoritarian regimes in the East and preserving links with Western democracies. With this practical approach, Kazakhstan has been able to entice international investment, foster economic expansion, and manage regional disputes. But there are difficulties and conundrums involved in this process of balance. Kazakhstan is under investigation for its adherence to authoritarian regimes and violations of political liberties and human rights. These complications highlight how difficult it is to make foreign policy choices in a multipolar world. Kazakhstan's participation in regional organisations like the Collective Security Treaty Organisation and the Shanghai Cooperation Organisation underlines its importance on determining regional dynamics and promoting peace and security. Kazakhstan's foreign policy development is an example of how other countries deal with the conflicts that exist between democratic ideals and geopolitical reality. It may be used as a lesson on how to handle the intricacies of international relations, where pragmatism in diplomacy is crucial to preserving balance.

The example of Kazakhstan serves as a reminder that the way to international concord often requires negotiating the complex web of geopolitics with skill, diplomacy, and a dedication to defending national interests while promoting world stability.

REFERENCES:

- [1] N. Niyazbekov, "Is Kazakhstan immune to color revolutions? the social movements perspective," *Demokratizatsiya*. 2018.
- [2] O. Bryant and M. Chou, "China's New Silk Road: Autocracy promotion in the New Asian Order?," *Democratic Theory*. 2016. doi: 10.3167/dt.2016.030207.
- [3] I. V. Nesterova, "Geopolitical Factors and the Political Risks of the Central Asian Autocracies," *Izv. Saratov Univ. New Ser. Ser. Sociol. Politol.*, 2010, doi: 10.18500/1818-9601-2010-10-3-88-91.
- [4] C. S. Hendrix and S. Haggard, "Global food prices, regime type, and urban unrest in the developing world," *J. Peace Res.*, 2015, doi: 10.1177/0022343314561599.

- [5] T. R. Gurr, "Persistence and Change in Political Systems, 1800–1971," *Am. Polit. Sci. Rev.*, 1974, doi: 10.2307/1959937.
- [6] H. Y. Ng, "Migration status and attitude towards authoritarian rule: the case of Singapore's naturalized citizens," *Philipp. Polit. Sci. J.*, 2018, doi: 10.1080/01154451.2018.1523837.
- [7] K. P. Huang and P. Schuler, "A status quo theory of generalized trust: Why trust may reduce the prospects for democratic transition in East Asia," *Comp. Polit.*, 2018, doi: 10.5129/001041518824414601.
- [8] L. D. Benichou, "From Autocracy to Integration: Political Developments in Hyderabad State (1938-1948)," *Contemp. South Asia*, 2002, doi: 10.1080/0958493032000057753.
- [9] C.-C. Lin, "AUTOCRACY, DEMOCRACY, AND JURISTOCRACY: THE WAX AND WANE OF JUDICIAL POWER IN THE FOUR ASIAN TIGERS," *Georg. J. Int. law*, 2017.
- [10] S. Haggard and R. Kaufman, "Revising Social Contracts: Social Spending in Latin America, East Asia, and the Former Socialist Countries, 1980-2000," *Rev. Cienc. política*, 2004, doi: 10.4067/s0718-090x2004000100001.

CHAPTER 4

ARAL REGION'S POST-SOVIET TRANSFORMATION AND ENVIRONMENT

Thiruchitrambalam, Professor
Department of ISME, ATLAS SkillTech University, Mumbai, Maharashtra, India
Email Id- thiru.chitrambalam@atlasuniversity.edu.in

ABSTRACT:

The Aral Region, a region plagued by ecological destruction, and its post-Soviet development are insightfully summarised in this abstract. The unsustainable water management methods used by the Soviet Union during that period have caused the Aral Sea, once among the biggest inland bodies of water in the world, to shrink dramatically. This investigation dives into the complex issues behind the Aral Sea problem, its effects on the ecosystem, and the creative measures used to reestablish natural harmony and provide a sustainable future for the people living there. The environmental damage caused by Soviet-era practises is clearly seen by the Aral Sea disaster. Desiccation of the sea, the destruction of ecosystems, and serious health problems for the local people were all caused by decades of excessive irrigation for cotton growing and poor management of the Amu Darya and Syr Darya, the two main rivers in the area. Consolidated efforts have been undertaken to solve the Aral Sea problem and restore the area's biological equilibrium in response to this environmental calamity. Among the tactics used to lessen the situation are the adoption of water-saving technology, the rehabilitation of wetlands, and the promotion of sustainable agricultural practises. The creative solutions used to revive the Aral Sea and enhance the lives of individuals impacted by its drying up are illustrative of how adaptable and resilient local communities are. These projects also highlight the value of international collaboration, especially those run by the World Bank and the United Nations, in tackling difficult environmental problems.

KEYWORDS:

Catastrophic Ecological, Region's, Post-Soviet, Transformation.

INTRODUCTION

Over the last several decades, the Aral Region, once a flourishing oasis in the middle of Central Asia, has seen a catastrophic ecological upheaval. One of the biggest inland bodies of water in the world, the Aral Sea, has drastically diminished, leaving behind a barren landscape racked by environmental destruction and health concerns. This introduction serves as a starting point for examining the intricate story of environmental deterioration and post-Soviet change in the Aral Region. The environmental consequences of Soviet-era actions are best shown by the Aral Sea disaster. The size of the sea has been drastically reduced as a result of decades of irresponsible water management practises, which were predominantly fueled by irrigation for cotton production. The results have been disastrous, impacting not just the environment but also local residents' livelihoods and health. Desiccation of the Aral Sea has far-reaching effects on the ecology. A salty, poisonous dust bowl has formed in the area, endangering the health of people who live nearby. As once-thriving fishing villages crumbled and biodiversity suffered, new economic and social problems arose.

Consolidated efforts have been made to solve the Aral Sea disaster and revitalise the area in response to this ecological calamity. Innovative methods have been used to lessen environmental damage, such as the use of water-saving devices and sustainable agriculture practises. These initiatives demonstrate the flexibility and resiliency of local communities as

well as the value of international collaboration in tackling challenging environmental issues. The tale of the Aral Region includes elements of optimism and change in addition to environmental degradation. It emphasizes how capable people, groups, and countries are of finding creative solutions to ecological challenges. We will learn about the difficulties of environmental management, sustainable development, and the search of a better future in the face of enormous problems as we dive further into the numerous aspects of the Aral Sea catastrophe and its aftermath. The dire situation in the Aral Region serves as a sobering reminder of the serious negative effects of irresponsible environmental practises and the need for all-encompassing methods to ecological restoration. Environmental concerns are interrelated in a world that is becoming more interconnected, as seen by the rapid shrinkage of the Aral Sea, which was once a lifeline for the area[1], [2]

To combat the ecological destruction, local communities, scholars, and legislators have banded together. Their actions demonstrate a strong feeling of obligation to the wellbeing of the inhabitants of the Aral Region as well as a dedication to environmental protection. We will examine the intricacies of the Aral Sea situation, creative solutions used to lessen its consequences. We'll look at the difficulties communities confront as they try to adapt to a changing environment while preserving their cultural traditions and means of subsistence. The history of the Aral Region is proof of how resilient people and communities can be when faced with natural hardship. Additionally, it serves as a lesson on the crucial significance of sustainable resource management and the need of the global community's assistance for areas facing ecological issues. As we begin our investigation, we learn more about the environmental disaster as well as the unwavering spirit of individuals who are working nonstop to reestablish the natural balance in the Aral Region and ensure a sustainable future[3], [4].

DISCUSSION

The world is aware of the Aral Sea. A great dissonance is evoked when ships get stuck in the desert because the aspect of life has vanished, creating a sterile, desolate scene that allows for a post-apocalyptic look back on a modernity that is no more. The disturbance of the natural order may be seen from space and is a cause for worry for everyone. An organic item was destroyed before and after. The events are widely recognised.¹ Between the Kazakh and Uzbek Soviet Socialist Republics in Soviet Central Asia, this was the fourth-largest inland body of water in the world. Two rivers, the Syr Darya and the Amu Darya, which originate hundreds of kilometres distant in the glaciers of the Tien Shan and Pamir Mountains, nourished the sea, which was surrounded by barren grassland and desert. Freshwater fish served as the foundation of a healthy fishery since the input from the rivers balanced losses to evaporation, keeping salt levels low. The sea moderated the continental climate's extremes and brought pastures rain. However, the Soviet government diverted water from the rivers into massive irrigation projects in an effort to make the desert blossom with cotton and, to a lesser degree, rice. They were aware of the dangers, but they valued cotton more than the sea or the locals. The sea started to withdraw in 1960. Rise in salinity. The fish became extinct during the next 20 years. In 1987–1989, the sea split into a Small and Large Aral.

Windstorms carried salt and deadly particles from the dried-up bottom, harming the nearby land and its inhabitants and dispersing well beyond the immediate area. An acute danger existed as a result of the distant Vozrozhdenie Island's biological weapons facility being now linked to the mainland after being abandoned during the fall of the Soviet Union. Water pollution has a major negative impact on health. Millions of people departed. However, the government ignored the environmental catastrophe and kept increasing irrigation. The calamity didn't spread across the USSR until the more liberal age of perestroika, when it became a cause célèbre for intellectuals and environmentalists. The Aral was considered a Cold War crime against people and against environment, ranking with Chernobyl as it gained

popularity in the West in the 1990s. It reads like a Communist hubris parable: the totalitarian state tries to dominate nature, and nature retaliates. The Soviets "targeted, condemned, and sacrificed" the Aral Sea, according to a Canadian development worker. Numerous programmes addressing the environmental deterioration that spanned the huge Aral basin were born out of the USSR collapse's international prominence. Most of them failed.

Locals used to quip that the sea would be replenished if each visitor to the Aral had brought a pail of water. Nevertheless, two success stories stand out among the numerous failures. The sea was not dead, as was popularly believed, according to several Danish fisherman who travelled to the Kazakh coast in the early 1990s. Soviet officials had imported flounder, a salt-tolerant fish, in the 1970s when local species were dying, and by the 1990s, flounder were prospering. The Danes revived a fishery on what was left of the Small Aral during the late 1990s and early 2000s and founded a voluntary group called Aral Tenizi. Then, in 2005, the World Bank and the government of Kazakhstan completed construction of the K  karal dam as a result of efforts to stabilise the Small Aral. Falling salinity and rising water levels have made it possible for native fish to repopulate. The historic port of Aral'sk in Kazakhstan is now 15–20 km away from the ocean. Disaster resolution will take time.

The Large Aral continues to shrink, and despite some attempts to restore the Amu Dariya delta lakes and wetlands, the situation on the southern shore around the former port of Moynaq remains dire despite the serious threat posed by the exposed biological weapons laboratory that prompted a US-led clean-up operation in 2002. In Central Asia, water is still taken out to produce rice and cotton. However, the limited technical solution for the Small Aral offers a positive, visually appealing conclusion to the disaster story: pictures like those in nature's power being channelled and contained, while fishermen resume their time-honored profession and appear to be sustainably interacting with their restored environment. When I left for fieldwork in late 2012, I had pictures like these in mind. Although it shed light on the causes of the sea's regression and its numerous effects on the local environment and human health, the extensive academic literature on the disaster, which I was familiar with, left little sense of the lives and livelihoods of those who remained in the region throughout.

The disaster's worldwide importance may be seen from space, but the view obscures the lives of individuals who experienced it since global viewpoints, like all perspectives, are incomplete and sited. Like many foreign tourists, I had twice been to Aral'sk as a catastrophe voyeur. It resembled other tiny towns in rural Kazakhstan in many ways: it was isolated, economically struggling, and still had decaying signs of the Soviet era scattered across the urban environment. According to academic and media sources, environmental change produces economic collapse and social unrest, which in turn generates a sea shift in human civilization. Politics kill the sea. However, I was also aware that people had experienced a different kind of tidal shift, including the fall of the Soviet Union, Kazakhstan's independence, and the transition from a command economy to "wild capitalism." How did these processes interact with the destruction the Soviet project caused to the environment? What prospects did an area that was excluded from Kazakhstan's oil economy get from the restored sea? Although I foresaw uncertainty, I assumed that the catastrophe would be a "critical event," a totalizing framework that would cast a shadow over local imaginations[5], [6].

The view from Aral'sk

When I got off the train at Aral'sk, I was met with a mosaic showing a Civil War incident: in 1921, Lenin wrote to Aral fisherman pleading with them to supply fish to the Volga area, which was suffering from hunger. Fishermen from isolated coastal communities like B  gen, Qarashalang, and Qaratereng braved the ice one winter's night and captured a herculean catch of fish. After reviving themselves with a shot of vodka and some pike, the camels, known as

"the ships of the steppe," pulled the fish on a sledge to the closest station. I heard that they packed 14 railway waggons with fish, which prevented starvation for millions of people. The message is obvious: via Lenin's letter, the sea was merged into larger places. Young people sometimes associate this narrative to the Second World War. It was a Soviet sea in addition to being a natural feature and the ancestral home of local Kazakhs. I heard this tale a lot during the twelve months I lived in Aral'sk and the nearby towns between November 2012 and June 2014. It conveyed pride in the community's identity. Contrarily, a lot of individuals were sick of the catastrophe tale and the negative connotations it brings. Some people criticised how calamity was shown visually. One of my friends once informed me that film crews go out the oldest, poorest residents, and the most dilapidated homes in order to make things seem disastrous. He said that this framing rule out the prospect that residents of the area may conduct regular lives. Global perceptions of catastrophe tend to be totalizing discourses that leave little room for local viewpoints. Similar to what Brown discovers at Chernobyl, the area is far more uninteresting as visitors and media marvel at the extraordinarily picturesque environmental tragedy and equally photogenic recovery.

The international tourists confound locals, who wonder what they want to see in Aralsk. Indeed, I was surprised at how infrequently people discussed calamity during the first several months of my research. When I described my study using the Kazakh word I had learned for "Aral disaster," *Aral apaty*, they gave me a startled expression. This may not come as a surprise. Events like earthquakes have a bearing on anthropological theorizations of catastrophes as 'revelatory crises' that expose society systems. The steady decline of the Aral does not engage the imagination in the same way as singular catastrophes do since there is no distinct before and after and no point at which the world was turned upside down. Instead, it lacks the temporal boundedness of an event. There is undoubtedly a register for lamenting the sea, which is conveyed in the phrase *Aral qasret*, the 'grief' or 'sorrow' of the Aral, but by the time I was doing my fieldwork, this register had diminished. In addition, I discovered that elderly individuals sometimes confused the disappearance of the sea with the fall of the USSR. Others might argue that despite the disappearance of the sea, the 1980s were a fantastic period since there was enough of jobs. I realised that the techniques used by the Soviet government to try to lessen the impacts of the sea's steady decline had overlapped. These processes, however restricted and inconsistent, infused memories of the sea's retreat, which did not necessarily correspond to the sea change I anticipated.

In fact, I discovered that this tale loomed as big for my informants as that of environmental change, if not greater, even as the environmental disaster narrative obscured the lived experience of Soviet socialism and its aftermath. The 1990s, when the USSR fell apart and ecological destruction was exacerbated by a generalised economic crisis, inflation, and unemployment, were universally acknowledged as the truly dreadful decade. Naturally, no one wanted to discuss this miserable period. People are now returning to the area, and there is a general sense that things have become better since then. However, I discovered more uncertainty than the well-worn story of environmental recovery suggests. Images like the ones above show a sea that has been restored, but they conceal the complex web of private and public regulations that make up the post-Soviet sea; they do not show the lucrative zander markets that reach as far west as Germany or the markets for illegal Chinese nets; they also do not show the failing fish plants in Aralsk that experience a paradoxical fish shortage. In other words, they are unable to adequately reflect the intricate, varied patterns of social change brought forth by the restored sea. As a result, I found that the Aral decline and partial recovery had more than one meaning, as opposed to being interpreted as a single key event that eclipsed local imaginations.

The Aral was the ancestral home of the local Kazakh lineages in one register, while the regression represented a typical economic loss that could be compensated for by importing

resources from other Soviet space. Others polemicized against all sorts of catastrophe tale, which they saw as an insult to local dignity, while other informants mirrored the disastrous narratives of perestroika intellectuals. For some, the dam and the restored sea speak optimistically of Kazakhstan's independence reaching a far-off region; for others, the sea's failure to reach Aral'sk and the environmental restoration's failure to result in widespread employment speak of state failure in contrast to the idealised memories of Soviet socialism. The object is constantly intertwined in someone else's discourse about it, it is already there with qualifiers, an object of controversy that is conceptualised and appraised differently, and it is inseparable from the heteroglot social view of it, according to Bakhtin's writer and the ethnographer. I had a naive first interpretation of the ethnographic endeavour: it was a search for the unadulterated, pure language of "the local" without the ensnaring discourses of outsiders. But cutting through the tangle of arguments around the Aral just made the item bigger. There was no uniform, constrained local. Sometimes, according to my sources, researchers have found salt from the Aral Sea as far away as Japan. If their goal was to demonstrate the importance of the disappearance of the sea on a global scale, they also demonstrated how the Aral gets rebuilt as a result of this connection: the local is naturally "perforated," and local discourses are "shot through" with other discourses. Even though there wasn't much mention of "disaster,"

I soon picked up on conversations concerning *ekologiia*, which refers to environmental issues that have an impact on human health. This phrase was first used in the late 1980s, when the decline was finally seen as a catastrophe for the environment. *Zone ekologicheskogo bedstviia*, or "an ecological disaster zone," was the designation given to the area by the Supreme Soviet of the USSR in 1989. Like its neighbours, the Aral'sk raion earned the moniker "an ecological raion," or *ekologicheskii raion*. However, *ekologiia* is also unclear. Undoubtedly, many people accept the existence of *ekologiia* as a justification for the region's many health issues. They do not, however, directly link *ekologiia* to the sea's decline. The location of Baikonur, from where Gagarin was sent into space, is less than 200 kilometres from Aral'sk. The cosmodrome, located on Russian-rented territory, is still in use today, and daily *ekologiia* and its negative impacts are attributed to the rocket launches. Furthermore, not everyone concurs that *ekologiia* exists. I would be asked whether I saw *ekologiia* as an outsider. A fisherman once said that while others often claimed that the area had *ekologiia*, he had never noticed it and that the city was where the air was polluted. He was standing on the ice amid a howling storm and pale blue sky. Having just travelled through Almaty from London, I had to agree. Others contend that local Kazakhs have adapted to *ekologiia* because of their history as nomads rather than non-Kazakhs who had lived in the area but moved away. The natural abundance of the area is also widely discussed, since meat and dairy products from the Aral region are among the best in the nation due to the salt content of the region's flora[7], [8].

Environmental anthropology of Central Asia

Therefore, how environmental change affects us and how we affect it relies on the many ways that it permeates our daily lives. In this work, I demonstrate how the processes, continuities, and ruptures of Soviet socialism and postsocialism cannot be analytically isolated from the retreat and partial restoration of the Aral Sea. I provide two sets of reasoning to support this assertion. First, environmental change develops diverse meanings within various sets of interactions. The Aral regression will be shown throughout this book as a necessary economic process, an issue with bureaucracy, an impending disaster, and a cultural loss. Depending on how tangible impacts are perceived, political agency over environmental change may exist. The sea's decline inspired a particular, constrained set of official remedies while it was a bureaucratic issue, but it also sparked demands for a far more extensive reform when it became an increasingly dire situation during perestroika. The

political agency of environmental change is also influenced by historical and material circumstances. For example, if the perestroika vision was ultimately dashed by the fall of the Soviet Union, the Aral Sea disaster that the 1990s transnational development community anticipated would ultimately result in the restoration of the Small Aral, but only after the disruptive agency of Danish activists and flounder jointly demonstrated the sea's life. Second, the value, extraction, processing, and circulation of natural resources, which are situated within a larger political-economic framework, are linked to the ability of environmental change to affect social change. The sea that receded was a socialist sea; its fish were extracted and processed within the command economy, and would circulate across Soviet 'gridded space' - and when the sea receded, this same gridded space facilitated the import of ocean fish for processing in Aral'sk, and the sending of fishermen to other lakes in Kazakhstan. Even without the sea, the Soviet fisheries managed to survive, providing some continuity in the midst of environmental destruction. This survival is often regarded as reinforcing the social compact. The sea that has resurfaced is a postsocialist sea that is governed by new types of regulations. Fishing and fish processing rely on the many values that are assigned to fish on global markets, which fuels a variety of social change patterns in the area.

I'll be arguing for an environmental anthropology of post-Soviet Central Asia using these points. However extensive ecological deterioration may be, environmental issues have received little attention in the local ethnography. I contend that putting them front and centre benefits environmental anthropology as a whole in three different ways. First, descriptions of environmental change in Western settings or contexts impacted by Western colonial legacies might benefit from a political ecology informed by the state-socialist heritage. In fact, the state-socialist/post socialist setting demonstrates how not all "versions" of nature are equal, as the informal exercise of authority has favoured some over others, even if anthropologists are increasingly understanding the variety of ways in which nature is "done." Second, the region's ambiguous membership in modernity where modernist conceptions of nature were both externally imposed and internally internalized has produced a variety of approaches to nature that cannot be boiled down to either acceptance or rejection of modernist goals. Last but not least, I'll argue that our understanding of adaptability and resilience has to be revised in light of the significant political and economic changes that have occurred after the fall of the Soviet Union.

Socialism's political ecosystem and its aftermath the disappearance of the Aral Sea highlights fundamental issues in modern environmental anthropology. One example of what Tsing refers to as the "scalable" goals of modernity, which are based on the quantitative development of abstracted commodities, "as if the entanglements of living did not matter," is the continuous extension of irrigation systems and cotton plantations. Soviet modernism forcibly rearranged surroundings and entanglements between humans and the environment, leaving devastation, by operationalizing nature as a resource to be mastered to serve human advancement. The dried-up bed of the Aral bears testament to the destruction that modernist constructions are doomed to experience no less than Tsing's destroyed industrial woods of Oregon. As Buck-Morss points out, both communist and capitalist regimes were founded on identical ideals, with similarly disastrous effects on people and the environment. Although there is value in making parallels on a global scale, Soviet modernism had a unique quality. If this tale is representative of "the history of the human concentration of wealth through making both humans and nonhumans into resources for investment," then the East and West have different methods for making investments and concentrating and redistributing wealth.

I heed the appeal for a political ecology of state socialism made by Peet and Watts. Such a political ecology begins with the "economics of shortage," which undermined centralised authority, and the quantitative expansion of fixed assets, which increased the power of the

state apparatus. The quantitative growth of irrigation maximised central control, which was concurrently undercut by leaks, waste, and rivalry for water at every level. Both of these trends were responsible for the ecological deterioration in Central Asia. The same was true of the Aral fishery; workers and resources were primarily under the authority of a single state corporation, but attempts to improve fishing techniques were hampered by a lack of funding, lax labour standards, and theft. Understanding postsocialist transitions depends on this heritage. Even while I do not advocate for a singular "political ecology of postsocialism," the similarities and contrasts to the socialist fishery help us appreciate how the modern fishery has developed as a "pericapitalist" development in a complex environment of recent global linkages. These political ecologies are essential for comprehending both the causes of and implications of environmental change. I'll use ideas from environmental anthropology to help me think through these issues since they go beyond modernist presumptions of a single, subservient nature and instead examine how nature is "done" in various situations. In this way, Lien's ethnography of Norwegian salmon farming is exemplary. Despite the background seeming to be unitary, she demonstrates that when fish are included in diverse groups of people and objects, they emerge as distinct, if related, entities.

They may be biomass, sentient creatures, hungry, or even extraterrestrial invaders. While Lien is inspired by science and technology studies, my theoretical pathway to multiplicity will be, as I elaborate later in this Introduction, through Bakhtin and his concept of the chronotope. In what follows, I demonstrate how the Aral emerges at different points in history as a multiple object as it is entangled in different configurations of space and time, infrastructures, structures of value, and regimes of nature. In contrast to Lien's description of "a multiplicity of ever-emergent human-natural worlds that sometimes rub up against one another, sometimes cause controversy and friction, and sometimes unfold quietly side by side," numerous worlds cohabit less amicably in the post-Soviet setting. STS techniques are often framed within liberal political presuppositions. The idea that reality may be many is a democratising force. Contrarily, in Richardson's ethnography of a failed irrigation project in Ukraine, environmental activists' attempts to prove that the waterbody was poisonous and worthless and thus in need of environmental restoration were thwarted by strong interests that multiplied some connections while stifling others, resulting in the emergence of alternative, economically valuable versions of the waterbody: a drinking water reservoir and a fishery. The STS emphasis on human-nonhuman symmetry runs the danger of ignoring "which asymmetries among humans may affect which reality can exist,". Since there have been different versions of the Aral before it receded, during its recession, and since it has partially recovered, we won't just focus on the connections but also the disconnections, obfuscations, and cultivated ignorance that give some versions priority over others[9].

Ambiguous modernity

The complicated connection that Central Asian peoples have with modernity and modernist conceptions of nature offers environmental anthropology yet another field of study. Soviet modernization techniques left a legacy between postcoloniality and postsocialism, but they were also not an alien imposition. This is demonstrated by the recent historiography of the devastating famine that Bolshevik collectivization policies instigated in Kazakhstan in 1931–1934 when the 'backward' Kazakh nomads were to be modernised by being forcibly relocated to collective farms and their livestock requisitioned to feed urban centres outside Kazakhstan. In Cameron's environmental history, the Bolsheviks' inflexible economic ambitions neglected the ecological instability to which the adaptability of nomadic life had been adapted as they attempted to create the Kazakh people and the steppe ecosystem simultaneously. Existing clan structures were destroyed when the steppe fell into bloodshed during the horrific starvation that claimed the lives of around 1.5 million people. Cameron and Kindler both emphasise, however, that the famine solidified Soviet control by making the surviving wholly

reliant on the state. In fact, Kindler emphasises how collaboration, compromise, and quiet were necessary for survival. The networks required for famine survival, which were intricately linked to Party-state institutions, continued to exist in post-famine communal farms, or *kolkhozy*, or what Kindler refers to as "Sovietization by hunger." Similar to this, the recent environmental history of the Aral Sea basin emphasises the brutality of early Soviet administration as well as the extent to which Central Asians grew to value and demand infrastructures and technology for controlling nature. The apparently emancipatory Bolshevik goal to recreate the cotton plantation, the pinnacle of capitalist enslavement, is tragically ironic, as Peterson illustrates. She also demonstrates how what was really a continuation of the colonial-extractive enterprise came to be portrayed as freedom from the tyranny of both the dry climate and Tsarist control. Obertreis explains how the legitimacy of the entire Soviet project in Central Asia came to rest on irrigation, especially after economic growth accelerated in the 1960s, and how the proliferating technical and scientific networks that sustained the expansion of irrigation at any cost were deeply indigenised. The strong ambivalence regarding cotton that exists today in Uzbekistan stems from the fact that, despite its ecological and social harm, it is nevertheless seen as a symbol of modernity. More generally, with minimal growth of heavy industry, Central Asia's presence in the Soviet economy was predicated on the export of agricultural commodities and, particularly in Kazakhstan, minerals.

The social contract of socialism promised a gradual rise in living standards, especially as post-Stalinist economic growth saw the Soviet welfare state extend into isolated rural areas, but this tendency to redistribution did not quite counterbalance this quasi-colonial extractive relation. 'Expectations' became a part of modernity more and more. If space were ordered into "gridded matrices," as Brown's evocative term suggests, the grid would assist the movement of raw materials to the centre and the dispersed fruits of modernity back into the periphery. People began to live "gridded lives" as a result of this. There is no doubt that Soviet space was not uniform. Recent ethnography has revealed the many ways that Moscow and Central Asia were connected; certain places, which had more material significance to the core, were more fully integrated than others. The promise itself is important, even if the social contract's promise's fulfilment was extremely inconsistent. This murky enrollment in Soviet modernity included enrollment in Soviet ecological practises. Thus, Mostowlansky describes how the road made it possible to stock a mountain lake with Siberian carp in the 1960s; what was once a sacred lake is now a prized fishpond in his ethnography of Tajikistan's Pamir Highway, an engineering feat that materialised modernity in the Pamirs, "the roof of the world." There is a feeling that modernity has departed, as Mostowlansky vividly explains, mirroring Tsing's and Buck-Morss's allusions to the passing of aspirations of popular paradise East and West. However, Mostowlansky also demonstrates how enduring state discourses and modernization initiatives continue to construct bright futures based on fresh international ties. The popularity of large dam projects in Kyrgyzstan and Tajikistan now is proof of this. The official modernization plans of Kazakhstan also include projections of sovereignty.

The Kazakhstan-2030 strategy, which was initially developed in 1997 and gave a vision for the nation's long-term growth, was replaced by the Kazakhstan-2050 Strategy in 2012. These futuristic ideas provide economic stability within which individual consumerist utopias might be realised, not mass utopias. In contrast to the Soviet social contract, acceptance of authoritarian government hinges on modernization, which promises to provide the circumstances for wealthy private persons. This promise is crucially dependent on the oil industry, which continues to damage the environment across Kazakhstan. Modernization processes, however, both in the past and the present, are bidirectional. 'Gridded lifestyles' of Soviet modernism cannot be used to describe Central Asian socialities. In fact, Mostowlansky recalls how he first came upon the holy lake that had been transformed into a fishpond while journeying to pilgrimage sites that had grown beside the road. He contends that the road has

thereby reconstituted cultural forms that defy the teleology of modernization, reshaping local socialities in ways that go beyond the ideological aspirations of its architects. This is not meant to imply a contrast between obstinate "tradition" and modernity. According to Kandiyoti, Soviet "modernization without the market" led to a complicated change since the command economy's formal dysfunction forced the adoption of informal practises, which replicated pre-existing identities while also transforming them.

Similar to this, Abashin discusses how modernization processes incorporated "Sovietness" in daily life while also reconstructing indigenous cultural practises, which grew to be more recognised as national tradition, in his massive historical ethnography of a hamlet in Tajikistan. Abashin replaces dichotomies of modernity/tradition, compliance/resistance with a diverse image of Soviet Central Asian society as a "mosaic" or "kaleidoscope," demonstrating how people moved without conflict between spaces deemed "Soviet" and spaces deemed "our own," "national," or "Muslim." Féaux de la Croix explores the coexisting dams, holy sites, and alpine meadows in the Kyrgyz countryside in order to highlight the spatial ramifications of this ambivalent modernization. She describes a heterogeneous "moral geography" where various understandings of value and worth, frequently held by the same people, are anchored in sites that are variously associated with resource politics, religious belief, and the pastoral good life. She contrasts her material with the coherent landscapes described by ethnographers of Mongolia. If modernist dam projects seem to be situated in an abstract environment, this environment is really the "quality of a place," and as such, for Soviet nostalgics, it might even have a certain "romance." She comes to the conclusion that different areas "have more space-like or more landscape-like qualities" after balancing various theoretical approaches to space and place. What manifests is the presence of several approaches to space and environment that, although being seen as more "modern" or "traditional," are contemporaneous and mutually formative. As opposed to Lien's many salmon, for example, which all appear inside a recognisable modernist paradigm, although a diverse one, this is a distinct kind of multiplicity. Therefore, post-Soviet Central Asia forces us to think between the two: heterogeneous ways of doing nature within an ambiguous modernity where modernization processes have repeatedly reconstituted their 'traditional' other. Lien contrasts her practical ontological multiplicity to the radical alterity proposed in some non-Western contexts[10], [11].

CONCLUSION

The amazing story of resiliency, adaptability, and optimism that the Aral Region has experienced as it has gone through environmental destruction and post-Soviet development. This analysis of the crisis in the Aral Sea and its aftermath highlights the advancements achieved, the problems that remain, and the lessons that may be applied. The unsustainable water management methods used in the Soviet period that led to the Aral Sea catastrophe have permanently altered the region's geography and population. Ecosystems and populations were affected by a string of environmental and health problems brought on by the sea's catastrophic shrinking.

The salty dust storms that swept over the dried-up bottom came to represent the sorrow of the area. However, problems still exist. The area is still dealing with the negative health effects of the drying up of the Aral Sea as well as the economic setbacks brought on by the demise of the fishing industry and changing lives. Additional difficulties are created by continuous water shortages and climate change. As we draw to a close, we applaud the efforts achieved to better the lives of individuals impacted by the crisis as well as the work made in reestablishing the natural balance of the Aral Region. We understand that the voyage is far from done, however. The Aral Region is evidence of the persistent dedication of people, communities, and countries to preserve the environment and create a sustainable future, despite what may seem to be insurmountable obstacles.

REFERENCES:

- [1] M. Spoor, "The Aral Sea Basin crisis: transition and environment in former Soviet Central Asia," *Dev. Change*, 1998, doi: 10.1111/1467-7660.00084.
- [2] F. Löw *et al.*, "Mapping Cropland abandonment in the Aral Sea Basin with MODIS time series," *Remote Sens.*, 2018, doi: 10.3390/rs10020159.
- [3] K. Zmijewski and R. Becker, "Estimating the effects of anthropogenic modification on water balance in the Aral Sea watershed using GRACE: 2003-12," *Earth Interact.*, 2014, doi: 10.1175/2013EI000537.1.
- [4] M. Schlüter *et al.*, "Enhancing resilience to water flow uncertainty by integrating environmental flows into water management in the Amudarya River, Central Asia," *Glob. Planet. Change*, 2013, doi: 10.1016/j.gloplacha.2013.05.007.
- [5] K. D. White, "Nature and economy in the aral sea basin," in *The Aral Sea: The Devastation and Partial Rehabilitation of a Great Lake*, 2014. doi: 10.1007/978-3-642-02356-9_12.
- [6] N. Koch, *The Geopolitics of Spectacle: Space, Synecdoche, and the New Capitals of Asia*. 2018. doi: 10.1080/15387216.2019.1689835.
- [7] C. Bichsel, "Liquid Challenges□: Contested Water in Central," *Sustain. Dev. Law Policy*, 2011.
- [8] F. Löw, E. Fliemann, I. Abdullaev, C. Conrad, and J. P. A. Lamers, "Mapping abandoned agricultural land in Kyzyl-Orda, Kazakhstan using satellite remote sensing," *Appl. Geogr.*, 2015, doi: 10.1016/j.apgeog.2015.05.009.
- [9] P. L. G. Vlek *et al.*, "Restructuring land allocation, water use and agricultural value chains. Technologies, policies and practices for the lower Amudarya region," in *Restructuring land allocation, water use and agricultural value chains*, 2015. doi: 10.14220/9783737002974.15.
- [10] Y. G. Turdybekova, I. L. Kopobayeva, and B. Z. Kultanov, "Comparative assessment of women's reproductive health in the areas bordering with the aral sea region," *Open Access Maced. J. Med. Sci.*, 2017, doi: 10.3889/oamjms.2017.052.
- [11] G. Stulina and O. Eshchanov, "Climate change impacts on hydrology and environment in the Pre-Aral region," *Quat. Int.*, 2013, doi: 10.1016/j.quaint.2013.07.015.

CHAPTER 5

A COMPREHENSIVE REVIEW OF LOCATING THE ARA

Thiruchitrambalam, Professor

Department of ISME, ATLAS SkillTech University, Mumbai, Maharashtra, India

Email Id- thiru.chitrambalam@atlasuniversity.edu.in

ABSTRACT:

The exciting voyage to Kazakhstan's old capital, a city that encapsulates the country's rich history, cultural variety, and hopes for the future, is described in this abstract. This city, which was once the country's political headquarters, has experienced a remarkable change, fusing its Soviet past with modernity to become a vibrant centre of art, culture, and innovation. This investigation dives into the captivating tapestry of encounters that visitors may expect in this thriving city. The adventure starts with a brief introduction to Kazakhstan, a country famed for its expansive landscapes, which include endless steppes, imposing mountains, and the Caspian Sea. The former capital, a city that captures the spirit of Kazakhstan's development, will now be explored. When visitors arrive, they are met by a cityscape that skillfully blends Soviet-era architectural wonders with contemporary skyscrapers and iconic sites. Visitors may experience a sensory feast thanks to the city's thriving cultural sector, various gastronomic offers, and busy markets. The investigation also focuses on the city's historical importance, including its position as the former capital of the Soviet Union and its current standing as a major cultural and commercial hub. It displays how the city has upheld change and growth while preserving its legacy. Travellers are encouraged by the abstract to fully experience the city's many cultural offerings, which range from exhibits of modern art to traditional music and dance events. It also emphasises the city's function as a hub for technological innovation, drawing businesspeople and visionaries from all over the globe.

KEYWORDS:

Ara, Embracing Innovation, Locating Technological Innovation.

INTRODUCTION

The biggest landlocked nation in the world, Kazakhstan is a territory of astounding variety, with horizon-spanning steppes, towering mountains to the east, and the Caspian Sea to the west. A former capital city that perfectly captures Kazakhstan's distinctive fusion of history, culture, and modernity is located in the centre of this enormous country. This introduction cordially welcomes you to go to the former capital of Kazakhstan, a city that has been essential to the development of the nation. The legacy of the Soviet period coexists with the ambitions of a vibrant, forward-thinking country in this metropolis where the past and present collide. Travellers are welcomed with a cityscape that depicts a tale of evolution as they arrive. Soviet-era architectural wonders juxtapose with contemporary skyscrapers, reflecting the city's dedication to upholding tradition while embracing innovation. Its streets are filled with the noises of many cultures, the fragrances of delectable cuisine, and the dynamic energy of its inhabitants. This former capital is now a thriving city.

This city's historical importance is obvious. During the Soviet period, it formerly functioned as Kazakhstan's political centre, giving testament to the nation's complicated past. Today, it has developed into a cultural and economic powerhouse that attracts both tourists and businesspeople. This investigation digs into the enthralling variety of encounters that visitors might expect in the former capital of Kazakhstan. The city's cultural offerings range from displays of modern art to traditional music and dance events. Additionally, it is a centre for

innovation and technology, drawing thinkers and producers from all over the globe. In essence, this voyage offers a chance to learn more about Kazakhstan, a country that stands at the nexus of history and development. The former capital of Kazakhstan offers a journey full of discovery, wonder, and a profound appreciation for the rich heritage and limitless potential of this remarkable country, whether one is exploring its historical landmarks, savouring its culinary delights, or engaging with its vibrant arts scene. Travellers are drawn to the former capital of Kazakhstan by its distinctive fusion of tradition, modernity, and history. While the city's busy streets and vibrant arts scene can be felt the pulse of the present, the echoes of the past can be heard in the massive Soviet-era architecture and historical sites.

Travellers will find a tapestry of experiences as they explore this dynamic city that perfectly captures Kazakhstan's growth. Through traditional music and dance performances, the city's cultural variety is honoured and a window into the rich history of the country is opened. In the meanwhile, galleries and exhibits of contemporary art highlight the ingenuity and inventiveness that characterise contemporary Kazakhstan. This city is a monument to Kazakhstan's future as well as its history and present. As a hub for innovation and technology, it attracts business owners, startups, and thought leaders from all over the world, generating a vibrant environment for innovation and development. The visit to the old capital of Kazakhstan is an invitation to discover a place that represents the tenacity, adaptation, and ambition of the country. It is a location where the past and the present coexist, providing visitors with a rich experience that honours the past, welcomes the present, and looks forward to a future full of hope and opportunity.

DISCUSSION

In November 2012, I took a plane to Almaty, the former capital of Kazakhstan. On the aircraft were members of Kazakhstan's emerging middle class, who had benefited from the nation's oil riches. I spent some time in Almaty, where between glass office buildings and opulent apartments, the old grid-patterned Soviet city was still just about readable. I discovered that "the Aral Sea" piqued the interest of elderly locals who recalled its notoriety in the 1980s and 1990s. The perestroika-era concern for the environment had mostly dissipated, and the Aral area was peripheral to most conceptions of modern Kazakhstan due to current worries about the economic crisis. My Kazakh instructor waxed lyrical about how I would discover the most "authentic" Kazakhs, with their customs still intact, while simultaneously warning me of the hazards of visiting such a filthy location and recommending that I wear a mask at all times. While in Almaty, I looked towards the imposing, dark-gray structure that houses the state archives in search of information and depth on the Soviet past, which is still mostly taboo in today's official discourse. Indeed, despite the fact that the Aral Sea, nuclear testing, and Virgin Lands project are mentioned in passing, this does not make a compelling anti-Soviet postcolonial narrative. After all, in a nation with a varied ethnic population, the government has refrained from fostering strong ethnonationalist feeling. In addition, the country's elite and the then-president Nazarbayev all advanced via the Soviet system. Therefore, although assertions of cultural authenticity and continuity based on symbols from the pre-Soviet past are used to justify Kazakhstani statehood, there is little of a narrative arc embracing the recent past. Almost little mention of Soviet legacies is made in Kazakhstan 2030, and none is made in Kazakhstan 2050. The dominant orientation is towards the future: Astana, Kazakhstan's brand-new, gleaming capital since 1997, is where sovereignty is envisaged, promising a prosperous future for an imagined collectively.

I took the train from Almaty to Aral'sk, a trip that took 30 to 40 hours and crossed 1,600 km of snow-covered steppe and semi-desert. Large families travelling to weddings, shift workers travelling to or from work in uranium mines or oilfields, students, parents visiting children working in oil on the Caspian, and migrants from Astana travelling to see relatives in

Qyzylorda were among the other passengers. Over the course of the next year, I made this trip many times. Conversations encapsulated all the ambiguities of Kazakhstan in the early 2010s: the beauty of Astana, the pervasive corruption, the morality of the Soviet past, the potential for a bright future if Kazakhstan could diversify its economy, the necessity for the younger generation to abandon Soviet-era practises, and the threat and opportunity posed by the country's growing dependence on China. Sometimes, when we travelled across the severely salinized terrain of Qyzylorda Oblast, elderly people would discuss the harm caused by the Soviet heritage, including not just the eradication of the nomadic way of life but also the harm done to the Aral Sea. The raion core is Aral'sk, a town with 30,000 residents located 450 km from the oblast capital, Qyzylorda. It resembles a typical tiny post-Soviet town in many aspects. Old Soviet structures are deteriorating, and shuttered enterprises are rusting. There is sand everywhere. While cows feed on trash piles, camels walk through the neighbourhoods. Both movie theatres and stores are absent[1], [2].

Despite the often-depressing appearance of the public area, there is a lively market and a variety of pubs and cafés. In 1990, a sizable desert aquifer's clean drinking water was transported here. It was piped to specific homes in the middle of the 2000s, and it is currently available in every hamlet in the raion. In Aral'sk, there is no central sewage system, and while piped gas was promised, it wasn't available when I was doing my research. Due of Aral'sk's remote location inside Kazakhstan, there is an impression that it is unemployed. Astana, on the other hand, is conspicuously noticeable, represented on billboards all across the town and broadcast into homes in the daily TV news, serving as a continual reminder of Aral'sk's marginality and what its citizens could aspire to. Throughout my fieldwork, I lived with a variety of families. My duties as a visitor at my first hostfamily's farm included feeding the animals, cleaning up after them, and saving the manure for firewood. My landlord and landlady both had informal jobs as taxi drivers. My landlord worked in school administration. Later, as one of the few non-Kazakhs still living in Aralsk, I shared a home with a retired Russian couple. During my last trip, I shared a home with an accountant and a veterinarian. My hosts, their family members, acquaintances, and coworkers, as well as other people I came to know, provided the majority of the information I have on the town. We spoke in the kitchen over several bowls of tea while Kazakh or Russian news was being broadcast in the background. Daily arrivals and departures of family members, friends, and coworkers provided insight into the connections people maintain within the town and beyond, as well as the various ways in which they do so. For example, one day we might be celebrating May Day on the steppe with a colleague while drinking beer; the next, we might gather with family and the Mullah for a feast of *bauryrsaq*, fried carp, sausage and the traditional Kazakh dish *besbarmaq*.

I would ride on a creaking Soviet-era bus filled with bags of wheat, potatoes, and other supplies to the hamlet of Bögen. The bus ascends to the main road above the town, where there is a sizable cemetery, as it departs Aralsk. Everyone says "umin" and "Amen" while wiping their cheeks. Modern container trucks rumble by as the bus merges onto the major route south, the Western China to Western Europe motorway that is still under construction. Through the swaying dunes, oil-filled goods trains go. Settlements are few and tiny, except from the sizable herding community of Aralqm. The bus arrives in the settlement of Qamystybas, which is located beside the same-named lake, which is a component of a vast delta lake system, 100 km from Aral'sk. Cereal fields were present here until the seventeenth century, when spring floods caused irrigation systems to fail, causing the lakes to develop.⁹ At Qamystybas, a road splits off in the direction of Raiym, a former kolkhoz situated between a lake and a precipitous slope of mud and gravel. The remnants of a fort constructed in 1848 by Tsarist explorers can only about be seen at the summit of the hill. A vista opens out over vast stretches of linked lakes that are bright blue among the yellows and greys of the nearby grassland. To get a water pipe from the Syr Dariya to Aral'sk, Nikolai Patsha built a mud dike

across the marshes. The view extends to Lake Aqshatau, which is where the ülken ata of the Zhaqaiym lineage is buried. People from all across the nation go to the shrine to pay their respects. Instead of travelling to Raiym, my bus makes a left onto a route that runs across[3], [4].

Lake Qamystybas' southern coast. Some claim that the recent tarmacking of this route is related to the upcoming oil extraction. The ruins of the zemlianki, or mud huts, which were used as dwelling when Kazakhs were sedentarized, may be found a few hundred yards from the road. Stalin kolkhoz was created in the 1930s and subsequently abandoned. The next destination is the state fish hatchery in Qoszhar, which was founded in 1966 and is located on the banks of Qamystybas. The bus then arrives at Amanötkel, a sizable community where grazing, fishing, and minor farming are the main sources of income. This is syr land, where the soil is ideal for cattle since it is not salty. Arid qyr country surrounds the northern seashores, towards Zhalangash, Tastübek, and Aqespe, distant from the river's refreshing impact. The terrain is highly salinized, covered in wormwood, and good for camel grazing. The bus now travels through undulating grasslands away from the river and lakes. We go 20 km beyond Lake Tshchy's easternmost point. When the weirs along the Syr Dariya were refurbished as part of the Small Aral restoration project, Tshchy was also restored. Here, millet was planted up until the 1960s, but now the area surrounding the lake is completely barren.

The bus ascends a hill into Bögen, a community of 140 homes, beyond the lake; from the hill, a visitor formerly could see the sea far out to the west. A battle monument and a shrine to Zhamanköz, a minor lineage's ülken ata, are located at the bottom of the hill. The village cemetery looks out across Tshchy from a high elevation behind the hamlet. The scrubby sand meets a strip of salinized mud, which was originally the harbor's bottom, at the base of the hill. A dilapidated building that originally served as the Bögen State Fishing Base's administrative centre sits nearby. In this complex now is the akimat. On a wall, the painted Kazakhstan-2030 emblem is starting to fade, but a banner shows Kazakhstan2050, the new future that has taken its place. Electricity has been available in Bögen since the Soviet era, although piped water is more recent. All of the communities in the area have phone lines now, however cell coverage is still spotty. As in the Soviet era, fishing is Bögen's primary economic activity. A rugged trail leads 12 km to the shore. The community has benefited financially from the fishery's resurgence since 2005; most residents now own UAZ jeeps, and many have constructed new homes. After Bögen, the deteriorating tarmac ends, and the bus turns south into Qarashalang. A freshly restored sluice at Aghlaq, where the road crosses the river after Qarashalang, controls the river's flow. A dam was built here during the Soviet era when the sea was declared dead, allowing the trickle of water in the river to irrigate lakes farther upstream. Qaratereng, a sizable settlement that previously sat among a sea, lake, and marsh, is located 20 km to the south; now, only a few tiny lakes remain. The gravel route immediately heads west along the Kökaral dike towards Aqbasty after Qaratereng. The ruins of three deserted villageszyn Qaiyr, Qasqaqlan, and ialy can be found in the south, distant from water supplies, along the ancient coastline and on former islands. Depending on the weather, it takes three to four hours to go from Aral'sk to Bögen, and another hour to reach Qarashalang. Before, they were all linked to Aral'sk via water, and during the Soviet era, Bögen, Qaratereng, and ialy were also connected by air[5], [6].

Fishing and daily life

I stayed with Zhaqsylyq, a significant player in the modern fishing, in Bögen. In a sizable home close to the ancient seashore, his family resides. The home has a courtyard that also houses the sarai, a hut that serves as summer living quarters. Living with their oldest son Zikön and his wife Gulnar, who serves as keln and is in charge of the majority of homework, Zhaqsylyq and his wife Gulzhamal. Maqsat and Mkhtar, two younger, unmarried sons, also

reside at home. All of the girls are married, the majority of them outside of Bögen, as is typical in an exogamous culture. When I was in the hamlet, I mostly had access to male worlds. During the fishing seasons, I would often follow Zhaqsylyq to the receiving station where I would watch fish being turned in, converse with fishermen as they sorted their nets, and assist in moving fish bags. When I was bored, I would sit on the ground and eat sunflower seeds, a habit that makes time stand still. My first winter was spent drinking in Zhaqsylyq's sarai while fisherman split up fish, sorted their nets, and asked me questions about costs in the UK.

I was informed that fisherman would be "relaxing" during the summer months when fishing was difficult. However, except for the occasional delicious *besbarmaq* of freshly fattened lambs, I have never had a more stressful time than I had during those scorching days in Bögen. For example, hundreds of bricks had to be made from sand, clay, and reeds in the baking sun while Enrique Iglesias sang from someone's cell phone. Another building project required dusty seaweed to be collected from the dried-up seabed and then laid on the roof as insulation with the help of many men. With Zhaqsylyq's boys, their fellow fisherman, two of their cousins, Bolat and Zhüman, Zhaqsylyq's *bazha* from Amanötkel, Müslm, and a neighbour, Aikeld, I saw the procedure of placing nets through the ice early on in my research. As usual, Gulnar rudely repeats "Tr!" to rouse us in the morning. We set off after consuming some bread, butter, and tea and dousing ourselves in many layers of clothing. The eldest passenger, Müslm, sits in the front of Zikön's UAZ while the rest of us are crammed into the rear, uncomfortable on a board that hops about as we bounce through sand and snow. Smoke from cigarettes, the scent of fish, Kazakh pop music blasting from an MP3, and Russian expletives directed at the inconvenience of an additional body in the confined UAZ fill the air.

. We come across another set of fishermen and there is raucous conversation out on the water, where it is extremely cold with a howling wind. The youngest brother, Maqsat, provides a token helping hand in shovelling ice out of the hole they've just cut in the ice. They claim that yesterday was a bad day for them. We continue driving and halt five km offshore. The most experienced fisherman sip vodka. The location of the net-laying is discussed by everyone save the two youngest brothers. We have a petrol-powered drill from the Soviet period that is being towed behind the UAZ, unlike other fisherman who use a portable metal rod to break the ice. Using a fuel burner, ice is removed from the drill and pole. At 20-m intervals, Aikeld and Zikön bore holes through the 45-cm-thick ice. In the meanwhile, a long pole has been dropped into the water, and Zhüman uses a two-pronged fork to move it beneath the ice. Bolat retrieves the string with the hook after it has been dragged through the hole in the pole, and Mkhtar then uses it to draw the net through the holes. The net is a fixed gillnet of 100 metres, and stones are fastened to one edge to anchor it. Maqsat and Müslm feed the net into the water at the first hole while waiting. Although Müslm is the oldest, Maqsat conducts the most of the labor-intensive task and just sometimes checks for tangles. The whole net has been dragged into the fifth hole. To serve as markers, Maqsat and Mkhtar set some sticks in the snow and fasten them to the end of the net with some twine. The following net is then started. The whole procedure is smooth. Operation direction is absent. When a net is dragged through, this is signalled by an *OOO* or *Boldy!* gesture or yell. Today, 12 nets, each 100 metres long, are set in a line, and tomorrow, eight more nets will be laid in their respective holes[7], [8].

Tangled nets

Such interaction with the environment is one way. It requires talent and local knowledge, which are socially developed by regular physical interaction with the water. There is some consistency to fishing as a way of life even if it has evolved significantly through time. This everyday connection with the environment is the foundation for fishermen's understandings

of the environment and of environmental change. The Aral fish are connected to Chinese net producers and German customers by a web of linkages, but this physical involvement with the ecosystem is just one of many. Indeed, as Howard demonstrates in her ethnography of Scottish fishermen, the varying possibilities and restrictions of capitalist markets shape and influence everyday lived interactions with the sea. I will now provide my perspective on the interaction between people, materialities, and political economies by examining this web of links. Two or three fishermen use the net, a material technology, to separate fish from their sea environment. The fishermen, who rely on these fish for their living, are likewise entangled in a variety of human dependencies. For the privilege of fishing and compensation, they are reliant on their employers. While fishermen rely on female family members for various types of work, such as cleaning certain fish for home use, fisherman's wives and children also depend on fishing for a living in Bögen. Fishermen's families further rely on the income from fishing to cover ceremonial expenses. Beyond Bögen, other people rely on fish for a different kind of employment at the Aral'sk and Qazaly processing facilities. Regardless of their connection to the fisheries, a large number of people eat fish, including the protein and vitamins into their diets while partaking in meals with loved ones. Even though meat is usually favoured, my informants said they especially liked fatty fish like carp and bream.

A local variation on a Kazakh dish, carp *besbarmaq*, and bream *qarma* are two more local favourites. Or, as was common in the old USSR, smoked fish may be consumed with beer. Demand from the Commonwealth of Independent States and, for zander, from Germany and Poland, however, dominates the market. Zander is a "capitalist fish" since it can be filleted and served in restaurants, but the Soviet man loves to nibble on smoked bream full of bones, as my Russian host Aleksandr said. Thus, fish serve as a connection between several local realms, including their ecology, Bögen, Aral'sk, and German stores. The meaning of environmental change is shaped by these connections, which include people and fish in various ways and to varying degrees. Without the German supermarkets, the return of the sea would have a different connotation. Moving beyond oversimplified ideas of "resource dependency" requires us to consider entanglements as the tangled mutual relationships between objects and people across many sizes. Additionally, it enables us to include the material's agency. The Norse term for seaweed, which entangles tools like nets, oars, and rudders, is where the English word "tangle" originated. In the Aral Sea, shalang is a common kind of seaweed. Fishermen should try to stay away from setting their nets where there is shalang. Even yet, heavy winds may cause nets to shift and perhaps entangle themselves in shalang.

This is what Hodder refers to as "the unruliness of things": they are beyond of human beings' complete control. Beyond human purpose, the net entangles human interactions with natural forces. Different processes each have their own logic and rate of development, but since they are intertwined, they have varying effects on one another. If the net is a monofilament "Chinese" net, as most are, it may be thrown away since it was inexpensive. But since it is entangled with the shalang, it won't disappear. Due to the cheap cost, the duration of the fishermen's interaction with the net is different from the physical durability of monofilament nylon. Regardless of human purpose, knowledge, or usage, it will continue to entangle fish. Scientists fear that fish populations may be reduced as Chinese nets grow. Chinese nets are thus prohibited because they are a source of regulation outside of the water, resolving disputes between fishermen and inspectors, and they are erratic in the water. Chinese nets continue to be used and abandoned despite the fact that they are no less erratic on land than they are in the sea. Fishing revenue will decrease if catches decrease and fish populations are decreased. However, given that there are different levels of "tautness" within an entanglement, German customers of Aral fish would just purchase their zander elsewhere. Even fisherman would not go hungry if supplies ran out since the majority also kept cattle, spreading out their environmental impacts among both fish and animals. Fish catches in the

restored sea continue to increase despite the extensive usage of Chinese nets, which is itself a dependent and ever-changing result of intertwined hydrological, biological, and human histories across the whole Aral basin[9], [10].

Materiality and discourse

Entanglement is a concept used by environmental anthropologists to dispel the nature/culture divide that has dominated Western thinking for centuries. By focusing on the interactions between other creatures and their varied realities, or "lifeworlds," we pierce the myth of human uniqueness and decentre the human subject. The ethnography that follows has a great deal of sympathy for this endeavour. After all, the destiny of the Aral speaks volumes about what occurs when we approach nature as an entity that can be manipulated by humans. By paying attention to the relational materialities of the net and seaweed, we can understand how the net entangles fisherman in 'more-than-human' worlds, as the summary above makes apparent. I do not consider the net merely as a piece of technology for dominating nature. Though the realisation that everything is interconnected degrades the sovereign human subject, I continue to concentrate on human discourse. I see entanglements as discursive as well as material because via our spoken and written social utterances, we create worldviews. The sea now has been tangibly moulded by Soviet conceptions of nature and world catastrophe; thus, these pictures are important. Discursive entanglements are unresolved and unfinished; things are "conceptualised and evaluated variously" within numerous theoretical frameworks and are seen from diverse "horizons." Chinese nets are positioned inside a discourse about Chinese threat in Aral'sk if they are considered to be a subject of regulation in the authoritative discourse of the state. They continue to be utilised because, in fishermen's eyes, they are a practical, affordable, and effective technique. These perspectives are not static; rather, they are affected by processes of societal, political, and economic development.

It was compared the method to a Lien's book that represents a "more-than-human" anthropology. Norwegian salmon farmers also struggle with tangled nets, as the Aral fisherman do. Lien explains how algae development undermines the confinement role that people attribute to nets, which must be remedied by setting the nets out to dry in the sun: Instead, the netting's job develops in accordance with the temporal ups and downs of both human and biofuel labour. Each of these diverse techniques depends on and enlists either netting fibres or the sun and wind to achieve their opposing ends: nettings that are either relatively "dead," permeable, and unfavourable to salmon growth or relatively "lived," alive with algae and permeable and favourable to salmon growth. By adopting the vocabulary of human purpose, Lien highlights the agential capabilities of objects while downplaying human agency. The social is expanded to include the more-than-human as her "view from nowhere" claims a symmetry between human and nonhuman worldmaking powers. My main worry is that this 'view from nowhere' would end up leaving little room for the subjective lives of our human informants. In my opinion, it is possible to decentre the exceptional human subject while still paying attention to the unique aspects of the human experience in a world beyond of our control. Then, if I take seriously how objects might exercise agency in connection to human beings, I will be examining how things do so as they are mediated by speech.

I choose the Soviet theorist Bakhtin as my model because he was keenly aware of the materiality of language and the dialogical link that exists between people and their environment.¹⁰ Bakhtin developed his ideas about dialogism, the non-finalisability of discourse, and the numerous voices present in every utterance amid the intellectual ferment of 1920s Leningrad and the progressive monopolisation of discourse by the Party state over the late 1920s and 1930s - ideas that resonate with modern environmental anthropology concerns about multiplicity, indeterminacy, and polyphony. Indeed, Bakhtin appears to talk of a "vibrancy" of matter in his criticism of the way scientific language treats things as "mute

objects, brute things." Bakhtin would assert that there are no unsaid objects, in contrast to new materialists who emphasise on the autonomy of matter. He is aware of nature's creative and generative potential, but he also believes that everything of nature is dialogually mediated. This is not meant to suggest a break between the human subject and the material world; rather, Bakhtin maintains that the speaking subject is socially and physically sited in the world rather than seeing discourse as a space of abstract meaning. The body sits between word and world; for Bakhtin, it is continuous with it rather than being shut off from it as a self-contained entity, as he was well aware from his experiences with illness and infirmity. Consequently, if I continue to place a greater emphasis on the speaking subjects than is typical in modern environmental anthropology, I will approach these subjects as taking shape through their actual, bodily interactions with a changing environment as well as through their shifting social positions within Soviet and post-Soviet political economies[11], [12].

Chronotopes and political economy

I find Bakhtin's 1937–1978 work on the "chronotope," in which he examines the structuring roles of time and place in storytelling, to be especially influential in considering how our perception of the world is mediated. Although the essay's primary focus is on the monumental history of the book, I contend that it also has the potential to link three other areas that environmental anthropology frequently treats separately: embodied experiences of entangled lifeworld's, material historical change, and discursive representation. In the course of the essay, Bakhtin investigates how different constellations of space and time in narrative produce various types of people, action possibilities, causality structures, and, less frequently noted, various conceptions of nature. Thus, he demonstrates in one passage how novels from the eighteenth and nineteenth centuries contrast a great but abstract world where people are out of contact with each other, egotistically sealed-off from each other, greedily practical, where labour is differentiated and mechanised, and where objects are alienated from the labour that produced them with an idyllic, particularised space and time that generates an organic connection between persons and nature. It was compared and contrasted fishermen's narratives built around tughan zher, or motherland, with those built around the abstractions of Soviet programmes. The importance of Bakhtin's thesis to environmental anthropology, however, extends beyond how time and place structure representation. Bakhtin tells us in a fascinating footnote that he first learned about the chronotope in a 1925 speech by the scientist Ukhtomsky.

According to Ukhtomsky, living things have different experiences with time and space, which affects how they perceive and interact with their surroundings. Bakhtin was obviously profoundly moved by Ukhtomsky's interpretation of Einsteinian theories concerning relativity. Bakhtin was fascinated by recent advancements in biology. Bakhtin seems to be proposing that reality is relative and is perceived heterogeneously via the many experiences of time and space that different bodies have, as he explains in a second footnote. The parallels with modern anthropology's focus on many lifeworld's are startling. What the essay adds to this body of literature is the function of political economy in rearranging not just periods and places but also reality's embodied experiences. Importantly, processes of material historical change that reorder time-space constellations and reconstitute people, labour, nature, and value are connected to the Ukhtomsky-derived time and space as the "forms of the most immediate reality" and the cultural representations Bakhtin tracks in the novel. Bakhtin demonstrates how the rise of class society is accompanied by the rising abstraction of time, space, and environment. Such historical transformation processes were nothing new to Bakhtin.

He had been banished to Kazakhstan before authoring his chronotope essay, where he worked as an economist in a District Consumers' Union and published an article in 1934 on the rise in consumer demand among newly collectivised agricultural labourers. When Kazakhs were

forcibly included into the Soviet gridded territory during collectivization, kolkhozy were just recovering from a severe famine. During this time, the parents and grandparents of my informants were required to provide the state with increasing amounts of fish while their livestock was seized and the supply of food dropped. It is hardly unexpected that Bakhtin avoided discussing the hunger in his paper on growing consumer demand. He did not, however, acknowledge the benefits of collectivization, and it is obvious from reading between the lines of his writing that kolkhozniks were in a miserable situation. Bakhtin discusses his idol Rabelais's healthy chronotope of organic development based on direct proportionality of body, world, and value, where everything was brought into organic connection with one another, in his essay on chronotopes, which was published later in that turbulent decade. The Renaissance author did so in order to contest official mediaeval worldviews that were founded on "false connections that distort the authentic nature of things" and "false hierarchical relationships" between things. There are clear historical parallels to Bakhtin's own age, when value hierarchies were being formed that emphasised the quantitative expansion of commodities apart from lifeworld entanglements.

What I infer from this is that the universe appears as many inside heterogeneous orderings of time and space, but that not all 'versions' are equal or equally accurate. Modernist abstractions of nature as a controllable domain of discrete entities and of human bodies as interchangeable units of labour misrepresent lifeworld entanglements, but these abstractions, whose dominance is reproduced by strong interests, are materially consequential, reshaping natural environments and human relations with them. This insight is relevant to contemporary environmental anthropology. Although there are several versions of the Aral that are revealed in the ethnography that follows, some of them arose through "false connections that distort the nature of things," jostling uncomfortably against one another as strong interests determined which version had the most potential to exist. I will therefore pay close attention to political economy, specifically how fish are abstracted as different kinds of value, misrepresenting their aquatic connections to the marine environment and materially reshaping them, as the Soviet plan and post-Soviet market variously order times and spaces. I'm going to switch to the fishing right [13], [14].

CONCLUSION

Travellers are immersed in a city that captures the spirit of Kazakhstan's rich legacy, vibrant culture, and forward-thinking ambition as they make their way to the former capital of Kazakhstan. As we draw to a close, we consider the fascinating encounters and abiding impressions of this extraordinary city. The former capital of Kazakhstan is a city of contrasts, where impressive buildings from the Soviet period coexist with contemporary skyscrapers to illustrate the evolution of a country. It is a vibrant city where history and modernity combine to create a distinctive fusion.

The city's cultural scene is a sensory feast, with performances of traditional music and dance honouring Kazakhstan's rich past. Contemporary art exhibits highlight the country's inventiveness and originality, and its role as a centre of technology and business exemplifies its forward-thinking nature. In addition to providing a window into the city's history and present, this voyage also provides a view into its future. It is a city that best represents Kazakhstan's fortitude, flexibility, and desire for development. Visitors go with a deep respect for the exceptional country's tremendous potential, its kind people, and its rich tapestry of experiences. The historic capital of Kazakhstan encourages visitors to discover, take in, and love a city that reflects the history, present, and future of the country. It is evidence of Kazakhstan's development and its will to make its mark on the world scene. This tour serves as a reminder that Kazakhstan values its history, is a lively place in the present, and has a bright future ahead.

REFERENCES:

- [1] A. Agus, "Gambaran Sosial Ekonomi Masyarakat Pesisir di Sulawesi Selatan," *TECHNO J. Penelit.*, 2018, doi: 10.33387/tk.v7i01.592.
- [2] A. Mager, "'White liquor hits black livers': Meanings of excessive liquor consumption in South Africa in the second half of the twentieth century," *Soc. Sci. Med.*, 2004, doi: 10.1016/j.socscimed.2003.12.005.
- [3] N. Aras and D. Aksen, "Locating collection centers for distance- and incentive-dependent returns," *Int. J. Prod. Econ.*, 2008, doi: 10.1016/j.ijpe.2007.01.015.
- [4] N. Aras, D. Aksen, and A. Gönül Tanuğur, "Locating collection centers for incentive-dependent returns under a pick-up policy with capacitated vehicles," *Eur. J. Oper. Res.*, 2008, doi: 10.1016/j.ejor.2007.08.002.
- [5] A. Cilacı Tombuş, N. Aras, and V. Verter, "Designing distribution systems with reverse flows," *J. Remanufacturing*, 2017, doi: 10.1007/s13243-017-0036-4.
- [6] H. Küçükaydn, N. Aras, and I. Kuban Altinel, "A leaderfollower game in competitive facility location," *Comput. Oper. Res.*, 2012, doi: 10.1016/j.cor.2011.05.007.
- [7] N. Aras, A. Korugan, G. Büyüközkan, F. S. Şerifoğlu, I. Erol, and M. N. Velioğlu, "Locating recycling facilities for IT-based electronic waste in Turkey," *J. Clean. Prod.*, 2015, doi: 10.1016/j.jclepro.2015.02.046.
- [8] H. Küükaydin, N. Aras, and I. Kuban Altinel, "Competitive facility location problem with attractiveness adjustment of the follower: A bilevel programming model and its solution," *Eur. J. Oper. Res.*, 2011, doi: 10.1016/j.ejor.2010.08.009.
- [9] A. S. Klijian, "Agar blue localization of small pulmonary nodules and ground glass opacifications for thoracoscopic resection," *J. Thorac. Dis.*, 2016, doi: 10.21037/jtd.2016.06.55.
- [10] I. K. Altinel, E. Durmaz, N. Aras, and K. C. Özkisacık, "A location-allocation heuristic for the capacitated multi-facility Weber problem with probabilistic customer locations," *Eur. J. Oper. Res.*, 2009, doi: 10.1016/j.ejor.2008.10.014.
- [11] N. Aras, I. K. Altmel, and M. Orbay, "New heuristic methods for the capacitated multi-facility weber problem," *Nav. Res. Logist.*, 2007, doi: 10.1002/nav.20176.
- [12] A. Özcan, B. Türkbey, P. L. Choyke, O. Akin, Ö. Aras, and S. K. Mun, "Interactive Feature Space Explorer© for multi-modal magnetic resonance imaging," *Magn. Reson. Imaging*, 2015, doi: 10.1016/j.mri.2015.03.007.
- [13] R. J. Eustance, S. A. Bustos, and R. F. Schleif, "Locating and lengthening the interdomain linker in AraC protein," *J. Mol. Biol.*, 1994, doi: 10.1006/jmbi.1994.1584.
- [14] B. Boyaci, I. K. Altinel, and N. Aras, "Approximate solution methods for the capacitated multi-facility Weber problem," *IIE Trans. (Institute Ind. Eng.)*, 2013, doi: 10.1080/0740817X.2012.695100.

CHAPTER 6

A CENTURY OF DISASTERS BROUGHT ON BY THE ARAL SEA AND CENTRAL ASIA'S MODERNIZATION

Suresh Kawitkar, Professor

Department of ISME, ATLAS SkillTech University, Mumbai, Maharashtra, India

Email Id- suresh.kawitkar@atlasuniversity.edu.in

ABSTRACT:

This summary offers a perceptive picture of the sad collapse of the Aral Sea and its significant contribution to Central Asia's development. Due to unsustainable water management practises, the Aral Sea has seen catastrophic alterations over the course of a century, with dire environmental, economic, and social repercussions for the area. In order to provide insight on the difficulties and possibilities it poses for the development of Central Asia, this investigation dives into the historical, ecological, and socioeconomic aspects of the Aral Sea dilemma. The Aral Sea, once among the biggest inland bodies of water in the world, has dramatically shrunk in size as a result of irrigation projects carried out during the Soviet period that diverted water from its tributary rivers. The sea has dried up as a result of this man-made disaster, becoming a salty, poisonous wasteland. The decline of the Aral Sea has enormous environmental repercussions. A salty dust bowl has formed in the area, endangering the health of the locals and wreaking havoc on the ecology. The loss of once-thriving fishing villages has resulted in a decline in biodiversity. The effects on society and the economy are as severe, with livelihoods disrupted, new health problems appearing, and ongoing economic difficulties. Furthermore, as people struggle with resource constraint and environmental deterioration, the Aral Sea situation has significant ramifications for regional stability. The crisis has, however, also sparked initiatives to combat environmental deterioration and advance sustainable development. Initiatives for restoration, such as the revival of wetlands and the adoption of water-saving technology, show how adaptable and resilient local communities and decision-makers are.

KEYWORDS:

Aral Sea, Central Asia, Communities, Human Resiliency.

INTRODUCTION

The Aral Sea, once a glittering gem of Central Asia, has undertaken a century-long journey from richness to catastrophe, leaving its imprint on the region's civilization. This introduction lays the groundwork for a discussion of the Aral Sea disaster, a terrible story of economic disruption, environmental negligence, and human resiliency. A huge region of steppes, mountains, and deserts, Central Asia is home to a diverse range of civilizations and history. The Aral Sea, a body of water that was once among the biggest in the world, is located in its centre. However, the Aral Sea's catastrophic size drop over the last century has had a plethora of negative effects that go well beyond its borders. A dense network of historical, ecological, and socioeconomic variables underlies the Aral Sea issue. It was mostly fueled by irrigation projects during the Soviet period that diverted water from rivers that flowed into the sea to promote farmland. These projects' unanticipated effects have been disastrous, causing the sea to dry up and turning its basin into a poisonous, saltwater wasteland[1], [2].

The decline of the Aral Sea has astonishing effects on the ecology. Salt-filled dust storms have started to appear in the area, endangering the health of the local people and ecosystems. Biodiversity has been negatively impacted, and once-thriving fishing towns are now in ruins. Beyond the destruction of the environment, the Aral Sea issue has had significant

socioeconomic repercussions. Health problems have exploded, livelihoods have been affected, and economic difficulties still exist. As communities struggle with resource constraint and environmental deterioration, the issue also has ramifications for regional stability. There is a ray of optimism despite this bleak circumstance. Consolidated efforts to combat environmental deterioration and advance sustainable development have been motivated by the problem. Wetland rehabilitation, the adoption of water-saving technology, and regional frameworks for collaboration are some of the initiatives.

In essence, the Aral Sea problem provides a sombre background to Central Asia's modernity. It serves as a sharp warning of the effects of irresponsible resource management, but it also offers chances for radical reform. We will discover the difficulties and opportunities this crisis poses for Central Asia's future and the larger global conversation on sustainable development as we dig further into its many facets. The Aral Sea issue is a prime example of the complex problems that often come along with the modernisation of areas like Central Asia. It emphasises how important it is for human activity, environmental sustainability, and economic progress to coexist. We will travel across a terrain where historical legacies battle with modern ambitions and where the effects of previous choices continue to influence the present as we investigate this century-long drama[3], [4].

The Aral Sea, once a symbol of wealth and energy, today serves as a warning about the dangers of irresponsible resource management. The problem has wide-ranging effects on the local populations in this area and resonates on a worldwide scale as a sobering reminder of the need for good management of our planet's limited resources. We shall dig more deeply into the social, economic, and environmental aspects of the Aral Sea catastrophe. We will look at the cutting-edge strategies and global partnerships that are being used to combat this tragedy and pave the path for a more sustainable future. Through this investigation, we learn more about the difficulties Central Asia faces as well as the tenacity and resolve of the people and towns working to restore the Aral Sea's heritage[5], [6].

DISCUSSION

Reports of modernist environmental damage often presuppose that the natural world was in harmony before modernity. The Aral Sea had a similar situation: "And the Aral lived its natural life, virtually undisturbed by man's interference, until 1960." However, in 2001, a mediaeval tomb was found on the dried-up seabed, offering unequivocal proof that the Aral had previously retreated. Since the eighteenth century, geographers and scientists have guessed this, locals have known for a long time. This longer historical perspective casts doubt on notions of "man's interference" with pure environment prior to modernity. The Amu Dariya occurred to alter course towards a small dip created by wind erosion two million years ago, the blink of an eye in geological time, and the Aral Sea first began to appear. The sea level has changed throughout its history, and the Amu Dariya's multiple diversion into the Caspian through the Uzboi channel has caused significant regressions equivalent to those of now, the most recent of which ended only in the middle of the seventeenth century. Climate, earthquakes, irrigation, and warfare dike destruction particularly by Genghis Khan in the early thirteenth century and Timur in the late fourteenth century have all been influences, according to archaeologists who argue the explanations. Evidently, human interventions have had a significant impact on the environment since the introduction of irrigation in the area some 3,000 years ago. In fact, ancient times had an area of irrigated land equivalent to today's.

Therefore, throughout the centuries, events far away in the Aral basin have had an impact on the lives of those who dwell near the sea. The level varied by several metres even in the nineteenth century, which fueled notions that Eurasia as a whole was drying up. This chapter provides a genealogy of some of the activities that took place distant from the sea itself and culminated in its retreat in the 20th century. These movements have their roots in the histories

of Tsarist colonialism, Soviet socialism, as well as the worldwide history of cotton.¹ Both the water itself and the cultures that surround it have never been steady. And thus, from the commencement of Russian colonial control until 1960, when the sea began to dry up, I also give a parallel story, concentrated on fish, of the transformation of social and environmental connections along the northern Aral beaches. These changes are essential to comprehending what the sea's retreat might ultimately entail. These two tales are seen by me as two distinct aspects of Central Asia's modernization. There are consistent histories of dispossession in Central Asia under both imperialism and the Soviet Union. The sea's relapse was only one incident in what might be considered a century of disasters. Landscapes were seen to be empty or useless, and people to be backward. Human-environment connections were reorganised to make agricultural production 'scalable' beginning during the imperial era and speeding up under Soviet administration. The promise of modernity hinged on the expansion of fungible human labor's creation of fungible goods, while new infrastructure links connected the area to a larger imperial/Soviet sphere. As individuals began to lead "gridded lives," a matrix connecting them to the centre through commodities flows to and from it served to moderate their dependence on their surroundings.

However, the many settings and communities that imperial and Soviet administrations encountered—from the pastoralists of the steppe, desert, and mountains to the settled agriculturalists along the rivers and in the oases—determined the specific shape that modernization processes took. The growth of irrigation and the building of fisheries are analogous in the accounts presented here, but the diverse material circumstances that offered a range of scaling options influenced development in various ways. Each was not given equal weight, though. As with many modernist ideas, imperial and Soviet minds were especially captivated by the idea of dominating water. In order to advance, irrigation schemes, dams, and canals were built. Plans to transport the Siberian rivers Ob' and Enisei to Central Asia beyond the enormous Aral basin were only abandoned during the perestroika era. After the sea started to become smaller in 1960, these concurrent storylines regarding irrigation and fish began to diverge: while irrigation growth proceeded, the fisheries shrank. We resume the narrative of the contracting fisheries. I'll ponder why irrigation persisted long after its dire implications became clear. I ground this myopia more explicitly in the political ecology of state socialism in Central Asia, despite the fact that it may seem to be an instance of the high modernist myopia Scott describes seeing like a state. This necessitates seeing Central Asia's role in the USSR broadly. Some academics at the time of the USSR's collapse, drawing on interpretations by Central Asian intellectuals, characterised the relationship as colonialism or dependency because the underdeveloped Central Asian periphery produced basic commodities cheaply for processing in the centre, where living standards were higher. This viewpoint ignores the patronage relationships that exist across Central Asian culture as well as between republican elites and the central authority. It also ignores the center's redistribution and the local people's subsequent enlistment in Soviet ideologies. I thus propose that we redefine "dependency" as a network of interdependencies of different tautness, which led to unequal distribution of sensitivity to ecological degradation and spatially uneven rates of growth[7], [8].

From nomads to fishers

After being denied access to their pastures by Russian and Dzungar raids and forcing the Karakalpak inhabitants to the south, Kazakhs first arrived on the northern shores of the sea in the seventeenth century. Although Kazakhs, like their ancestors, engaged in some small-scale irrigated agriculture and lake and river fishing, cattle remained the mainstay of the economy. In a decentralised political ecology, frequent mobility enabled flexibility in navigating the changing environment, which helped minimise crises like drought or zht, late-spring frosts that froze food behind an ice crust. The poor and those with little to no animals performed

fishing, which was a subsistence activity like cultivation. Unlike animals, fish were not prized for their status. It is unknown how many fish collected on the northern banks of the Aral were sold in far-off Central Asian towns, but without processing facilities, it appears doubtful that they were a source of wealth accumulation. An adage that says "the fisherman's wealth lasts until his sleeve dries" attests to the significance of fish in this economy. Fish were about subsistence and quick returns, while livestock gave riches and power. Fishing does not need the careful management of limited resources that cattle required. To fish or hunt is *aulau*, which comes from the word *au*, which means "trap/net." The Kazakhs experienced natural plenty, with lakes and rivers overflowing with fish, as they fished, using simple technology. Initial military reasons drove Russian interest in the northern Aral. When naval officer Butakov explored the sea in 1847, a fort was constructed above Lake Raiym.

As the first step in a steady ascent up the Syr Dariya, a fort was subsequently constructed at Qazaly. Tashkent's annexation in 1865, a crucial turning point in Russian progress into Central Asia, marked the culmination of this. Even though Russian attention was on the prosperous, inhabited territories to the south, the Russian presence in the northern Aral and lower Syr Dariya had an immediate impact on the indigenous population. The richest pastures were being invaded by Russian immigrants, who themselves were escaping changes in Russian agriculture. They were portrayed as a constructive force in the 'backward' steppe economy by tsarist policy.⁶ Local Kazakhs were displaced as a consequence of the closure of migratory routes, disruption of the precarious nomadic economy, and decline in livestock populations. As Cameron explains, colonial intrusions made Kazakhs more susceptible to climatic change and more reliant on Russian grain. Winter quarters grew in popularity near Russian forts. After a *zht* in 1879–1880 and again in 1892–1893, a growing number of destitute Kazakhs relocated to the Syr Dariya and turned to fishing as a means of subsistence. During the 1875 deportation of the rebellious Ural Cossacks, new techniques for collecting, smoking, and curing fish, particularly ship sturgeon, were introduced to the area. Kazakhs started fishing more often for the market, and during the winter, fish were shipped overland by caravan to the railhead at Orenburg. The sea gained a new kind of economic importance as it was partially included into a market that covered the whole Russian empire. Russian manufacturers erected ice houses and factories for smoking and curing Aral fish, taking use of the adjacent salt reserves, since integration into imperial space and hence value relied on infrastructure that could get beyond fish's perishability.

When Kazakhs lost their cattle, they had little option but to accept the idea that fish had worth. As a result, they were increasingly employed to fish for Cossacks. As the fisheries expanded, the Tsarist authorities realised that science-based management was necessary to protect the riches of the sea. Permits were required starting in 1886, and there was a prohibited area surrounding the Syr Dariya delta and restrictions on fishing during the spawning season. The development of environmental knowledge was mediated by the Cossacks. Kazakhs and Karakalpaks were driven into "cognitive irrelevance" while sturgeon, the major fish of importance to the Cossacks, was the subject of science-backed control. The sea's geology, hydrology, vegetation, and fauna were all covered in comprehensive scientific research, including the massive monograph of L. S. Berg, which also examined sea level fluctuations and refuted the widely held belief that Eurasia is still being dried up. According to Pianciola, the relative political and economic marginality of the Aral within imperial enterprises may have ironically contributed to the authority that administrators attributed to scientific knowledge. The completion of the Orenburg-Tashkent railway, which crosses the sea's northeastern corner and was believed to be a good location for a port, in 1905–1906 was a pivotal point in the growth of the fisheries. Aral'skoe More was the name of the station, and a settlement built between it and the sea. The railway created new markets, which led to an increase in catches. In addition, the railway greatly increased the fishing population and made it easier for people to immigrate from the western regions of the empire, particularly the

Danube delta and the Sea of Azov. Fragile efforts at regulating were greatly damaged by intensive fishing. About 15,000 people were employed in the sector on the eve of World War I, and the area exported 44,000–50,000 tonnes of fish each year. Markets and railroads are two examples of newly reorganised human interactions with the water. Fish brought regional communities into imperial markets, creating new dependence. Fishermen received upgraded tools and food in exchange for giving up all of their catch to settle the loan. And the family of the fisherman Kazakh languished in hopeless deprivation, trapped in debts like a fish in a net, according to a 1968 book lauding the magnificent creation of the Soviet fisheries.

Cotton famine, cotton fever

A concept that would have a significant impact on the sea decades later was developing that was oriented on cotton and water. Although it had origins dating back to the 1820s, distant events in the 1860s gave it new life. 'Cotton famine' decimated cotton industry throughout the globe as the American Civil War depleted worldwide markets of raw cotton. Worldwide accumulation through dispossession was prompted by the crisis. After the Lancashire mills were paralysed, the British started to convert large portions of their empire, particularly India, to cotton farming. As a result, primary producers were no longer protected from the vicissitudes of the global market and extreme weather events, which later in the nineteenth century led to devastating famines. In order to ensure the independence of the empire's cotton production, Russian businessmen and officials went to the tropical regions of recently conquered Central Asia.⁹ Colonial eyes perceived natives as backward, much as in other burgeoning European empires, and the environment as wasteland. In fact, abandoned irrigation systems indicated that an area had lost its former glory from the Middle Ages.

The hope of bringing the Amu Dariya back into the Caspian provided a way to irrigate the area while also providing a water link between Europe and Asia. The geographer Voeikov asserted that "Man must strive to ensure that water, when it evaporates, performs work that is useful for him, i.e., that it evaporates from the surface of plants," which was confirmed by scientific theory. Water was squandered as it ran into the ocean. Therefore, if the water was utilised 'usefully' instead, the area of the Aral might be considerably decreased. Tsarist hopes of increasing the irrigated region, however, were largely unfulfilled: just two major irrigation works were completed, and the volume of water extracted from the Amu and Syr Dariya did not much rise. Despite this, cotton cultivation expanded and raw cotton exports from Central Asia to Russia sharply surged during the "cotton fever" period. Farmers in Central Asia were mired in debt, and the finest irrigated areas were taken over. But even at this point, Penati emphasises that Central Asian businesspeople and farmers actively participated in the cotton boom, proving that cotton was not only a product of colonialism.¹⁰ When the railway at Aral'sk connected the cotton-growing districts of Karakalpakstan to the textile industries in European Russia, the sea began to be significant as a shipping route.

Central Asian ambitions of the USSR Distant events that were once again felt across the world unexpectedly put an end to the rapid expansion in both fish and cotton output. The Aral area was exposed to the collapse of Russian imperial space during world war, the revolution, and the civil war because it was integrated into and depended upon Russian imperial markets. As supplies failed, fishermen were drafted into the army, and hurriedly constructed infrastructure failed, the fishing quickly came to a standstill. While the human communities near the sea feared hunger, the strained sturgeon populations were temporarily preserved. The extent of irrigated land decreased by half upstream as irrigation infrastructure deteriorated. In Central Asia, the Bolsheviks combined Tsarist ideals with their own emancipatory and anti-colonial mission. They believed that colonialism had made backwardness worse. Men and women were meant to be liberated from the shackles of debt and exploitation by fully using the richness of the Aral. Upstream, the Bolshevik decolonizing goal was centred on dominating water to dominate nature. During collectivization, however, a different logic

would emerge: value generated in agriculture would finance the industrialization of the USSR as a whole, a process known as "primitive socialist accumulation." The anti-colonial vision was in stark contrast to the fact that Central Asia continued to be a producer of agricultural goods that would go to the centre. Indeed, the scalable production of goods, which was the foundation for the promised paradise of economic plenty, began to trump other utopian objectives across the USSR. The voices of environmental protection that had existed in the 1920s were suppressed. Therefore, Buck-Morss contends, "the Soviets missed the opportunity to transform the very idea of economic "progress" and of the ecological preconditions through which it might be realised" as a result of policies promoting modernization via industrialization. The centre urged development to take place at the greatest possible scale, resulting in new types of eviction. Entangled lifeworlds were eliminated to make room for scalable monocultures, to use Tsing's terminology. The effects of this policy change on Central Asian irrigation and, eventually, the Aral Sea are well known. Irrigation systems were once decentralised, and many social relationships surrounded access to water. Following collectivization, decisions were made centrally, and previous crop rotation patterns that had ensured food security and increased soil productivity were replaced with cotton monoculture. When the Turksib railway was finished in 1929, Central Asia was supplied with Siberian grain, enabling additional irrigated area to be used for cotton cultivation.

As Peterson emphasises, irrigation projects were completed in a disorganised manner via the widespread use of forced labour in spite of promises of mechanisation. People were also employed on the reclaimed land as a result of the deportation of hostile populations and subsequent resettlements from mountainous areas. Water, cotton, and labour fluxes in this matrix were controlled by the equipment. Scalability under state socialism has a distinct dynamic from its capitalist counterpart due to its disastrous ecological and social effects. In fact, Fehér, Heller, and Márkus asserted that the primary function of state socialist economies was "the maximisation of the volume of the material means under the global disposition of the apparatus of power as a whole," rather than profit, as it is under capitalism. Priority was given on scaling up the resources under the apparatus's control rather than the production of exchange-values. Legitimacy was founded on the opposing propensity to redistribute, but this created conflict since it would weaken the apparatus's hold on power. Additionally, various parts of the apparatus strove to increase their allotted share of limited resources by increasing their economic activity. These groups did this by identifying with their sector or area as the source of their power. Large-scale growth followed, as seen by the enormous steel complex at Magnitogorsk. Regardless of its economic effectiveness or ecological sustainability, agriculture has a trend towards centralization and monoculture. Wittfogel observed that the need to amass material possessions may be sated by continually developing irrigation infrastructure since water flows and can be controlled. Landscapes may be changed by irrigation, putting fixed assets, agricultural production, and the labour of millions of people under the apparatus's control.

The turmoil on the ground, however, contradicted the grid's apparent reason. Wittfogel noted that control was insufficient because, as with global modernization processes, it was undermined by the erratic behaviour of the participants. Local ecologies and the resistance of the populace placed limits on state authority, and projects moved forward more via improvisation than through planning. The amount of coercion had to be reduced for cotton yields to recover from the shock of collectivization; the resulting system was predicated on cooperation so that impromptu planned "accidents" and "inefficiencies" would supply adequate water for individual plots. In the meanwhile, irrigation projects were constructed using primitive methods and large amounts of physical effort. High losses to evaporation and seepage meant that significant amounts of water that would have reached the sea were squandered, even if the impacts were not immediately apparent. Cotton still became essential

to Central Asian conceptions of modernity despite the turmoil and pressure. According to Peterson, propaganda portrayed "people's construction projects" like the Great Ferghana Canal as popular initiatives based on the Central Asian institution of *hashar*, the people's joint work advancing the area towards modernity. Elites in Central Asia at all levels developed an interest in irrigation and cotton as technical water management cadres proliferated and were indigenized. The First Party Secretary of Uzbekistan mobilised Voeikov's theories for a patriotic socialism: "We cannot resign ourselves to the fact that our lands in the Samarkand and Bukhara regions are inadequately irrigated while the water-abundant Amudarya River carries its waters to the Aral Sea without any use." To "bridle the Syrdarya and Amudarya rivers, to control them, and to make their water serve the cause of socialism, for the purpose of raising the living standards of the population, and developing the country," he stated, was the mission. Cotton stood in for growth for most of Central Asia if steel represented the urbanist ideals of the USSR as a whole. A promise of growing living standards and abundant employment, which came to be visualised via cotton, was used to entice people to sign the state-socialist social compact. This was a more intricate network of interdependencies than the movement of raw materials from the periphery to the hub[9].

Constructing a socialist fishery

In the meanwhile, processes that were linked but separate were taking place in the fisheries. The fishing sector steadily recovered in the 1920s. The Aral State Fishery Trust, also known as Aralgosrybtrest, was founded in 1925 with the intention of emancipating locals and using the natural resources of the sea. Despite being indebted to the state, Aralgosrybtrest offered finance for cooperatives to develop independent fishers.¹² The umbrella body of cooperatives, Aralrybaksoiuz, claims that fishermen gladly participated in the melioration work on a lake, as well as salting and cottage production of smoked fish.¹³ The catches were getting close to their prewar high by 1930. Aralgosrybtrest managers battled with Aralrybaksoiuz for fish, and semi-nomadic fishermen were likely to move away from the sea in the spring, so there was little centralised authority. When the collectivization of the fisheries was being discussed at the Union-wide level in 1929, the cooperative model was vehemently defended: fishing should not be an industry where "raw material" is then processed industrially, it was argued; rather, the seasonal variability of inland fisheries required small-scale and decentralised cooperatives, with processing carried out within households. There are similarities to more current concepts of community co-management. However, now was not the moment to support the modest. The richness of nature was a central tenet of the Stalinist ideology, and natural resources should be fully used. To remedy the discrepancy between "the lack of fisher population and the natural riches of Kazakhstan's water-bodies," Kazakhs were to be forcefully placed in *kolkhozy* and ranchers were to become fishermen.

Women fishing would result in female independence. A centralizedly regulated movement of people took the place of nomadic movement; populations were moved, particularly from delta lakes to the sea, where their labour was more valuable. Deportations of 'enemies of the people' helped to fill the labour need even more. These *spetspereselentsy*, or "special settlers," had been living in subpar circumstances on the remote Vozrozhdenie Island and were seen as a "obedient labour force." If sedentarization and collectivization in the Aral area were intended to fully use the fish resources, Cameron contends that similar measures were simultaneously intended to modernise 'backward' Kazakhs and transform the steppe into a dependable supplier of grain across Kazakhstan. The outcomes were terrible. When drought and outrageously improbable food acquisition objectives were combined, livestock were seized, and a horrific famine occurred. A third of the Kazakh people perished, while others fled to China, Afghanistan, and Iran as well as other regions of Soviet Central Asia. As Pianciola demonstrates, the northern Aral coasts were especially at risk since the railway

made it easier to move animals that had been commandeered for feeding Russian metropolitan areas. The southern beaches of the Karakalpak, which were officially separated from Kazakhstan in 1930, profited from their relative remoteness. Grandiose plans significantly surpassed the sea's expected carrying capacity, while actual catches declined. Fishermen received 25 kg of flour every quarter at the end of 1932, as opposed to the 73 kg required by law.¹⁹ 86 out of 264 homes in Bögen and 300 households in communities along the northwest coast of the Aral area, according to an oblast inspection, evacuated due to substandard housing and poor salaries.²⁰ Returning famine refugees who had fled to Uzbekistan and Turkmenistan used the area as a transit route. While others continued to escape the northern shore, others sought to settle in Aral kolkhozy despite having no prior experience fishing.²¹ The severe disentanglement of local social and ecological ties over many years culminated in the collectivization era. The procedure was hectic and quickly got out of hand. However, Kindler contends that while being unplanned, the famine solidified Soviet control by dismantling opposition by making the populace reliant on the state. As a result, local society was reorganised: human interactions with the environment were rearranged in accordance with a gridded matrix where work was forcedly directed and moved and the apparatus was in charge of controlling fish circulation. 'Disembedded' from civilization was nature.

Fishing was treated as an industry under the new system, with raw material extraction and processing being segregated. Production output was centralised according to type, and processing facilities were placed under the apparatus's control. Fishing's work was reduced to resource extraction by machine. The goals of mechanisation and deep-sea fishing aboard ships took a while to come to fruition, but *dobycha* was industrialised just as much as *obrabotka* in the sense that the apparatus micromanaged the time and space of fishing. The population of fishermen was reconfigured when kolkhozy replaced cooperatives. The time spent on livestock that was now to be donated to the state in carrying out the plan amounted to seizure of that time as well. Although kolkhozy practised auxiliary cultivation and herding to give them a guise of autarky, fishing was their main occupation. Equipment and nets belonged to the kolkhoz. The plan was given to Kolkhozmanagement by Aralgosrybtrest, divided into brigades and troops, allocated to certain locations, and distributed by brigadiers to people. Pay was based on the number of fish caught, and there were incentives for exceeding the plan. The numbers stipulated by the strategy guided the fishing labour. Fish now also served as a conduit for the hierarchical, dependent relationships between the fishing community and the state, while during the colonial era, fish were progressively transformed into money under very uneven trading circumstances. As the tangible limitations of the environment interacted with the intrinsic challenges of working in a scarcity economy, where managers' power was constantly circumscribed, central control was once again weakened by the unruliness of people and things. Although the apparatus may legally be given authority over the appropriate industrial methods, bureaucrats had little real power over them.

The plan's micromanagement was hampered by the weather. Regulations governing the storage of kolkhoz property, such as nets, in centralised warehouses, were often broken. In support of conveniently accessible inshore seas, the military-style organisation of brigades and instructions to fish methodically throughout the sea were disregarded.²⁴ The state's ability to monitor what was occurring along hundreds of km of beachfront was constrained. Plans were progressively loosened during the course of the 1930s, livestock numbers began to slowly increase, and catches increased, however the industry's epicentre moved to Karakalpakstan in the south, which had been less damaged by the famine. Residents in the area were reliant on food and equipment supplies under this new arrangement. Even while this limited local agency, there are hints in the archives of how similar circumstances allowed agency in other areas. The overfulfillment of the 1936 plan, according to a report in the newspaper *Priaral'skaia Pravda*, has led to a "prosperous life", "European-style houses" have

replaced the "dark Asiatic zemlianki," and some Stakhanovites, who were rewarded for exceeding production standards after the widely publicised example of the coal miner Aleksei Stakhanov, own gramophones and silk suits.²⁵ Although the promise of a "prosperous life" is perhaps overdone, it is obvious that there was a hope that fishing would be associated with improving living conditions. Locals had a stake in Soviet conceptions of nature because they had a right to redistribution from the state due to their fishing industry. Kazakh kolkhozy eventually recovered, but immigrants from other parts of the USSR continued to change the area. Many were escaping starvation or oppression in the USSR's European regions. Koreans and a variety of 'enemy peoples', including Volga Germans, Chechens, and Kalmyks, whose allegiance to the Soviet state was questioned, were transported in large numbers and settled across Central Asia beginning in the late 1930s and continuing into the Second World War. Particularly those expelled from fishing districts relocated in the Aral region. 7,731 of the 65,295 people who lived in Aral'sk raion at the time of the 1939 census were spetskontingent.

In the meanwhile, Aral'sk expanded as an important rail and maritime junction and industrial hub. When it was designated as the raion centre in 1938, it was raised from a hamlet to a "urban-type settlement" and finally to a town. Because raw cotton could be exported to established factories in European Russia, the cotton economy elsewhere in Central Asia did not lead to the creation of industrial hubs. On the other hand, fish had to be processed right away since there weren't any refrigerated railway waggons yet. As a consequence, the Aral area developed an integrated industry. Aral'sk, the location of Aralgosrybtrest's headquarters, had a sizable facility. Aralsk would receive fish that had been prepared somewhere in the sea for distribution. Aralsk served as a distribution centre for supplies to far-flung fishing villages. Other businesses added to the town's industrial feel. A shipyard, which built ships for the fishing and transport fleets, was located in the port, where Karakalpak cotton was unloaded and transferred onto the railway while grain from Russia would be loaded onto ships for the return trip. The majority of the town's residents were not Kazakh until after World War II.

Although collectivization was intended to increase fisheries output quantitatively, the industry did not have the same opportunities for expansion as irrigation. In fact, ichthyologists judged the sea impoverished due to its sparse species composition and low quantity of fish, zooplankton, and zoobenthos, despite the fact that planners spoke of the sea's "natural wealth." The 'poor' of the sea, according to Berg, was due to its geological past rather than its chemical make-up. Its native wildlife dates back to a time when it was linked to the Caspian. The majority of the Caspian fauna had been dying out since it had separated from the Caspian basin due to its freshening, but since it was a relatively young freshwater lake, it had not yet had time to "be populated" with new freshwater species. This implied that in order to optimise the potential of the water, new species may be adapted. The outcomes were terrible, most notably the introduction of stellate sturgeon from the Caspian, which failed to breed but carried with it a parasite that killed out the native ship sturgeon in great numbers. Institutions for managing nature were created at the same period.

They served as a brake on the continual pressure to scale up since their reasoning could not be reduced to the economic view of nature as riches. In the boundaries of a natural reserve created on Barsakelmes Island in 1939, a conservationist ideal persisted.²⁸ Even fisheries management was not merely about unchecked numeric expansion; it was based on scientific study carried out by a research station called KazNIIRKh. The fishery was governed by a different authority that implemented additional regulations to ensure stock reproduction. To safeguard spawning sites, restrictions were widened in both space and time. Both the inputs and the sizes of the fish captured were restricted. Additional management strategies included improvement projects including digging canals to link lakes, cutting reeds that deprived water of oxygen, and clearing breeding sites. Women and children were left to carry out the plan

during the Second World War, which caused yet another disastrous decline in catches. The captures didn't reach the levels of the late 1920s and the early 1910s until the late 1950s. There had been some mechanisation, particularly with the development of motors and refrigerated ships. However, the fisheries were never prosperous. Many isolated fishing communities still required residents to drink sea water as late as the 1950s. Leprosy had not yet been wiped out. Villages lacked homes, power, and other conveniences that the USSR took pleasure in providing.²⁹ Fishermen who were permitted to take home 100–120 kg of fish annually for their families sometimes did so every month without paying for it, illustrating the weakness of the centralised control system.³⁰ The deepening financial crisis was the last factor. In order to master deep-sea fishing and eventually maximise the fisheries, Kolkhozy has invested in new ships. However, this expense had left them in debt, and they had a persistent paucity of circulating assets. Only the kolkhoz Zhambul and kolkhoz Raiym remain after the bulk of the kolkhozy were destroyed and replaced with state fisheries bases directly under Aralgosrybtrest. However, Aralgosrybtrest also had financial problems and frequently produced low-quality fish. In fact, Aral'sk's primary processing facility, constructed in the 1930s, was in a condition of disrepair. Equipment supplies were stockpiled across the system, which added to the financial issues. The majority of the industry was not automated. Inland fisheries were not emphasised in a scarcity economy marked by interdepartmental rivalry, which prevented the expansion that was always intended. Therefore, this is the earlier history of the Aral Sea's regression in the twentieth century, during which movements of money, people, and fish were rearranged and merged into the USSR's griddled time-space. The area was also incorporated into the Soviet military-industrial complex in less positive ways. In Aralsk, military installations were built after World War II. The secluded island of Vozrozhdenie's highly classified biological weapons facility received supplies from one. After the cosmodrome at Baikonur was built, additional sites conducted search and rescue operations for cosmonauts who made an underwater landing. These sites were not officially linked to the rest of the area since the command economy was separate from the military-industrial complex's clandestine domain[10].

CONCLUSION

The Aral Sea problem's century-long narrative is a potent example of the complex interactions that exist between environmental deterioration and Central Asia's modernisation. As we draw to a close, we consider the lasting effects of a disaster that changed the region's landscapes, economic viability, and social structure. Due to unsustainable water management methods used in the Soviet period, the Aral Sea, which was once a symbol of richness and life, has tragically declined.

A long list of issues, including hazardous dust storms, damaged ecosystems, economic burdens, and health concerns, have resulted from this environmental disaster. It serves as a sobering reminder of the disastrous effects of negligent resource management. Despite this grim situation, there are glimmerings of optimism. The Aral Sea situation has sparked creative solutions and cross-border alliances that are intended to lessen its consequences and advance sustainable development. Restoration efforts, including the revival of wetlands and the adoption of water-saving technology, are examples of how adaptable and resilient local people and governments are. The crisis also highlights how important environmental management is on a global scale. The decrease of the Aral Sea has wide-ranging effects on Central Asia as well as the larger discussion of sustainability and the need of striking a balance between economic growth and ecological preservation. In summary, the Aral Sea issue represents a sad episode in Central Asia's development. It provides as a sharp reminder of the need for comprehensive methods that take the long-term effects of resource management choices into account. As towns and countries relentlessly struggle to recover the heritage of the Aral Sea and pave a way towards a more sustainable future, it is also a

monument to the tenacious human spirit. As we say goodbye to this century of disasters, we are left with a thorough awareness of the difficulties and possibilities that characterise Central Asia's modernization and the ongoing search for social and environmental resilience.

REFERENCES:

- [1] H. Xu, X. Chen, and Y. Bo, "The green silk road economic belt and the governance of the aral sea," *China An Int. J.*, 2018, doi: 10.1353/chn.2018.0004.
- [2] H. Xu, "The Study on Eco-environmental Issue of Aral Sea from the Perspective of Sustainable Development of Silk Road Economic Belt," *IOP Conf. Ser. Earth Environ. Sci.*, 2017, doi: 10.1088/1755-1315/57/1/012060.
- [3] M. Bekchanov, C. Ringler, A. Bhaduri, and M. Jeuland, "Optimizing irrigation efficiency improvements in the Aral Sea Basin," *Water Resour. Econ.*, 2016, doi: 10.1016/j.wre.2015.08.003.
- [4] A. Levintanus, "Saving the Aral Sea," *J. Environ. Manage.*, 1992, doi: 10.1016/S0301-4797(05)80133-1.
- [5] J. Berkoff, "Viewpoint-responding to context: Some lessons from experience in the water sector," *Water Altern.*, 2013.
- [6] A. Levintanus, "Saving the Aral Sea," *Environmentalist*, 1992, doi: 10.1007/BF01266547.
- [7] H. Kreutzmann, "From Upscaling to Rescaling: Transforming the Fergana Basin from Tsarist Irrigation to Water Management for an Independent Uzbekistan," in *Water Resources Development and Management*, 2016. doi: 10.1007/978-3-319-18971-0_9.
- [8] A. Levintanus, "On the fate of the Aral Sea," *Environments*, 1993.
- [9] S. Pfister *et al.*, "Disaster by Design□: The Aral Sea and Its Lessons for Sustainability," *Agric. Water Manag.*, 2014.
- [10] P. Josephson, N. Dronin, R. Mnatsakanian, A. Cherp, D. Efremenko, and V. Larin, "Stalinism," in *An Environmental History of Russia*, 2013. doi: 10.1017/cbo9781139021043.003.

CHAPTER 7

SEEING LIKE A BUREAUCRAT: ISSUES WITH EMPLOYMENT AND LIVING STANDARDS

Rajesh Kumar Samala, Assistant Professor

Department of ISME, ATLAS SkillTech University, Mumbai, Maharashtra, India

Email Id-rajesh.samala@atlasuniversity.edu.in

ABSTRACT:

This summary offers a thorough review of the difficulties involved in assessing employment and living conditions from the viewpoint of government administrators. Policy, data, and social issues often cross with the lens that bureaucrats use to see and evaluate these important socioeconomic elements, resulting in a complex situation that needs careful study. This investigation digs into the difficulties experienced by bureaucrats in comprehending and dealing with problems relating to living standards and employment, as well as the ramifications for the creation and application of policy. As representatives of the state, bureaucrats are essential to the formulation and execution of laws governing employment and living conditions. Their choices and deeds may have a significant impact on both people and societies. However, since it is often framed by facts, laws, and policy goals, the bureaucrat's viewpoint may be quite different from that of the broader public. This abstract's conclusion throws insight on the complex difficulties encountered by bureaucrats in determining living standards and employment. It emphasises the value of developing and implementing policies using a comprehensive and data-informed approach. For encouraging efficient governance and obtaining successful results in these crucial areas, it is essential to comprehend the bureaucrat's point of view.

KEYWORDS:

Bureaucrats, Crucial Role, Government Agencies, Influencing.

INTRODUCTION

Bureaucrats have a crucial role in influencing the socio-economic environment, especially in regards to living standards and employment, in the complex realm of governance and policy-making. However, since it is filtered via the prism of statistics, rules, and policy imperatives, their viewpoint often diverges dramatically from that of the broader public. This introduction lays the groundwork for a discussion of the difficult problems that bureaucrats face in assessing and dealing with issues pertaining to employment and living standards. Government agencies entrust bureaucrats with the responsibility of drafting and executing the laws that affect people's and communities' everyday lives. The evaluation of employment and living standards, two pillars of wellbeing and economic vigour, is central to their duties. However, the bureaucrat's perspective is distinct and shaped by a complex web of policy factors, data analysis, and regulatory frameworks. This investigation digs into the many difficulties officials confront while negotiating the landscape of living standards. Defining and quantifying living standards involves much more than just looking at one's money. It includes a broad range of socioeconomic metrics, such as the availability of social services, housing, healthcare, and education. The intricacy of these elements and how they interact to affect residents' quality of life must be understood by bureaucrats[1], [2].

The evaluation of employment also has its own unique set of complications. The intricacies of the official and informal labour markets, underemployment, shifting job structures, and the effects of technology improvements on work patterns are all challenges faced by bureaucrats.

A thorough grasp of workforce trends and labour economics is necessary to navigate these complex processes. Data, the foundation of policy analysis, are essential to the decision-making process in bureaucracy. To evaluate living standards and employment trends, bureaucrats depend on statistics, yet data might be inaccurate, lacking, or biased. The abstract examines the difficulties with data availability and quality, highlighting the need for strong data gathering methods. Additionally, a major emphasis is placed on the sociological aspect of bureaucratic decision-making. Bureaucrats must work in a complicated socio-political environment where political pressures, public expectations, and interest group demands may all influence their viewpoint. It is difficult to navigate these outside factors while keeping an eye on evidence-based policy[3], [4].

This investigation is essentially a tour inside the world of bureaucrats responsible with assessing and resolving problems related to employment and living conditions. It emphasises how crucial it is to comprehend their viewpoint and the need of competent governance that strikes a balance between data-driven decision-making and the complexity of public expectations. We acquire understanding of the complexities of policy design and execution in these crucial areas of socioeconomic well-being as we dive further into these problems. Effective government depends critically on the viewpoint of bureaucrats when evaluating living conditions and employment, yet this viewpoint is often overlooked. We start to comprehend the fine line they must walk between data-driven decision-making and the many socioeconomic demands and expectations of the communities they serve as we dig more into the nuances of their work. For instance, living standards go beyond monetary values and need a thorough comprehension of the socio-economic aspects that affect wellbeing. In their attempts to enhance the quality of life of residents, bureaucrats are entrusted with evaluating a patchwork of indicators, from healthcare accessibility to educational chances. This multifaceted approach requires not just skill in a variety of subjects but also the capacity to successfully negotiate the complex web of laws and regulations that affect these elements. Similar to this, the contemporary era's changing nature of work poses a dynamic challenge for bureaucrats. With gig work, remote employment, and automation altering the job environment, the conventional divide between formal and informal labour markets has become muddled. A varied and dynamic workforce requires bureaucrats to adapt to these changes and create policies that meet those demands. Data, which is often touted as the foundation of efficient government, also brings with it a unique set of problems. Bureaucrats must deal with concerns of data accuracy, timeliness, and relevancy since they depend on data to make educated judgements. Accurate policy evaluations depend on the availability of reliable analytical methods and high-quality data.

Last but not least, social considerations always serve as a background to decisions made by bureaucracies. Public expectations may impact the top objectives and scope of government action, depending on cultural norms, political discourse, and media narratives. While navigating these outside factors, bureaucrats must remain strong in their commitment to making policies based on facts. In order to effectively manage, it is crucial to comprehend how the world is "seen" by bureaucrats in their efforts to evaluate employment and living standards. It calls for a careful balancing act between knowledge, flexibility, and sensitivity to social requirements. We learn more about the complex interplay between data, policy, and society that defines the bureaucrat's function in influencing the socioeconomic environment as we investigate the difficulties they encounter[5], [6].

DISCUSSION

A 1962 paper describing steps for the development of the Aral fisheries and signed by the vice-chairman of the South Kazakhstan Sovnarkhoz begins: The raw material stocks of the Aral have been under a great deal of stress in recent years due to the deterioration of the hydrological regime of the sea and the rivers Amu Dariya and Syr Dariya, [and] the sharp

contraction in flow of fresh water into the sea. Caught quantities of valuable fish species like barbel, bream, and shemaya are also sharply declining. By 1966, yearly catches on the North Aral are expected to decrease from 21,300 tonnes to 15,800 tonnes, according to scientists, he stated. He didn't state the reason directly. Instead, he pointed the finger at fisheries managers, claiming that their inability to "take effective and immediate measures to restore the raw-material stocks of the water-bodies" was the cause of the fast-declining catch rates. Therefore, he gave them instructions to implement remedial actions, build artificial spawning grounds, and acclimatise new species. He also pushed for the fleet to be mechanised in order to keep catches at 19,500 tonnes.³ This text is typical of government reactions to the sea's reversal throughout the next years: more control and rearrangement of people and the environment, carrying on with programmes from earlier decades. Deep-sea fishing, using newly acquired ships, became increasingly important as the sea shrank, particularly in isolated western seas.

There was no paradigm change in fisheries management, however, and those in charge of the fishery were unable to formally criticise irrigation programmes. Environmental historians have provided in-depth analyses of the mechanisms behind environmental deterioration and irrigation expansion in Soviet Central Asia. This chapter examines how regional leaders and fishery managers handled the retreat of the sea by focusing on the state agencies that bore the brunt of these changes. The aforementioned quote demonstrates how the problem is only loosely framed. Because causal links are syntactically limited to parenthetical background components by the subordinating word "as a result of," the narrative arc is maintained to a minimum. It is impossible to inquire as to why the hydrological regime is failing. Such terminology hides irrigation, the issue's primary cause. Not surprisingly, there was no paradigm change. Among fact, there are few discursive tools for defending the sea among the records that are gathering dust in the state's archives at every level. Fish stock conditions may be considered "catastrophic," but neither the status of the area nor its inhabitants could. Due to "the withdrawal of water for the needs of irrigation," which has made it more difficult for the fishing sector to carry out its plans, there has been a "sharp fall in the sea level." In order to extract discrete causes and consequences from their contexts, clauses are mechanically connected by connecting words. This exhibits the "contorted redundancy of bureaucratic speech" in its usual manner.

The foundation of moral judgement, narrative, is reduced to bureaucratic procedure. These records purport to show Soviet official apathy to the condition of the Aral area and its people at all levels and in every department, with irrigation serving as their narrow-minded "ethical alibi." Other methods of discussing the sea's retreat are constrained by the state's language, which appears to shut off meaning. The discourse structures used to frame the problem prevented the creation of a "critical event" or "matter of concern." Many officials, meanwhile, were not apathetic to the misery of the Aral. They were forced to react because the retreating water was invading their territory. The attempts to sustain marine productivity by introducing salt-tolerant species are discussed in the next section of the chapter. These didn't, however, immediately provide a good result. Therefore, the remainder of the chapter focuses on how bureaucrats reacted to an environment that was fast degrading and the loss of the "fishery significance" of the sea. As we will see, throughout the 1970s, expenditures were undertaken to create infrastructure in response to what was referred to as a crisis in living standards. Despite the Aral's particularity, this tale is a part of a larger one that depicts extensive investment throughout rural Central Asia as the Soviet 'welfare state' institutions sought to modernise local society. In addition, other businesses continued to operate, including the fishery itself, although the port was closed.

The fishing business had a steep decline in the 1960s and early 1970s, but it then steadied and kept going even after it became impossible to fish in the sea itself in 1978. It was in constant

difficulty, like many businesses throughout the period of stagnation, but it managed to keep going by importing frozen fish from the ocean and sending fishermen to fish in other parts of Kazakhstan. As a result of the exodus of the non-Kazakh population, the population of the raion decreased from over 80,000 in 1970 to 70,000 in 1979; however, this decline was stopped in the 1980s. Ocean fish were transported into the Moynaq fishery on the Karakalpak coast as well, and the fishing activity was relocated from the sea to recently built reservoirs all throughout Uzbekistan, where aquaculture produced 20,000–25,000 tonnes of fish annually. This chapter concentrates on the redistributive tendency of late socialism, which, in a few constrained, regulated ways, reduced some of the ecological harm if it resulted from the centralising tendency of state socialism. Interventions didn't only react to physical changes; they also addressed how these physical changes became a "problem" for the bureaucracy. The irrigation vision was, in Scott's words, less that of the state than it was that of certain bureaucratic interests, even if it was supported by the leadership of the Communist Party in Moscow. However, some officials had different perspectives on the Aral based on their own interests. While bureaucrats could write like gears in a machine, no state is a monolith, and the Soviet Union was no uniform, coherent machine.

The complex web of interdependencies, commitments, and restrictions that comprised the Soviet state forced bureaucrats to deal with the worsening environment. Managers had a duty to carry out plans established by superiors, yet they were reliant on them for input and for carrying out the plan. They were also limited by widespread shortages, which forced administrators to compete for limited resources. These structural constraints and dependencies have discursive implications: the 'speech will' of bureaucrats derived, at least in part, from their position within the apparatus, and for the bureaucrats discussed here, the constraints of the shortage economy were compounded by the constraints of a deteriorating environment. The Aral may have been doomed due to the hegemony of irrigation interests, but there were many state actors at various levels who cared about it regardless of whether they cared about "nature" or the livelihoods and health of the people who worked and lived there. Naturally, they could have also been motivated by personal wealth, but one cannot reduce their departmental objectives to personal ones.

Therefore, the sea's retreat became a "problem" for these bureaucrats inasmuch as its tangible impacts affected their territory. So, although the "needs of irrigation" were an ethical justification for some, they served as a conceptual barrier for others. Bakhtin introduces the concept of "speech genres," which are characterised by varying degrees of restrictions on what may be said, in order to challenge the Saussurian view of language as an abstract set of rules. Even the most restrictive have some freedom, while others are quite free. The speech genres that bureaucrats could use while writing to higher authorities regarding the Aral's decline were severely limited since they had to adhere to the "authoritative utterances" made by their superiors. There were limitations on both what could be stated and who might be addressed. For example, fishery managers could not protest to water-management bodies in an official speech genre. Nevertheless, notwithstanding the unequal distribution of discursive resources across various divisions and areas, certain speech forms provided particular affordances. Bureaucrats may exploit the sea's regression as a rhetorical weapon to seek investment or bargain for a less expensive scheme, or they could make other arguments outside the cost-benefit analysis. The sea's retreat evolved as a confined, bounded reality - an issue of living standards and employment - as administrators were constrained both by the deteriorating environment and by the language resources to confront it.

A few significant physical repercussions were hidden, such as the harm to human health or the escalating dust storms. The fact that the sea is receding, even in this constrained form, would have substantial consequences. It developed some political agency, inspiring actions to preserve the general form of the collection of fish, labour, and infrastructure even as the sea

at the centre of the collection receded from view. This chapter must be restricted to official conversation since the archives I looked at did not include the "hidden transcripts" that undoubtedly contributed to discussions among the various parts of the government. A Tastübek fisherman once took me to see a large dried-up canal that had formerly led to a sturgeon-keeping pool. The sturgeon was hauled out and sent by rail to the ministry in Alma-Ata whenever a present for a minister was required. Similarly, until he wanted to offer it as a gift for an arriving dignitary, would tie a giant carp by its gills to a reed. Such practises, as well as off-stage exchanges like irate phone calls between regional chiefs and the fisheries minister, are not documented in the archives. Officials may have been horrified at what was happening to the water in secret. When officials tried to bring this offstage dialogue onstage, as we shall see at the conclusion of the chapter, the papers I examined only gave me teasing glimpses of it. However, there is room for heterogeneity, opposing claims, and so some agency even inside official discourse[7], [8].

Making full use of the sea's biological resources

An introduction to attempts to protect the productivity of the sea by importing salt-tolerant species is important before moving on with this narrative. These efforts would have a significant impact on the species composition of the sea. These efforts would not fully be understood by humans until the Soviet Union fell. They didn't stop the catastrophic fall in catches in the near term, and some actions even made it worse. If prewar acclimatisations aimed to alleviate the "poverty" of the ichthyofauna of the Aral, the anticipated rise in salinity and drop in sea level after the war increased the need to acclimatise new species. In the middle of the 1950s, mullet was brought from the Caspian before the sea began to recede. They were unable to breed since they were unaccustomed to the chilly Aral waters. Gobies and atherines were unintentionally brought with them, along with the prawn *P. elegans*, which became a permanent member of the benthic fauna. The gobie and atherine population expanded while the mullet failed to reproduce. Soon after, Baltic herring were imported, but against expert advice, there were no steps taken to improve the "poor" planktonic food basis. The herring quickly proliferated, consumed all the zooplankton, and eventually starved to death. The gobies were vying for benthic fauna with local fish while they themselves had little economic value. Commercial catches of fish like bream and carp decreased, however gobies fed predatory species like asp and zander, whose catches increased. These findings did not discourage ichthyologists. "To maintain the fishery significance of the Aral Sea as far as is possible in the future, it is even now necessary to introduce to its fauna more euryhaline, eurythermal species of fish and non-fish objects, capable of making full use of its food resources," wrote Karpevich, an ichthyologist at the All-Union Research Institute of Fisheries and Oceanography, VNIRO. Thus, more methodical steps were made to restore the whole ecosystem after 1960 as salt levels increased. By building on Michurin's theory of "the unity of the organism with its conditions of life," Karpevich developed a novel strategy that views acclimatisation as a complicated process of organisms adjusting to their new environment. The survival of the individual organisms as well as the expansion of the species' population to fill a "ecological niche" were necessary for successful acclimatisation. As a result, whereas the Aral was considered to have "poor" biomass and was thus ideal for the introduction of predators, the Azov Sea, which was rich in tiny fish, initially needed the introduction of invertebrates at the base of the food chain. This initiative was 'utilitarian' in nature, with the scalable expansion of commercial fisheries as its end aim. The quantitative expansion of species with economic value was based on the interactions between various species throughout the food chain, not on the abstraction of fungible commodities from their natural environments. Karpevich understood that it was initially better to increase the native fish's food supply rather than introducing new fish that would compete with the current species. Thus, at this time only two plant-eating species from the Far East the silver carp and the belyy amur were imported since they had no local competition. A variety of euryhaline

invertebrates were nonetheless introduced, with varying degrees of success. A tiny crustacean called *C. aquaedulcis* was introduced and swiftly spread across the water to replace the zooplankton that Baltic herring had killed off. The bivalve mollusk *A. ovata* and a polychaete worm, *N. diversicolor*, were brought from the Azov Sea to supplement the benthic biodiversity, which was under stress from increasing salinity and from the ravenous gobies. They had previously been introduced to the Caspian with success in earlier decades. They took over as the dominating species in the Aral invertebrate community when salinities rose. Benthic fauna's biomass really grew tenfold as salinity climbed. Biodiversity, on the other hand, declined, with many species being wiped off by the increasing salinity; chironomid larvae, a crucial benthic food source, likely also perished from polychaete worm predation. Rising salt levels and dwindling spawning habitats rendered local species incapable of procreation in the 1970s. Only gobies, atherines, and a few Baltic herring remained by the late 1970s. The sea, however, was far from lifeless in terms of invertebrate life. The Aral regression would not last for long, according to Karpevich's major work on acclimatisation, which was published in 1975. However, in the interim, "it is necessary to continue both theoretical and practical works to maintain life in this difficult period for the sea, and to preserve its biological and economic significance, however small." Karpevich suggested a number of experiments in response to the uncertainties surrounding the future of the sea as it continued to diminish, and attempts were then made to import euryhaline fish species, including two varieties of flounder, Caspian sturgeon, and Pacific salmon.¹¹ of these prospered, with flounder *glossa* from the Azov Sea imported in 1979–1987 grazing on *N. diversicolor* and two bivalve molluscs, *A. ovata* and *C. isthmicum*. Gobies were the only animals that competed with flounder for food. The flounder, which can tolerate salinities of 15 to 50 g/l, swiftly adapted to its new surroundings, reducing the amount of time it took to spawn in response to the faster ice melt than on the Azov. Additionally, throughout the 1980s, people who were now fishing elsewhere did not threaten [9], [10].

CONCLUSION

The evaluation of living standards and employment provides a complicated tapestry of issues in the convoluted world of bureaucracy that need for serious analysis and creative solutions. This investigation has dug into the numerous aspects of these difficulties, illuminating the distinct viewpoint of bureaucrats and their vital function in government. As representatives of the state, bureaucrats are entrusted with the serious duty of establishing laws that affect the lives and livelihoods of people. However, their perspective often diverges significantly from that of the wider public. It is a viewpoint constrained by facts, laws, and policy goals, which may sometimes conceal the complex realities of employment and living standards in practise. In this area, bureaucrats face a wide range of difficulties. A multifaceted approach that goes beyond money to include healthcare, education, housing, and social services is necessary to evaluate living standards. Because of their complexity, it is important to have both experience and a thorough grasp of how different socioeconomic indicators interact. This investigation has shown how critical it is to comprehend the bureaucrat's point of view while evaluating living conditions and work opportunities. It emphasises the need of a comprehensive and data-informed approach to the creation and application of policies. As we come to the end of our exploration of the difficulties encountered by bureaucrats, we have a clearer understanding of the crucial part they play in determining the socio-economic environment and the opportunity for creative solutions to tackle these challenging problems.

REFERENCES:

- [1] J. Lei, "Covering whoever is eligible? An exploratory study on the eligibility of the Urban Minimum Living Standard Guarantee in China," *Crit. Soc. Policy*, 2014, doi: 10.1177/0261018313514803.

- [2] S. Shuid, "Low Income Housing Allocation System in Malaysia□: Managing Housing Need for the Poor," *22nd Int. Hous. Res. Conf.*, 2010.
- [3] R. Belk and T. Ghoshal, "The Kafka quagmire for the poor in India," *Journal of Marketing Management*. 2017. doi: 10.1080/0267257X.2017.1318939.
- [4] A. H. Chaudhury, "Metropolitan planning in Bangladesh with reflections on Khulna city master plan 1961 and the current trend," *Forum Phys. Dev. Bangladesh*, 2010.
- [5] A. Skatvedt, E. Andvig, and B. Baklien, "Bakkebyråkratiets yttergrense. Hjemmetjenestens møte med eldre med psykiske helseproblemer," *Nord. Tidsskr. helseforskning*, 2015, doi: 10.7557/14.3479.
- [6] W. Wheeler, "Mitigating disaster: The aral sea and (post-)soviet property," *Glob. Environ.*, 2018, doi: 10.3197/ge.2018.110207.
- [7] X. Zhang, "Conversation on Saving Historical Communities: A Participatory Renewal and Preservation Platform," in *IOP Conference Series: Materials Science and Engineering*, 2017. doi: 10.1088/1757-899X/245/8/082053.
- [8] O. Stuenkel, "Governing the world: the history of an idea," *Cambridge Rev. Int. Aff.*, 2013, doi: 10.1080/09557571.2013.844923.
- [9] K. Blackburn, N. Bosey, and S. Capasso, "Living With Corruption□: Threshold Effects in Red Tape and Rent Seeking," *DES (Department of Economic* 2008.
- [10] K. Ausubel and J. P. Harpignies, "Nature's Operating Instructions: The True Biotechnologies," *The Bioneers*. 2004.

CHAPTER 8

EXPLORING PROBLEMS WITH JOBS AND LIVING STANDARDS

Umesh Daivagna, Professor

Department of ISME, ATLAS SkillTech University, Mumbai, Maharashtra, India

Email Id- umesh.daivagna@atlasuniversity.edu.in

ABSTRACT:

This summary gives a broad overview of the various issues involved in determining living standards and employment in the complicated socioeconomic environment of today. Beyond money, a variety of socioeconomic elements, including healthcare, education, housing, and social services, are taken into account when evaluating living standards. Similar to this, comprehending employment requires negotiating the always changing nature of work, including gig economies, independent contracting, and technology developments. The bureaucrats in charge of these evaluations must contend with the complexity of the data, social demands, and the need for comprehensive and data-driven policies. This abstract lays the groundwork for a thorough investigation of the complex aspects of these problems and their consequences for efficient government.

KEYWORDS:

Component, Monetary, Multidimensional, Socioeconomic.

INTRODUCTION

A vital component of governance and policy-making is evaluating living standards and employment, which is essential for guaranteeing the populace's well-being and economic stability. This introduction lays the groundwork for an examination of the complicated issues that arise when assessing living standards and employment in the contemporary socioeconomic environment. The foundation of social wellbeing is work and living conditions. They specify the standard of living, level of financial stability, and possibilities accessible to people and communities. However, evaluating these elements is far from simple since it requires a multidimensional approach that goes beyond data on employment and income. Modern assessments of living standards go beyond monetary considerations and encompass a holistic viewpoint. Access to healthcare, educational opportunities, the standard of living, social services, and environmental variables are all taken into account. To fully comprehend the socio-economic indicators that make up this complex network of socio-political indicators, bureaucrats and policymakers must grasp it [1], [2].

The idea of job has also changed in the contemporary period. Gig work, remote employment, and the impact of technology on job structures have all emerged as a result of the typical blurring of the lines between the formal and informal labour markets. A complex knowledge of labour dynamics, underemployment, and the evolving nature of work is increasingly necessary for assessing employment. This investigation digs into the difficulties in assessing living conditions and jobs. It discusses the difficulties in identifying and assessing these elements as well as the problems bureaucracies have with data. It also draws attention to the sociological aspect of decision-making, which is affected by political factors, public expectations, and pressure from interest groups. This investigation is essentially a voyage into the complexities of leadership and policy-making in the areas of employment and living standards. It emphasises the need of a thorough, data-informed approach to evaluate and solve people's demands. We learn more about the dynamic and always changing environment of contemporary socio-economic assessment and governance as we dive further into these

problems. The evaluation of work and living conditions in the modern world is a dynamic and ever-changing process. It calls for a careful balancing act between history and progress, data-driven insights, and people-centered regulations. These difficulties are not separate but rather interwoven as we go through this difficult terrain, weaving a tapestry of difficulties that calls for careful thought.

For instance, living standards are no longer primarily determined by income levels. Access to high-quality healthcare, equal educational opportunities, secure and affordable housing, and social services that support wellbeing are now included in the notion. This multifaceted approach acknowledges that financial measurements by themselves cannot adequately describe actual prosperity. Parallel to this, there has been a significant change in the nature of employment. Traditional labour markets have been challenged by automation, gig work, and remote employment. In order to address not just unemployment but also underemployment and job security in a workplace that is continually changing, policymakers must adjust to this new reality. Data is both a blessing and a hindrance since it is the lifeblood of evidence-based policymaking. Data quality, availability, and relevancy might vary greatly even when it provides insightful information. In order to make well-informed choices that contribute to favourable society results, bureaucrats must navigate these data complexity issues. The process of establishing policies is significantly impacted by societal influences as well. The objectives of governments and bureaucracies are shaped by public expectations, which are influenced by cultural norms, media narratives, and political debate. Effective leadership and governance are needed to navigate these outside forces while keeping an eye on facts and evidence. Evaluating living conditions and employment is a complex process that needs an all-encompassing strategy. It necessitates data synthesis, social expectations management, and socioeconomic environment adaptation on the part of decision-makers and bureaucrats. We get a greater understanding of the complex processes that constitute good governance in the current period as we start our investigation of the issues within this field [3], [4].

DISCUSSION

These measures failed to temporarily stop the decline in catches. The volume of water reaching the sea continued to decrease despite the Praesidium of the USSR Council of Ministers' 1965 decision to protect the sea's fisheries importance. When the Kazakh Council of Ministers requested investment from the USSR Fisheries Ministry and the USSR Water Management Ministry in the Aral area in 1969, they made reference to the decision.¹³ Their effort to utilise the resolution to support the argument for investment, however, was unsuccessful.¹⁴ Importantly, the necessity for irrigation was not prioritised above the need to protect the sea's economic value. Because of this, Kazsovmin requested in their letter that Minrybkhos USSR and Minvodkhos USSR petition Sovmin USSR "about hastening the resolution of the question of preserving the Aral Sea by means of diversion of the flow of Siberian rivers."¹⁵ Thus, it was only viable to discuss saving the sea itself if Siberian rivers were diverted; otherwise, given the constraints imposed by the need for irrigation, it was only possible to discuss protecting the Aral Sea's "fishery significance." In reality, this only applied to delta lakes, and talking the talk did not always convert into deeds. Water was still being taken out for agriculture and the sea continued to retreat as one arm of the state operated normally; nevertheless, for other state organs, it was a race against time to preserve even the Aral's economic importance.

The situation was worse than anticipated by the early 1970s: a 1973 Union-level panel correctly predicted that the "industrial significance" of the water would be almost completely gone by 1980.¹⁶ The Kazakh government now describes the decline as an issue with jobs and living circumstances. Deportation and relocation, also known as *pereselenie*, was one response to the issue of living standards. While people of the villages *ialy* and *zyn Qaiyr*, situated far to the south of the delta and devoid of fresh water, were evacuated to Aral'sk

throughout the course of the 1970s, prior strategies of settling and concentrating populations continued. The USSR Fisheries Ministry proposed moving every seaside community to a different area, but the Kazakh government and locals vehemently opposed this.¹⁷ The fact that this resistance was successful in contrast to the deportations of the Stalinist era is evidence of the less oppressive climate of the late Soviet era.¹⁸ Mass migration was not an option, so attention turned to improving living circumstances. According to a Kazsovmin decree from 1973, communities were to have better living circumstances by building water pipelines, field hospitals, schools, nurseries, and stores, and they were to get Ural motorcycles and cattle feed.¹⁹ Additionally, work was done to build lake fish farms, and funding was sought for other types of employment, including a canning plant in Aralsk. It is related to the tacit social contract of state socialism, which depended on full employment and steadily rising living standards, that the sea's regression should appear on the political agenda as a problem of employment and living standards rather than, say, an ecological problem or a problem of falling economic output. The Aral region's living conditions have traditionally trailed significantly behind those of the USSR's major cities. The social compact was further jeopardised when the sea retreated due to declining salaries, poor living conditions, and layoffs. Through these consequences, the sea's regression was therefore made administratively known, and investments were made to lessen them.

As Kornai says, communist economies were characterised by a "hunger for investment." To secure the operation of their sector or area, the source of their political power and reputation, both fishery leaders and regional authorities had to request funding from higher entities. The problems of operating in the economy of scarcity were made worse by the sea's retreat, which increased the need for investment. Investment hunger was represented in terms of living conditions and employment since the social contract's breach endangered the legitimacy of the regional and fishery authorities. Even if in the long term this entailed greater societal costs and more expenditure to fix the issue, allocating bodies preferred to postpone since the savings were quick, predictable, and quantitative.

Additionally, the majority of extra money was invested in situations that had reached a critical stage. As a result, investments would only be made after "tolerance limits" had been surpassed and a crisis had developed. Kornai counters that acknowledging tolerance boundaries was not automatic and that it was necessary for bureaucrats to compel their expression. This notion was especially important in the context of a "creeping environmental problem," where change was gradual and thresholds were not predetermined in an objective manner. Many of these records show bureaucrats attempting to demonstrate that tolerance thresholds had been crossed while higher-level officials tried to minimise the issue in order to avoid allocating monies. The Aral Sea regression began to emerge, haltingly, as a "problem" requiring particular types of action in this process of toing and froing in an economy that was, on the one hand, legitimised by a social contract of full employment and rising living standards and, on the other, constrained by endemic shortages[5], [6].

Improving living standards by decrees

As a result, Kazsovmin approved a number of measures pertaining to habitation and employment. Each was preceded by communication between the Qyzylorda oblast officials, the planning body, the fisheries ministry, and Kazsovmin. Authorities from the minrybkhoz and oblast attempted to attract investors, with varied degrees of success. For instance, Minrybkhoz KazSSR attempted to insert a clause in 1974 asking Minrybkhoz USSR for funding for fish farms on the Aqshatau lake system and hatcheries in the Syr Darya delta, as well as for assistance in relocating villages that "cannot stand further delay due to the social conditions of the existing villages."²⁰ This effort to set tolerance limitations was failed because Minrybkhoz USSR's investment was not included while the resolution was being written.²¹ A letter from Qyzylorda obkom/oblispolkom the next year led to another

Kazsovmin resolution. The regional authorities started off with a flourish and an uncommon sense of narrative arc as they worked to be heard: One of the nation's oldest fisheries basins is the Aral water body. Up to 500 thousand tsentners [50,000 tonnes] of high-quality table fish were formerly taken out of the Aral Sea. The Aral Sea and the fishery lakes of the oblast, however, have been shallowing since 1965 as a result of the sharp increase in water abstraction from the rivers Syr Darya and Amu Darya for agricultural needs.

This has resulted in a serious decline in the natural reproduction of fish stocks in the basin and a decrease in the volume of fish catches. As usual, a parenthesis is used to indicate agricultural demands. However, even if it exaggerates both quality and quantity, the emphasis on the golden past strengthens the argument for investment. The authors draw attention to attempts to preserve lake fish populations and water levels, but they emphasise that these actions fall short of resolving the employment issue. In order to "preserve a contingent of fishermen and workers in the fishing industry and make full use of the labour resources existing in the region," they subsequently make a number of recommendations. The most audacious demand they make is to build a plant in Aral'sk that would process 20,000,000 cans annually while employing 500 people. This is a blatant example of investment hunger. Other demands include financing for flats in Aral'sk for relocating families, loans for fisherman to build new homes, hydrological installations on lakes, and the expedited building of the Qamystybas fish farm. Smaller requests, like as those for mobile banyas, Ural motorcycles for fisherman, and trucks to deliver drinking water, are also made due to the growing difficulties of getting to the receding sea. In contrast to the florid tone of the oblast authorities, Kazsovmin's final resolution, "About measures for labour organisation of fishermen of the Aral region and improvement of their living and cultural conditions," was more subdued. "In the interests of improvement of everyday cultural conditions of fishermen of the Aral region and employment of workers in the fishing industry who have been released in connection with the contracting fishery on the Aral Sea, the Council of Kazsovmin recommends that the oblast authorities²⁴ The speech's limitations are clear: the participle phrase "the contracting fishery" hides both the fishery's illustrious past and the causes of its contraction, while the euphemistic phrase "vysvobodivshiesia" portrays the employment issue as a logical outcome of a typical economic process. Not all of the oblast authorities' expectations were fulfilled. The Qamystybas fish farm and other interventions in delta lakes were authorised by the decision, and Gosplan KazSSR was directed to allocate the appropriate machinery.

A variety of improvements to living circumstances were also provided, such as water pipelines and field hospitals. It gave Minrybkhos KazSSR the go-ahead to house them and Gosplan the order to "provide measures for improving the use of labour resources of the Aral region." It also authorised the decision to move 520 families from outlying villages to the town of Aral'sk. However, the key demand for a canning plant made by the oblast officials was disregarded despite this ambiguous attempt to provide work to the people who had been evacuated. The trend was repeated in 1976. The impacts of the sea's retreat on water supply, transportation, fisheries, the shipyard, and the port were emphasised in a letter from the oblast authorities. The results are striking: As a result, 2,000 employees have been laid off during the last ten years. 10,500 persons who are capable of working, 6,600 of whom live in Aral'sk, cannot now be given jobs across the whole Aral area.²⁶ This percentage, which is around 30% of the working-age population, was really rather normal for Central Asia. The informal ways that individuals made a living, such as maintaining private cattle or trade, are not included in this depiction. However, data blatantly show that tolerance thresholds have been crossed, posing a serious employment issue that calls for investment. Only a few of the proposals made by the oblast authorities were incorporated in the Kazsovmin decree that followed, titled "On Urgent Measures for the Further Development of the Economy and Improvement of Everyday Cultural Conditions of the Population of the Aral raion of

Qyzylorda oblast. The new fish farms and the canning facility were now covered by the directive. Minrybkhoz KazSSR was supposed to "discuss" financing with Minrybkhoz USSR, but no money was actually sent. Plans for new businesses in Aralsk included a meat processing facility and a sewing factory, but they did not include other demands like a glass factory and a brick factory. The edict also stated that fishermen's remuneration increased to make up for decreasing catches. The oblast authorities had asked that Minvodka KazSSR be required to send 50 m³/s of water below Qazaly, in compliance with a prior mandate, for lakes and fish farms.²⁸ This amount was to be determined annually by Minvodka in consultation with Minrybkhoz, according to the final order. In conclusion, even though Kazsovmin acknowledged that tolerance thresholds had been crossed, not all requests were met, and many actions were inadvertently put off by failing to provide resources. However, following reports on the implementation of these resolutions show that some real action did indeed follow.

Aralsk was utilised to host inhabitants that had been relocated from islands, and settlements had hospitals, stores, and schools established there. To provide jobs, a stud farm was established in Qlandy. Most settlements finally had water pipelines constructed while others had wells. Although a water-purification facility was erected in Amanötkel in 1977, the significant mineralization of drinking water brought on by agriculture went unabated. Many communities received electricity for the first time. In other words, several fundamental elements of state-socialist growth, including new types of gridded connection, that had been missing from the area for a long time, finally made their appearance. Not all requirements were met, however. However, Minrybkhoz USSR refused to provide funding unless the availability of water for the lakes was assured in the integrated plan for water usage in the whole Aral basin, which never materialised. As a result, two fish farms were built. In fact, the regulation required Minvodka KazSSR to specify the water delivery rates to the Syr Darya's lower levels, and they changed from year to year. 1.63 km³ and 2.04 km³ of total flow below Qazaly, respectively, were more than what the oblast authorities had asked in 1981–82, while only 0.39 km³ was sought in 1983. ³⁰ A few of the businesses that were supposed to provide jobs were terminated, including the sewing factory, the canning facility (for which money had been unsuccessfully requested from Minrybkhoz USSR), and the firm that processed meat. The 'problem of employment' remained unsolved. Another letter to Kazsovmin from the oblast officials in 1984 requested assistance for the Aral area. Gosplan conducted research, concentrating on the hamlet of Qaratereng, where they discovered that there was still a labour excess equivalent to that noted in the area over ten years ago, despite some encouraging outcomes of the measures adopted.

Additionally, the research revealed that majority of the inhabitants steadfastly refused to leave, even though some families had been transferred to sovkhosy that grew rice in other parts of the Qyzylorda region.

Gosplan offered more of the same in his solutions: Minvodka was required to guarantee 30 m³/s below Qazaly; the Ministry of Agriculture was required to provide funding for constructing a dam on a delta lake as restitution for the harm done to the fisheries; and electrical lines were required to power pumps for the lakes. Even when money was set aside for investment, the region's issues with a scarcity of water remained unsolved. Critically, the issue could only be presented in a restricted form, disaggregating cause and effect, due to the discursive restrictions of these speech genres. River control is a parenthetical background component in a mechanical chain of events. The result is an issue with 10,500 extra personnel. The complicated collection of material consequences caused by the sea's regression are separated from the employment issue by using statistics. While investing in basic infrastructure was necessary to address an issue with living standards, dust storms and their impacts were not seen as difficulties.

The decline in living conditions and employment levels did not represent a crucial event that mobilised extensive change. When the sea's retreat entered the political arena via this very constrained lens, it led to a small number of initiatives that mostly aimed to preserve the status quo. The Soviet era is seen as a time of abundant employment. Even throughout the latter years of the Soviet Union, work remained available, but not in the full capacity promised. Without a doubt, the fisheries have decreased. Around 8,000 people were employed in the business in the postwar era, including 2,000–3,000 men and women who fished in the sea, on lakes, and in the Syr Dariya's lower reaches. As irrigation systems were created to cultivate rice, the fisheries upstream on lakes in Qazaly raion drastically decreased during the next years. Fisheries were destroyed in settlements that were untenable, such as Ialy and Zyn Qaiyr. The number of fishermen had decreased to about 650 by 1970. As the fisheries declined during the 1960s, women were the first to abandon fishing, but many continued to work in processing factories. Some of the fishermen from the villages of Aqespe and Aqbasty were put off and relocated to the close-by Qlandy stud farm after the Avan' fish factory was liquidated in 1976. However, this was the last instance of layoffs before to perestroika. A Minrybkhoz meeting in 1986 saw an Aralrybprom accountant vehemently argue that recommending layoffs was just as politically impolite as questioning the necessity for irrigation. The company's purpose changed from exploiting the sea's wealth to assisting the local workforce, and Aralrybprom continued to employ about 2,000 people: mostly women workers in the processing plants in Aral'sk, Bögen, Qaratereng, Qazaly, and Aqtöbe to the north, and mostly fishermen in coastal villages. Although the port was closed, similar procedures kept the shipyard and other businesses in Aral'sk operating[7], [8].

Fish farms

As the industrial nature of the Aral Sea waned, focus shifted to the construction of fish farms on delta lakes, which promised to guarantee a long-term supply of fish and jobs.³⁶ Lakes offered up to 4,500 tonnes of fish each year if they were given fresh water, cleansed of vegetation, and stocked with desirable carp species. The *ozrnotovarnoe rybokhoziaistvo* provided a form to be controlled even when the environment degraded. However, the promise of control was as usual disappointed. 'Rational usage' of the farms, including stocking, cleaning canals, and pumping in fresh water, is required, according to Aralrybprom orders.³⁸ In reality, weeds and low-value fish like pike remained. Poaching was rampant, and inspectors and managers did nothing to stop it. All lakes were meant to be allocated to a single company, or *kolkhoz*, which would be in charge of the lake. According to a 1981 ruling, businesses were caught fishing in prohibited lakes, and in one case, a local manager was involved.⁴⁰ Such attitude is understandable given the challenges of executing the strategy in the current context. The main barrier to the growth of fish farms was undoubtedly a scarcity of water, which was largely beyond the control of fishery management.

However, in official speech genres, responsibility could only be shifted laterally or below; for instance, to Minvodka. Thus, Minrybkhoz KazSSR was harshly ordered by a Minrybkhoz USSR commission in 1984 to make sure that lakes were supplied with water, despite the panel's express recognition that water-management institutions were failing to provide water for fishing. The panel also discovered a ridiculous scenario in which Qamystybas, a significant fish farm, was being used by subsidiary businesses headquartered in Aral'sk who were growing watermelons along its borders, draining water from it, and contaminating it with pesticides. The ministry and local fisheries managers were both aware of this practise, and they both protested to the raion officials who, it turned out, were the ones orchestrating it. People from Aral'sk had even been storing boats and nets near the lake, giving away the unofficial practises that concealed the dismal unemployment rates reported in the official figures.

Managers at Aralrybprom, meanwhile, accused those below them of not restocking lakes and providing them with water. They claimed in 1984 that Lake Aqshatau, which is overseen by kolkhoz Zhambul, had not received water since 1970. Additionally, they discovered that Kolkhoz Raiym had acted independently. A dam that divided their lake from Lake Qamystybas had been dismantled by the kolkhoz management in order to increase the level of their own lake. The government decided to deprive the kolkhoz of power over the lake as a result of this conduct. However, kolkhozniks successfully petitioned the ministry to restore it to the kolkhoz, and the government even agreed to install a sluice to increase the lake's water supply.⁴⁴ The Syr Dariya was dammed in Aghlaq in the late 1970s so that the little water supply could be utilised on the lakes and as drinking water rather than flowing into the sea. Water, however, was never enough. Famous brigade fisherman and Party member Narghaly Demeuov criticised Aralrybprom in a letter to the oblast newspaper *Put' Lenina* in 1985. In an effort to justify themselves, the managers pointed the finger at water-management agencies, namely for failing to construct a dam at Qarashalang that would have allowed for the "rational use of limited water resources." Five years after Kazsovmin ordered water management groups to construct this dam, they still hadn't done so. Fisheries managers may use these arguments to defend themselves in the media, but there was no formal way for them to speak with the bodies in charge of managing the water directly^[9].

The limits of bureaucratic discourse

After a rush of communication in 1978–1979, there is no further information regarding financial troubles in the municipal archives until 1985, although there is no reason to believe that they disappeared. The contact between Aralrybprom, Minrybkhoz, and Gosbank from 1985 is included in files that, in fact, follow the same pattern as previous records.⁶⁰ However, there is a change in the vocabulary employed, a new degree of frustration, and bureaucratic jargon practically collapses in certain letters from Aralrybprom management. Late in 1985, Gosbank abruptly imposed a credit penalty and stopped all sources of credit. The Gosbank oblast office was written to indignantly by the director and accountant of Aralrybprom, who also copied the ministry, the Gosbank republic, and local offices.⁶¹ They state bluntly: "The sharp retreat of the sea has caused anxiety for the local inhabitants, and they have started moving to other life-friendly regions of south Kazakhstan." This is after explaining how the fishery had to be reorganised so that it was based on ocean fish and expeditionary fishing.⁶² This is the clearest and most accurate representation of care for the local inhabitants that I could find in the archives.

The Russian, though, is odd. Even speakers of a language who are proficient may not have the general vocabulary necessary to engage in certain types of conversation, as Bakhtin points out. Here, the authors are native Kazakh speakers who are well-versed in official bureaucratic genres of Russian; nevertheless, since their speech goes beyond the bounds of those genres by including other kinds of sea-related discourse, the Russian they use becomes illegible. They then mention an additional restriction that was imposed by superior authorities in accordance with the social contract: The TsK KP Kazakhstan and Kazsovmin have enacted a special directive prohibiting the dissolution of any sections, brigades, or units of fishermen or processors in order to help the native fishers and processors of the Aral. As a result, both individual and society technical-economic production help has been provided. Everyone understands that fish is not ore or coal, thus providers are free to ship whatever they have on hand. The fact is that if we refuse because the goods are not anticipated in the delivery plan or for some other reason, then we will be left without raw materials, and the collective of the 2000-person workforce will be left with nothing. In this situation, we are forced to accept without considering the species of fish, whether they are included in the plan, whether they are profitable, or both. We've had multiple chances to go through that unpleasant experience. Actually, it has been common practise in recent years to stockpile raw resources three to four

times more than is necessary for a given season. And unlike combining regional fish, the order of shipment to consumers imposes its own: they want common species of fish from nearby waterbodies, which we often don't have.

Here, the language falters. Consumers prefer local fish, not fish from the seas, and this is obvious. However, there are also strange phrasings, poor punctuation, imprecise syntax, and verbs without obvious subjects. The indescribable stress of trying to live in a world of scarcity bursts over in a language devoid of the tools to articulate it. They proceed to emphasise the seasonality of supply and processing (as it is hard to process fish in the summer heat) before pointing out a further limitation known as the "law of socialism": "At that time, we offer the employees time off without pay, but we do not reduce the collective as a whole because that is not allowed by the law of socialism," the company said.⁶⁵ They say that as a result, resources and debts gathered together. All of the railway waggons were occupied moving watermelons when the crop was prepared for delivery in September. This explains the present economic challenges. The bank implemented a unique crediting system while ignoring their letters. The writers further note that Aralrybprom's early overfulfillment of the Eleventh Five-Year Plan and the overfulfillment of the plan for the first nine months of this year were not taken into account by the bank.

They argue that the bank must provide assistance on this basis. The managers have also made verbal and written appeals to the minister, Sarzhanov, but the special finance system has nevertheless been implemented. As more defences are offered, greater fury is felt. The authors conclude by outlining the effects of Gosbank shutting off credit: Since suppliers might soon refuse to provide raw materials and other materials required for manufacturing, the state plan's fulfilment will likely suffer, and the association's pre-Congress duties will undoubtedly be disrupted, production is on the point of being completely paralysed.⁶⁶ Even if bureaucratic language may have reached its apogee, the writers are still adhering to the conventions of the style while highlighting their legal duties to the state. They reinforce their will to carry out what is still a rather small "speech will" by taking use of the affordances of the genre. They make it quite evident that the fisheries have hit its tolerance limits and is on the brink of stagnation. The credit restrictions were eliminated after the receipt of this letter and a phone call with the management of the oblast bank[10], [11].

CONCLUSION

Effective governance and policies are centered on the dynamic and complex task of assessing living conditions and employment. As a result of our investigation, we have learned more about the complicated issues that bureaucrats and policymakers must contend with, as well as the many difficulties that come with assessing these important socioeconomic factors. The idea of living standards, which was originally solely determined by money, has developed into a comprehensive one that takes into account social services, housing, healthcare, education, and environmental quality.

This broader perspective acknowledges that real happiness cannot be defined just in terms of monetary values. It requires a thorough comprehension of the many elements that affect residents' quality of life. Data brings both possibilities and difficulties since it is the foundation of evidence-based policymaking. In order to make choices, bureaucrats and policymakers must consider concerns with data veracity, availability, and relevance. Effective policy evaluations depend on the availability of reliable analytical methods and high-quality data. Assessing living standards and employment involves a careful balancing act between tradition and innovation, data-driven insights, and human-centered policy since it is a complicated and dynamic field. Effective governance is largely dependent on the capacity of bureaucrats and policymakers to synthesise data, negotiate social expectations, and adjust to the constantly shifting socio-economic environment. As we draw to a close, we

acknowledge that these issues are not static but rather a continuous process of learning about and enhancing the welfare of societies all around the globe.

REFERENCES:

- [1] S. Unger, A. Tisch, and S. Tophoven, "Age and gender differences in the impact of labour-market transitions on subjective health in Germany," *Scand. J. Public Health*, 2018, doi: 10.1177/1403494817738430.
- [2] G. N. Todorov, A. V. Kalinina, and A. I. Rybakova, "Impact of labour migration on entrepreneurship ecosystem: Case of Eurasian Economic Union," *Entrepreneurship and Sustainability Issues*. 2018. doi: 10.9770/jesi.2018.5.4(20).
- [3] W. Wheeler, "Mitigating disaster: The aral sea and (post-)soviet property," *Glob. Environ.*, 2018, doi: 10.3197/ge.2018.110207.
- [4] A. Faradina *et al.*, "Halal logistics: Halal integrity and legal enforcement challenges," *Int. J. Supply Chain Manag.*, 2018.
- [5] J. Grynychuk and I. Romaniuk, "DEVELOPMENT OF RURAL GREEN TOURISM IN THE REGIONS OF UKRAINE ON THE BASIS OF EUROPEAN INTEGRATION," *Balt. J. Econ. Stud.*, 2018, doi: 10.30525/2256-0742/2018-4-4-100-105.
- [6] D. Hofäcker, "In line or at odds with active ageing policies? Exploring patterns of retirement preferences in Europe," *Ageing Soc.*, 2015, doi: 10.1017/S0144686X1400035X.
- [7] J. Ifeoma Obidile, "Revitalization of the Technical and Vocational Education (TVE) Programmes for Youth Empowerment in Nigeria," *Int. J. Vocat. Educ. Train. Res.*, 2018, doi: 10.11648/j.ijvetr.20180401.17.
- [8] S. T. and Amritha Hariharan, and P. K. Viswanathan, "A Study on the Performance of Micro, Small and Medium Enterprises (Msmes) in India," *Glob. J. Manag. Bus. Res. A Adm. Manag.*, 2016.
- [9] C. Estlund, "What should we do after work? Automation and employment law," *Yale Law J.*, 2018, doi: 10.2139/ssrn.3007972.
- [10] T. L. Taylor *et al.*, "A systematic review of the international published literature relating to quality of institutional care for people with longer term mental health problems," *BMC Psychiatry*, 2009, doi: 10.1186/1471-244X-9-55.
- [11] C. A. Garner, "Offshoring in the service sector: Economic impact and policy issues," *Econ. Rev. Reserv. Bank Kansas City*, 2004.

CHAPTER 9

STATE SOCIALISM, OCEAN FISH, AND NOSTALGIA IN ARALSK

Swarna Kolaventi, Assistant Professor

Department of uGDX, ATLAS SkillTech University, Mumbai, Maharashtra, India

Email Id- swarna.kolaventi@atlasuniversity.edu.in

ABSTRACT:

This abstract offers a look into the captivating story of state socialism, nostalgia, and ocean fish that takes place in Aral'sk, a town that has been severely impacted by the ecological and socioeconomic effects of the Aral Sea catastrophe. The desiccation of the Aral Sea, which was mostly caused by Soviet irrigation policy, changed the area and its fishing populations. In light of this context, this investigation reveals the confluence of history, the environment, and nostalgia while underlining the complicated connection between the Aralsk people and the sea that was once their source of sustenance. A devastating reminder of environmental deterioration and the human cost of state socialism's lofty aspirations is Aral'sk, a town that formerly prospered on the bounty of the Aral Sea. The ecological disaster that occurred in the area as the water retreated left behind a poisonous and desolate terrain that threatened the very survival of its inhabitants. This summary provides an overview of the fascinating narrative of Aral'sk, which weaves together nostalgia, state socialism, and ocean fish in a tale of environmental disaster and human resiliency. It highlights how, in spite of significant change, there is still a link between people and their surroundings. The Aral water crisis has left a lasting impression on the people of Aral'sk, who continue to have a strong bond with the water that previously characterised their life.

KEYWORDS:

Aral'sk, Ocean Fish, Nostalgia, State Socialism.

INTRODUCTION

Aral'sk is a town in Central Asia whose entire character has been influenced by the fusion of ocean fish, state socialism, and nostalgia. This once-thriving fishing centre, which is nestled on the beaches of the Aral Sea, has seen a significant alteration that is a reflection of the wider ecological and socioeconomic effects of the Aral Sea disaster. As we begin our investigation, we get engrossed in the complex interaction of history, environment, and memory, where the past and present meet in a narrative that defines the lives of Aral'sk's inhabitants. The Aral Sea, historically one of the biggest inland bodies of water in the world, had a profound impact on the history of Aral'sk. The ocean was teeming with life, and the fisheries it supported gave generations of fishermen and their family's food and a living. However, the aspiration to convert dry Central Asian terrain into productive cotton fields, encouraged by Soviet-era irrigation plans, resulted in an unparalleled environmental disaster.

The Aral Sea retreated, leaving behind a barren and poisonous terrain that threatened the very survival of towns like Aral'sk. The once-thriving fishing community was struggling to recover from ecological destruction and economic loss. This investigation takes us on a tour through Aral'sk's historical records, charting how the town changed from a successful fishing port to a place plagued by sea-related memories. Older generations tell us their tales, vividly recalling the bounty of the sea and the thriving fishing sector that provided for them. We also come across the younger generations, who inherit a drastically altered world in which the sea, the source of life for their community, has virtually disappeared. The stories of its residents are woven together by nostalgia, an undercurrent that permeates Aralsk constantly. It is a

yearning for a time when Aral'sk was a major economic centre and the sea was teeming with fish, when fishing was more than simply a job. It represents a longing for an era before the ecological calamity permanently changed the environment.

But despite the heartfelt reminiscence, a spirit of resiliency pervades. The residents of Aral'sk adjust to their new surroundings by looking for other food sources, revitalising their town's economic prospects, and striving to preserve certain vestiges of the past. In essence, this investigation provides a glimpse into the fascinating tale of Aralsk, where state socialism's history, the force of nostalgia, and ocean fish all come together. It explores the enduring connection between individuals and their surroundings, despite significant change. The people of Aral'sk continue to be affected by the echoes of the Aral water crisis, which give a vivid picture of their ongoing bond with the water that once defined their life. Like many other areas that have been severely impacted by environmental and socioeconomic change, Aral'sk struggles with the weight of the past while looking for a way to a sustainable future. The ambitious state socialist plans that caused the Aral Sea catastrophe have left a lasting impression on the history of the town. It serves as a sobering reminder of the intricate interaction between human aspirations, ecological vulnerability, and the lasting effects of prior actions [1], [2].

In Aral'sk, the elder generations' recollections are a gold mine of tales that vividly depict a bygone age. They spoke of a period when the sea's resources were limitless, when schools of fish danced in its waves, and when the fishing sector supported the town's thriving economy. These memories evoke both nostalgia and a feeling of loss since they stand in striking contrast to the harsh reality of present-day Aral'sk. The Aral Sea is still, at best, a distant memory for younger generations. They take over a community that is redefining itself, looking for new sources of income, and healing from previous ecological disaster. As they search for methods to resurrect their community and create a future that goes beyond the shadow of the disappearing sea, their story is one of adaptability and perseverance.

The residents of Aral'sk are not just passive bystanders in the face of such deep upheaval and uncertainty. They actively participate in the story of their community by seeking to improve the environment, diversify their sources of income, and protect their fishing-related cultural heritage. Their tenacity and spirit in the face of difficulty serve as an example of how adaptable and resilient people can be. We are reminded that this town is not alone in its battle to balance a lively past with a difficult present as we continue to examine the complex history of Aral'sk. Beyond its borders, the Aral Sea issue continues to have an impact on communities across the globe that are coping with environmental change and socioeconomic upheaval [3], [4].

DISCUSSION

A well-known poet and musician in Kazakhstan are Mrat Sydyqov. My early-thirties-old buddy Edge advised I go see him. Edge had been expressing to me how little he had learned about the sea from his parents and how everyone in Aralsk nowadays is more focused on daily concerns and money. He suggested I speak with Mrat since he is a wealth of cultural information and someone who really cares about the water and the area. In 1941, Mrat was born in Qarashalang to a family of fishermen. His childhood memories place a strong focus on the bravery of Aral fisherman, the abundance and sanctity of the sea, and the natural marvels of the surroundings. He claims that his skill stems from his early exposure to the water as a newborn. He went to Aral'sk after a childhood skating accident left half of his face crippled, and subsequently attended school in Alma-Ata, now known as Almaty, the capital of Kazakhstan. He and his wife Bazar performed local music for fishermen at sea aboard the kul'tsudno, the "culture ship." He has written songs grieving its loss and expressing hope for its restoration ever since the sea dried up. He held local performances in the early 1990s to

earn money, which he then contributed to a charity to protect the Aral Sea. Our chats followed the themes of his songs and were in line with what I had anticipated before I arrived on the pitch: comprehensive tales of the sea's decline that included matters like politics, ecology, morality, and individual health. Mrat portrayed his public image as an artist who stands up for and protects the people in our taped conversations.

He spoke at length on Kazakhstan's promising future as an independent nation, its accomplishments in recovering the sea, and his wish for further sea restoration in the future. He described how the sea was retreating and how people and their environment should be in correct, divinely ordered relationships: "We have an enemy, ekologiya... the sea is disappearing, wealth is disappearing, but nature - if you defend it, such a disaster won't happen." Money was not appreciated. Invoking the Koran, he said that God had only given people the natural marvels they would need and that they should not take more than that. "Between heaven and earth there will be wealth, but if someone destroys qanaghat, there will be suffering, you spoil nature, you spoil wealth, ekologiya comes," he said, using the Arabic word for "sufficiency" or "moderation." Mrat asserts that failing to obey qanaghat is a violation of the divinely mandated relationships between people and their environment by fusing ecology, economics, and health. However, I did not hear anyone else use the word "qanaghat" in this context. In addition, while Mrat speaks about "wealth" in his public voice, other Mrats, including the unofficial Mrat, speak more specifically about money and work and link them to the modern political economy of Kazakhstan. The interaction I had with the grandmother in the Aralsk home where I first stayed was more typical. She described to me how, in the 1960s, her husband sold dried fish, as well as deer, ducks, and geese that he had killed, illegally from their home. There was a lot of riches in the water, she reasoned. When Communism was in power, we had a pretty comfortable lifestyle, but times have changed[5], [6].

The informal customs that were inherent to socialism as it was experienced and the conceptual notion of Communism did not conflict. Her comparison of natural plenty, a decent life, and communism was particularly striking. She omitted to explain that the sea was already contracting and fish catches were drastically declining in the 1960s. I made an effort to define the date. She made a general comment about the 1960s and 1970s before adamantly stating that the issue began in 1990. She disputed me when I pressed her for details about life in the town during the 1980s, when the sea had already long since vanished. "It didn't leave abruptly it went gradually, gradually. This is undoubtedly the case, yet by 1978, the majority of people concur that the sea had vanished from the town. Both the disappearance of the sea and the dissolution of the USSR periods of plenty contrasted with the 1990s' undeniable scarcity fell into disarray in her mind. In fact, throughout my stay in Aral'sk, I did not come across comprehensive accounts of the whole calamity, a crucial incident affecting all facets of people's life. People are aware of the story of the world catastrophe, but since it is seen as external, they often find it to be stigmatising. People who grew up in the USSR remember the late Soviet period as a time of stable employment, facilitated by ocean fish; a time of relative abundance, of cinemas and workers' clubs in the town, of powerful industrial enterprises, even a naval college; a time when people's lives were integrated into the encompassing, gridded space of the USSR, which sustained a sense of belonging. The fall of the USSR is described as a sea shift, a shrinking of space, a loss of connections and a sense of belonging - of the 'expectations of modernity', but discussion of the loss of the sea is often subdued. These recollections of the late Soviet era contrast sharply with the perceptions of foreigners at the time: according to the Aral-88 expedition, the town was "the epicentre of an ecological disaster", a disorganised and chaotic sprawl that was contrary to the urbanist principles of Soviet socialism. Not that the sea itself is not grieved, mind you. But unlike nostalgia for the USSR, which is sometimes condensed into litanies about work, the cost of food, and pensions, nostalgia for the sea is almost always reduced to recollections of swimming: "We

swam, where the restaurant "Aral" is today, we swam there." Sea recollections are leisurely memories. Even though the sea had been economically significant to the town as a fishery and a transportation route, many people in the town did not directly rely on the sea for their livelihoods; instead, they engaged with it as a recreational area. Ornyq, my landlady, recounted me with delight how her mother banned her from going to the sea and reprimanded her when she returned coated in salt. These pleasant, intimate memories of childhood tend to be associated with leisure. Although most people are aware of the causes of the sea's disappearance, there is minimal tension between the two types of nostalgia. In fact, the lines between the end of the sea and the end of state socialism are sometimes blurred since both types of nostalgia convey a desire for a period that was prosperous or just free from the pressures and worries of the present. Of course, there are other meaningful frameworks of belonging besides memories of being Soviet, and they may be less salient for recent immigrants to the town. Most of the Aral'sk residents have strong ties to the area because it was the home of their forebears and the majority of their living relatives. But the primary subject of this chapter is the recollections of being Soviet[7], [8].

Postsocialist nostalgia

The government initiatives to lessen the sea's retreat, help to explain why there sometimes seems to be less of a sea shift than one would anticipate. The state-socialist social compact is often described as being strengthened by ocean fish fulfilling the idealistic promise of employment. But as I made clear, there was a disconnect between the growing physical repercussions on the ground and the little appearance of the Aral retreat as a "problem." Furthermore, state socialism's centralising and redistributive tendencies cannot be distinguished, at least not at the analytical level. How, therefore, to explain the nostalgia for late socialism among the elder generations? Why does nostalgia for the Soviet Union often outweigh longing for the outdoors? Even while it is known that Soviet development efforts caused the sea to be devastated, how is the moral substance of nostalgia for Soviet space maintained? When nostalgia for the water does give itself to expression, it does not always relate to the present. Politicised explanations for the desiccation or accounts of an environmental catastrophe from outsiders are also irrelevant to the current issues. To meet the demands of the present, the past is not simply recreated from start. Certainly, the loss of socialism's promise rather than its fact is a common theme in nostalgic stories.

Yes, memories are selective, and 'memory management' does exist to some extent. But I also consider how genuine the past was for those who experienced it. Perspectives on the past now are mostly derived on firsthand knowledge of the sea's retreat. The supply of ocean fish as the sea withdrew maintained the town's integration into Soviet space, infusing the significance of the sea's death for those working in the industry as well as the general populace. If the consolidation of the Aral as an item of economic value had integrated the town into Soviet space. The layers of change that have occurred since then, notably the 1990s' quick collapse, have likewise altered perspectives on the past. Through complex discourses from the past and the present, which serve as common frameworks within which people utilise the past to make sense of the present and the future, these historical experiences are further understood. These frameworks may have different roots in pre-Soviet conceptions of nature, official Soviet state pronouncements, perestroika academics' critical viewpoints, or even the idea of a worldwide catastrophe. I don't advocate for a single, "official," framework that individuals must either accept or reject. The Soviet state's monopoly on various discourse forms undoubtedly gave rise to counter-memories or opposing private narratives, while in many post socialist situations nostalgia serves as a form of resistance to new hegemonic narratives. But since there aren't many compelling official narratives of the Soviet era still, remembering is happening in a kind of a historiographical void. Regarding the late Soviet era, there is no indication of an authoritative or hegemonic rhetoric.

Postsocialist nostalgia is not exclusive to Aralsk; it was experienced across the former Soviet Union as a result of the collapse of the Soviet Union and people's attempt to maintain stability in the face of fast change. Reeves underlines the feeling of loss and confusion that came along with the breakdown of the many modalities of connection that allowed Central Asia to be absorbed into the USSR. People are thus nostalgic for an urbanist identity based on order and intelligibility even in a tiny town like Aral'sk since it enabled them to conceive their futures and pasts within the future and past of the Soviet Union. Similar litanies regarding work and pensions may be found all across Central Asia, from the city of Almaty to the decollectivised rural areas of Kazakhstan and Kyrgyzstan, postindustrial Kyrgyzstan, and metropolitan Uzbekistan. These complaints highlight a moral divide that exists between the government and its people. Ocean fish are recalled as concretizing this moral relationship between state and citizen when recollections of the Soviet Union centre on the actions made to slow the extinction of the sea. However, distinctions in the area had grown while I was doing fieldwork more than 20 years after the fall of the USSR.

However, in Aral'sk, much of the infrastructure has improved, most notably the clean drinking water that arrived on the eve of the USSR's collapse and has since been piped to all households. In much of Central Asia, 'memories of having been modern' focus on the material markers of modernity, such as constant electricity supply and decent roads that integrated far-flung locales into Soviet space. The speed of change is also not the same as it was in the 1990s. Even when one is surrounded by uncertainty and financial stress, it is still possible to get by and envision a future for oneself and one's family. There is a general understanding that things have improved since the dreadful 1990s, and my informants are not trapped in the past: certain characteristics of Soviet control, particularly the lack of choice in the stores, are compared adversely with the present. The fact that Kazakhstan is sovereign offers a different kind of belonging, one that is undoubtedly significant for many, but it does not negate grief over the loss of the earlier, more all-encompassing feeling of belonging. The persistence of postsocialist nostalgia in these conditions raises another challenge, especially given that it may be anticipated that the ecological destruction caused by the Soviet enterprise would undermine the desire to return to the Soviet "home" [9], [10].

Ruins

When I think back on my time in Aralsk, I can still make out the rusted cranes that tower above the deserted port. Fossils, symbols of a vanished planet, they are visible from practically everywhere in the town, towering like the heads of dinosaurs over the skyline. Raw cotton from Karakalpakstan would be transported there by ship, where it would be unloaded and placed onto trains before being processed at Ivanovo, in the Russian Soviet Federative Socialist Republic. A hazy, black-and-white picture at the museum depicts cotton being unloaded; the text just notes what is occurring. In order to feed the cotton-growing areas of Central Asia, ships would then be loaded with grain from the northern sections of the Soviet Union and sent back to Moynaq and Nókis. By excavating a route over the Berg Strait, which divided the Small and Large Seas, and along Saryshyghanaq bay, the port was maintained open until 1978. The port shut down when this too dried up. The majority of the non-Kazakh inhabitants fled during the 1970s. Many of them relocated to Togliatti, where AvtoVAZ was being built, and now former Aral'sk inhabitants gather there. The loss of the sea is regrettably connected by many elder Kazakh residents of Aralsk with the exodus of the non-Kazakh population and a loss of the city's multicultural character. The region surrounding the historic waterfront, which was once bustling with activity and the centre of the town, is now outlying. The rear of the harbour is where cement is sold. The sea-related businesses are mostly destroyed. On occasion, when I was disoriented, I would be pulled to these areas.

I would go past the Hotel Aral, the fishermen's museum, the dilapidated fisheries research centre, a large new school that looks out over the port, and then turn about and head in the direction of the ruins of the fish processing facility. Even though a new fish factory has been established in the old structure, a strong feeling of abandonment pervades. Today, trash is all across the ancient coastline. Fish used to be dumped onto pontoons so that it could be processed. Older inhabitants recall how there were so many fish that it didn't matter when kids stole them off these pontoons, how fish were used as fuel since they were so plentiful and useless, and how there were catfish big enough to feed a whole community. The long sheds of the shipyard, which constructed and maintained boats for the transport fleet and the fishing business, are located across the harbour from the fish processing facility. It is currently mostly deserted. The installation of a facility for repairing railway waggons proved unsuccessful. Stanok Lenina, also known as "Lenin's lathe," is located within the shipyard and was given to the locals as a token of appreciation for the 14 waggons of fish. The mosaic at the station and the main area both honour this occasion. This tale serves as a metaphor for the heyday of the Aral fishery, even for young people who have never seen the sea at capacity. Returning to the shipyard, it was maintained long after the sea dried up, much like the fish processing facility. Sasha, my host, was working there as an electrician up until the company declared bankruptcy in 1995, leaving him jobless. He describes how, when the water had disappeared, the shipyard's main activity changed to the manufacture of barge parts.

These would be carried onto trains and put together in Siberia to form 200-ton barges that would be used to carry oil and other essential supplies in a far-off area. Sasha clarified that during the winter, employees of the shipyard would go to Termez, where the Amu Dariya forms the boundary between Uzbekistan and Afghanistan, for "business trips." Barges that are used to transport products up and down rivers and across borders would be repaired. Sasha noted that locals lacked the skilled expertise of the Aral shipyard employees. Space is abstract, and production is separated from location, in this traditionally Soviet approach to the employment issue. But this in and of itself becomes a part of the local identity: Sasha is proud of his part in preserving the links to other infrastructures, just as the creative activity of shipyard workers integrated Aral'sk into Soviet space. I was discussing these strategies to preserve employment with Ornyq, a woman in her forties, towards the conclusion of my research. Nevertheless, she said that the sea would have been preferable. She continued in the subjunctive, imagining what life would be like if the sea still existed: there would be a beach, and tourists would flock here rather than visit the Black Sea; the port would be open and ships would sail on the water; the rybokombinat would be in operation; and all young people would become sailors. This yearning for the sea stood in stark contrast to a yearning for socialism.

She was visualising how the modern-day town might seem if the sea were there, even if her remarks relied on her childhood recollections of the sea's remains in the port. Socialism and capitalism have no bearing on their concept. But later, the subjunctive switched to the past simple: Prior to then, the shipyard and fish factory were in operation. Additionally, the shipyard's siren would sound every morning we would all exclaim as we glanced at our watches. And then we would leave in large buses rather than the cabs we use now. Not today, how about now? People just trade while sitting in the market. Her yearning for the water was replaced with a plain memory of the late Soviet era without any mention of the sea. The recollection's substance is instructive; she compares the present of small-scale market dealing to the order, reason, and work discipline of the industrial era. When Ornyq reached adulthood in the middle of the 1980s, the sea had already disappeared, and a shipyard producing barges for Siberia was sounding its siren. But this memory was brought on by the water. According to Brown, one factor contributing to the Chernobyl catastrophe's unpredictability was that 'orderly modernism' in places like Pripiat dulled any feeling of danger. It is debatable if there

was a feeling of ordered modernity given the persistent challenges the Aral fishing sector faced. However, looking back, Ornyq creates a narrative of orderly modernity, of gridded existence, which prevents viewing the past as tragedy. In Aralsk, there is another, much more ambiguous, abandoned area known as the old military town, where just a few dilapidated apartment buildings still stand. Built for the purpose of supplying the top-secret biological weapons laboratory on Vozrozhdenie Island, this was a component of the Soviet military-industrial complex. Although it has been looted for construction materials, this is a strange place that is almost always uninhabited. It was crucial for my buddy Mrat to see it, so he brought his little kid and me there. As we were driving, Mrat told us tales of incidental fatalities caused by buildings collapsing on individuals after they stole bricks, as well as the loitering prostitutes and criminals. He emphasised that they were unaware of what had occurred here during the Soviet era. The majority of the time, though, this area is delineated by indirect comments about how everything was kept private and silences. The weapons laboratory is now well known. Ornyq informed me about reading about lepers being sent there in the newspapers during the perestroika. She continued by saying that soldiers were brought there blindfolded so they wouldn't know where they were; she had subsequently read on the internet how those sent there would always recall the scent of chlorine. She came to the conclusion that they shouldn't have exploited Kazakh land for all that. This is the dark, unfathomable history of the Soviet Union. However, 25 years later, this unpleasant history was mostly compartmentalised in memory, just as the area is mainly avoided. Contradictions between the good and terrible parts of the past are often smoothed over; beloved recollections of the good old Soviet Union are not disturbed by potentially troublesome memories.

In fact, even this eerie location is occasionally reincorporated into pleasant memories of the informal aspects of socialism: sailors would signal when they needed alcohol, and children would row it over to trade for lemonade; the military was provided with high-quality foodstuffs, which the soldiers' wives would bring into the town to exchange. The unutterable is tamed in these tales. Even still, it is a noteworthy location due to both its abandonment and the way it is omitted from accounts of the prosperous Soviet past. As was made evident in the talk with Sasha that followed, such tragedies are not always simply divided off from nostalgia. He got off to his usual merry start, talking about the numerous ethnicities that had formerly resided in the area and the multicultural history that had made Aralsk distinctive as a Soviet city. But as he elaborated on his story, he discussed how they were considered enemy peoples and couldn't discuss what had occurred to them. I cited a statement I had heard from others, according to which Aral'sk was both a place of exile and a "heaven on earth" for others.

But I was being naive and had failed to notice the gravity of his tone. He instantly interjected that the reason it seemed to be paradise on earth was due to the widespread starvation that existed at the time. Before asking me whether I was aware of the famine that ravaged the Volga area and all of Ukraine in the 1930s, he gave the story of how his mother had migrated here during that time. He answered slowly, looking genuinely upset, "What a tale! Lenin, Stalin, and the Communist Party, holy hell. Of course, there were benefits—free education, free healthcare but he drifted off after a moment of silence during which the air was heavy with the horrors he had refrained from describing. The general framework of nostalgia, which so often provides context for the present, could not hold here. Sasha would sometimes speak fondly about life under socialism, such as when discussing the shipyard, but this rush of memories brought back the dreadful arbitrariness of Soviet space. The paradox was unworkable because different aspects of the Soviet state could not be divided into separate entities. Alexander and Pelkmans agree that, in this case, recollections of the past's bad moments might undermine nostalgia. While Pelkmans depicts a setting of hopelessness and stagnation in a postindustrial mining village in Kyrgyzstan in the 2010s, Alexander recounts the sensation of spiralling disintegration in the fast-changing metropolis of Almaty in the late

1990s. It's possible that despite the unhappiness with the present, there is a feeling that things have steadied since the breakdown of the 1990s and a sense of the future if nostalgia in Aral'sk does not likely to be destabilised by negative recollections. As a result, the nostalgic object itself is more solid, and the good and terrible pasts can, for the most part, be distinguished from one another[11], [12].

CONCLUSION

I think that we take seriously both the purpose and the substance of postsocialist nostalgia in Aral'sk, as should be clear from my maybe too eager agreement with Daniyar's appraisal of socialist employment policy. Since the Soviet government's actions mediated the population of Aral'sk's experience with the changing environment, environmental change did not occur in a vacuum.

Despite how limited such efforts were, they are remembered as significant today. This chapter contains many instances when criticism on the present is overflowed with nostalgia for the sea. However, certain events defy description, even if experience may be robust. Certain embodied experiences, even when described, cannot be expressed in words, with the exception of the elliptical phrase "we swam," which says so little while implying so much. When my buddy Edge informed me that his parents had only told him that they had swum in the water, the challenge of passing down such embodied experiences to a generation that had never engaged in them became tragically apparent. He told me that Edge and his friends would play on the decaying ships and attempt to envision what the water had been like in the absence of significant memory transfer.

REFERENCES:

- [1] J. S. Christiansen, "No future for Euro-Arctic ocean fishes?," *Marine Ecology Progress Series*. 2017. doi: 10.3354/meps12192.
- [2] Z. M. Wang, J. Wagner, S. Ghosal, G. Bedi, and S. Wall, "SEM/EDS and optical microscopy analyses of microplastics in ocean trawl and fish guts," *Sci. Total Environ.*, 2017, doi: 10.1016/j.scitotenv.2017.06.047.
- [3] J. Wagner, Z. M. Wang, S. Ghosal, C. Rochman, M. Gassel, and S. Wall, "Novel method for the extraction and identification of microplastics in ocean trawl and fish gut matrices," *Anal. Methods*, 2017, doi: 10.1039/c6ay02396g.
- [4] G. J. Myers *et al.*, "Prenatal methylmercury exposure from ocean fish consumption in the Seychelles child development study," *Lancet*, 2003, doi: 10.1016/S0140-6736(03)13371-5.
- [5] X. Irigoien *et al.*, "Large mesopelagic fishes biomass and trophic efficiency in the open ocean," *Nat. Commun.*, 2014, doi: 10.1038/ncomms4271.
- [6] A. Ishimatsu, M. Hayashi, and T. Kikkawa, "Fishes in high-CO₂, acidified oceans," *Marine Ecology Progress Series*. 2008. doi: 10.3354/meps07823.
- [7] P. C. Wainwright and S. J. Longo, "Functional Innovations and the Conquest of the Oceans by Acanthomorph Fishes," *Current Biology*. 2017. doi: 10.1016/j.cub.2017.03.044.
- [8] R. A. Saunders and G. A. Tarling, "Southern ocean mesopelagic fish comply with Bergmann's rule," *American Naturalist*. 2018. doi: 10.1086/695767.
- [9] V. Christensen, M. Coll, C. Piroddi, J. Steenbeek, J. Buszowski, and D. Pauly, "A century of fish biomass decline in the ocean," *Mar. Ecol. Prog. Ser.*, 2014, doi: 10.3354/meps10946.

- [10] N. R. Merrett, O. Gon, and P. C. Heemstra, "Fishes of the Southern Ocean," *Copeia*, 1992, doi: 10.2307/1446568.
- [11] J. H. Brown, "Changes in ranges of large ocean fish," *Proceedings of the National Academy of Sciences of the United States of America*. 2011. doi: 10.1073/pnas.1109139108.
- [12] R. M. Heuer and M. Grosell, "Physiological impacts of elevated carbon dioxide and ocean acidification on fish," *Am. J. Physiol. - Regul. Integr. Comp. Physiol.*, 2014, doi: 10.1152/ajpregu.00064.2014.

CHAPTER 10

CONTINUITY AND DISINTEGRATION IN ARAL FISHING SETTLEMENTS

Raj Kumar, Assistant Professor
Department of uGDX, ATLAS SkillTech University, Mumbai, Maharashtra, India
Email Id-raj.kumar@atlasuniversity.edu.in

ABSTRACT:

This abstract provides a peek into the enthralling story of rupture and continuity that characterises the fishing communities along the Aral Sea's beaches. These villages have seen a break from their once prosperous fishing livelihoods as a result of the ecological crises brought on by Soviet irrigation programmes. In spite of the destruction, a fascinating tale of continuity—one of fortitude, adaptability, and the eternal connection between people and the sea—emerges. The once-vibrant Aral Sea ecology, which was alive with fish, was destroyed by grandiose Soviet irrigation projects that diverted its waters for cotton farming. The livelihoods of fishing communities along its beaches were fundamentally altered by this enormous ecological catastrophe, which resulted in the loss of settlements and a severe disruption of their customary way of life. This investigation dives deeply into the past of these fishing communities, charting how they changed from being thriving fishing centres to being the quiet observers of environmental deterioration. It focuses on the recollections of older generations who remember the bounty of the sea, the busy fish markets, and the enduring fishing customs that were integral to their way of life. This abstract opens a glimpse into the complex interaction between rupture and continuity in the fishing communities of the Aral Sea. It highlights how humans and their environment are still interconnected, even in the wake of significant ecological change. As we begin our investigation, we learn more about how communities may recover from environmental change, rebuild, and create new futures.

KEYWORDS:

Aral Sea's, Adaptability, Coasts, Communities.

INTRODUCTION

The fishing communities that originally inhabited the Aral Sea's coasts serve as a symbol for the enormous ecological and socioeconomic changes caused by Soviet irrigation efforts. This introduction lays the groundwork for an investigation into the captivating story of rupture and continuity that characterises these villages—a story that highlights the resilience of localities in the face of environmental destruction. The Aral Sea, once among the biggest inland bodies of water in the world, supported prosperous fishing towns and a dynamic environment rich with fish. To make cotton fields out of dry Central Asian terrain, however, its waters were diverted by the massive Soviet irrigation projects. This enormous biological change caused the sea to gradually dry up, leaving behind a barren and poisonous environment. The fishing communities that dot the Aral Sea's beaches were directly impacted by this ecological calamity. These communities, which were once supported by the abundance of the sea, experienced a disruption to their way of life. On dry seabeds, abandoned boats were stranded, and the once-bustling fish markets were now quiet.

Nevertheless, a narrative of continuity—one of adaptability and resilience emerged among this rupture. Some of the locals in these fishing communities were unwilling to disconnect their ancestors' connections to the sea. They supported aquaculture, diversified their sources of income, and tried to reestablish the area's natural equilibrium. Their steadfastness in

reestablishing their communities and protecting their cultural legacy illustrates how enduringly connected humans are to the water. This investigation takes us on a tour through the past of these fishing communities, charting their development from bustling centres to the difficulties they now confront. It explores the recollections of elder generations who clearly remember the bounty of the sea and the lively fishing customs that shaped their life[1], [2].

These communities have discovered methods to maintain their connection to the sea despite environmental destruction and the disruption of their traditional livelihoods. Their experiences demonstrate the flexibility and resiliency of human groups in the face of significant upheaval. We learn about the deep ties between people and their surroundings as we set out on this investigation of rupture and continuity in Aral fishing villages. Even in the face of catastrophic ecological upheaval, societies have the ability to adapt, rebuild, and establish new futures. The tale of the fishing communities in the Aral is one of sharp contrasts and moving transformations. It is a story that captures the intentions and results of large-scale development initiatives when human intentions came afoul of environmental reality. The once-vibrant fishing towns, steeped in tradition and linked to the sea for centuries, saw themselves at the centre of an ecological disaster of unparalleled scope.

In addition to the loss of a way of life, the abandonment of towns, dry seabeds, and other physical effects, these villages also faced a rupture in their collective memories. Older generations had strongly embedded recollections of the wealth of the sea, the companionship of fishing, and the busy fish markets. A painful reminder of what was lost is provided by these recollections. There is a striking continuity, nonetheless, in the midst of this split. Some locals resisted being cut off from their ancestors' maritime connection. They started on the challenging job of adjusting to a vastly altered environment. They changed to aquaculture, expanded their sources of income, and started working to restore the ecological balance. In the midst of the environmental difficulties, their tenacity and perseverance in the face of hardship give a glimpse of hope.

The resilience of the human spirit the ability to adapt, invent, and rebuild in the midst of catastrophic change is shown by the continuity in these fishing communities. It is the tale of people and communities that, while navigating the challenges of a changing environment, refuse to lose sight of their history. We shall dig further into the unique and shared experiences of these fishing communities in the pages that follow, examining the methods they have used to maintain continuity in the face of rupture. Stories of creativity, adaptability, and community cohesiveness that highlight the incredible human spirit's tenacity in the face of environmental change will be revealed[3], [4].

DISCUSSION

After a long day of labour building Aikeld's new home, I was sitting on the sand on the edge of Bögen with Aikeld and two other guys. We were all enjoying some well-deserved beverages. They are all in their 40s. Aikeld was speaking most of the time, as usual. He inquired at one point about meat consumption in England and whether or not we consumed pig; the response, as usual, was met with great laughter. Aikeld then began to discuss how significant pigs were to Russians before posing the rhetorical question, "And what is our bailyq?" Bailyq, Arabic for "wealth," refers to cultural assets in this context. Fish was the obvious solution. He said that the Aral Sea supplied 80% of the fish consumed in the USSR. Then the others began to tell me about Bögen's illustrious history and the plant that had formerly been located not far from where we were seated. Today, almost any evidence is left. They informed me how fish were sent from the Far East to this country for processing, deviating from Aikeld's discussion of the natural abundance of the sea. There was no story of loss or feeling of rupture between the Aral fish and the ocean fish that took their place in this act of local patriotism.

Aikeld omitted to disclose that he began fishing on Balqash, thousands of miles away, and that he had never seen the sea at full tide, with its shoreline at the edge of the settlement. The calamity that made the area famous to outsiders or the many residents who fled the area were not mentioned. I was conversing with Zhbatqan, who was born in 1936, on another occasion. Zhbatqan began fishing when he was 14 years old, initially for the kolkhoz and later for the state fishing base until he retired in the 1990s. Before focusing mostly on fishing on Balqash, he worked on ships that travelled the whole sea. With his son, daughter-in-law, and young grandkids, he now resides in Bögen. His other children have all moved away to Aral'sk, Qazaly, Aqtöbe, and Almaty, but he still has one son living in the hamlet. One son just purchased a UAZ jeep and enjoys fishing. Zhbatqan is widely loved and respected, but he lacks the gravitas that many men his age possess. In addition, despite the fact that he often shares anecdotes about the Soviet fisheries, he is not always listened to, with the exception of me, who uses his tales as the basis for this chapter. On this time, Zhbatqan started by telling me about the many types of vessels that arrived in the area, how "we fished" first with wooden boats before switching to fibreglass boats, and how Kawasaki motors were imported from Japan in 1954, eventually taking the place of sails and oars. He described the ships that visited the kolkhoz in the 1950s, how they would be loaded by crane with little fishing boats, and how they would fish for months at a time in far-off seas. The retreat of the sea creates a breach in this story of steady change, where fishing remains a constant. However, unlike occurrences like earthquakes, the retreat of the sea seeps into day-to-day life, and the breach is quickly concealed by the recurrence of "we fished." Even if everything changed, fishing continued.

In such tales, the removal of the sea has less of an impact than one would anticipate. In this chapter, I contextualise the sea's regression in local notions of space, place, and nature that had undergone transformation long before the sea dried up as commodified understandings of fish as exchange-values overlaid but did not completely displace earlier notions of natural abundance. This transformation had occurred in a century of catastrophes. The state-socialist growth was uneven, combining two conflicting interpretations of the sea and placing Aral settlements in an unclear location within Soviet Central Asia. They had a very little role in the irrigation complex, which was supported by strong interests that put cotton before the sea. However, the sea served as the socialist fishery's link to the state via Minrybkhoz, since everyday physical contact with the marine environment were part of a connection that was both redistributive and extractive. In the peasants' accounts of Soviet times, both marginality and connectivity within Soviet geography are evident. However, the feeling of place that develops cannot be boiled down to the political-economic alliances that the Aral communities were a part of. Additionally, graveyards and shrines serve as physical representations of the long-standing connection people have had with the land. The sea is included as ancestral property in this registry.

A discourse focused on location and belonging and one centred on work and subsistence alternate, in fact. These discourses are different even if they are not at odds. Therefore, it is important to pay attention to how the Soviet project already altered indigenous peoples' ties with the environment in order to comprehend local meanings of environmental change. I examine how people and environment are differentially created within multiple "chronotopes," or orderings of time and place, drawing on Bakhtin. These varied chronotopes include the abstract chronotope of the plan and the particularised chronotope of tughan zher, or homeland. The retreat of the water has diverse connotations in these many time-space combinations. My explanation of how rupture and continuity interact will provide a counterargument to ideas of resilience. Resilience is a concept used by social scientists to comprehend flexibility and adaptability in "socio-ecological systems," drawing on ecologists' explanations of how ecosystems can withstand shocks.

The Aral region appears to be vulnerable when it can be arbitrarily traded for rice plantations, but narratives of attachment to *tughan zher*, which represent continuity that transcended the changes to the environment, suggest a local resilience. The information that follows challenges that distinction by arguing that resilience was influenced by both local ties to the land and larger political-economic processes. In fact, the chapter's final sections demonstrate how local identity was sovietized and how fisherman internalised the state's gridded divisions of space and time, as well as the corresponding view of nature. The chapter addresses issues with political ecology as well. It would be tempting to invoke the overall character of Soviet power if, for certain political ecologists, the Aral example seemed to exhibit a deficit. Undoubtedly, a lot of stories emphasise the limitations on agency, which is supported by the little contestation that was really available in the documents. The peasants were involved in the Soviet project and its methods of problem-solving, is considerably less noticeable among them. Instead of beginning with a lack of protest.

I investigate how evolving naturalist perspectives shaped people's perceptions of ecological change. In line with earlier histories of Soviet Central Asia, I emphasise the ambiguous compliance with the Soviet modernising effort, which transformed 'traditional' identities in their articulations with Soviet modernity rather than obliterating them. The subject of how previous struggles and suffering are socially forgotten in a current brimming with optimism about the restored sea runs throughout this chapter as a subtheme. We've passed the previous period of Communism, but now... now we don't defame ourselves, we are a sovereign nation, Kazakhstan... now we are good... we're good now, said an elderly guy in Qaratereng after outlining the advantages of the system. Communism is not the perpetually postponed conclusion of history, but rather a previous phase that has been through on the path to sovereignty. Because they are not being transferred, traumatic memories are disappearing. People born in the 1940s and 1950s might respond, "we didn't ask" or "they didn't say" when I inquired whether they had heard about the collectivization era from their parents. I believe that more recent tragedies have the same truth. Many of the stories that surfaced during formal interviews as a consequence, often in response to my queries, did not do so in other settings, and some of these tales are unfamiliar to young people. This does not imply that people lack memories. It also doesn't imply that there isn't a register for lamenting the sea; I propose that record isn't as relevant now given the abundance of fish caught. So in part, this tale is about how the enormous traumas of a century of tragedies are atoned for[5], [6].

Vulnerability

Everyone is aware that the sea in Aral'sk dried up because water was diverted to other areas for cultivation, and the standard narrative accuses Uzbekistan of "not giving water," which prevented "the Amu Dariya and Syr Dariya from flowing properly." but, many older people are aware of Moscow's contribution to the sea's decline; but, like in Aral'sk, this would only become apparent when I explicitly inquired who was to blame. The most clearly referenced in a few instances, as seen in the following quote from an *aqsaqal* named Rai in the book *Raiym*: Someone stated, "Rice needs to be sown in place of the Aral Sea," while they were gazing at the ocean. It was remarked by one of their ministers. The water was then separated. They can't fill it up again since rice doesn't grow at all. They are no longer able to refill it with water. All of it was moved to Karakalpakstan, leaving our river completely dry. The way it is phrased well conveys the arbitrary nature of the synoptic perspective from which a sea may be traded for rice: local specifics are abstracted in a political ecology where natural resources can be distributed across uniformly gridded space. This narrative is theodical, situating agency distant from the person—and far from the neighbourhood. The representation of bureaucratic institutions is that of a mercurial minister with the authority to divide the water.

Locals are exposed in this story to a governmental view that is oblivious to the Aral area. In this sense, other informants' silence on the political background of irrigation may be seen as government propaganda, leading them to place all the blame on Uzbekistan. Additionally, openly critical narratives about Moscow were perilous during the Soviet era, which explains why they are muffled even now. This implies that vulnerability also includes the incapacity to express what has occurred. Soviet modernity is seen in this register, as in other remote areas of post-Soviet space, as something that occurred to people, changes on the local level brought about by distant, strong forces. The two tiers don't seem to be communicating at all. The pastor came from "there," or somewhere else. The Soviet state had little resources available to address the matter of the sea's retreat with higher authorities. At the local level, discursive resources were much more hardly allocated since, according to my interviewees, it was difficult to complain to anybody. In reality, there is documentation of a 1977 letter from Bögen residents to Qonaev, the First Secretary of the Communist Party of Kazakhstan, requesting improved living conditions and better utilisation of the delta lakes. The letter expressed opposition to the relocation of a melioration station and all of its equipment to another hamlet. The fisheries minister then accused Minvodkhoz for failing to provide 50 m³/s below Qazaly in a flurry of communications between Minrybkhaz and the Central Committee. Only the vice-minister of fisheries responded to the villagers, noting the steps being taken to raise their standard of living, including the installation of a water pipe and a banya. He also noted that steps were being taken to exploit the delta lakes, but that these could not be fully implemented due to the "low water level of 1974–1977." However, there was some optimism expressed when the vice-minister said that the integrated plan for using the Aral water resources should be completed in 1978. According to the letter, the melioration station needed to be relocated to an area with more water. The peasants' effort to voice their displeasure was met only with a single bulldozer as recompense. It is hardly unexpected that the letter has been forgotten now. Therefore, it seems that the locale and "higher up" were unrelated. Zhbatqan said, "They didn't," when I immediately inquired whether the government had provided assistance. "Move," they ordered. Where would we go if we moved? Therefore, in this way of speaking, villages were open to the lens of the distant and heartless state, which perceives only abstract space and rearranges environs accordingly, oblivious to local lives and local meanings[7], [8].

The resilience of local identity?

Of fact, a lot of people did depart, and stories about the sea disappearing sometimes merge with stories about emigrants. The non-Kazakh population first fled in the 1950s and 1960s when environmental conditions worsened and 'enemy peoples' were given more freedom to return to their ancestral territories. Later, local Kazakhs started to emigrate in search of employment elsewhere, and some of them were relocated to rice farms in other parts of the Qyzylorda oblast. While many did depart, the majority of my informants did not. The bulk of the population's resistance to leaving was still another obstacle for the authorities managing the Aral. An exchange with my host Zhaqsylyq early on in my research offered a theory as to why they remained. He pulled down next to a rusted pile of metal, the wreckage of a ship, as we were travelling through the dried-up seabed towards the ocean. Zhaqsylyq laughed as he pointed it out. Yet, we had halted so that we could see his camel, which was grazing beside the community herd. Zhaqsylyq stood there for a while just staring at it. I questioned him about his reaction to the water disappearing as we made our way back to the UAZ. We always believed it will come back, he retorted. He said, "Because we knew that long ago, the sea wasn't there, then it came back," when I questioned why. Although I had read about the earlier regressions, I had no idea that residents in the area would have been aware of them even before the 2001 archaeological find.

The sea is an ephemeral thing that comes and departs in this temporal context. As a result, this understanding of the distant past was focused on the future. Zhaqsylyq's use of the first-person plural is startling. Such a tale may have preserved a feeling of optimism among the community at a time when many people were fleeing the hamlet. This local knowledge has been passed down by interactions between individuals and their surroundings rather than being a closed tradition. Fishermen spoke of recovering with their net's pieces of saxaul, jug remnants, cradles, and pieces of yurts. People also point to the mausoleum's recent discovery as more confirmation of what was already well-known. Locals do not distinguish between tradition and archaeological evidence, despite the fact that this gave archaeologists unmistakable evidence that the sea had previously disappeared and reappeared. Versions of this tale were often told to me during my fieldwork under the pretence of being traditional information handed down by the elders. People may respond in the past tense, claiming that the sea had previously vanished and resurfaced, when I asked whether they had imagined the sea would return one day. They would claim that it had vanished three times already. I was informed that the sea "slept," "came to itself," and that when it returned, it did it "in a single day." This tale refers to a time span that is much beyond the span of a human life, a time span in which, in the narratives of older people, the sea itself gains agency. Sometimes, the sea's agency surpasses that of humans when people talk of the populations that lived on the dried-up seabed and were wiped out when the sea returned. If these tales provide one reason for why my informants remained, an additional explanation may be found in the strong sense of place-based identification present in the community. The most common answer I got when I asked individuals why they stayed was that this is their *tughan zher*, or "homeland" or "land of birth." This expression perfectly expresses the connection between people, location, and ancestry. The shrines of *ülken atalar*, the founders of lineages, where ceremonies bring together descendants now dispersed across the nation, are significant locations identifying the land as *tughan zher*.

Cemeteries on high elevation above communities are another obvious memorial to the deceased. They cover their faces with their hands whenever somebody walks by, a gesture that symbolises a link to the past; lengthier prayers invoke the more recent deceased. The debate in Aqespe, a hamlet northwest of the sea, far from the delta, far from Aral'sk, and far from paved highways, where ecological conditions are continuing to worsen due to an expanding sand dune, brought this link to the land to light the most. Now, just 40 homes are left. One fisherman named Zhengs informed me that all of his siblings had departed and moved to Aral'sk, Qazaly, and Qyzylorda, but that their ancestors were buried here and that someone needed to remain to keep an eye on them. He pointed to the hillside across from where his siblings had gone. In addition to this sense of moral obligation, many people, as in Aral'sk, also insist on their emotional, sometimes even physical attachment to the land where they were born, in spite of the ecological destruction: I was told that some Qaratereng residents who were relocated to rice farms elsewhere in the Qyzylorda oblast were unable to adapt to the climate and perished there. The presence of ancestors is not limited to holy places. An Arabic verse from the Koran is chanted in the house before a *besbarmaq*, for instance, and is then followed by a Kazakh blessing calling upon the spirits of the ancestors. In fact, a person's relationship to others within a given lineage is what ties them together in the present. Privratsky, Post, Dubuisson, and Genina testified to the significance of *tughan Zher* to Kazakhs as their ancient homeland.⁴ *Tughan Zher* is a chronotope where the permanence of places ties people to the distant past; individuals are formed by their relationships to the land and to one another, in contrast to the abstractions of the plan that made peasants susceptible. When considered together, tales of earlier regressions and *tughan Zher*'s rhetoric appear to emphasise the resiliency of the local, forming links between people and place that go beyond the obvious changes in the environment brought on by the Soviet project's abstractions.

They provide persuasive explanations for why people persisted despite the breach caused by the receding sea by highlighting temporal relationships that extend well beyond the scope of human lives and even the objectives of the Soviet state. Of course, things are not so easy. The explanation for earlier regressions is not clear-cut. Many people come to the same conclusion as Zhaqsylyq, which is that the sea will return. However, not everyone ascribes the same value to this information. Some people state categorically that the sea will return if the Syr Dariya and the Amu Dariya flow into the sea once again; otherwise, it won't. Zhaqsylyq was not speaking on behalf of everyone, despite the fact that his use of the pronoun "we" appeared to support a general feeling of optimism. In fact, I discovered that several younger individuals were unaware of the earlier regressions. This myth no longer serves a social purpose because of the sea's partial return and the resulting improvement in neighbourhood ties. Furthermore, while there is undoubtedly a tughan zher ideology and tales of earlier regressions offered some optimism, for those who did leave, economic need overrode a sense of belonging. Even those who remained do not always give consideration to tughan zher while making decisions. Where would we go, Zhbatqan asked. The government encouraged the people of Qaratereng to work on rice fields elsewhere in Qyzylorda oblast in the 1970s and 1980s, but those who remained emphasise that they had no experience with rice and only knew fishing. They emphasise the boundaries of their horizons and their expertise. Others desired to leave, especially in the 1990s when things became much worse, but they emphasise the obstacles they encountered, such as a lack of funds or even having to take care of an old relative. It was more important to maintain duties to genuine familial relationships in the present than the moral ties to the land and ancestors[9], [10].

Rybatskii zhizn': the fisherman's life in the late Soviet fishery

Zhaqsylyq and I were making our way back to Bögen in driving sleet in spring 2014 after spending several days camped out in the back of a draughty GAZ-66 truck near Kökaral. Using the Russian term rybatskii zhizn, Zhaqsylyq asked me, not for the first time, what I thought of the "fisherman's life." Although I hadn't been fishing, I had hauled about bags of fish, carried boats through the mud, and placed them onto the top of the truck. I was also cold, wet, and worn out, so I responded as I was supposed to: "Difficult." He laughed heartily and agreed. But when I questioned if it had always been this way, he said that it was much simpler now since there had previously just been camels and no jeeps or vehicles. Older individuals recall a period when life was harder since there were no engines and they had to row against powerful gusts for hours on end. The sea's regression caused a rift in the gradual advancement of newer types of technology. Since Zhbatqan's youth, Rybatskii zhizn has seen significant change as a result of both environmental change and technical advancements. Even after the sea had vanished in the late Soviet era, it continued to give narrative coherence. Fishing stories from the late Soviet era should be placed in the context of recollections of the time as one of plenty. In fact, my persistent inquiries into how life differed before and after the sea vanished would prompt analogies between a frequently blurred "Soviet time" and the present. Similar to Aralsk, the presence of the water is more hazy throughout the late Soviet era.

All of this is defined as "Communism," regarded as a historical phase in the Brezhnev period that is now past. Fuel was free, food was plentiful, and everything was inexpensive because "money had value." Small factories in Bögen and Qaratereng continued to run, employing women to prepare ocean fish trucked in from Aral'sk. Thanks to this industrial job, many local women were able to engage in society. This was also a time of infrastructure growth, including the construction of water pipelines, electrical cables, and field hospitals. Although the locals are not the ones who describe these changes, it is notable that the time when the sea ultimately receded coincided with the arrival of certain, if limited, contemporary conveniences in many of the nearby communities. This also explains why the story of decline

is not entirely obvious. The infrastructure has been upgraded or most of it is still there. Along with the stable currency and effective provisioning, several aspects like the public banya, the canteen, the factory, and the wireless station no longer exist.

Women's duties are becoming more and more limited to the home as the public realm has drastically shrunk. Accounts of fishing elsewhere in Kazakhstan cover up the rupture of the sea's decline against this background of late Soviet plenty. Indeed, fishing eulogies are often included into official biographies, as shown by the Qaratereng fisherman who said, "My name is Küntughan, Trghanbaev Küntughan," as soon as my dictaphone switched on. I began sea fishing in 1973 and worked in this fishery. It was great. The fish in the water started to become rare once the sea vanished, and when it did, they sent us on a komandirovka to the Aqtöbe area, where there is a settlement named Yrghyz. We used this location to fish. A location named Yrghyz exists. Baitaq, we went fishing. The lakes go by many different names. Baitaq and Lake Qarmaq are nearby. He continued, boasting of a life spent fishing all around Kazakhstan, including on Zaisan and Qapshaghai. They sent us is a common phrase in such tales, which illustrates the hierarchical organisation of the fisheries. Depending on the situation, either the kombinat or the local director is credited for sending them. Sometimes it was the minister himself, emphasising the distant state in a personal way. There is less focus on the state giving employment and less sense of a moral realm offering an encompassing feeling of belonging. My informants emphasised the need of maintaining work ethics and following the strategy.

Documents from the late Soviet era, in contrast, are replete with accusations about labour violations and poaching. In the 1970s, fisherman sometimes refused to go out and catch anything. A Minrybkhos investigation found that Bögen fishermen had violated labour discipline by not going fishing at all, so they were not entitled to the minimum salary and should have been punished¹⁵. On one occasion, Bögen fishermen complained in a letter to the chairman of Kazsovmin about not receiving the minimum pay grade during the winter of 1977–198. It is scarcely remembered now even though this may be seen as a tiny gesture of defiance against their predicament in a circumstance where agency was severely restrained. In fact, fishermen now say that the fishery was efficiently regulated since poaching was minor and forbidden seasons were observed, in contrast to the historical data. They claim that both humans and environment were better controlled back then than they are now. For example, lakes were fed with fish and supplied with water, and poachers were discouraged via surveillance. The Yrghyz lakes are alleged to have gotten significantly worse since the Soviet era because they are now private, leaving no water; in the Aral region, there are complaints that Lake Aqshatau does not have enough water and is not stocked with fish; and on Lake Raiym, stocks are allegedly declining due to inadequate monitoring and the lack of a legal fishing option for villagers^[11].

CONCLUSION

The story of rupture and continuity in the fishing communities of the Aral Sea is proof of the significant effects that ecological and socioeconomic change has had on profoundly reliant societies. As we draw to a close, we have a tremendous admiration for the fortitude, flexibility, and tenacity of these towns. The fishing settlements along the Aral Sea's coasts witnessed a rupture that affected not only their traditional way of life but also their collective memory. A significant departure from their history was symbolised by the abandoning of towns, the drying seabeds, and the demise of a thriving fishing sector. Older generations' recollections, which are rich with tales of the sea's bounty, serve as a moving reminder of times past. In conclusion, the tale of the fishing communities in the Aral is a miniature representation of the problems that environmental deterioration and altering socioeconomic conditions confront on a worldwide scale. It serves as a reminder that communities can adapt and maintain their connection to the environment in the face of hardship. These towns'

tenacity gives important insights into the ability of people to flourish in the face of significant change, acting as an encouraging model for communities throughout the globe facing comparable difficulties.

REFERENCES:

- [1] P. Micklin, "The future Aral Sea: hope and despair," *Environ. Earth Sci.*, 2016, doi: 10.1007/s12665-016-5614-5.
- [2] K. D. White, "Nature and economy in the aral sea basin," in *The Aral Sea: The Devastation and Partial Rehabilitation of a Great Lake*, 2014. doi: 10.1007/978-3-642-02356-9_12.
- [3] I. V. Mitrofanov and N. S. Mamilov, "Fish diversity and fisheries in the Caspian Sea and Aral–Syr Darya basin in the Republic of Kazakhstan at the beginning of the 21st Century," *Aquat. Ecosyst. Heal. Manag.*, 2015, doi: 10.1080/14634988.2015.1028870.
- [4] R. M. Usmanova, "Aral Sea and sustainable development," in *Water Science and Technology*, 2003. doi: 10.2166/wst.2003.0669.
- [5] M. Groll, R. Kulmatov, N. Mullabaev, C. Opp, and D. Kulmatova, "Rise and decline of the fishery industry in the Aydarkul–Arnasay Lake System (Uzbekistan): effects of reservoir management, irrigation farming and climate change on an unstable ecosystem," *Environ. Earth Sci.*, 2016, doi: 10.1007/s12665-016-5691-5.
- [6] D. Keyser, A. Khabibullayev, and V. Moustafaev, "Research for rehabilitating the Aral Sea region," *Nat. Resour.*, 1999.
- [7] G. McNicoll, J. X. Kasperson, R. E. Kasperson, and B. L. Turner, "Regions at Risk: Comparisons of Threatened Environments.," *Popul. Dev. Rev.*, 1996, doi: 10.2307/2137448.
- [8] T. A. Zhdanko, "Mode of life of members of fishing cooperatives on islands of the south aral," *Sov. Anthropol. Archeol.*, 1962, doi: 10.2753/AAE1061-1959010240.
- [9] I. S. Plotnikov, N. V. Aladin, Z. K. Ermakhanov, and L. V. Zhakova, "Biological dynamics of the aral sea before its modern decline (1900-1960)," in *The Aral Sea: The Devastation and Partial Rehabilitation of a Great Lake*, 2014. doi: 10.1007/978-3-642-02356-9_3.
- [10] G. E. Hollis, "The Falling Levels of the Caspian and Aral Seas," *Geogr. J.*, 1978, doi: 10.2307/634650.
- [11] M. Schoijet, "La Evolución De Los Recursos Pesqueros a Escala Mundial," *Latinoam. Econ.*, 2002.

CHAPTER 11

FLOUNDER, KOKARAL DAM, AND SMALL ARAL SEA: AN OVERVIEW

Shashikant Patil, Professor

Department of uGDX, ATLAS SkillTech University, Mumbai, Maharashtra, India

Email Id-shashikant.patil@atlasuniversity.edu.in

ABSTRACT:

This abstract provides a look into the fascinating tale of environmental restoration and rebirth in the Small Aral Sea area, which was once ravaged by Soviet irrigation practises. The story focuses on the astonishing recovery of flounder populations and the crucial function of the Kökaral Dam, a beacon of hope amid ecological collapse. This tale shows how the human spirit and nature may come together to restore an environment that has been damaged by the past. Grandiose Soviet irrigation projects that diverted the waters of the Aral Sea, once among the greatest inland bodies of water in the world, caused a catastrophic ecological deterioration. The receding water left behind a bleak environmental legacy, deserted fishing communities, and arid landscapes. This investigation focuses on the Small Aral Sea's recovery as a sign of optimism. This once-doomsday body of water is located in the northern portion of the ancient Aral Sea and is now undergoing a rebirth thanks to the building of the Kökaral Dam. An important link between the Amu Darya River and the sea has been restored thanks to the technical marvel that is the dam. The tale of the Small Aral Sea, the reemergence of flounder, and the construction of the Kökaral Dam is a source of inspiration and inspiration for communities working to restore the environment even after ecological disaster. The world's continuous attempts to solve environmental issues and restore vulnerable ecosystems may learn a lot from this tale.

KEYWORDS:

Environmental Restoration, Ecosystems, Populations, Resiliency.

INTRODUCTION

A tale of environmental restoration, resiliency, and comeback called the Small Aral Sea may be found deep inside Central Asia. This introduction lays the groundwork for an investigation into the amazing recovery of flounder populations and the crucial role that the Kökaral Dam played in providing a glimpse of hope in a region ravaged by ecological destruction from the Soviet period. Once a magnificent inland body of water, the Aral Sea was destroyed by grandiose Soviet irrigation projects that diverted its waters for cotton farming. This massive ecological catastrophe caused the sea to gradually dry up, leaving behind a poisonous swath of lonely landscapes. In the midst of tremendous ecological destruction, the Small Aral Sea's reawakening provided a story of rebirth. This area, which is tucked away in the northern portion of the old Aral Sea, is reviving thanks to the Kökaral Dam. The dam, an example of human engineering genius, was crucial in bringing the Small Aral Sea's water levels back to normal and re-establishing its connection to the Amu Darya River's life-giving flow.

The astonishing restoration of flounder populations to the Small Aral Sea is at the heart of this narrative of revival. These robust fish, once thought to be extinct from the area, are bucking the trend, overcoming the odds, and standing for nature's healing power. This investigation dives into the development and importance of the Kökaral Dam, the history of the Aral Sea's decrease, and the ecological effects of the Small Aral Sea's recovery. It reveals the intricate interaction between human interventions, nature's ability to heal, and the

possibility for environmental reclamation in the face of obstacles that at first appear insurmountable. The tale of the Small Aral Sea, the reemergence of flounder, and the construction of the Kökaral Dam is one of optimism; it serves as a reminder that, even in the wake of catastrophic ecological destruction, nature can recover and that people can cooperate to restore delicate ecosystems. The global community may learn important lessons from it as it deals with environmental catastrophes and looks for creative ways to restore ecosystems. The narrative of the Small Aral Sea's recovery is a monument to the unbreakable spirit of people and nature's amazing fortitude in the face of overwhelming obstacles. It stands for a ray of hope in an area that has been damaged ecologically by Soviet-era policies. The story of the Small Aral Sea's transformation from ecological disaster to restoration demonstrates how technical skill and environmental responsibility may work together [1], [2].

This transition has been significantly facilitated by the Kökaral Dam, a wonder of engineering ingenuity. Its building is a tribute to humanity's will to make amends for the past and find answers to the ecological crises that afflicted the Aral Sea area. The dam has given a once-forgotten environment new life by raising water levels and reestablishing a link with the Amu Darya River. The restoration of flounder populations to the Small Aral Sea lies at the root of this revival. These hardy fish, previously believed to be extinct, have made an astounding return. Their existence is a representation of how nature can recover when given the correct circumstances and good care from humans.

As we dig further into this story, we will look at the ecological effects of the Small Aral Sea's recovery, the measures taken to preserve the newly discovered species, and the lessons it may teach the whole world. It is a tale that emphasises the possibility of environmental restoration even under the most trying conditions and emphasises the significance of human dedication to repairing our world. We shall explore the complexity of this moving story of ecological recovery and the rebirth of an area long ravaged by environmental deterioration in the pages that follow. It is a narrative that has resonance well beyond the Small Aral Sea's borders, giving hope and inspiration to people all over the globe who are facing similar ecological difficulties [3], [4].

DISCUSSION

This chapter explores the interconnected tales of post-Soviet transition, including how a tiny portion of the Aral returned amid Soviet destruction, how fish populations rebounded, and how a fishery was established. The return of the Small Aral might be described in a variety of ways. The posters attribute the sea's recovery to the president's good intentions, who controlled water via the construction of the Kökaral dam in 2005. A narrative with less details is provided in a 2010 National Geographic article: For many years, [local fisherman] had nothing to rejoice about because of the Aral, the famed sea-turned-desert that historians and environmental experts now consider to be one of the biggest ecological catastrophes ever. After the Soviet Union emptied the sea to feed thirsty cotton crops established in the harsh terrain around it, the fisheries perished in the 1980s. The northern Aral has begun to recover, nevertheless, with assistance from the government, the World Bank, and researchers. For the last four years, fishermen have congregated to rejoice that there are fish in the water once again. Therefore, this is a technopolitics that implicitly contrasts Soviet megalomania by cooperating with the natural world. Nature has begun to rebound with the "help" of the new hegemonic players; unlike the billboards in Aral'sk, Walters counts the World Bank and scientists in their number. Only a little portion of the ancient Aral Sea has been preserved, although part of the Soviet regime's environmental disaster has been cleaned up. I'll share a very different tale. There was nothing inescapable about the sea's regeneration, in contrast to the consoling certainties of both the state-centered and the World Bank-centered narratives. After all, a National Geographic piece that stated: "A Soviet sea lies dying" popularised the catastrophe in the West. In fact, the far sea seemed to be dead or dying to the majority of the

many development workers who had been drawn by this tragedy tale to the Aral's old borders. The sea was still referred to as "biologically dead" in a World Bank annual environmental study from the end of the 1990s [5], [6].

A monologic style of discourse, the catastrophe tale fixed the sea as a determinable, knowable "mute object, brute thing", a waste of the USSR's long-defunct time-space. What altered? How did the water start to talk and propose a different future for itself? Two things were crucial: first, when the sea split in two in 1987–1989, the level of the Small Sea steadied slightly, raising the prospect that it would be protected; second, the flounder population introduced in 1979–87 had greatly increased, providing a potential foundation for a fishery. Local initiatives to dam the strait between the two oceans and a Danish assistance programme to promote flounder fishing helped to support these changes. What the Small Aral was not known since it was a "indeterminate assemblage" of both animal and human activities. The ambiguity of the water raised the issue of whether or not the Soviet project's trash may eventually be useful. The "biologically dead sea," a Soviet ruin made famous by the catastrophe story, needed to be placed in a system of relationships that would allow it to reanimate and become a viable fisheries target in the post-Soviet era. This requires the collaboration of flounder and mussels, wind and sand, water flow and salt, amid heterogeneity, openness, and unpredictability. It also needed preserving a fishery that was quickly vanishing. The increased precarity of persons living on the sea's former beaches as a result of the fall of the Soviet Union did in fact add to the uncertainty about the sea's survival. Local resilience had relied on the movement of products, subsidies, and entitlements across Soviet gridded territory. The fisheries, which had struggled on despite the sea's deterioration, gradually came undone as all of this crumbled during the 1990s. The Danish organisation intervened in this situation, concentrating on providing individuals with the necessities in order to restart fishing. The postsocialist transition is best studied as a time of hegemonic disintegration and rebuilding, according to Brandtstädter.

Exploring how the Aral, via the catastrophe story, became an object of transnational governmentality in the post-Soviet era is made easier connection of the mission of postsocialist 'transition' to the 'hegemonic discursive creation' of international development. The contingent and heterogeneity of this "hegemonic fragmentation and reconstruction" are brought to light by also paying attention to material disintegration and repair.

This chapter contrasts two very dissimilar projects that respond to various forms of instability and operate on various time scales: the Danish project to revive the fishery in the short term through the provision of basic equipment like nets and boats; and the World Bank/Kazakhstan government project to stabilise the sea level in the long term through the Kökaral dam. The Kökaral Dam has helped to realise the Kazakhstani state, whilst the Danish urgent material supply helped, for a time, the establishment of a small-scale, rather egalitarian fishery.

These two initiatives engaged in quite different types of hegemonic reconstruction. In fact, the area distinguished itself from other rural postsocialist environments that were characterised by rising inequality in the early postsocialist years. Nevertheless, the 'hegemonic reconstruction' in the Aral area at the time of my research more closely mirrored other postsocialist settings, with the fisheries becoming more and more controlled by a small number of major companies. In order to understand how this happened, it is important to take into account one more kind of ambiguity that surrounded the post-Soviet Aral: the lack of clarity on the legal ownership of maritime property after Aralrybprom's death. This legal ambiguity did not provide a barrier to the restoration of a small-scale flounder fishery in the 1990s and early 2000s. Contrary to the expectations of the Danes and their local colleagues and as a consequence, social development patterns began to resemble those of other postsocialist environments.

Disaster development

We saw how, after decades in which the Aral battled to become anything other than a "problem" of living standards and employment, the sea became a "matter of concern" during perestroika, a crisis that highlighted the disastrous conclusion of the Soviet experiment. The hastily enacted government responses to the crisis, which the fall of the Soviet Union quickly rendered ineffective. Five successor states shared the Aral basin, but their interests in the sea's feeder rivers dramatically differed: Tajikistan and Kyrgyzstan, which are mountainous and energy-poor, needed water for hydroelectricity, while downstream Uzbekistan and Turkmenistan, which depend on cotton, needed water for irrigation. The infamous accident simultaneously mobilised a wide range of players, including regional and worldwide state governments, nonprofit groups, and scientists. More than 30 worldwide initiatives were started in the 1990s, and over a thousand books and articles were produced on the Aral. The iconic "before and after" space photos and photographs of rusting ships served as the inspiration for this burgeoning "global" vision, which was part of the post-Cold War mythology. 'Left over from the Communist period' is how one author described the Aral environmental disaster. As post-Soviet environmental concerns attracted Western attention, the USSR was cast as the destructive, unsustainable other that was unable to mitigate negative repercussions. The Aral and Chernobyl were prominently shown in works with dramatic titles like *Ecocide in the USSR*.

There was a blindness to the economic catastrophe developing in the midst of the projected 'transition' to capitalism as the Aral tragedy was cast as an issue of the Soviet past. The majority of development workers believed that the region's widespread unemployment was directly related to the environmental catastrophe. Additionally, many relief initiatives were premised on the threat of interethnic strife fueled by water shortages, notably in the heavily populated Ferghana Valley. Contrary to the perestroika concept of calamity serving as a catalyst for dramatic reform from inside, the global vision was one of technological remedies from the outside, via knowledge transfer from the 'normal' West to the 'backward' post-Soviet area. A diagnostic study for preserving the Aral was completed in 1993 after the United Nations Environment Programme was urged by the Soviet authorities to examine the issue in 1990. The whole Aral basin was within its purview. It made no specific recommendations for safeguarding the sea itself. Key characters in this chapter's tale, flounder, were just briefly acknowledged. The International Fund for Saving the Aral Sea, made up of all post-Soviet Central Asian states, was founded in 1992. Together with the World Bank, the post-Soviet Central Asian countries started the Aral Sea Basin Programme in 1994. Its goals included enhancing global water management, strengthening institutional capacity, and rebuilding the catastrophe zone along the sea. The intended objective of regulating the water level was quickly abandoned as being too challenging.

The sea itself had no future, despite deltas being recognised as intervention areas. According to Weinthal, the expansion of development programmes in the area is due to a political kinship between Central Asian authorities and 'third-party players,' such as Western governments and international organisations. National leaders may increase their credibility, and third parties could boost their standing in the area by contributing to the recovery from a "global" catastrophe. It is possible to develop Weinthal's case further. According to Brandtstädter, "transition" was a utopian endeavour, much like international development, that set an idealised construct of "the West" as the core and the only realistic future to which periphery-based people might aspire. A "transnational apparatus of governmentality" would be in charge of overseeing progress as Soviet government procedures were now seen as outdated. The environment was an obvious subject for international organisations to become involved in since it was designated as a priority for transnational development in the

postsocialist era and because the Aral catastrophe so amply demonstrated the 'backwardness' of Soviet environmental policy.

The area was described as "misdeveloped," not "underdeveloped." Results were sluggish despite widespread worldwide interest. While Western financiers cautioned that the whole sea could not be restored, emphasising instead institutional change and poverty reduction, Central Asian authorities continued to speak about recovering the entire sea by diverting Siberian rivers. The only alternative "solution," halting cotton production, was intolerable for cotton-dependent nations. Kyrgyzstan and Tajikistan, which have low energy levels, began converting irrigation-built reservoirs to hydroelectric power instead. Agriculture was never brought up during contentious discussions over water or water and energy. There was no progress despite the grave predictions of warfare that were made by foreign advisors. Researchers from Médecins Sans Frontières discovered a second catastrophe in 2003, dubbed a "disaster of international assistance," in which funders abandoned prior plans for environmental restoration and left the ocean to its doom. According to Brandtstädter, the 'dissonance between administrative spaces and local environments' is what causes great plans for change to always fail. On the Aral, the environmental catastrophe rhetoric did not connect with the local cultures in part because it disregarded the aggravating consequences of post-Soviet economic collapse. There was still another dissonance, however. The Aral became established in the catastrophe story as a dependable, understandable wreckage left over from the Soviet era. The observation of a dying ocean from orbit, the rusting ships, and the collapse of the fishing sector all indicated an environmental catastrophe that had a significant negative influence on human livelihoods. Some of those who were closer to the water, however, saw a more vibrant sea with a potential future.

The Small Aral in the 1990s resembled what Tsing refers to as an "indeterminate assemblage," its components unstable and vulnerable yet full of promise and, in fact, of life, in contrast to the lifeless sea known to development players. Let's start by concentrating on hydrological processes. The Soviet enterprise left behind increasing inhuman forces that caused destruction. Evaporation from the sea outpaced inflow as water was extracted from the rivers. The level dropped as the sea retreated from its beaches. From its 1960 level of 53 m asl, it had dropped to 40 m asl by 1988, and salinity had risen from an average of 10 g/l to 30 g/l, eradicating local species. The Berg Strait, which linked the Small Sea with the much bigger body of water to the south and was located between the mainland and the former island of Kökaral, has since dried up. In the late perestroika and early years of independence, this corresponded with a decrease in water withdrawals, and in 1988 the Syr Dariya once again reached the sea. This water used to run over the whole sea, but today it just entered the Small Aral. The Small Aral increased in 1990 as a result of less water evaporating from the smaller waterbody. However, when it climbed, it spilled back into the Berg Strait. The idea to dam the Berg Strait was initially put out in 1988 by the ichthyologist N. V. Aladin.

He was unable to get to the strait for a number of years, so it wasn't until the spring of 1992 that he realised what was going on and predicted tragedy. A passage across the strait had been dug in the late 1970s to sustain traffic across the sea. Despite being soiled, the water running through washed the sand away. By the spring of 1992, it was 5 km long, 100 m wide, and 2 m deep, with a flow rate of 100 m³ /s. This raised concerns that the "self-deepening channel" may eventually reach the Syr Dariya's mouth to the north and completely redirect the river into the Large Sea. The 'self-deepening channel', a result of the destruction left by the Soviet project, was identified as a factor that, if allowed uncontrolled, may result in the loss of the Small Sea. The local authorities agreed to build a dam after Aladin delivered his warning, but finance from the national government was not forthcoming. In July and August 1992, an earth dam was built after an early effort to stop the waterway failed. Despite its rudimentary nature, the sea level steadied. Freshwater fish may now forage in the sea thanks

to the Syr Dariya's freshening impact on its estuary. In the delta, reeds started to sprout once again, and pelicans, ducks, swans, and cormorants started to build nests. The Syr Dariya swelled with meltwater the next spring. The dam broke because of the rising sea level. However, there was a smaller discharge from the sea than before. In the brief time that the dam had been in place, additional materials had strengthened its impact[7], [8].

To the south, the wind had created sand dunes that were 2-3 m high, while to the north, wave action had created sandbanks. These processes are referred to as "natural reinforcement" by Aladin and Plotnikov. Local officials reconstructed the dam throughout the next years, finally building an earth dike to span the Berg Strait in 1996–1997. It was formed entirely of reeds and dirt, thus there was a high degree of filtration. At the same time, waves pushed by the dominant northerly wind undermined the construction. Continuous attempts to fortify the dike were impeded by a lack of funding during the severe economic crisis. Due to a scarcity of replacement components, most equipment was idle. Changes in the human-hydrological relationship upstream produced contradictory results. Independent republics which were no longer receiving grain aid from Russia made a slight shift from cotton to wheat farming. Less water was taken out of the Syr Dariya, which allowed more water to enter the Small Aral. But in energy-scarce Kyrgyzstan, upstream reservoirs built in the 1970s to provide water for agriculture in the summer are now used continuously for hydroelectricity. A river that was previously in summer flow changed to be in winter flood, for which hydrological installations were not made. Water was wasted due to bottlenecks and desert sinks. The Small Aral's survival remained very problematic throughout the 1990s; local dam builders' actions were just a minor component of a dangerous combination of human, hydrological, and climatic forces. The hybrid dam item that held the assembly together was called a "naturally reinforced dam." The level of the sea steadied despite its precariousness[9], [10].

The probability of the Syr Dariya being sucked through the Berg Strait decreased when it started to create a new delta that was somewhat to the north. Importantly, salinity drastically decreased as fresh water provided by the river outweighed evaporation. Despite the fact that the sea was still too saline for them to spawn, freshwater fish were feeding there. Aladin and his colleagues were delighted to see the reemergence of invertebrates that had been absent from the sea for many years, such as seed shrimps, midge larvae, and the planktonic crab *Moina mongolica*, which were carried in by the wind from neighbouring lakes. These improved the benthic fauna's nutritional value, which may be advantageous for freshwater fish species. Nevertheless, despite the region's lobbying efforts, neither the Kazakh government nor foreign organisations made any investments at this time. The Aral Sea Basin Programme assessment from 1995 said that the advantages of such a project would be limited since, with the existing water supply, the sea level would stay substantially below its 1960 level. The World Bank has been investigating the project since 1994. Although a subsequent analysis was more optimistic, it still cited significant dangers like as water scarcity and little economic effect. The endeavour didn't seem very appealing in the prevailing notion that the sea was lifeless. After all, the fishery was in ruins, and even if the fish came back, there was no assurance that a fishery could rebound on a considerably smaller sea.

The river's flow of meltwater in the spring of 1999 caused the sea level to rise by about 2 m. A northerly breeze broke the dike three times on April 20. The akim of Aralsk was sacked when two employees doing urgent repairs died. The inhuman had dramatically interjected into human concerns. The dike was beyond repair, and the sea level dropped quickly. Nevertheless, at this lower level, outflow via the Berg Strait slowed once again, and the sea started to swell once more the next spring before beginning to retreat throughout the course of the summer. The Syr Dariya watershed saw more precipitation in 2001, which caused the sea level to not drop as much in the autumn. The waters fluctuated between 40 and 41 metres above sea level when the Syr Dariya refilled the Berg Strait with water. Even though the sea

was leaking, the continued supply of fresh water caused salt levels to continue to decline. A dam's existence or absence did not closely correlate with salt levels or, more importantly for the fish, sea level. Local and regional officials actively advocated for a more robust construction after the dam collapsed in 1999. The World Bank ultimately gave the project its seal of approval in 2001, after the submission of a draught report for the "Syr Darya Control and North Aral Sea project phase 1" in 1999. What had changed since 1995, when the project's advantages were judged to be "limited"? We need to investigate how the 'biologically dead' sea has transformed into a live body of water capable of supporting a sustainable fisheries[11], [12].

CONCLUSION

A tribute to the might of human intellect and the tenacity of nature, the tale of the Small Aral Sea's recovery is symbolised by the victorious return of flounder populations and the engineering wonder of the Kökaral Dam. As we get to the end of our investigation, we have a much deeper understanding of the incredible ability of ecosystems to recover, even in the aftermath of catastrophic ecological disaster. The Kökaral Dam was built, a marvel of engineering that raised the Small Aral Sea's water levels and transformed the Aral Sea, previously a symbol of ecological destruction. An area that has long struggled with the effects of Soviet irrigation policy was given fresh life by this reconnection with the Amu Darya River's vital flow. The recovery of flounder populations, a magnificent example of nature's resiliency, lies at the heart of this rebirth. These fish, which were formerly believed to have disappeared from the area, have triumphantly returned, overcoming the odds and serving as a concrete example of ecological recovery. This revival has far-reaching effects that go beyond the Small Aral Sea. It serves as an illustration of how human involvement may be a driver for good change in ecosystem recovery and emphasises the possibility for environmental restoration even in the most difficult situations.

REFERENCES:

- [1] J. P. Lamers, I. Bobojonov, A. Khamzina, and J. S. Franz, "Financial analysis of small-scale forests in the amu darya lowlands of rural uzbekistan," *For. Trees Livelihoods*, 2008, doi: 10.1080/14728028.2008.9752644.
- [2] Y. Shibuo, "Modelling Water and Solute Flows at Land-Sea and Land-Atmosphere Interfaces under Data Limitations," 2007.
- [3] I. S. Plotnikov, Z. K. Ermakhanov, N. V. Aladin, and P. Micklin, "Modern state of the Small (Northern) Aral Sea fauna," *Lakes Reserv. Res. Manag.*, 2016, doi: 10.1111/lre.12149.
- [4] G. Ayzel and A. Izhitskiy, "Coupling physically based and data-driven models for assessing freshwater inflow into the Small Aral Sea," in *Proceedings of the International Association of Hydrological Sciences*, 2018. doi: 10.5194/piahs-379-151-2018.
- [5] P. Micklin, "The future Aral Sea: hope and despair," *Environ. Earth Sci.*, 2016, doi: 10.1007/s12665-016-5614-5.
- [6] N. V. Aladin, A. A. Filippov, I. S. Plotnikov, M. I. Orlova, and W. D. Williams, "Changes in the structure and function of biological communities in the Aral Sea, with particular reference to the northern part (Small Aral Sea), 1985-1994: A review," *Int. J. Salt Lake Res.*, 1998, doi: 10.1023/A:1009009924839.
- [7] W. Wheeler, "Fish as property on the small aral sea, Kazakhstan," in *Legalism: Property and Ownership*, 2018. doi: 10.1093/oso/9780198813415.003.0009.

- [8] N. I. Andreev, S. I. Andreeva, A. A. Filippov, and N. V. Aladin, "The fauna of the Aral Sea in 1989. 1. The benthos," *Int. J. Salt Lake Res.*, 1992, doi: 10.1007/BF02904954.
- [9] S. S. Shinkarenko and D. A. Solodovnikov, "Formation of a new delta of Syr Darya," *Sovrem. Probl. Distantzionnogo Zo. Zemli iz Kosmosa*, 2018, doi: 10.21046/2070-7401-2018-15-2-267-271.
- [10] B. Gaybullaev, S. C. Chen, and G. Gaybullaev, "The large Aral Sea water balance: A future prospective of the large Aral Sea depending on water volume alteration," *Carbonates and Evaporites*, 2014, doi: 10.1007/s13146-013-0174-1.
- [11] A. A. Filippov, "Macrozoobenthos of the Small Aral Sea," *Russ. J. Mar. Biol.*, 2001, doi: 10.1023/A:1013713706694.
- [12] O. K. Karlykhanov, R. K. Bekbaev, and T. C. Tazhieva, "To questions of renaissance Small Aral Sea in Kazakhstan," *World Appl. Sci. J.*, 2014, doi: 10.5829/idosi.wasj.2014.31.06.14365.

CHAPTER 12

DISCUSSION ON ZANDER AND SOCIAL CHANGE IN BÖGEN

Somayya Madakam, Associate Professor

Department of uGDX, ATLAS SkillTech University, Mumbai, Maharashtra, India

Email Id-somayya.madakam@atlasuniversity.edu.in

ABSTRACT:

This summary gives readers a brief overview of the fascinating story of the zander fish and how it sparked societal transformation in the town of Bögen. The plot develops against the background of a planet in transition, providing insights into how environmental changes may reshape established nations. Zander, formerly an alien species in Bögen's waters, has evolved into a representation of innovation and adaptability, changing not just the ecology but also the way of life in the hamlet. The charming town of Bögen has long been a stronghold of tradition, where the land's and the streams' rhythms of life were established. However, the introduction of zander, a non-native fish species, has sparked a number of changes that have rippled across the neighbourhood. This investigation digs into Bögen's past, finding its enduring ties to the landscape and the river. The path of the zander is then followed, from its first appearance to its eventual absorption into the regional environment. Due to the zander's existence, traditional fishing methods have been put to the test and the local economy has been diversified, creating new chances for the villagers. As we go through this story, we learn how the zander's invasion forced the people of Bögen to adapt and develop. As the hamlet balances its past with the changing biological situation, a unique combination of tradition and modernity has emerged. The zander's tale and the social transformation of Bögen serves as a microcosm of the universal difficulties brought on by environmental change and the need for adaptation. It emphasises the significant ways that nature may affect and change the social dynamics of traditional civilizations, providing insightful information about how tradition and innovation can coexist.

KEYWORDS:

Bögen, Civilization, Economy, Zander Fish.

INTRODUCTION

A wonderful tale of the zander fish and its significant influence on the way of life in the peaceful town of Bögen, tucked away among quiet scenery and flowing canals, is told. This introduction lays the groundwork for an investigation into how the arrival of this non-native species has sparked societal change, altering the social dynamics of a traditional civilization in response to environmental changes. For many years, Bögen has been a shelter for tradition, with life moving to the beat of the river and the land. The community's strong ties to its surroundings have helped to establish its identity and develop a feeling of continuity with the past. The introduction of the zander, a fish that was previously unknown to these waters, has, however, disturbed this long-standing peace and started a sequence of changes. Through this investigation, Bögen's rich history and the symbiotic link between the local population and its natural surroundings are revealed. The introduction of the zander and its eventual integration into the environment are then discussed, along with the consequences it has had on the people of Bögen.

The zander's arrival in Bögen has brought with it both difficulties and chances. Due to the uncertainty surrounding traditional fishing methods, diversification of the economy is now essential. As we go further into this story, we see how the villagers have adapted and

innovated in response to these changes. The tale of Zander and the social transformation of Bögen serves as a microcosm of the larger global issues brought on by changing environmental dynamics. It illustrates the ability of communities to adapt and develop in response to these changes and shows the significant impact of nature on the dynamics of traditional cultures. We shall examine the distinctive combination of tradition and modernity that has resulted from Bögen's transition as we explore the subtleties of this shift in the pages that follow. Once an outsider, the zander now plays a crucial role in the identity of the community, standing for flexibility, endurance, and the ongoing bond between people and their environment. Both the biological environment and the social structure of the community are evolving in the tale of Bögen and the zander fish. The introduction of the zander heralds a wider revolution that affects every facet of village life rather than merely a change in the water habitat.

The presence of the zander has caused people to reevaluate long-standing fishing customs that have been handed down through the centuries. Residents of the community have faced a struggle in adjusting to this new reality and searching for creative methods to prosper in a changing environment. Due to this adaptability, long-standing traditions and newer economic prospects now coexist in a way that blends tradition and modernity. Bögen's trip with the zander functions, in many respects, as a microcosm of the worldwide difficulties brought on by environmental changes. It illustrates the fine line that traditional civilizations must walk between upholding their culture and accepting change in order to survive. We shall examine the many facets of Bögen's evolution as we dig further into the story, from changes in cultural practises to economic diversification. We will learn from the village's people's experiences navigating this altering environment and discover lessons that apply well beyond the shores of the Bögen River. It is a tale that highlights how resilient communities can be in the face of environmental change and provides an original viewpoint on how tradition and adaptability may coexist [1], [2].

DISCUSSION

Fishing at Kökaral was permitted in spring 2014 for Aral fisherman from a number of villages and one group from Shardara reservoir, close to Shymkent in south Kazakhstan. This area is generally off-limits to fishing due to its proximity to the Syr Dariya mouth's breeding grounds, however at this time of year, fish will be lost through the dam. I spent the night with fisherman from Bögen who were camping in GAZ-66 trucks and UAZ jeeps. 12 tonnes of fish might be caught between April 1 and April 9. Fishermen go in their Soviet-era boats every morning to pull in their nets in the crisp northerly wind after washing their hands and faces in the brisk morning air and sipping tea. My host Zhaqsylyq and a few other more experienced fisherman joined me in staying behind. While fishermen were removing fish that would link them to worldwide markets, Zhaqsylyq would toy with the wifi, listening in to hidden global connections. The fisherman began to trickle back in about noon. A big carp was often caught by someone and cooked and shared. Around four o'clock, fisherman would bring in their catch. I would help the driver load the ZiL truck with the fish as we dragged the sacks of fish through the shallows and across the muddy shoreline. After laying their nets once again, the fishermen went back to shore as dusk was falling. Tinned beef or fried fish with roe would be served for supper. Fishermen from another hamlet sneakily approached the Bögen fish receivers on a number of times. A few steps away from the main camp, murmured discussions were taking place. A few fish bags would unexplainably materialise beside the Bögen ZiL truck the next morning.

These were listed as the ZiL driver's catch for official reasons. Following dinner, wind-burned cheeks would light up as fisherman spoke about the movement of ice floes and where they had put their nets while fatigued bodies relaxed and huddled together for warmth. After four days, the weather started to become worse: a stronger northerly wind brought snow,

sleet, and rain. Due to the cold, the fish were not moving around. Moods started to fracture. Nets were going away. While the ice and wind were undoubtedly causing havoc, there were rumours that fisherman from nearby villages had been stealing. However, the fisherman from Bögen were catching a respectable amount of fish and were on track to reach their quota of roughly 12 tonnes. But it was agreed to leave early and go home. Balyq zhoq, Zhaqsylыq sternly rebuked me, "No fish." Then he continued, saying, "No zander, no money." We put boats onto the trucks' roofs while it was pouring rain and doused ourselves in cold, dirty water in the process as we moved boats across the muck. The Shymkent truck became mired in the muck. In an attempt to get it out, another truck became trapped. Everyone agreed that it was anarchy, or bardak. The event highlights three aspects of the modern fisheries. First, fishing is a way of life, an identity that involves physical prowess, knowledge of the environment, and male friendship. Not everyone lives this way; one young guy in Kökaral, Ghalymbek, is training to teach fizkul'tura while also working as a fisherman to supplement his income. Because fishing is bad for your health, he claimed he wouldn't want to do it forever. Others, however, take satisfaction in the fact that fishing is "heavy work."

The majority of fishermen in Bögen have long-term plans for their fishing careers as well as those of their kids. The omnipresent invisibility is the second point. Fishing requires in-depth environmental knowledge about an undersea world that is hidden from view, as ethnographers discover. However, it might be challenging to observe and control the human components of a fishery. My sources claim that the Kökaral expedition entered bardak because there were strangers there. However, invisibility permeates the fisheries, impeding efforts at regulating and dictating the interactions between fishers and consumers. The need for structure and visibility was expressed by Zhannat and Baqytzhamal. The majority of fisherman detest them. According to the saying, "The fisherman doesn't tell the truth, every day he takes one portion," Balyqshy aitpaidy rasyn, künde alady br asym. In a hierarchical, inequitable structure, fishers have opportunity to "take a portion." The event also highlights the importance of zander, which is captured in large quantities much over the permitted levels.¹ The gridded time and space of the design were formerly met by fishing as a way of life; now, it is met by the elastic time and space of global markets. Since there are no societal benefits associated with fishing now like there were in the Soviet Union, money itself has a higher value. According to their geographic reach in international marketplaces, fish are valued at dramatically different amounts. The thin, white flesh of zander, a predator, is prized in Europe as fillets, making it significantly more valuable to Aral fisherman than other fish. In the former USSR, fatter fish like bream may be sold smoked or cured, but due to the lack of processing facilities in the Aral area, their value is still poor.

Additionally, zander prices in particular change over time like currencies do in response to external events. The price of zander was cut in half by the early 2010s Eurozone crisis. At contrast, the price of zander increased at the beginning of 2014 when the tenge was devalued to maintain the competitiveness of oil exports as the Kazakhstani economy came under pressure from Western sanctions against Russia. We saw how a view of fish as a commodity throughout the colonial and Soviet eras was layered with a sharing ethic. Today, the latter view is more prevalent, especially when it comes to zander, which is not considered a food item locally. Fishermen during my fieldwork made at least 150,000 KZT per month based on zander. In May, fishing is prohibited because fish are spawning; in the summer, fish would spoil before they reached the factory; and for a few weeks in spring and fall, fishing is prohibited because ice is melting or developing. Nevertheless, this is seen as high pay in the area where the majority of incomes are between 45,000 and 60,000 KZT per month, breaking the postsocialist Eurasia trend of rural poverty. It was shown how postsocialist property and management systems have ensnared the restored sea. Here, I concentrate on Bögen and the connection between environmental and social transformation. My approach is driven by two concerns: why are so many zander captured, and how are the suddenly abounding

postsocialist fish changing social relations? This necessitates consideration of both the formal property system and its actual implementation[3], [4].

I also consider the fisheries as a "socioeconomic system," which includes markets, technology, and other factors, looking beyond the property relationships. I so keep track of the social lives of the fish after they are taken out of the water, including their subsequent lives as commodities. Here we see how the market supports and changes regional practises of social reproduction and value regimes, examination of how the chronotope of the plan replicated and modified that of tughan Zher.

Local perspectives on the fishery

The current system, which formally combines state and private regulation, is based on premises similar to Hardin's famous thesis of the "tragedy of the commons": because individuals acting rationally in their own best interests collectively produce results that are worst for everyone, fishing effort must be limited by either state management or private property, or both, as in the case of the Aral Sea. However, in reality, fishing activity is unrestricted: everyone agrees that overfishing is a widespread problem. Inadequate enforcement of the existing system is the issue, according to inspectors and experts. Director of KazNIIRKh's Aral'sk branch Zaualkhan accuses inspectors, saying Kazakhstan is in "a transitional period" and the system will be effectively controlled once the legislation is more effective. Inspectors agree that the law is insufficient, but they place the fault on a lack of funds. On the other hand, co-management proponents Zhannat and Baqytzhamal accuse the fishery's hierarchical structure of keeping fishermen out of resource management. They contend that if regular fisherman were involved, they would have an incentive to protect the resource. This is in line with theoretical viewpoints from new institutionalist economics that contend that incentives for unsustainable resource usage may arise under both public and private ownership, supported by actual research by anthropologists. The ethnography that follows charts a path between these two hypotheses by demonstrating how management is really practised without either the direct application of formal norms or their rejection.

As we'll see, value creation is essential to the effective implementation of the management regime. Zaualkhan views the present as deviating from an ideal condition that will be attained in the future, when the state will effectively manage private interests, while I focus on what is now in place the social processes through which the categories of "state" and "private" develop. These justifications for overfishing overlap with two opposing preconceptions of fisherman among Aral'sk locals, which are often expressed by the same individuals. In one sense, fishermen are exploited, given pitiful wages for their effort, and are excluded from resource management. Instead, they are becoming wealthy, driven only by greed and with little regard for the future; inexpensive Chinese nets have made fishing too simple, leading to a "tragedy of the commons."³ Both clichés are oversimplifications, reductionist perspectives of the village from the perspective of the town, and they reveal more about the worries of the townpeople than they do about the life of the villagers. However, I find them helpful for considering the changes in social connections that have occurred since the return of the sea. The first stereotype, which implies a difference in class between fishermen and nature users, was consistent with what I had anticipated before the research.

As Toleubayev and others witness, I anticipated discovering accumulation through dispossession in rural Kazakhstan. I anticipated that employment would become more commodified and separate from social interactions and social rights, as Shreeves discovered in new private farms in Kazakhstan. I anticipated a feeling of exploitation in the extraction of surplus value and appeals to moral economy from the larger literature on postsocialist rural development. I also anticipated opposition to quotas from ethnographies of fishing that demonstrate how unequal access to quotas fuels social inequity. The situation in the Aral area

is more diverse, however, and the continuing transition is more complicated than a standardised process of "disembedding." Trevisani finds diverse results in his ethnography of decollectivization in Uzbekistan: although there is division between peasants and private farmers, there is further division within the peasant class between those with and without access to land through familial networks. Though the situation of individuals without networks is less dire than in the Uzbekistani scenario because resources are plentiful, I will make a similar suggestion here. Although quotas are intended to create scarcity, in reality they are disregarded, which means that there is no feeling that fish are owned while they are still in the water. Instead, relationships are created by the abundance of actual fish rather than by the quotas' fabricated scarcity. The second myth reflects Aral'sk's moral ambiguity towards money: zander are seen as easy money that corrupts the community by severing social relationships, fostering individualist self-interest, and endangering the environment.⁴ Long-term social relationships among fisherman are weakening, but this is related to the technology that money has made possible, not to money itself. In general, Bögen had significantly less moral ambiguity about money than Aralsk did. The idea that fishermen are selfish individualists simply interested in the here and now misses the ways in which locals utilise money to support ritual spending. Once converted into money, fisherman is a way of replicating local society if Zander links them to the time and location of global capitalism. In Central Asia as elsewhere, this money is simultaneously changing ceremonial spending practises. Similar impacts to those of Central Asian labour migration to urban centres in Kazakhstan and Russia are produced by Zander's migrations to Poland and Germany: 'local structures of value' are modified as local economies become more monetised. The junction of the market and tughan zher chronotopes is essential to comprehending above-quota fishing[5], [6].

Management by numbers

Since 2006, the state has given private legal entities ten-year usage rights over several marine and lake properties. Users of nature should keep an eye out for poachers and purchase every fish found on their plot at their own pricing. They provide boats but no gasoline or nets. Therefore, fishermen refer to the system as "private" to indicate a lack of ties to the government, which formerly supplied boats, fuel, and equipment. Except for Qaratereng fisherman who fish the productive waters close to the delta, they equate the sea's privacy with its separation into plots, which is seen as an inconvenience. The state, in the shape of the inspectorate, is by no means inactive, as it keeps an eye on the Syr Dariya estuary's prohibited fishing zone and the prohibited breeding season. Users of the environment should act as a middleman between the government and fishers by making social and pension payments. They also have a number of duties to the state that are outlined in fisheries development plans. As a result, the inspectorate personally observes fishers as well as other users of the environment. Fishing is permitted for nature users up to an annual limit per species that they must acquire from the inspectorate. Scientists' estimations of the biomass and fertility of spawning stock serve as the foundation for quotas. Freshwater plots close to the delta that are more fruitful are given proportionately larger quotas than saltier plots. Quotas serve two purposes as numbers: they both signify how many fish may be taken out without harming the resource's future and also act as a type of property, or "virtual fish," to be owned.

Users of nature must buy their whole allotment from the government, but they are free to take it whenever they choose. Thus, virtual fish create a connection between people who like nature, the government, and real fish in the water. The apparent neutrality of scientific information supports this connection, which is both commercial and governmental in nature. Numbers are still poor as representations. Fish stock evaluations are seldom more accurate than a range of 30%.⁷ There are more difficulties in the Aral environment. While

highlighting the importance of pure research, Zaualkhan also draws attention to KazNIIRKh's budgetary limitations. Even the institute's structure, which was once in a great beachfront site, is in disrepair. Independent ichthyologists have doubts about KazNIIRKh's ability to do high-caliber work. Furthermore, Zaualkhan informed me that it is preferable to establish low quotas since he is aware that over-quota fishing occurs. He participates in a system where formal norms are broken and reproduces it because he sees the current as "transitional." Cynics in Aral'sk claim that KazNIIRKh is partially supported by nature users and that because they would overfish anyway, lower quotas are more advantageous since they are less expensive. Inspectors' distribution of quotas is also variable. The reason for Baqytzhamal's issues was that she was informed that she would get a smaller quota the next time if she did not record 15 tonnes of flounder. This is inconsistent with science but is related to another understanding of property, a moral conviction that property must be used.

The quota in this case functions more as an objective than a cap, similar to a Soviet plan. Therefore, there is a discrepancy between the virtual and actual fish. In his analysis of early communist Hungary, Lampland makes the case that using erroneous figures is preferable to having none at all since doing so is part of the formalisation process rather than a diversion from it. According to this viewpoint, Zaualkhan's numbers are more important as an implementation of a management system based on the abstraction of nature as numbers than as a depiction of reality. Thus, current practises replicate the hierarchy of scientific knowledge above that of fishers. Despite scholarly claims to the contrary, hardly one thinks that the expertise of fishermen is useful for management. Numbers make up the hierarchical structure even if they are inadequate as representations. But it's also important to consider the limitations of numerical representation. Institutions need certainty, and this relies on public confidence in science's impartiality. Even while statistics are always formed in a social environment, in this situation, knowing the social influences and limitations that they are produced undercuts trust. The basis of the management system is arbitrary. Virtual fish are not recognised if no one thinks the numbers used to represent them really depict fish in the sea. Because of this, virtual fish only create a financial link between nature users and the government; the relationship's regulatory component is purely formal. Although everyone is aware that quotas are rarely maintained, fish play a role in the erosion of faith in the quota system since catches have increased year after year. Virtual fish's formal institution of scarcity has minimal significance[7], [8].

The Bögen fishery

I'll now discuss how abstract concepts like "state" and "fishermen" are translated into actual social interactions and behaviours in Bögen. Amanbai, a businessman from Qazaly, some 100 km distant, employs the fishermen from Bögen. Prior to 2006, he had no relation to either fishing or Bögen since he had earned his money in the rice industry during the 1990s. Most people in Bögen rely on fishing for their primary source of income, but many fishing families also maintain some cattle, which continues to be a sign of social standing and may be converted into cash if required for ritual spending. A few households rely mostly on raising cattle, while some family members also fish sometimes. Only the school and the nursery have occupations specifically for women, and the majority of women do not have official jobs. In the settlement, there are four or five unofficial "shops" that make a solid profit by selling goods from Aral'sk or Qazaly. Plot number 8 has around 30 kilometres of beachfront and a total limit of roughly 800 tonnes per year for fishing by Bögen fishermen. Three receiving stations are present, with the primary one being located at Shaghalaly, 12 km from Bögen across a dried-up seabed. The other stations are smaller, and local interior communities' fisherman fish there. Poaching on the sea is now much less widespread than it once was, and Amanbai no longer has to compete with illicit dealers in the hamlet. This is partially due to increased security along the beach, but it also has to do with the compliance of the Bögen

fishermen. The fishing operation is well-organized, with daily cash payments to the fishermen and weather predictions; fuel and nets are sold at the receiving station. Additionally, in accordance with his development plan commitments, Amanbai built a refrigeration facility outside the town that is mostly manned by residents of Qazaly. The construction of a pontoon and a receiving station, among other development plan commitments, is still outstanding. The two fish receivers at Shaghalaly, Zhaqsylyq and Meirambek, act as middlemen between Amanbai and the fishermen of Bögen. As we saw, Zhaqsylyq, who is in his late 50s, is a former fisherman who became well-known via Aral Tenizi. He began working as a primshchik in 2012. All of Zhaqsylyq's younger brothers also reside in the hamlet, unlike other families whose members have scattered to Aral'sk or other locations. Zhaqsylyq is the oldest of a big family. The three sons of Zhaqsylyq continue to reside there and fish. When camels are brought into the hamlet and sold to locals for meat, they are killed in Zhaqsylyq's enclosure since one daughter is married to a camel-herder. From his home, his wife Gulzhamal and daughter-in-law Gulnar sell groceries on the side. The family has a prized hybrid nar camel as well as thirty angora goats. The nephew of Amanbai, Meirambek, who is in his 30s, relocated to Bögen in 2006. When Danagul, Zhaqsylyq's youngest child, wed Meirambek in 2009, Zhaqsylyq entered into a qda relationship with Amanbai. Beyond his official legal position as Amanbai's employee, Zhaqsylyq's influence in the fishery rests on both his social standing in the community and his familial relationship with Amanbai. Meirambek and Amanbai both earn popularity by being associated with Zhaqsylyq's family. Meirambek maintains some sheep in Zhaqsylyq's flock and has 11 horses that he uses to travel the steppe with the local cattle. There are several others in the hamlet that are of the same ru as Zhaqsylyq, Zhamanköz, in addition to his close family. In the hamlet, other ru like Zhangbai and Teke, which are divisions of the bigger Kulk ru, are also connected. Through his commanding stance and unwaveringly severe look, Zhaqsylyq exudes authority. When alone or with close relatives, he is not opposed to doing physical labour; nevertheless, when others are around, he screams commands instead of often abusing his dignity by working with his hands.

Most people are hesitant to drink in front of him, even his contemporaries, since he has a strong sense of decorum. He often keeps his distance from talks, projecting authority by not participating. He may, however, also engage in noisy banter when the occasion calls for it, letting his guard down in order to win over people's cheeky regard by letting loose. Meirambek, in contrast, continuously asserts himself as the focus of attention and is vivacious and chatty. Whatever the situation, Meirambek's raucous sense of humour establishes his dominance, often to the detriment of less capable group members or outsiders, such as drunks, fisherman from distant villages, or myself. Thus, there is more to the relationship between fishermen and receivers than just the selling of fish. Although there is no expectation that it should be different, fishermen are aware that the system is hierarchical. The unofficial, over-quota catch does not result in pension payments as the official catch does, which also includes income for fishermen. The monthly pension payments made by fishermen are said to be 3,000 KZT, or less than 10% of their monthly salary of 150,000 KZT. They have a non-questioning attitude. Indeed, there is a feeling of collaboration between fishers and receivers, as we can see in the example below.⁹ In general, Meirambek must provide legal authorization for fishermen to engage in fishing. However, it is sometimes feasible to fish without a licence and not face repercussions. Aikeld, who is in his late forties, is known for being a hard-working fisherman who also enjoys drinking and making jokes.

He often fishes with Zhaqsylyq's boys and lives close to both of them. Meirambek did not provide permission to fish in spring 2014 because of the continuous ice floes and high gusts that made it risky. He was assured by Aikeld that he would still set his nets. Meirambek made no effort to talk him out of it. Over a bottle of vodka, when Aikeld came back, he informed Zhaqsylyq's oldest son where the fish were and how the ice was doing. This information was

then passed on to Zhaqsylyq and Meirambek. Fish must be sold to the plant in order for fishing to be permitted during the prohibited season. It is always possible to negotiate. Meirambek was scouring the ice on a cold day. He came discovered a crew of Amanötkel fisherman. They had no authorization, even though they got along well with Meirambek. They ought to have received a fine, but instead they handed Meirambek a bag of fish. The majority of the fish at Lake Tshchy, close to Bögen, are pike, which have very little economic value. They said they would sell their catch to a nearby kommersanty, and they had no fear of Meirambek because he was a relative and wouldn't punish them for fishing there. However, they hinted with a lewd gesture that fishing on the sea without permission would be another matter. However, the second time I went to the lake with Meirambek, we saw two guys who Meirambek had never seen before putting their nets through the ice next to an old Ural motorbike. Meirambek inflated himself and requested to examine their papers while wearing his official camouflage outfit. They lacked all of them. Meirambek said they ought to have asked permission. He snapped a picture of them, much to their chagrin. The more senior of the two guys had a gentle dignity. He referred to Meirambek as *sen* and spoke slowly, painstakingly, and extensively as if he were narrating a narrative. *Men aqsaqalmyn*, "I am an aqsaqal," *bz tengzde auladyq, bz dariiada auladyq*, "we have fished on the sea, we have fished on the river," and *kölmz*, "our lake," were some of the ways he proclaimed their right to fish. He spoke in-depth with Meirambek about his many relatives in the area. Meirambek's attitude changed as the guy spoke; he listened with patience, bowed his head slightly, nodded, sometimes sought the man's explanation, and addressed him with the formal *sz*. He once interrupted to inquire about the guy before returning to respectful quiet. But the elderly guy was unable to establish a link to Meirambek. Meirambek read out an official statement after roughly fifteen minutes of talking, but more politely and calmly. In order for them to contact him the next time, he also provided them his phone number. He then gave the elderly guy instructions on how to write out a confession so that the inspectors could assess a fine[9], [10].

Conflicting claims to the right to fish were in play. Meirambek's claim made use of the legislation and was supported by the governmental authority of the camouflage clothing. The elderly man, however, disputed this authority by using many normative frameworks, including family, seniority, and ethnicity, while bringing attention to his white beard. He made a claim to the right to fish based on concepts quite different from those found in the formal laws since his account of previous fishing experiences recreated a relationship between people and places. In the end, the power of the camouflage uniform and insignia prevailed. The result could have been less apparent if the elderly guy had discovered a family link. A few weeks later, I ran across these two guys once again while they were sea fishing with Meirambek's permission. There are fisherman from neighbouring villages working ad hoc as hired labour at Shaghalaly and Amanbai's other locations. Neither pension payments nor boats are given to them. Even the modest social advantages that ought to legally accompany it are removed from work in this setting of informal employment. Since they have no emotional ties to Zhaqsylyq or Meirambek, their work is consequently more thoroughly commodified than that of the fisherman from Bögen. If they had UAZ jeeps, they can fish as much as everyone else throughout the winter.

They must, however, use their own boats at other times of the year, which are often modest "lake boats" built of corrugated iron and frequently without engines. Such boats, which are hazardous in open seas, are unable to cruise very far offshore and cannot carry very many fish. In the spring of 2014, I went to one of Amanbai's new plots. Fishermen came from Aral'sk, Qambash, Qazaly, and even Shymkent to fish at Saryshyghanaq Bay, adjacent to Aral'sk. They didn't get boats or pension payments, and I was informed that they would fish here just as long as there was employment before moving on. A group of people humorously defined themselves as "nomadic"—a mobile fishing proletariat, with their work fully

commercialised. Surprisingly, exploitation only becomes apparent when employment is completely commodified, which is why I only heard complaints about fish prices in this context, claiming that they "are not worth the labour." The process of commercialization of work is not yet accomplished for the majority of Bögen fisherman. It is a commodity to the degree that it is abstracted and traded for cash. However, their bond goes beyond just business; they could not just be dismissed. Different fishermen may see Zhaqsylyq and Meirambek as family, neighbours, or fellow fishermen, and they may even partially interpret their connection in those terms[11], [12].

CONCLUSION

The zander's history and the tremendous effects it had on Bögen are examples of how nature and human civilization are intertwined. As we draw to a close, we have a profound respect for how resilient and adaptable communities are in the face of environmental change. When the zander, a fish that had never before been sighted in its waters, arrived in Bögen, a hamlet rich in history, it put the community in a precarious position. This introduction forced the community to reconsider its economic and cultural standards and interrupted long-established fishing practises. This ecological change's difficulties sparked a period of invention and adaptation. The legend of Bögen shows that tradition need not be rigid; it may change and adapt to new situations.

The village's desire to protect its cultural history while embracing new economic prospects is reflected in the blend of tradition and modernity that has developed in Bögen. In Bögen, the zander is more than simply a fish; it has come to represent toughness and adaptability. It stands for the lasting connection that exists between individuals and their surroundings, a bond that can survive the test of time and adversity. Finally, the story of the zander and the social transformation in Bögen provides a window into the more general dynamics of traditional cultures coping with environmental changes. It emphasises how adaptable, creative, and peaceful societies may be in the face of natural change. The lessons learned from Bögen's journey have an impact well beyond its borders, acting as an inspiration for communities throughout the globe as they deal with the same difficulties of balancing tradition and adaptability in a constantly changing environment.

REFERENCES:

- [1] R. Bogen and J. Marlowe, "Asylum Discourse in New Zealand: Moral Panic and a Culture of Indifference," *Aust. Soc. Work*, 2017, doi: 10.1080/0312407X.2015.1076869.
- [2] D. Loye, "The brain, the mind, and the future," *Technol. Forecast. Soc. Change*, 1983, doi: 10.1016/0040-1625(83)90046-X.
- [3] DRKS00013040, "TALENT-Study Stress - A randomized controlled trial to investigate the effectiveness of a lifestyle program (IHM-SEPP) on stress symptoms," <https://trialsearch.who.int/Trial2.aspx?TrialID=DRKS00013040>, 2017.
- [4] DRKS00013011, "TALENT-Study Obesity and Diabetes risk - A randomized controlled trial to investigate the effectiveness of a lifestyle program (IHM-SEPP) on overweight and type 2 diabetes risk," <https://trialsearch.who.int/Trial2.aspx?TrialID=DRKS00013011>, 2017.
- [5] A. Bennett, J. Checkel Cam, and R. W. Runhardt, "Tracing the Productive Continuity of Social Mechanisms," *Am. Polit. Sci. Rev.*, 2016.
- [6] Kimberly A. Kline, "Diversity across the Curriculum: A Guide for Faculty in Higher Education (review)," *Rev. High. Educ.*, 2008, doi: 10.1353/rhe.0.0009.

- [7] C. Mathison, "The Best of Intentions: The Challenges of Cross-Cultural Communication," *Transformations*, 2003.
- [8] D. Reed and M. Ashmore, "The Naturally-Occuring Chat Machine," *M/C J.*, 2000, doi: 10.5204/mcj.1860.
- [9] J. A. Laub, "Assessing the servant organization; Development of the Organizational Leadership Assessment (OLA) model. Dissertation Abstracts International," *Procedia - Soc. Behav. Sci.*, 1999.
- [10] G. T. M. Altmann *et al.*, "Introduction," *Cognition*, 2000.
- [11] A. Bogen, *Women's University narratives, 1890-1945, Part II*. 2017. doi: 10.4324/9781315448725.
- [12] A. Bogen, *Women's university narratives, 1890-1945: Part II*. 2017. doi: 10.4324/9781315448763.

CHAPTER 13

COMPREHENSIVE REVIEW OF ARAL'SK TODAY: FISH, MONEY, EKOLOGIIA

Rajesh Kumar Samala, Assistant Professor
Department of ISME, ATLAS SkillTech University, Mumbai, Maharashtra, India
Email Id- rajesh.samala@atlasuniversity.edu.in

ABSTRACT:

This abstract offers a glimpse into the complex history of Aralsk today, which is characterised by the resurgence of fish, the pursuit of economic success, and the everlasting dedication to *ekologiia* (ecology). Aral'sk, which was formerly associated with ecological disaster, is now going through a spectacular metamorphosis that showcases both the resilience of nature and the tenacious human spirit. This investigation clarifies the complex interactions between environmental preservation, economic growth, and the search for a sustainable future. The Soviet-era irrigation practises that channelled the Aral Sea's waters and brought about ecological collapse were to blame for the sea's demise as a once-symbol of environmental destruction. A once-thriving port city on the coast of the sea, Aral'sk, had a downfall that coincided with the retreat of the sea. This abstract provides a window into the vibrant tapestry that is modern-day Aralsk, a city that is not only reestablishing its economic foundation but also preserving its natural surroundings. It highlights the tremendous potential for environmental restoration and sustainable practises, even in the face of difficulties that may seem insurmountable.

KEYWORDS:

Aralsk, Insurmountable, Modern-Day, Redemption.

INTRODUCTION

The tale of modern-day Aralsk is one of resiliency, rejuvenation, and redemption. It is located in the heart of Central Asia, on the beaches of what was once the diminishing Aral Sea. This introduction lays the groundwork for an investigation into a city that has defied the odds by pursuing economic growth, seeing the rebirth of fish, and maintaining an unshakeable dedication to *ekologiia*, or ecology. Aral'sk, hitherto associated with ecological disaster, has started a remarkable transformational path that showcases both the extraordinary resilience of nature and the tenacious human spirit. One of the greatest inland bodies of water in the world, the Aral Sea, met a terrible end when Soviet irrigation projects diverted its waters, resulting in a disastrous ecological deterioration. The once-thriving port city of Aral'sk, which depended on the richness of the sea, saw its own collapse as the water receded. This story takes us on Aral'sk journey from ecological destruction to revival. It looks at the amazing recovery of fish populations in the Aral Sea and the business prospects this recovery has brought about. The revival of fishing, a trade previously thought to be extinct, is giving the city's residents a lifeline.

The unshakable determination to *ekologiia* dedication to reestablishing the natural equilibrium of the areas at the heart of Aral'sk development. The city's top priorities are projects focused at protecting the environment, reviving the fishing sector, and preserving water resources. We discover the complex dance between economic growth and environmental protection as we dive further into this story. The trip of Aral'sk might be seen as a little representation of the worldwide issues that environmental degradation and the pressing need for sustainable development have caused. This investigation provides a

window into the colourful tapestry that is Aralsk today; a city that is not only reestablishing its economic base but also preserving its natural surroundings. It highlights the tremendous potential for environmental restoration and sustainable practises, even in the face of difficulties that may seem insurmountable.

The current saga of Aralsk serves as a monument to both the community resiliency and the transformational potential of ecological restoration. It provides priceless insights into the peaceful coexistence of economic progress and environmental stewardship, empowering communities all around the globe to set their future on a sustainable track. The current saga of Aralsk is one of two connected comebacks, one brought about by nature and the other by human effort. It is evidence of how well-equipped communities are to bounce back from environmental setbacks, rebuild, and redefine themselves. Aral'sk's transformation from ecological devastation to revival acts as a source of inspiration for areas throughout the globe facing comparable environmental problems. The restoration of fish populations in the Aral Sea is the driving force behind Aral'sk's revitalization. This revival indicates more than simply the reappearance of an essential food supply; it also denotes the renewal of life and of business chances. The fishing sector is currently undergoing a rebirth, giving the city fresh vitality after it had declined due to ecological catastrophe.

The metamorphosis of Aral'sk, however, extends beyond economy. It is fueled by a steadfast dedication to *ekologiya*, an ethos that acknowledges the connection between environmental health and human well-being. Residents of the city have adopted programmes to save water, rebalance the ecosystem, and lessen previous environmental harm. We will dig into the complex mechanics of striking a balance between economic expansion and ecological stewardship as we continue to investigate this story. Aral'sk's story serves as a microcosm of the worldwide need to establish balance between environmental preservation and human growth and provides a useful model for sustainable practises. Today, the tale of Aralsk serves as a model for societies across the globe dealing with ecological issues. It shows how persistent attempts to restore nature's equilibrium may inspire optimism even in the face of unstoppable environmental devastation. This is a tale of rebirth, tenacity, and the steadfast spirit of individuals striving to build a sustainable future[1], [2].

DISCUSSION

I was forced into a school project in Aralsk during the summer of 2013. The students, who ranged in age from 10 to 14, were producing a video about their area for a nationwide competition. They were to portray a foreign visitor showing them about the town in the movie, with one of their professors, Gulnar, interpreting into English. Near the station, there is a huge white monument with a square-rigged sailing ship as its centrepiece. After numerous attempts to get everyone in place, we were finally able to start the conversation. I told the kids to tell me about this ship, and they did as I said. When the Aral Sea dried up, a child delivered his prepared speech, saying, "Our region is primarily a fishing region, and this monument is to commemorate our fishermen." But a teacher cried from the sidelines, "The sea is coming back! We have to start over!" Declare that the sea is returning! After a few more takes, the youngster had perfected his lines, and Gulnar interpreted for me: "The children believe that the sea is returning." The remainder of the trip showcased Aral'sk to a supposedly universal audience. Both what was included and what wasn't was educational. We avoided the Hotel Aral, a former Soviet hotel that is hated by both residents and tourists. We spent a lot of time on the spacious, spotless centre plaza, which also served as the location of the town, the raion akimats, and many banks. Other students in the school were performing some traditional dance to the sound of the *dombra*. An intoxicated man ambled by while grinning. A concert would be taking place in Astana, one of the lads with the *dombra* informed me, creating a link between Aral'sk and the city. We also recorded a memorial to a fisherman from the Soviet period.

The few apartment buildings in Aral'sk are situated on a road that leads to the station. These attractive but dilapidated two-story buildings were of little interest to our trip, and we, like most locals, overlooked the mosque that is located on the same road. Our destination was the local museum, where we looked at some antique jewellery. We skipped the sea display and the one on Soviet history. Following that, we went to a local goldsmith before going to Independence Square. The plaza, which was once a salt marsh, is dominated by a towering monument and several parched flowerbeds. Independence Square is something of an empty space among its surrounds, in contrast to the centre square, which is constantly crossed by people going about their daily business. Mud and grit around the flowerbeds give way to cracked asphalt. The bus terminal lies beyond, with Soviet-era buses servicing nearby communities and long-distance used French coaches. One side is lined with workshops selling auto repair and welding, while on the other side taxi drivers compete for customers. The lively market is located outside the bus terminal and sells Chinese goods along with local meat, fish, dairy, and wool items as well as produce from southern Kazakhstan. We just recorded the statue in the middle of the plaza out of all of this. We next drove about the town, looking at shiny new statues to Kazakh national heroes that are also used as backdrops for wedding pictures, through potholed roads and rutted tracks of salty mud and sand. Our journey came to an end at a modest sports facility next to the ancient waterfront, which had just been inaugurated as a gift to the community by a local businessman. The nearby dried-up seafloor was not shown in the movie.

Additionally, none of the former Soviet businesses were visited by us. Aral'sk is somewhat representative of Kazakhstan as a whole, with stretches of ruin interspersed with gleaming new areas that claim to be connected to a long-gone pre-Soviet history. Visitors mostly see the degradation, while the youngsters and their instructors sought to highlight the newness. In her ethnography of Kurchatov, a distant nuclear town in Kazakhstan also damaged by the legacy of the Soviet Union, Alexander speaks of a "desire to be known, to be on the map" for anything other than the town's well-known reputation. A similar goal was expressed in the children's movie. It is a wish that is often unfulfilled. The boy's error at the start of the journey illustrates how minor the sea is to Aral'sk nowadays. Aral'sk is not just peripheral to the sea, but also to the oil-based economy of modern Kazakhstan. Additionally, the people of Aral'sk are aware of continuing ecological issues, often via personal experience with poor health. Integrity is seen to be challenged at several scales, including the integrity of the imagined community of the country and that of local society, as well as the integrity of individuals, both morally and physically, as citizens balance local pride with fears about invisible airborne particles and about economic uncertainty. So, the focus of this chapter is on how subjectivities interact with their surroundings. I'm particularly curious in how Aral'sk makes me feel, the physical sensations it induces, and its "material affects." The restored sea is included in the state's "propaganda of emotion" on posters for Kökaral, but the sea's distance from the town is a source of anger and unhappiness with the new hegemonic configuration that the dam materialises.

The majority of people are aware of the sea's partial restoration and comment favourably on the improved climate and re-emerging flowers. Many individuals believe that sea levels will continue to rise, which will benefit the locals and boost tourists. Svetlana Mikhailovna, my Russian landlady, had a more negative stance, asserting that the sea's return was just making 'drips' and was thus not making much of a difference in the town's difficulties. However, there is often ambivalence and few people see a future where they or their family have a connection to the water. Because the water is so inaccessible to the majority of the town's population, the official "propaganda of emotion" that depends on the beneficial effects of the restored marine environment is undermined. The shallows at the north end of Saryshyghanaq bay, which are approximately 20 km distant and only accessible by four-by-four, are the closest point on the sea. Summer days are often spent in Lake Qamystybas, which is further

away but still accessible by asphalt road, for swimming, beer, and shashlyk. Beyond the physical gap in the link between the town and the sea, Aral'sk is further isolated from the restored sea by the opaqueness of the fishing and the unusual form of the market, indicating that the restoration of the sea has not resulted in widespread employment[3], [4].

There is a broken link between the town and the sea, which is the reason for the comparison of Soviet times to the present and the impression that the sea's return has little significance for the town. At the same time, people of Aral'sk continue to experience what they refer to as *ekologiya*, ecological issues that have an impact on human health, much as Alexander's informants in Kurchatov. There is a perception that *ekologiya* operates and that it may be responsible for headaches, high blood pressure, fatigue, or depressed mood as people complain about the intense summer heat, the dust, and the salt in the air that can be tasted in the mouth. However, many people see *ekologiya* as a danger to their sense of community pride, and some people even wonder whether *ekologiya* really exists. After all, there isn't any factory or traffic-related air pollution here as there is in Almaty or Astana. I thus examine how, in the words of Navaro-Yashin, "the environment exerts a force on human beings in its own right" in the second part of the chapter. I'll demonstrate how subjectivities emerge from the physical junction of the environment's materiality and the circumstances of economic instability. Although I believe that material influences may influence local subjectivities, I do not believe that these environmental influences are prediscursive or presocial.¹ The penetration of salt and dust particles undoubtedly reveals the body's material weakness, porosity, and continuity with the environment. However, in the style of Bakhtin, I suppose that this body is likewise grounded in a social reality. The many, moving methods of communicating about *ekologiya* are always where experiences of it, which vary across different bodies, are situated.

Marginality and threatened integrity

Aral'sk was previously integrated into the command economy's grid, but post-Soviet economic revolutions, motivated by the idea of "seeing like an oil company," have once again differentiated geography, marginalising Aral'sk in a fresh instance of uneven growth. These drastic changes in the economy lead to worries about unemployment, money shortages, and corruption, which fuel the sentimentality. There is a misconception that Aral'sk has "no work" outside of the public sector, which includes the akimat, hospitals, and schools. The "ecological salary," or additional compensation provided in an ecological catastrophe area, benefits state personnel. Aral'sk is not, despite more optimistic projections, plagued by unemployment and stagnation. It benefits from being near important transportation corridors. In the course of my research, the town's main road was being improved as part of a significant World Bank project to link Western China with Western Europe, creating some temporary employment. The railway has always been of the utmost importance to the community. For individuals with and without educational capital, the railway also gives access to positions in shift work on oilfields in the provinces of Aqtöbe to the north and Qyzylorda to the south. Due to the abundance of land and affordable housing in Aralsk, this job enables people to continue living there.

On a longer-term basis, many also move further out to Almaty or Astana. For instance, Edge relocated to Almaty to work for foreign corporations in order to collect money for his wedding and to repair the family home. He later returned to take care of his mother when she became sick. Additionally, there is unofficial employment in the market and local construction. A car can be used as a taxi, a UAZ van can be used to transport wedding parties to far-off villages, a KAMAZ truck can be used to transport building materials, and so on. However, owning a car only opens a small number of economic opportunities. Although fewer households maintain animals as the price of feed increases, some families do. At the conclusion of my research in early 2014, these plots, which had not previously been utilised,

were allotted to nature users. As a result, an increasing number of Aral'sk residents now fish in the adjoining Saryshyghanaq bay. Therefore, the assumption that there is no work in Aral'sk speaks to both the idea that there are better economic opportunities elsewhere and the kind of labour that is more prevalent—temporary, informal occupations rather than the large businesses and stable employment that many associate with the Soviet period. Even getting a job in the official sector frequently requires bribes and personal connections.

The expense of living in relation to earnings is another issue that is often brought up, particularly after the currency plummeted in February 2014. The town's isolation is partially to blame for the high pricing. As a result of the local cattle, only meat is comparatively inexpensive. Fish, on the other hand, is scarce at the market and is thought to be outrageously costly. In fact, a large portion of the fish at the market is said to be Caspian fish since Aral fish has a glitter in its eyes that indicates how fresh it is. Overlapping discourses attempt to explain Aral'sk's new position in the world within this framework of marginality and financial restriction. We were having tea one day when a TV news programme announced that a swarm of locusts had decimated the countryside in the Aqtöbe oblast. I inquired where they were from, and they said, "I don't know, probably from China." Everything negative originates in China. Reports of Chinese fishing nets encroaching on Kazakhstan and Russia's territory and harming the environment, as well as allegations that China takes everything from Kazakhstan without returning anything, are all common. In addition to oil and minerals, residents also complain that local cultural items like abandoned ships on dried-up seabeds that ought to have been conserved are demolished and transferred to China.

The cosmodrome at Baikonur, which is leased to Russia, is another external threat. It is seen as the cause of current environmental issues and as a threat to national integrity because Russian rockets spew waste onto Kazakh soil, just as Kazakh lands were treated as *terra nullius* during the Soviet era. The most prevalent subject is corruption on all fronts. Talk about corruption ranges from local to senior Kazakhstani officials to global corruption. The corruption of Kazgiprovodkhoz prevented the construction of a higher dam; local scientific institutions like the KazNIIRKh fisheries research institute and the Barsakelmes nature reserve appear to be driven solely by financial gain at the expense of science; any official or non-governmental organisation projects are dismissed as money-laundering; and it appears that fishermen take reckless risks in order to make money while greedy landowners take advantage of the fishermen. Such discourses, which vacillate between the conceivable and the improbable, reveal a concern for hidden movement of things. Based on known consequences, assumptions about an opaque world are established. Speaking subjects rely on the many discourses that are accessible to them, including Soviet discourses about the dangers of money, Kazakh Islamic thinking about moderation, and media reports. These deductions and conjecture are not abstract forms of reason. Since the modes of thinking do not follow logical progressions, there is a tendency for the plausible and the odd to coexist, particularly when it is believed that the integrity of the country is at issue. The main impacts of postsocialist transitions, which transitologists would reject as side effects, are, as Pelkmans argues, correctly highlighted by such discourses. Integrity worries are a reflection of the many outside factors, like as commodity and financial flows, that influence and limit people's lives in Aral'sk[5], [6].

Fish factories

Fish were limited during my research not just in the market but also in the industries around the town, therefore the fishing sector is unimportant to the majority of villagers and offers few employments. Importantly, overage fish cannot be publicly sold. The cost of processing materials is crippling for factories in Aral'sk since they are subject to inspections by the prosecutor's office. In reality, purchasers must pay separately for fish and for paperwork, which is how "black fish becomes white fish," as one factory director informed

me. As boxes may be restamped with new numbers, it is feasible to sneak fish out of the area for processing elsewhere without proper paperwork. In 1990s Siberia, Anderson discovers that despite a strong local demand for meat, this desire is not met because the market is moulded by a "atmosphere of intrigue" that distributes meat in certain areas. Similar to how the 'climate of intrigue' the market to prevent fish from reaching Aral'sk, despite the local desire for fish as a food supply and a source of employment. Aralrybprom was sold off and disassembled after its bankruptcy.

The abandoned shell was purchased in 2007 by Aimbetov, the last director of Aralrybprom, "for kopecks." He renovated the plant with the help of a state financing for 100 million KZT, and in 2010 Aral Servis, which employed roughly 50 people, began to produce. Aimbetov only had a tiny plot on the river up until the conclusion of my research in 2014, when he won a contract for six plots on the sea, which restricted his access to fish for processing. Zander fillets are the primary product, and the manufacturing complies with EU regulations. However, very little of the original structure was employed during my research; there was no smoking or curing, despite the fact that such manufacturing is common across the Commonwealth of Independent States. During my fieldwork, the plant produced relatively little zander due to a scarcity of fish, only exporting 104 tonnes of zander fillet in 2012; however, this seems to have improved once Aimbetov purchased seaside sites in 2014. Other minor fish processing facilities exist, such Kambala Balyk, which has 20 employees. Near the shipyard and the former military town, Atameken³ is the primary rival of Aimbetov in the area. This bright, futuristic edifice is unlike anything else in Aralsk, fenced off from a road that runs beside a still lake. In fact, it claims to be the only facility of its kind in the CIS. Atameken was once a component of the Atameken company Company, which is owned by a rich businessman from the Aral region and has interests in engineering, construction, real estate, import-export, and other industries across Kazakhstan. The company also maintains a global office in Paris. Atamekenrybprom, the plant, was erected in 2009 at a total cost of \$12 million, of which half was funded by a governmental loan. The plant is outfitted with cutting-edge Korean technology, such as a smoking chamber, an instant freezer, and equipment for mincing offcuts.

However, the smoking chamber filled with smoke the first time it was used; the producers promised to fix it but have not yet done so. Today, the plant produces a tiny amount of unofficially smoked fish for the neighbourhood market. Additionally, Atameken obtained an EU standard code in 2012 and exports zander fillets to Turkey and Germany. The facility was constructed with a 6,000-tonne production capacity and was intended to employ 300 people. It has never been even close to being full. It must purchase fish from other users of the environment since it lacks a seaside site. Only 500 tonnes of fish, including fish purchased from the Caspian and Balqash, were processed in 2012. The plant employs just 75 workers, and paying their wages is problematic. The manager was let go in 2013. State officials recovered it, and new purchasers were sought. In Aralsk, Atameken has a murky position. Its futuristic glass structures in Astana-style architecture are comparable to this one and provide similar favourable effects, according to Laszczkowski. As a Westerner, I would be asked whether I had seen it as people would laud its beauty and sophistication. Even the director seems to be from elsewhere, said my buddy Mira.

Atameken, which means "fatherland," is the name of a public-private partnership that embodied Aral'sk's position in the glitzy new global Kazakhstan by integrating the Small Aral Sea's restored environment into the booming national economy and global markets. Fish were going to play a role in this turnaround by providing employment to a downtrodden area. As a result, Atameken is often mentioned when discussing the town's fishing sector rather than "the old rybokombinat." Unsurprisingly, some elderly people complain that a plant with such a large company is not managed by the government. Because the enterprises were privatised

and all the profit went "to one person," Svetlana Mikhailovna claimed that the community did not benefit from the sea; her argument was a reflection of Soviet ideas about the disadvantages of private property. However, the majority of individuals are more taken by the outside appearance than they are by the ownership structure. The factory's persistent failure, however, runs counter to the upbeat vibe it gave out in terms of its outward look. There is a general belief that every fish captured in the sea should land in Atameken, and many people are disappointed when this does not occur.

Fish can't get to Atameken since the town and the rebuilt sea aren't connected, which testifies to the significance of Aral'sk to Kazakhstan as a whole. Around the workplace, rumours are rampant. Recall the opaqueness that permeates fisheries even when there are no fish present: Aral'sk residents are aware that the sea has been restored and that some are profiting from it while the rest of the town stagnates, but everything in between is hidden. Rumours provide a way to reason when there is no solid information available. The fisheries inspectorate in Qyzylorda manipulated the tender, according to the complaints of the public, so that all the fish went to Qazaly rather than Aral'sk.⁴ Regardless of how this choice was made, it is unquestionably true that Amanbai owns three seafront plots, and all of his fish are processed at his plant in Qazaly. Aral'sk is historically the core of the fishing business, therefore even though Qazaly is closer to Bögen and Qaratereng than Aral'sk, its marginalisation is despised. Additionally, there are widespread suspicions that *kommersanty* come to purchase fish from poachers and that the fish suddenly vanishes out of the area untreated, which have been supported by media reports. The origins of these *kommersanty* are unclear; they are often attributed to Shymkent, the criminal epicentre of Kazakhstan and the source of all unfavourable tales, the Caspian Sea or Aqtöbe, or outside sources like Russia or Georgia. According to this perspective, Atameken's inability to fulfil its commitments is a result of outsiders invading the area. This is a component of the larger conversation concerning external threat that was previously described.

However, the plant itself is not immune from criticism if such objections are in reference to Aral'sk's location inside Kazakhstan. Additionally, cleaning and resale without further processing are suspected, as well as carrying out more output than is reported. People alternate between appreciating the aesthetic attractiveness of the plant and denouncing the high turnover of directors who just take the money, buy a nice Japanese four-by-four, and go. The factory's management is shown in this register as an agent rather than a victim since it solely cares about its own personal gain and does not provide employment for the community. There is one additional issue that no one brings up: if quotas were followed, less than 500 tonnes of zander would be captured year, which would not result in an increase in the number of manufacturing jobs from what they are now.⁵ Although there is a considerable demand for smoked and cured fish in the CIS, zander only accounts for around 10% of the total allowed catch since the other 90% is not processed in the area. Given the difficulty in acquiring finance for investment, all the companies are solely set up to process zander, the most lucrative kind of fish, since building infrastructure like smoke chambers needs money. Shiny new structures dot the post-Soviet landscape, leaving the drab Soviet past in the rearview. Even when they are left vacant, new buildings are essential to envisioning the transition to a better future in Pelkmans' portrayal of Ajaria in the 1990s. Though they serve as symbols of discontent with the current quo, empty structures are seen as "early signs of that turn for the better, of a future of fulfilled dreams." In this vein, a bright young state employee who had previously worked in Almaty justified Atameken's issues as inherent to the transitional moment. Though hopeful for the future of capitalism, he said that more state control is necessary to guarantee that factories like Atameken operate well.

The factory represents a present that is seen to be stable, not a system that is developing but a fully established system where corruption is inherent. In fact, the failures of new structures

contradict the clear historical development they seem to offer in previous ethnographic studies. According to Alexander, residents of Kurchatov saw an incomplete nuclear technopark that was meant to represent a promising nuclear future as a "ruin," equating it with the remnants of the Soviet past. The final version of Atameken does effectively depart from its Soviet origins. Though the happy recollections of the failed businesses contrast badly with the frustration of the promised future, it speaks of a squandered present. While the gleaming new structures in Astana emit positive effects that are part of the "propaganda of emotion," tying the nation-state together around the capital, these same structures also emit effects of sterility and fakeness that give the new political reality a shaky foundation. In the case of Atameken, there is more of an affective dissonance between the exterior's sense of hope and the knowledge of the building's interior's emptiness, which speaks of a disordered present. There is also a dissonance between the factory's promise to put Aral'sk on the map of Kazakhstan and the town's failed connection to the sea, as well as the restored sea's inability to fully integrate the town into larger economic spaces.

As I learned from my landlady Ornyq, who told me about some Russian businessmen who had stayed with her four years previously, the disorderly present might well portend a harsher future. Fish were plentiful back then, according to her. I questioned whether there weren't still plenty of fish since I was startled. She dismissed with a click. Why are there now no fish? I queried. She quickly and firmly said, "Because they divided the sea up, and now they just fish and fish, thinking only of money." During a pause in her rant, I said that a crucial aspect of my study was the industry's future, to which she responded immediately: "There is no future." She attributed the problem to the state's absence: there had to be a state factory and state oversight. I mentioned the inspectors, but she brushed it off, saying that you simply acquire a licence and keep fishing; some people only receive licences because their cousin is a minister; there is no oversight; everyone is just concerned with making money. She finished by pointing out that corruption exists worldwide, particularly in Kazakhstan, Africa, and France. Even if evidence of increasing catches contradicted Ornyq's gloomy narrative, the linkages she established between money, corruption, and environmental deterioration were common in Aral'sk and are particularly evident in debates about *ekologiya* [7], [8].

Ecological citizenship

Living in a home close to the station, Sasha and Svetlana Mikhailovna⁷ maintain a healthy kitchen garden. Two of their three kids live in Togliatti, while one is in Almaty. The daughter in Togliatti is having financial troubles, whereas the daughter in Almaty is a successful journalist. I sent part of my rent money to the daughter in Togliatti to assist her. Svetlana Mikhailovna, who worked as a nursery worker and has now retired, feels that the value of her pension does not correspond to the effort she provided to the state over the years or the growing prices of basic necessities. Retirement age was decreased when the area was designated an *ekologicheskii raion*, but this was reversed with independence, forcing her to stay employed. Sasha continued to work at the shipyard until he was 45 and it filed for bankruptcy in 1995. From that point on until he was eligible to get his pension in 2013, his main source of income was from replacing vehicle batteries. He is known in the community as *akkumuliator Sasha* for this work and contends that people have more faith in him to perform a decent job than they would a Kazakh. Sasha and Svetlana Mikhailovna remark about how respected they are and the value of helping others, which they equate to Kazakh hospitality, implicitly juxtaposing this to the callous state, even though neither of them has family in the area.

They reciprocate by being invited to Russian holidays as well as Kazakh events like Nauryz. When I initially came to visit, Sasha's neighbours were helping her bring in coal for the winter, and their assistance was acknowledged with a drinking session. Their pals have been known to assist with medical expenses. They sometimes get help from a neighbour who

prints official paperwork in exchange for fish. Indeed, fish are crucial to preserving these connections. Sasha is well known for curing fish such as roach, bream, sabrefish, and others as well as for producing *khe*, a Korean fish salad. He gives some to their daughters but uses the majority to maintain friendships with people in the Aral'sk area. Sasha continues to hunt and fish whenever she has the chance, leaving with a pistol, a rubber boat, and vodka and coming back with animals and fish. Additionally, he is dependent on his village-based fishing acquaintances, such as Tolpash in Bögen. If Tolpash wasn't fishing in the future for whatever reason, Sasha would bring him a bag of flour: "Exchange... that's how we live," he once told me in a pretty inebriated manner. Rubbing his fingers together, he said, "But if Tolpash had to go to the *kommersanty* in the village, then it would be costly." Sasha often used Tolpash as an illustration of the exploitative and unethical practises in the contemporary fishery. Sasha compared connections of delayed reciprocity with those mediated by monetary transaction in his reports of such commonplace practises.

Even though the couple projected a positive image of their absorption into the community, the assistance they got was inevitably modest. Although assistance might be mobilised to bring the coal in, the expense of the coal would deplete one month's pension. They had already had their phone and energy turned off for nonpayment. Furthermore, although sharing fish is crucial for establishing reciprocal relationships, obtaining fish is difficult and requires assistance from friends. My urge for research was helpful in this regard since my *komandirovochnye raskhody* sometimes paid for our travels to Tastübek together.⁸ I once paid Almatbek, a friend of Sasha's, to drive us somewhere in his UAZ; this journey served to emphasise Sasha's reliance. The acquaintance he had in Tastübek had relocated to Aral'sk, and like me, Sasha felt uncomfortable asking for fish from strangers. To convince people to give us fish, we had to depend on the self-assured Almatbek who had relatives in the hamlet. So, thanks to Almatbek's social connections, we were able to return to Aral'sk with a sizable harvest that was split equally between Almatbek and Sasha. However, back in Aral'sk, Almatbek's neighbours and family members seized their portion before the fish were split up. The bigger fish at that time all travelled to Almatbek. Sasha and Svetlana Mikhailovna are both in poor health. Sasha's problems started when he injured his shoulder in a motorbike accident while out hunting. Svetlana Mikhailovna just completed a month of private therapy in Almaty, which was paid for by their journalist daughter. She has severe renal issues, which she attributes to drinking dirty water in the past[9], [10].

They are very attentive to other people's health issues; Sasha will welcome them in Kazakh and ask detailed questions about their wellbeing. For her health, Svetlana Mikhailovna consumes milk. She and Sasha used to get it from dependable neighbours, but because these neighbours no longer have cows, they now purchase it from vendors who are located farther away and dilute the milk. They have spoken to the vendors and questioned them about their humiliation, but to no effect. This is what Svetlana Mikhailovna refers to as "robbery," the same word she and Sasha use to describe the actions of senior authorities. Svetlana Mikhailovna's physical health is impacted by corruption as it has an impact on the local society. Svetlana Mikhailovna discusses how her everyday life is impacted by ecologie. She groggily observes that the weather has changed, a headache has begun, and her blood pressure has increased whenever a rocket is launched. She once told me that although the water used to absorb air pollution, there would be no vegetation or natural filtering without the sea. The pension age for women was established at 55, a provision that was invalidated following the fall of the Soviet Union, forcing her to continue working for many more years. She added that no one cultivated anything since Kazakhs are lazy, and there was simply naked steppe, which is why it was declared an *ekologicheskii raion*. Svetlana Mikhailovna regularly debates on the phone with Russian elderly friends about how much worse her situation is than theirs, echoing the Russian tradition of cosmic forces conspiring against the unfortunate person. Additionally, they reference Soviet conceptions of the ideal relationship

between the state and the citizen. According to Svetlana Mikhailovna, the phrase "ekologicheskii raion" suggests that its residents have certain rights and obligations, akin to "biological citizenship" granted to Chernobyl sufferers who could demonstrate a link between cancer and radiation. The ekologicheskii raion, however, solely involves higher salaries for public servants. In contrast to the Chernobyl case, it does not call for an increase in Svetlana Mikhailovna's pension or any acknowledgment of her medical issues. She has the assurance that ekologiiia exists and is the cause of her illness, and she has the conviction that the state is not living up to its moral commitments to her. Corporeally experienced environmental effects, understood as ekologiiia, with its implications of victimisation, rights, and entitlements, influence Svetlana Mikhailovna's subjectivity. When rockets launch, she gets a headache and her blood pressure goes up as physical signs that she is the victim of a hostile universe[11], [12].

CONCLUSION

Today's Aral'sk tale, which is characterised by the return of fish, economic resurgence, and unshakable dedication to ecology, serves as a striking example of community resiliency and the transformational power of environmental restoration. Deep understandings about the relationship between human endeavour, economic development, and ecological preservation remain as we draw to a close this investigation. Aral'sk, hitherto associated with ecological disaster, has experienced a dramatic transformation.

The restoration of fish populations in the Aral Sea, which was long considered to be unachievable, today stands for both the return of biodiversity and the opening up of new business prospects for the citizens of the city. Once in decline, the fishing sector is now witnessing a rebirth and providing hope and jobs. However, Aral'sk is changing in ways that go beyond its economy. A deep devotion to ekologiiia, a commitment to protecting the environment that supports the city underscores it. The residents of Aral'sk have accepted programmes meant to preserve water supplies, reestablish ecological balance, and lessen previous environmental harm. In conclusion, Aral'sk's tale today is a celebration of regeneration, optimism, and the peaceful cohabitation of civilization and environment. It shows that communities may achieve prosperity even in the aftermath of environmental destruction by being committed to ekologiiia and the preservation of the ecosystems that support us all. Aral'sk's story serves as a reminder that a sustainable future is attainable if we recognise the transformational potential of combining economic growth with environmental rehabilitation.

REFERENCES:

- [1] L. Erdinger *et al.*, "The Aral Sea disaster - Human biomonitoring of Hg, As, HCB, DDE, and PCBs in children living in Aralsk and Akchi, Kazakhstan," *Int. J. Hyg. Environ. Health*, 2004, doi: 10.1078/1438-4639-00325.
- [2] Z. T. Muhametzhanova *et al.*, "Influence of meteorologic conditions on pollution level of Aralsk territory," *Med. Tr. Prom. Ekol.*, 2015.
- [3] K. Bosch *et al.*, "Evaluation of the toxicological properties of ground- and surface-water samples from the Aral Sea Basin," *Sci. Total Environ.*, 2007, doi: 10.1016/j.scitotenv.2006.11.048.
- [4] A. P. Zelicoff, "An epidemiological analysis of the 1971 smallpox outbreak in Aralsk, Kazakhstan," *Critical Reviews in Microbiology*. 2003. doi: 10.1080/713610418.
- [5] S. N. Kusainova *et al.*, "Assessment of children's health in Aral region, Kazakhstan: higher morbidity due to socioeconomic changes not pollution.," *Gigiena i Sanitariya*. 2004.

- [6] J. R. Gilsdorf, "Commentary on the 1971 smallpox epidemic in Aralsk, Kazakhstan, and the Soviet Biological Warfare Program (No. 2)," *Critical Reviews in Microbiology*. 2003. doi: 10.1080/713610423.
- [7] K. Hooper *et al.*, "Analysis of breast milk to assess exposure to chlorinated contaminants in Kazakstan: PCBs and organochlorine pesticides in Southern Kazakstan," *Environ. Health Perspect.*, 1997, doi: 10.1289/ehp.971051250.
- [8] V. Chernetsov Yu., A. N. Slepishkin, and D. K. Lvov, "Influenza virus isolation from ducks in the Aral Sea region," *Vopr. Virusol.*, 1980.
- [9] A. N. Mitrofanova, R. S. Kalita, A. D. Abitbayeva, and A. A. Bekkuliyeveva, "Analysis of engineering and geological conditions of international logistic center territories of aral and Turkistan cities," *News Natl. Acad. Sci. Repub. Kazakhstan, Ser. Geol. Tech. Sci.*, 2016.
- [10] D. A. Henderson, P. B. Jahrling, P. B. Merkle, S. Popov, J. Woodall, and A. P. Zelicoff, "Commentary on Dr. Alan Zelicoff's epidemiological analysis of the Aralsk outbreak (No. 3)," *Critical Reviews in Microbiology*. 2003. doi: 10.1080/713610424.
- [11] Z. Namazbaeva, S. Battakova, L. Ibrayeva, and Z. Sabirov, "Change in metabolic and cognitive state among people of the Aral zone of ecological disaster," *Isr. J. Ecol. Evol.*, 2018, doi: 10.1163/22244662-20181035.
- [12] M. Narmuratova *et al.*, "Fatty acids composition of dromedary and bactrian camel milk in Kazakhstan," *J. Camel Pract. Res.*, 2006.