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Climate Change and Cultures of Environmental Migration in Eastern Eurasia

From Gumilev to Nazarbaev

In the run-up to the twenty-first Conference of the Parties of the United Nations Framework Convention for Climate Change (UNFCCC), the Advisory Group on Climate Change and Human Mobility recommended including the context of environmental migration in the preamble of the Paris Agreement by recognizing that "climate change is expected to increase forced internal and cross-border displacement of people" and "the need to take into account human mobility in climate change adaptation and mitigation policies."[1] What is left in the original text of the Paris agreement is only a vague request to "develop recommendations for integrated approaches to avert, minimize and address displacement related to the adverse impacts of climate change."[2]

This shows that environmental migration is already recognized as one of the central challenges of the twenty-first century, but at the same time is mostly neglected by policy makers. In fact, people displaced by environmental causes do not qualify as refugees under the UN convention definition.[3] The research field of environmental migration remains essentially contested since it lacks clear definition and is difficult to disaggregate from other forms of migration such as economic and political migration.

1 "Human Mobility in the Context of Climate Change. Elements for the UNFCCC Paris Agreement (March 2015)," in *IOM Online Bookstore*, accessed October 25, 2018, https://publications.iom.int/system/files/pdf/mecc_human_mobility_in_the_context_of_climate_change.pdf.

2 "Adoption of the Paris Agreement," 8, accessed October 25, 2018, https://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf.

3 Anthony Oliver-Smith, "Environmental Migration. Nature, Society and Population Movement," in: *Routledge International Handbook of Social and Environmental Change*, ed. Stewart Lockie et al. (London: Routledge, 2014), 145.

Despite these pronounced issues in framing the research field and policy recommendations based on it, two lines of argumentation can be isolated:

1. Environmental migration as a security threat and climate change as a threat multiplier, as has been conceptualized already since 1990 and adopted by the Pentagon and other Western security agencies, thus being instructive for the securitization of the climate change discourse as such[4] and particularly in regard to health risks.[5]
2. Environmental migration as adaptation to climate change as has been influentially conceptualized by the *Foresight Report* (2011). Migration as adaptation has been advocated by the International Organization for Migration (IOM) as a policy shift from climate refugees to climate migrants.[6]

Consequently, the World Bank's *Groundswell Report* (2018) predicts 200 to 300 million people to be displaced by climate change worldwide by 2050 and further promotes the notion of migration as adaptation, focusing on internal migration, mapping hotspots, and proposing an anticipatory approach to planning and investment.[7]

So far, Central Asia has barely been mentioned in the steadily growing literature on climate migration. And also vice versa: The research on Central Asian migration has not yet paid any attention to the ecological factors and theories of environmental migration.[8] This is the point at which this article seeks to establish the link between environmental studies, migration studies,

4 Gregory White, "Environmental Refugees," in *Handbook on Migration and Security*, ed. Philippe Bourbeau (Cheltenham: Edward Elgar, 2017), 181.

5 Patricia Schwerdtle, "The Health Impacts of Climate-related Migration," in *BMC Medicine* 16:1 (2018), accessed October 25, 2018, https://doi.org/10.1186/s12916-017-0981-7.

6 François Gemenne and Julia Blocher, "How Can Migration Serve Adaptation to Climate Change? Challenges to Fleshing Out a Policy Ideal," in *The Geographical Journal* 183:4 (2017): 336–347.

7 Kanta Kumari Rigaud et al., *Groundswell: Preparing for Internal Climate Migration* (Washington, D.C.: The World Bank 2018), 7.

8 Cf. Marlene Laruelle and Caress Schenk, eds., *Eurasia on the Move. Interdisciplinary Approaches to a Dynamic Migration Region* (Washington, D.C.: The George Washington University, Central Asia Program, 2018).

and Central Asian studies. It seems necessary and productive for future research for three main reasons:

1. Central Asia is a region highly vulnerable to climate change.[9]
2. The Eurasian migration subsystem, including Russia and the Central Asia hub, has challenged the conventional frame of reference as to how migration and its sociopolitical impacts are understood.[10]
3. Central Asian societies and cultures are historically shaped by nomadism, which is an essential form of environmental migration.

This last point is crucial because the discourse on climate migration mostly neglects the historical perspective. Such perspective can be drawn up for Eurasia based on the concept developed by Soviet scholar Lev Gumilev (1912–1992) which has been highly influential for identity politics in today's Russia and Central Asian countries.

After examining case studies on patterns of environmental migration in Kazakhstan, Kyrgyzstan, and Western China (Xinjiang), this paper proposes a contextualization in terms of cultural history and its links to contemporary research in migration studies.

Kazakhstan—National Brand and Future Energy

In the opening ceremony of the World Expo 2017 "Future Energy", in Kazakhstan's capital Astana (now Nur-Sultan), President Nursultan Nazarbaev addressed his guests and the international community with a carefully crafted welcome speech, highlighting the new national branding of Kazakhstan in the "global logic of ecologically balanced, sustainable development of the world". By stressing Kazakhstan's commitment to the renewable energy transition

9 Christopher P. O Reyer et al., "Climate Change Impacts in Central Asia and their Implications for Development," in *Regional Environmental Change* 17:6 (2017): 1639–1650.

10 Mikhail A. Alexseev, "Russia and Central Asia," in *Handbook on Migration and Security*, ed. Philippe Bourbeau (Cheltenham: Edward Elgar Publishing, 2017), 363.

(committing to using 30 percent renewable energy by 2030)[11] and inviting the participants to discover Kazakhstan's culture, historical heritage, and natural beauty, Nazarbaev created a link between the future and the past and was seated in the middle of the first row, Xi Jinping to his right, Vladimir Putin to his left.

As this and other speeches by Nazarbaev clearly demonstrate, the president is highly occupied with the very concept of nation branding. Being one of world's largest exporters of hydrocarbons and uranium, Kazakhstan has recently been known as a country doing almost nothing to tackle severe environmental issues, such as heavy pollution in the Caspian Sea caused by oil and natural gas production, radioactive or toxic chemical sites associated with former defense industries, industrial pollution, soil pollution from overuse of agricultural chemicals, and salination from poor infrastructure and wasteful irrigation practices. Notably, a legitimate assessment of Kazakhstan's environmental issues does not exist since the government systematically hinders the work of environmental NGOs and persecutes activists.[12] Thus, the greenwashing of Kazakhstan's international image forwarded by Nazarbaev seems to be the right strategy for the near future.

The visitors to Expo 2017 "Future Energy" had the opportunity to marvel at Astana's impressive modernist architecture and newly built Congress Center but they would not have seen the migrant workers who built them, since most of the illegally working migrants were removed from the capital right before Expo 2017 was about to start.[13] The living conditions and human rights violations of labor migrants in Kazakhstan are shocking, as they are elsewhere in Asia. But in Kazakhstan it is especially worrying, since the country has a long tradition of migration itself.

In fact, the statehood of Kazakhstan begins with environmental migration. It starts with Russian peasants moving onto Kazakh steppe land from the

11 This ambitious target is also anchored in the countries development strategy "Kazakhstan 2050". Cf. *The Address of President of the Republic of Kazakhstan, Nursultan Nazarbaev, to the people of Kazakhstan. January 10, 2018*, accessed October 25, 2018, https://strategy2050.kz/en/page/message_text20171/.

12 Yulia Genin et al., *Dangerous Work. Increasing Pressure on Environmental NGOs and Activists in the Countries of the Former Soviet Union and the U.S.* (Crude Accountability / Ecoforum of NGOs Kazakhstan 2017).

13 Zhadra Zhulmukhametova, "Svoi sredi chuzhikh: Kak trudovym migrantam vyzhit' v Kazakhstane?" in *BNEWS*, May 22, 2017, accessed October 25, 2018, https://bnews.kz/ru/dialog/interview/svoi_sredi_chuzhih_kak_trudovim_migrantam_vizhit_v_kazahstane.

eighteenth century on. This unregulated migration flow in the Russian Empire was legalized with the Resettlement Act of 1889 which did not consider the migration routes of pastoral nomads, who, upon returning from summer or winter pastures, found their land occupied by foreign peasants. This conflict over land use gave rise to *Alash*—the first national movement of the Kazakh people, formed around the oral tradition of the genealogic register, *shezhyre*—the cornerstone of nomadic social organization, codifying land distribution among tribes and providing "knowledge of the ecological environment and the skills necessary to be a successful nomad."[14]

After a very short period of so-called Alash Autonomy, from 1917 to 1920, and a number of administrative rearrangements, the Kazakh Soviet Socialist Republic was formed in 1936 on territory corresponding to that of modern Kazakhstan. Right from the beginning, Kazakhstan experienced large multi-ethnic migration inflows—deportations, prisoners concentrated in Soviet labor camps, and refugees evacuated during World War II. Those migrants were instrumental in building up the country's industry, infrastructure, and agriculture alongside educational and health systems.

After World War II, Kazakhstan was subject to large-scale agricultural transformation by monocultures. Namely the Virgin Lands Campaign, which eventually led to weed infestation, soil erosion, reduced natural fertility, desertification, and severe droughts. After this program failed the Soviet leadership decided to intensify irrigation in Central Asia with half of the annual flow of the Amu Darya and Syr Darya rivers, which resulted in the destruction of the Aral Sea followed by salinization, dust storms, and contamination of drinking water with toxic chemicals from pesticides and fertilizers.[15]

These (and several other) processes of environmental degradation triggered state-regulated resettlement programs. After the breakdown of the Soviet Union, however, Kazakhstan faced unregulated internal migration from the sites of ecological disasters, such as the Aral Sea region, from where 75,000 people fled annually since 1990, as outlined in an IOM study. As the authors sum up: "Even by conservative estimates it can be stated that, directly or indirectly, approximately 80 percent of total migration flows occurs for purely ecological

14 Bhavna Dave, *Kazakhstan – Ethnicity, Language and Power* (London and New York: Routledge, 2007), 33.

15 Paul Josephson et al., *An Environmental History of Russia* (Cambridge: University Press, 2013), 151; 232.

reasons or is caused by the socio-economic difficulties which are the result of ecological degradation."[16]

At the same time Kazakhstan was experiencing massive rural to urban migration, outgoing migration of Russians, Germans, Jews, and other nationalities, and also incoming migration of ethnic Kazakhs from other Central Asian countries, facilitated by state-sponsored repatriation programs.[17]

During the 2000s, migration patterns in Kazakhstan changed. Labor incoming migration predominated over ethnic outgoing migration. In 2013, the in- and outflow of migrants were about equal, with the total migration volume significantly lower than a decade before.[18] This change in pattern goes along with the expansion of the Kazakh economy and the process of Eurasian economic integration, which was inspired by Nursultan Nazarbaev as early as 1994. Still, labor migrants and Kazakh repatriates alike are deprived of fundamental rights and social integration policies.[19]

Concerning environmental internal migration, the situation is even worse. The exploitation of Kazakh natural oil and gas resources in the North Caspian region by Western companies causes severe damage to the region's ecological balance. Large areas of land are removed from agricultural use and thousands of tons of pollutants are released into the atmosphere.[20] In addition to the oil, phenol and heavy metals contaminate the water and the soil, and after cleaning crude oil, sulfur is stored in the open air in violation of environmental regulations and poses serious health risks to the local population.[21] Instead of investing in storage facilities for sulfur in the Mangystau region, the Kazakh government and the Chevron Corporation decided to relocate the residents to new homes in the vicinity of Atyrau—another region in Western Kazakhstan which experienced environmental outgoing migration in the 1990s due to the

16 Aleksandr Shestakov and Vladimir Streletsky, *Mapping of Risk Areas of Environmentally-Induced Migration in the Commonwealth of Independent States* (Geneva: International Organization for Migration, 1998), 71.

17 Gulnar Kendirbaeva, "Migrations in Kazakhstan: Past and Present," in *Nationalities Papers* 25:4 (1997): 741–751.

18 Alexseev, "Russia and Central Asia," 385.

19 Aina Shormanbayeva et al., *Migrant Workers in Kazakhstan: No Status, no Rights* (Paris: International Federation for Human Rights, 2016).

20 Maulken Askarova and Aizhan Mussagaliyeva, "The Ecological Situation in Contaminated Areas of Oil and Gas Exploration in Atyrau Region," in *Procedia – Social and Behavioral Sciences* 120 (2014): 455–459.

21 Darek Urbaniak et al., *Kashagan Oil Field Development* (Brusells: Friends of the Earth Europe, 2007), 15–16.

increased risk of floods caused by sea level rise. In this way, the people were relocated to an area where environmental and health impacts are only slightly better and they were not even fairly compensated.[22]

Although these problems were brought to the attention of the government already in 2000 and more firmly around 2007, very little has been done to tackle the upcoming environmental crisis in western Kazakhstan so far. Instead, the Kazakh government decided to make an example of a strike of oil workers which broke out 2011 in Zhanaozen and was violently ended by state security forces with at least seventeen people killed and more than 100 injured. Significantly, the strike was originally provoked by the worsening environmental situation and increased tensions between the local population, ethnic repatriates, the foreign labor force, and environmental refugees competing for jobs and livelihoods in a shrinking labor market, since some oil projects are already closing down due to rapid field depletion.[23] In contrast, the newly developed Kashagan oil field threatens to do even more environmental damage to the whole North Caspian region due to poor regulation and technical challenges which are so enormous that the question is not if an environmental catastrophe will happen, but when.[24]

When it happens, Kazakhstan will most probably face unregulated migration flows to the north of the country. South to north internal migration is already stimulated by the government in order to counter demographic misbalance and to populate the Russian-dominated north with ethnic Kazakhs.[25] Although the outcome of this resettlement program has so far been very modest, in the near future, as southern parts of Kazakhstan suffer from poor agricultural conditions and the western parts from environmental pollution, the north will become more attractive as a destination for internal migration,

22 William T. Vollmann, *Poor People* (New York: Harper Perennial, 2008), 173–195.

23 Aitolkyn Kourmanova, "Lessons from Zhanaozen. Bringing Business, Government, and Society Together," in *Kazakhstan: Nation-Branding, Economic Trials, and Cultural Changes*, ed. Marlene Laruelle (Washington, D.C.: The George Washington University, Central Asia Program, 2017): 15.

24 Helga D'Havé and Bart Ulens, "Giant Oil Field in Kazakhstan is a Ticking Time Bomb," in *Mondiaal Nieuws*, January 29, 2014, accessed October 25, 2018, https://www.mo.be/es/node/36659. Cf. Urbaniak, "Kashagan Oil Field," 23.

25 Serik Jaxylykov, "The Northern region and the Southern People: Migration Policies and Patterns in Kazakhstan," in *Central Asia Fellows Papers* (CAP Papers 184), April 23, 2017, accessed May 13, 2018, http://centralasiaprogram.org/archives/10627.

despite of radioactive contamination, severe industrial pollution and poor air quality.

The east of the country, in its turn, is experiencing heavy demographic pressure from China, thus triggering a discourse of creeping Chinese colonization through migration.[26]

Xinjiang—China's Dynamic Borderlands and Future Challenges

Xinjiang Uygur Autonomous Region, which borders Kazakhstan to the east, was populated in the fifth century by the Yuezhi nomadic tribe, who moved to Xinjiang as environmental refugees due to desiccation and pasture decline of the Kazakh steppes, according to Gumilev.[27] From 1760 to 1820, Xinjiang experienced large-scale migration by Han Chinese caused by extreme climate events (droughts and floods) in northwestern China. In the same period Xinjiang experienced optimal climate conditions for the rapid development of agriculture facilitated by administrative reforms. Thus, Xinjiang provides an interesting historical showcase of the impact-response chains among climate change, human migration, and political coping strategies.[28]

In the 1960s it became apparent that climate warming, desiccation, and soil degradation in Xinjiang are progressing faster than in Soviet Central Asia.[29] This environmental change can be explained as an outcome of the People's Republic of China's development policy in regard to its western frontiers. In 1954, Xinjiang Production and Construction Corps (XPCC) was founded in order to enhance agricultural development, promote extracting industries, and consolidate border defense. Another important mission of the XPCC was the ethnic homogenization of the Uyghur-dominated province. Between 1949 and 2008, the proportion of Han in Xinjiang rose dramatically, from 6.7 percent to

26 Alexseev, "Russia and Central Asia," 387.

27 Lev Gumilev, "Heterochronism in the Moisture Supply of Eurasia in the Middle Ages (Landscape and Ethnos V)," in *Soviet Geography: Review and Translation* 9:1 (1968): 29–33.

28 YanPeng Li et al., "Climate Change, Migration, and regional Administrative Reform: A Case Study of Xinjiang in the Middle Quing Dynasty (1760–1884)," in *Science China Earth Sciences* 60:7 (2017): 1328–1337.

29 Mikhail Petrov, "Once Again about the Desiccation of Asia" in *Soviet Geography: Review and Translation* 7:10 (1966): 18.

40 percent.[30] Due to internal migration and high fertility rates, the growing population of Xinjiang required intensified food production. Government policies implemented to meet food demands have resulted in extensive deforestation, water diversion, and groundwater pumping, which have led to an increase in soil erosion and overdrafting of water resources by at least 112 percent.[31] Around 2000, the Chinese government made an attempt to mitigate the environmental degradation by promoting the Nomad Sedentarization Project (NSP).

Sedentarization policies have been advocated by international development agencies, conservation groups, and national governments around the world. From their perspective, pastoralism is inefficient and damaging to the environment while sedentarization permits better control and taxation, while also eliminating cross-border migration.[32] In the short term, sedentarization policies indeed seemed to work in Xinjiang, as most households increased their number of livestock while labor intensity decreased and sources of income became diversified by crop cultivation. However, after sedentarization, dependence on local water resources has increased and agricultural reclamation has led to excessive exploitation of groundwater. In the end, the sedentarization project created short-term prosperity for some nomadic people at the cost of large-scale ecological damage to water resources and grassland soils and the loss of their thousand-year-old culture in the longer term.[33] The failure of the sedentarization project is just one of the numerous examples of how implementing environmental policies produces new and even worse damage to the environment and living conditions.

Today Xinjiang is rated as one of the unhealthiest regions in China and large scale relocation projects are discussed. Against the backdrop of massive rural-to-urban migration reaching 150 million people and approximately 4

30 Anthony Howell and C. Cindy Fan, "Migration and Inequality in Xinjiang: A Survey of Han and Uyghur Migrants in Urumqi," in *Eurasian Geography and Economics* 72:1 (2011): 119.

31 Michael Werz and Lauren Reed, *Climate Change, Migration, and Nontraditional Security Threats in China. Complex Crisis Scenarios and Policy Options for China and the World* (Washington, D.C.: Center for American Progress, 2014), 43.

32 Mingming Fan et al., "Impacts of Nomad Sedentarization on Social and Ecological Systems at Multiple Scales in Xinjiang Uyghur Autonomous Region, China," in *Ambio. A Journal on Human Environment* 43:5 (2014): 674.

33 Fan et al., "Impacts of Nomad Sedentarization," 684.

million environmentally displaced people, the projections of environmental migration from western China is envisioned as another 10 million people by 2050.[34] In the last decade China has already experienced mass incidents of environmental and migrant worker protests, provoking social instability. In the case of Xinjiang the outlook is even more dramatic due to ethnic tensions between Uighurs and Han Chinese and local competition for resources and employment.[35]

Climate-driven environmental changes often result in migration toward the coastal mega-cities in eastern China as a final option in search for labor. However, in the case of Xinjiang environmental migrants, it is not an option. Firstly, the coastal cities are already overcrowded and their labor markets are increasingly competitive, making Xinjiang in turn an attractive destination for Han Chinese labor migrants.[36] Additionally, the coastal cities are in high risk of extreme weather events due to sea level rise. Secondly, Uighur migrants will face even greater challenges than other laborers because many firms will not hire Muslims. This leaves them with only one choice: to go west.

Kyrgyzstan—Future Outlooks of Eurasian Integration

In September 2013, at Nazarbaev University in Astana, Chinese president Xi Jinping announced for the first time the new massive project for Eurasian economic integration: the Silk Road Economic Belt (SREB). Is this integration project competitive or complementary to the Russian-led Eurasian Economic Union (EAEU)? Expert opinions are divided on this matter, though the overall discussion mostly recognizes the cooperation prospects and benefits for Central Asian countries.[37] However, the prospected benefits of Chinese investment

34 Werz and Reed, "Security Threats in China," 12.

35 Ibid., 44. The systematic persecution of Uighur people is a well-known fact. See the latest investigation by John Sudworth, "China's hidden camps. What happened to the vanished Uighurs of Xinjiang?" in *BBC News*, October 24, 2018, accessed October 25, 2018, https://www.bbc.co.uk/news/resources/idt-sh/China_hidden_camps?fbclid=IwAR10spcqM86YFvqsYLQxjqPaqYhmByluol0RQRt5WIZ56Wz0K3YFSnQrzWs.

36 Howell and Fan, "Migration and Inequality," 112.

37 See for example: Evgeny Vinokurov and Taras Tsukarev, "The Belt and Road Initiative and the Transit Countries: An Economic Assessment of Land Transport Corridors," in *Area Development and Policy* 3:1

in Eurasian economies comes with a price tag. China typically provides foreign governments with loans in exchange for the right to extract mineral resources, fostering a pattern of "predatory aid".[38] Moreover, Chinese money is often invested in infrastructure projects that serve Chinese interests, and investments rarely create lasting employment opportunities for local people, nor generate export revenues for the countries.[39] Thus, Chinese investments in Eurasian infrastructure in the framework of SREB eventually create a serious debt spiral in Central Asian countries. Today, 40 percent of Kyrgyzstan's public debt and 50 percent of Tajikistan's is owed to Chinese institutions.[40]

The Republic of Kyrgyzstan, west of Xinjiang and south of Kazakhstan may serve as a disconcerting showcase for the Chinese outsourcing of the climate-migration-security nexus. After the announcement of SREB, the number of Chinese migrants in Central Asia and particularly in Kyrgyzstan grew rapidly due to increased Chinese investment. The number of Chinese citizens as a share of the total migrant worker population in Kyrgyzstan rose to 77 percent according to official statistics, yet there are no concrete figures about the total number of Chinese nationals permanently residing in Kyrgyzstan. According to estimates, there are further 50,000 to 300,000 illegal migrants from China in Kyrgyzstan.[41] This is even more striking because in the framework of EAEU, Kyrgyzstan is a major migrant-sending country, with 20 percent of Kyrgyzstan's total population working abroad and their remittances accounting for

(2018): 1–21; Ivan Timofeev et al., "Russia's Vision of the Belt and Road Initiative: From the Rivalry of the Great Powers to Forging a New Cooperation Model in Eurasia," in *China & World Economy* 25:5 (2017): 62–77; Wolfgang Zank, "The Eurasian Economic Union: A Brittle Road Block on China's 'One Belt – One Road' – A Liberal Perspective," in *Journal of China and International Relations* 5:1 (2017): 67–92.

38 Safovudin Jaborov, "Chinese Loans in Central Asia: Development Assistance or 'Predatory Lending'?" in *China's Belt and Road Initiative and its Impact in Central Asia*, ed. Marlene Laruelle (Washington, D.C.: The George Washington University, Central Asia Program, 2017), 34–40.

39 Azad Garibov, "Contemporary Chinese Labor Migration and its Public Perception in Kazakhstan and Kyrgyzstan," in *China's Belt and Road Initiative and its Impact in Central Asia*, ed. Marlene Laruelle (Washington, D.C.: The George Washington University, Central Asia Program, 2017), 146.

40 Alexander Wolters, "Hegemonic or Multilateral? Chinese Investments and the BRI Initiative in Tajikistan and Kyrgyzstan," in *China's Belt and Road Initiative and its Impact in Central Asia*, ed. Marlene Laruelle (Washington, D.C.: The George Washington University, Central Asia Program, 2017), 41–50. Cf. John Hurley et al. *Examining the Debt Implications of the Belt and Road Initiative from a Policy Perspective* (Washington, D.C.: Center for Global Development, 2018).

41 Garibov, "Chinese Labor Migration," 146.

roughly 30 percent of the country's GDP.[42] So, where do the Chinese migrants work in Kyrgyzstan? Obviously, they are employed in mining areas, infrastructure projects, and businesses built with Chinese loans.

For example, in June 2016 Kyrgyzstan handed forty companies over to China, the majority of which were at risk of bankruptcy and badly in need of investment. The two countries agreed that 80 percent of the employees in these companies should be Kyrgyz citizens, but eventually Chinese management systematically undermined the deal. Instead, more Chinese workers were hired and they were paid higher wages than local people.[43] Naturally, this situation provokes anti-Chinese anger and fear in combination with the environmental concerns, since Chinese companies ignore environmental regulations.[44]

As Cholpon Orozobekova assumes, the relocation of heavy industries to Kyrgyzstan and other Central Asian countries is a part of a Chinese strategy for sustainable development called "ecological civilization" which was developed and promoted in cooperation with the United Nation's Environmental Program.[45] By relocating environmentally harmful and polluting industries to neighboring countries through the SREB framework, China can hold onto its

42 Evgeny Vinokurov, "The Art of Survival: Kyrgyz Labor Migration, Human Capital, and Social Networks," in *Kyrgyzstan: Political Pluralism and Economic Challenges*, ed. Marlene Laruelle (Washington, D.C.: The George Washington University, Central Asia Program, 2017), 49–57.

43 Garibov, "Chinese Labor Migration," 149. Cf. Cholpon Orozobekova, "China Relocating Heavy Enterprises to Kyrgyzstan," in *Eurasia Daily Monitor* 13:114 (2016), accessed October 25, 2018, https://jamestown.org/program/china-relocating-heavy-enterprises-to-kyrgyzstan/.

44 To be 'fair', it is not only Chinese businesses who create health risks, environmental damage, and social instability by means of unsustainable management in Kyrgyzstan. The Canadian excavation company Centerra Gold Inc. operates the Kumtor Goldmine in Tian Shan Mountains at 4000 m above sea level—the biggest open pit gold mine in Central Asia. The revenues from the gold mine account for fifteen percent of Kyrgyzstan's GDP. This is why Kyrgyz officials turn a blind eye to the systematic violations of environmental regulations, which are outrageous. Centerra destroys millions of square metres of glacier by explosion, polluting the local water sources and regional river systems with chemical toxins, and threatens environmental and labor activists with the help of the corrupt administration. On this, see: Matteo Fumagalli, "The Kumtor Gold Mine and the Rise of Resource Nationalism in Kyrgyzstan," in *Kyrgyzstan: Political Pluralism and Economic Challenges*, ed. Marlene Laruelle (Washington, D.C.: The George Washington University, Central Asia Program, 2017), 41–48; Jakub Kronenberg, "Linking Ecological Economics and Political Ecology to Study Mining, Glaciers and Global Warming," in *Environmental Policy and Governance* 23 (2013): 75–90.

45 *Green is Gold. The Strategy and Actions of China's Ecological Civilization* (Geneva: UNEP Division of Technology, Industry & Economics 2016).

production capacity while improving domestic air quality and ecological balance.[46]

By doing this, China additionally creates labor markets and settlement infrastructure for its own environmental refugees. It makes SREB investments in foreign economies a solution for Chinese domestic ecological, demographic, and social tensions.

Thus, a constant flow of migrants can be witnessed along China's western border regions.[47] The inflow of Chinese (and partly Uighur) labor migrants to Kazakhstan and Kyrgyzstan puts critical pressure on the constantly shrinking labor markets and degrading ecosystems in the Central Asian republics, creating anxiety and negative public perception of China. What we witness here is the logical development of a process that started directly after the breakdown of the Soviet Union, as people started to move and to bargain, spontaneously generating cross-border trade between Kazakhstan, Kyrgyzstan, and Xinjiang, and intensifying the creation of an dynamic network of local and regional markets in advance of state-driven economic and institutional integration such as SREB and EAEU.[48]

Of course, this process goes much further back in time, to the nomads moving constantly back and forth over the Eurasian steppe, long before today's state borders were drawn up.

46 Elena F. Tracy et al., "China's New Eurasian Ambitions: The Environmental Risks of the Silk Road Economic Belt," in *Eurasian Geography and Economics* 58:1 (2017): 56–88.

47 We have not yet touched upon the topic of environmental migration in the northern part of Eastern Eurasia. However, the barely regulated migration of Chinese to the Russian Far East region rises concern about social and ecological impacts since, as in the case of Central Asia, Chinese businesses and settlers operate in complete disregard of environmental regulations. To approach the scope of issues, see: Carla P. Freeman and Yiqian Xu, "China as an Environmental Actor in the Developing World – China's Role in Deforestation and the Timber Trade in Developing Countries," in *Handbook on China and Developing Countries*, ed. Carla P. Freeman (Cheltenham: Edward Elgar 2015), 318–358; Jiayi Zhou, "Chinese Agrarian Capitalism in the Russian Far East," in *Third World Thematics: A TWQ Journal* 1:5 (2016): 612–632.

48 Cf. Henryk Alff, "Bazaars and Social Transformation in the Borderlands of Kazakhstan, Kyrgyzstan and Xinjiang," in *The Art of Neighbouring. Making Relations across China's Borders*, eds. Martin Saxer and Juan Zhang (Amsterdam: University Press, 2017), 95–119.

Eurasia—Nomadic Past and Lessons for the Future

One week after the opening of Expo 2017 "Future Energy", a supporting cultural program started. Astana Art Festival, titled "Nomad Energy", decorated Nurzhol Boulevard, the capital's central axis, with art installations, art performances, concerts, workshops, and souvenir shops. All of these in order to explore the artistic and semantic spectrum of "Neonomadism"—an open concept promoted by the organizers to highlight Kazakh nomadic culture linked to their agenda of sustainable development. As the festival curator, Yana Malinovskaya stated: "We are inheriting the traditional philosophy of nomadism. In old times nomads perceived themselves as a part of nature, today's nomads perceive themselves as a part of the world. We are using the term passionarity, coined by our beloved, though controversial, Gumilev. Today's nomad appears as a human constantly crossing the borders—physically, spiritually, emotionally. We think that this kind of nomad energy is this very passionarity which allows him to act for the benefit of the human society and the world."[49]

The intellectual legacy of Lev Gumilev can hardly be overestimated for post-Soviet societies. Especially not in Astana where the L. N. Gumilyov Eurasian National University was founded in 1996 by Nursultan Nazarbaev thus setting a cornerstone for the new Kazakh capital as the president proudly stated ten years later. Nazarbaev, an ample admirer of Gumilev's ideas, already imagined Astana as becoming the center of a united Eurasia and Gumilyov University to be the heart of this center.[50]

Ten years later, this dream of Nazarbaev seemed to come true in the summer of 2017 as Astana hosted world powers and regional leaders, big business and cutting-edge technology—all of them united by the idea of clean energy and sustainable development.

By strengthening the environmental agenda in the course of Kazakhstan's rebranding, Nazarbaev has done great honor to Gumilev's legacy, a man whose political significance for post-Soviet societies has only very recently been worked out and whose role for the development of environmental awareness in

49 Kseniya Tatarinova, "Astana Art Fest 2017: rozhdenie neonomada," in *Atameken Business*, June 19, 2017, accessed October 25, 2018, http://abctv.kz/ru/news/astana-art-fest-2017-rozhdenie-neonomada.

50 "Lektsiya Prezidenta Respubliki Kazakhstan N. A. Nazarbaeva v Evraziiskom Natsionalnom Universitete imeni L. N. Gumileva «K ekonomike znanii cherez innovatsii i obrazovanie» (Astana, 26 maya 2006 goda)", accessed October 25, 2018, https://www.zakon.kz/141562-lekcija-prezidenta-respubliki.html.

the Soviet Union and Russia we are just starting to comprehend, thanks to the profound study by Mark Bassin.[51] Still, Gumilev's pioneering approach describing Eurasian cultures as shaped by patterns of environmental migration has been mostly neglected by the steadily growing Gumilev scholarship.

The concept of nomad energy which is to become Kazakhstan's national brand for sustainable development is based on Gumilev's theory of ethnogenesis and in particular the notion of passionarity (*passionarnost'*) developed in his monograph *Ethnogenesis and the Biosphere* (*Etnogenez i biosfera zemli*), first published 1979. His concept of *passionarity* as an explanation for the development of ethnic groups and their interaction with ecosystems especially remains highly controversial. Though, as Mark Bassin concludes, "[t]he fact that these explanations do not for the most part withstand scholarly and scientific scrutiny would seem to be entirely beside the point, for it does not in any way undermine the authority that his work continues to enjoy."[52]

In order to restore Gumilev's initial ideas I propose to suspend the ideological reading and to take a step back from his, indeed highly metaphorical, theories of passionarity and ethnogenesis which have attracted so much attention in the scholarship. Instead, I intend to take a closer look at his original concept of environmental migration, developed already in the 1960s. As I am trying to show, this model is fundamental for the superstructure of the ethnogenesis theory developed later in the 1970s, and not only is able to withstand scholarly scrutiny but is surprisingly compatible with cutting edge research in migration studies.

In a nutshell, Gumilev's ethnogenesis theory revolves around two focal points: environmental change and the movement of people: "The formation of a new ethnos always begins with a single peculiarity: an insuperable inner striving on the part of a small group of people toward an intensely active goal-oriented endeavor, which is always connected with the alteration of the external environment."[53] Gumilev started to develop this notion during archeological expeditions he was involved in from the late 1940s. Subsequently Gumilev headed a series of archeological expeditions organized by the State Hermitage

51 Mark Bassin, *The Gumilev Mystique. Biopolitics, Eurasianism, and the Construction of Community in Modern Russia* (Ithaca and London: Cornell University Press, 2016), 135 passim.

52 Ibid., 316.

53 Lev Gumilev, "Etnogenez i etnosfera," in *Priroda* 2 (1970), cited after: Bassin, "Gumilev Mystique," 128.

museum from 1959 to 1963. The goal of these expeditions was to collect new data on the geography, history, and culture of the ancient Khazar Khaganate in the Trans-Caspian and Volga regions.

It is very important to note that by 1950 the Soviet school of Eurasian archeology adapted and forwarded migration as an appropriate explanatory tool within the historical-materialist epistemology of Soviet archeology.[54] Notably, after 1990 the migration model in Eurasian Archeology withstood scientific scrutiny by Western scholars and up-to-date methodologies.[55] The methods of environmental archeology, developed and promoted by Gumilev (among other Soviet scholars) in the early 1960s has been refined and produces important data on the history of migration in Eurasia.[56]

Right after the Hermitage expedition, Gumilev started to elaborate on the nexus of climate history, environmental change, migration, and ethnogenesis.[57] The first notable paper on this matter was "Khazaria and Caspian" which appeared in 1964 as the first piece of an article series titled "Landscape and Ethnos" published through the 1960s and simultaneously translated into English in the journal *Soviet Geography: Review and Translation*.[58] It was the "Landscape and Ethnos" series where the groundwork for the later ethnogenesis theory was laid. Gumilev proposed a transdisciplinary approach to the history of Eurasian cultures and economics of nomadism.[59]

54 Michael D. Frachetti, "Migration Concepts in Central Eurasian Archeology," in *Annual Review of Anthropology* 40 (2011): 198.

55 Frachetti, "Migration Concepts," 206.

56 E. Marian Scott et al., ed., *Impact of the Environment on Human Migration in Eurasia* (Dodrecht: Kluwer Academic Publishers, 2004).

57 Lev Gumilev, "Kaspii, klimat i kochevniki," in *Trudy obshhestva istorii, arkheologii i etnografii Kazanskogo gosudarstvennogo universiteta* 36 (1963): 41–55. Cf. Lev Gumilev, "Pul's klimata," in *Komsomol'skaya pravda*, July 27, 1963.

58 Lev Gumilev, "Khazaria and Caspian (Landscape and Ethnos I)," in *Soviet Geography: Review and Translation* 5:6 (1964): 54–68. Cf. Bassin, "Gumilev Mystique", 136.

59 On this matter, a 1966 paper coauthored with the renowned soil scientist Aleksandr Gayel' was a breakthrough for Gumilev's ideas, providing backing, credibility, and a prestigious forum in the Soviet Academy of Sciences. Hereby Gumilev embraced the opportunity to straightforwardly present his climate change-economic history nexus with solid soil science and the correlated issue of anthropogenic pressure on ecosystems. Cf. Aleksandr Gayel' and Lev Gumilev, "Soils of various Ages in the Steppe Sands of the Don and the Migration of People in Historical Times" in *Soviet Geography: Review and Translation* 9:7 (1968): 588.

Connecting the dots in "Landscape and Ethnos", Gumilev draws an epic picture of Eurasian history in the Middle Ages by juxtaposing climate fluctuations, production modes, and migration patterns. The reader witnesses economies and cultures falling apart due to climate change, desiccation, and sea level rise; environmental refugees competing for land and scarce resources, forming new ethnic groups, adapting to landscapes, and developing new trade routes, political structures, and military practices.

Subsequently Gumilev expanded his Eurasia-centered research to the scope of universal history and theory of modernization by arguing with Arnold J. Toynbee's *A Study of History* (1946). Gumilev did so by differentiating from Toynbee's central notion of the man-nature relationship: "Suppose, we approach the question from another aspect: not how mankind as a whole affects nature, but how it is affected by various peoples at different stages of their development?"[60] To this question Gumilev himself proposes two options which can simplistically be described as:

1. Adaptation of ethnic groups to the environment; and
2. Adaptation of the environment to the production modes of ethnic groups.[61]

Furthermore, he puts Eurasian nomad cultures in the second category with certain reservations, since "the nomads' transformative efforts also differed fundamentally from those of the sedentary peoples in the sense that the nomads sought to improve the landscape rather than to transform it."[62] Here is where we find the model of nomadism as an ecologically balanced way of life and economy that was adapted for Kazakhstan's strategy of sustainable development in the shape of "nomad energy".

So, what is particularly controversial about Gumilev's concept of ethnogenesis? It builds on contemporary theories in archeology and physical geography which are as yet uncontested. The universalist approach is inspired mainly by Toynbee, whose legacy has been resurrected by Samuel Huntington's *Clash of*

60 Lev Gumilev, "On the Anthropogenic Factor in Landscape Formation (Landscape and Ethnos VII)," in *Soviet Geography: Review and Translation* 9:7 (1968): 595.

61 Ibid., 596.

62 Ibid., 597 f.

Civilizations (1997) and appears today even more instrumental to understanding world history and politics than in the 1960s.[63]

Problematic indeed seems Gumilev's attempt to explain *passionarity* esoterically, as a kind of cosmic energy or solar radiation.[64] But then again, energy-matter interaction and heat balance were important epistemic models of his time and especially instructive for Soviet climate research.[65] Energetism as such has long transgressed the natural sciences and is increasingly used to describe how human societies and cultures work.[66] There is even an innovative and highly popular origin-of-life hypothesis by Jeremy England called "dissipation-driven adaptation" which explains evolution as the ability of atoms to restructure themselves in order to dissipate more energy.[67] The idea to derive the origin of life from thermodynamics instead from biology was originally proposed in the 1960s by Nobel laureate Ilya Prigogine. He was nurtured by the same source of inspiration as Gumilev, the Soviet climatologists, and today's proponents of the Anthropocene—the intellectual legacy of Vladimir Vernadskii.[68]

With this in mind, Gumilev's 'cosmic energy' is not that esoteric or mystic at all. It is barely a code for climate change and global warming. It makes *passionarity* in its double connotation of suffering and desire a code for humankind's effort to seek better living conditions—a metaphor for environmental

63 Jürgen Osterhammel, "Arnold Toynbee and the Problems of Today," in *Bulletin of the German Historical Institute Washington, D.C.* 60 (2017): 69–87.

64 For the evolution of energetism as a world view and how it was perceived in Soviet culture in general and by Gumilev in particular, see: Bassin, "Gumilev Mystique," 43–49.

65 Jonathan D. Oldfield, "Climate Modification and Climate Change Debates among Soviet Physical Geographers, 1940s–1960s," in *WIREs Climate Change* 4 (2013): 513–524.

66 There is, for example, a rapidly emerging interdisciplinary field of 'Energy humanities'. See: Imre Szeman and Dominic Boyer, eds., *Energy Humanities. An Anthology* (Baltimore: John Hopkins University Press 2017).

67 Natalie Wolchover, "Controversial New Theory Suggests Life Wasn't a Fluke of Biology – it was Physics," in *WIRED*, July 30, 2017, accessed October 25, 2018, https://www.wired.com/story/controversial-new-theory-suggests-life-wasnt-a-fluke-of-biologyit-was-physics/.

68 Bassin, "Gumilev Mystique," 46; Jonathan D. Oldfield and Denis Shaw, "V. I. Vernadskii and the development of biogeochemical understandings of the biosphere, 1880s–1968," in *The British Journal of the History of Science* 46 (2013): 287–310; Bertrand Guillaume, "Vernadsky's philosophical legacy: A perspective from the Anthropocene," in *The Anthropocene Review* 1:2 (2014): 137–146.

migration. Or, as UN Secretary-General Ban Ki-moon puts it: "Migration is an expression of the human aspiration for dignity, safety, and a better future."[69]

Conclusion—Future of Environmental Migration in Eurasia

In this regard, the Gumelevian notion turns out to be compatible with contemporary developments in migration studies. The actual migration policies adopted by international organizations such as 'migration for development' and 'migration as adaptation' discourses are heavily criticized as state-centered and as a part of a neo-liberal agenda. Instead, the researchers recommend methodological re-orientation and a migrant-centric understanding of migration, such as 'translocal social resilience'[70] or a 'kinetic politics of migration'[71], focusing on actors, vulnerabilities, human rights, social construction of human-environment relations, and translocal connectedness.

This is where Gumilev's approach to environmental migration as ethnogenesis can teach us a great deal by providing far-reaching links to cultural history. Environmental migration across Eurasian borders is happening right now and will develop dynamically in the near future. If it leads to violent conflict or peaceful coexistence depends on how we understand ethnic diversity and human mobility today.

Right now, Central Asian societies, especially Kazakhstan, Kyrgyzstan, and Mongolia adopt their nomadic heritage as a source of ethno-nationalism. Yet on the other hand, it is easily convertible to a translocal approach and a Gumilevian understanding of environmental migration as a cradle of new ethnic formation adapting to ecosystems in a rapidly changing climate.

69 United Nations Secretary-General's remarks to High-Level Dialogue on International Migration and Development, October 3, 2013, accessed October 25, 2018, https://www.un.org/sg/en/content/sg/statement/2013-10-03/secretary-generals-remarks-high-level-dialogue-international.

70 Patrick Sakdapolrak et al., "Migration in a Changing Climate. Towards a Translocal Social Resilience Approach," in *Die Erde* 147:2 (2016): 81–94.

71 Samid Suliman, "Mobility and the Kinetic Politics of Migration and Development," in *Review of International Studies* 42:4 (2016): 702–723; Samid Suliman, "Migration and Development after 2015," in *Globalizations* 14:3 (2017): 415–431.

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