Environmental challenges of international migration in East Asia

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International migration has become one of the major trends that shape the highly urbanizing societies of East Asia, and in a broader sense Southeast Asia. Groups are drawn towards the newly established cities in these regions. Environmental change has also been one of the signifying elements on the global agenda. Even though the impact of international migration is already a usual suspect when it comes to environmental change, the cause and effect relationship is yet to be analyzed from a multidisciplinary perspective.

Fig. 1: Earthquake-stricken coast in Otsuchi Town, Iwate Prefecture, Japan (Photo taken by the author, 25 June 2011).

As part of the panel sessions presented at ICAS 11 on 'Environmental Issues, Social Activism and Policy Challenges', this study looks at the multiple dimensions of the causal relationship between migration and environmental change (environmental change can be the reason for migration, but it can also be caused by migration); the study aims to link the 'environmental issues' and 'policy challenges' of these panel sessions in order to set a new framework with which to consider the causal relationship between environmental change and migration and how they affect each other during people's movements from one place to another. One result from this short survey, would be that these two processes, especially in East Asia, are on the verge of securitization (a situation in which they are pushed out of the arena of regular politics into becoming a matter of security). Clearly, regional responses for sustainable adaptation practices and better inclusion of immigrants in host communities are needed.

Recent dynamics of international migration

According to the International Organization for Migration (IOM), 3.4% of the world's population in 2018 (about 258 million people) live outside their country of birth. This percentage rose from about 2.7% in the early 2000s. Top destinations (host/receiving countries) have consistently included the USA, Germany, Russia, Saudi Arabia, UK, and UAE, while top origins (home/sending countries) are India, Mexico, Russia, China, Bangladesh and the Philippines, in terms of the total number of people in the migration lane. If we consider internal migration, it is even more striking in terms of environmental change: of the 68.5 million internally displaced people (due to conflicts and disasters), 18.8 million in 135 countries were displaced because of sudden environmental disasters (2017 data).[1]

Migration as a process is complicated enough as there are many reasons, push and pull factors, flows of emigration and immigration, difficulties in defining categories, and various dimensions while settling the migrant groups in their host countries, and potential outcomes in the host countries. This study aims to combine and present the causal relationship among all these segments of the whole migration process, in a comprehensive framework (table 1). As can be seen in this framework, environmental change issues are of course involved in the migration process from the very beginning. The framework starts with an initial separation of 'internal' and 'external/international' migration by focusing on the main drivers. Environmental degradation, economic necessities and hardships, conflicts/wars, political/social pressures and identity crisis in the home countries, might be some of the reasons for people to leave their original birth places, both internally and internationally.

Categories and dimensions of migrants could be endless, so too could the outcomes of migration in terms of policy or governance, but this study attempts to cover as many facets as possible in the figure. It is crucial to differentiate between categories such as legal/regular vs. irregular/illegal/undocumented, permanent vs. temporary/seasonal, or voluntary vs. forced migration. Migrants and refugees should also be approached differently as their push and pull factors are entirely dissimilar. Governance policies within and between the host and home countries depend on whether these countries have sufficient economic, political, and sociocultural capacity to send and, more importantly, to welcome migrant groups. Most migrants experience a force to leave their home countries due to economic, political and/or security related issues, however, there is a small number of migrant communities of high-skilled experts and students who leave their home countries with none of these concerns, but who migrate voluntarily for career or educational aspirations. The duration of migration (short or long-term) also affects the nature, documentation, and outcome of migration flows. This overview hopefully helps to grasp the difficulties faced when drawing an overarching migration framework covering legal, economic, political, sociocultural, and environmental phases.

Environmental challenges and migration in East Asia

Although migration has many forms and definitions, natural disasters and other environmental changes have increasingly become some of the main motivators. The initial reason for the movement of people might be any sort of environmental change, but this movement leads to the *securitization of environmental change* issues with emerging environmental problems in the host countries as a result of the increasing number of residents. This process occurs similarly with internal migration, whereby the environment in particular areas of a country experience the direct effects of migration. The impact of migration on the environment leads to developments in the governance of migration, and the securitization of environmental changes.

When we look at the mention of 'environment' in migration history and literature, throughout the 20th century, primarily political-economic push and pull factors were at the core of the migration discourse. During the 1990s, the growing global environmental crisis was mostly considered to be a humanitarian disaster by media, politicians, and NGOs; the academic circles started to include it as one of the side-effects of migration. The unprecedented, repetitive, and large-scale natural disasters of the 2000s, as well as drastic environmental changes throughout the world, led 'environmental concerns' to be reintroduced into the migration literature.[2] The increasing frequency and scale of natural disasters (both gradual changes to our ecosystems and sudden devastation of environment) led to the use of environmental concerns, frameworks, and solutions as adaptation strategies by international organizations, politicians, and migration and environmental scholars in the following years.[3] As a result, 'environmental migrants' came to be defined by the IOM as "persons or groups of persons who, for compelling reasons of sudden or progressive changes in the environment that adversely affect their lives or living conditions, are obliged

Table 1: Migration (internal and international)

Internal and External/ International drivers	Emigration Push factors	Immigration Pull factors	Mixing categories	Dimensions	Outcomes
- Environmental degradation	- Economic reasons	- Economy	- Legal vs irregular (undocumented)	- Men and women	- Political
- Economy	- Population rise	- Betterment of lifestyles	- Permanent vs seasonal/temporary	- Old and young	- Economic
- Conflict/war	- Threat to one's life	- Family/relatives	- Voluntary vs forced (Human trafficking vs migrant smuggling)	- New and family lineages	- Demographic
- Political/social pressure	- Conflict/war	- Culture/religion	- Migrant vs refugees and asylum-seekers	- Home (sending) and host (receiving) country	- Environmental
- Identity/culture	- Environmental degradation	- Environment	- Developing vs developed countries	- Images of sending and receiving societies	- Social/cultural
	- Threat from government		- Immigrants vs global migrants (highly skilled experts and students)		- Legal
	- Disasters		- Short vs long-term stay		- Security

Compiled by the author

to leave their habitual homes, or choose to
do so, either temporarily or permanently, and
who move within their country or abroad".[4]

IOM's definition garners various aspects
of the migration framework in table 1. We can
rewrite this framework from an environmental
point of view, to produce a more environment-
oriented migration scheme, as can be seen
in table 2. This table shows how environment-
driven causes of migration can, to start, be
divided into two big groups: migration as
a result of sudden environmental hazards,
natural disasters, and industrial accidents
(as a result of an environmental event), and
migration happening as a result of gradual
changes within the environmental conditions
of one's home country, such as climate
change, ecosystem degradation, rise of
sea-levels, infrastructural changes, and land
grabbing. The lists are not exhaustive, but show
the most common incidences we encounter.
Depending on the sudden or gradual character
of the environmental change, all push and pull
factors, categories, and dimensions lead
in different directions. The response and
adaptation processes also change from short
to mid- and long-term measures. As a result of
these emerging drivers (both within the same
country and across borders), migrant groups are
usually considered within the forced migration
category whereby categorization, legalization,
and engagement mechanisms in the host
communities (in the same country) and societies
(in receiving countries) become increasingly
difficult. Governance of both migration and
environmental change faces security-related
questions such as 'how to cope with sudden
events and gradual changes?' and 'How to
respond and adapt appropriately, both in
the immediate as well as the long run?'

How does East Asia (and in a broader sense
this includes Southeast Asia) play a role in
framing the processes of environmental change
and migration? From a migration studies
perspective, Asia receives and sends more
than 40% of all international migrants and has
a majority of the top sending countries.[5] From
an environmental viewpoint, Asia experiences
the highest frequency of natural disasters
(around 150 disasters in 2017) compared to
the Americas, Africa, Europe and Oceania.[6]
According to the same resource, Asia saw
37% of all global natural disasters in the years
1998-2007, and even 41% during the following
decade (2008-2017). The growing occurrence
of environmental disasters is a crucial fact of
our times. Compared to Asia, in the decade
2008-2017, the Americas experienced 24%,
Africa 20%, Europe 11%, and Oceania 4%, of the
global natural disasters. However, during that
same time, the percentage of people actually
affected by the disasters was about 80% in Asia,
with only 11% in the Americas and 9% in Africa.

Natural disasters are some of the main
causes of forced migration, leading environ-
mental refugees to flee to other areas of their
own country, or even into other countries in
search of safety. The main disasters occurring
in East Asia between 2008-2017 were floods
(38%), storms (24%), earthquakes (12%),
epidemics (10%) and extreme temperatures
(3%).[7] On 11 March 2011, the Tohoku Earthquake
(9.0 magnitude) and the subsequent tsunami
devastated the eastern prefectures (Tohoku
region) of Japan, and even affected areas
further away throughout the entire Pacific
region (fig.1). The earthquake and tsunami
triggered the man-made disasters of a

nuclear meltdown, hydrogen explosions,
and radioactive contamination in the
Fukushima Daiichi Nuclear Power Plant in
Fukushima Prefecture, leading to the loss of
15,000 lives, a further 7,500 people missing,
and 125,000 people displaced and forced
to live in temporary shelters.[8]

The impact of these natural disasters on
(inter)national migrants in both home and
host countries ranges from the emergence
of internally displaced people, increased
vulnerability (alienation, sense of being
forgotten, unplanned shocks for illegal migrant
groups, or inability to reclaim the bodies
of loved ones), lack of access to assistance
(since illegal groups are usually invisible to
governmental and international humanitarian
aid schemes), unemployment, loss of assets,
identity loss, psychological effects, political
disempowerment, loss of communication with
relatives in the home countries, and emergence
of new refugees.[9] Moving into urban areas is
usually one of the first and foremost reactions
by migrant groups, adding more pressure onto
urban infrastructure and services.

Gradual changes of environmental
conditions, or mid/long-term responses and
adaptation mechanisms vis-à-vis environmental
changes, have their own set of implications.
Climate change, for example, is one of the
most impactful factors affecting people's living
standards. The most vulnerable groups are those
living in low-lying areas, landslide areas, and
agrarian areas, as well as coastal communities
and island communities. The effects of climate
change are seen in coastal areas and low-lying
areas, food production systems, movement of
people towards cities, industry, infrastructure,
human health, human security, livelihoods,
and poverty. In fact, poverty and growing
urbanization are the main consequences of
climate change. Environmental (and other)
drivers force people to move to cities in their
home countries, or when moving across borders
migrants tend to settle in urban areas in the
host country. The urban population has already
exceeded the rural population in Asia (in 2018),
and the whole region (especially South and East
Asia) has the fastest growth rate of urbanization
(60% now live in cities); it is expected that more
than two thirds of the population will live in
cities by 2050.[10] It is clear that unplanned or
mismanaged urbanization will lead to further
environmental and social problems, such as
strained urban services (for example, sanitation
and health care), poverty, growing urban-rural
divide, worsening agricultural support for the
cities, added discrimination among ethnic
groups or against new settlers such as migrants.

Securitization of international environmental migration and potential regional responses

The classical understanding of 'security'
was always a state-based one (national
security), thanks to the long-lasting wars
of most of the 20th century. The scope of
the concept of security started to change
with globalization, societies opening up
to more inter-state interactions, economic
cooperation, cultural exchanges, and the
emergence of new non-state actors.

The concept of 'human security' was
initially framed by leading UN experts and
various UN institutions, as well as their
programs. The UN 1994 Human Development

Report was devoted to the concept of human
security, stating that security should refer
to the safety of all human beings from the
threats of hunger, disease, crime, repression,
and protection from sudden disruptions
of people's daily lives.[11] The seven pillars of
human security include economic, political,
food, health, personal, community, and
environmental security. Here environmental
security means both protecting people
against the risks of environmental hazards
and changes, and also protecting nature
from man-made damages and threats. This
two-way understanding of environmental
security brings us to the recent framework
of migration and environmental migration
flows. As shown in the above examples, when
lives and livelihoods are threatened by the
risks associated with sudden or gradual
environmental changes, forced migration is a
very plausible outcome. When these threats
are merged with the other pillars of human
security, such as economic or political threats,
then migration becomes even more likely and
greater in number of people. The migration
process leads to further problems, and
additional threats to human security, leading
to the even higher levels of securitization of
the environmental migration processes.

East Asia presents a noticeable trend
in international migration (with all its
drivers) while occurrences of environmental
changes (both sudden and gradual) have
also increased dramatically in recent
years. The most visible instance would
again be in the cities where most migration
movements happen, especially in developing
countries. The sudden or gradual rise of
population poses immediate or mid/long-
term environmental risks for urban dwellers,
including migrant communities. Some of the
threats to people's environmental security
include increasing carbon emissions and
deterioration of air quality in big or mega
cities, water degradation, rise of urban
surface temperature, heatwaves (especially
during monsoon seasons and sub-tropical
regions, and it is reality for most of the
Southeast Asian countries), waste, lack of
sanitation, and increasing health risks due
to mismanagement of all these issues.

There are of course steps taken at
both national and international levels.
Governments and their agencies, especially
those of sending and receiving countries, work
on migration governance programs through
bilateral agreements, multilateral agreements
together with regional and international
organizations, and trans-governmental tracks
by including labor unions, migrant community
representatives, migration-relation business
groups, and non-governmental initiatives.
In the meantime, there are also international
initiatives focusing on the establishment
of migration regimes between sending and
receiving countries, multilateral forums, and
regional initiatives. Among these, special
attention is paid to regional organizations
(like ASEAN in the Southeast Asian case),
forums, and other inter-governmental, and
non-governmental initiatives at the regional
level. The most important reason for this is
that those regional forums already have
experience in dealing with regional economic,
political, and sociocultural issues and they
already have the organizational structures
to launch the initiatives for these emerging
issues of environmental migration and their

outcomes. Though there are international
migration regimes set by other international
organizations, regional organizations know
the realities, and especially the sociocultural
dynamics and specifications of their own
regions and sub-regions, and they have better
means to implement those international
migration and environmental systems in their
regions. Indeed, ASEAN is a good example,
in that it has been focusing on the Southeast
Asian dynamics of migration and working
hard to establish new and more plausible
regimes to govern migration flows and the
environmental impacts of the movement
of people.

Conclusion

This short overview looks at the
environmental migration processes in East
Asia with an attempt to frame the migration
agenda with a focus on environmental change
issues. The recent dynamics of international
migration and environmental changes
have a cause and effect relation since the
environment has become one of the main
drivers of (inter)national migration in recent
years. Sudden and gradual environmental
changes have led to migration at an
unprecedented scale. The new migration
flows lead to the further securitization of
environmental change issues and migration
processes, as increased risks of substantial
environmental changes in the receiving areas
are very likely.

Governing mechanisms of international
migration also lead to further securitization
of environmental migration processes since
they necessitate multi-actor and multi-level
involvement. Governmental and non-
governmental initiatives at the regional level
could be among the more realistic platforms
to communicate those migration governance
regimes and environmental change agendas,
and to recognize as well as put emphasis
on the environmental aspects, drivers,
and outcomes of recent migration trends.

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Notes

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Table 2: Environmental migration (internal and international)

Sudden outbreaks	Gradual changes	Push factors	Pull factors	Mixing categories	Dimensions
- Environmental hazards	- Climate change	- Threat to one's life	- Adaptation	- Immediate vs gradual migration	- Men and women
- Natural disasters	- Ecosystem degradation	- Conflict	- Betterment of lifestyles	- Irregular vs legal	- Old and young
- Industrial accidents	- Sea-level rise	- Mismanagement	- Environment	- Temporary vs permanent	- New and family lineages
	- Infrastructure	- Population rise	- Governmental policies	- Forced vs voluntary	- Home (sending) and host (receiving) country
	- Land grabbing	- Economic risks	- Security	- Environmental refugees vs migrants	- Country and IO regulations
		- Health risks		- Short vs long-term stay	- Images of sending and receiving societies
		- Segregation			
		- Insecurity			

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