

# **Migrating To Adapt?**

Contesting Dominant Narratives of Migration and Climate Change

# **Discussion Paper**

Himani Upadhyay and Divya Mohan
Earth Science and Climate Change Division
The Energy and Resources Institute (TERI)





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Any communication concerning this report may be addressed to:

Social and Human Sciences UNESCO New Delhi Office B-5/29 Safdarjung Enclave New Delhi 110029, India

Tel: +91 11 26713000

Email: newdelhi@unesco.org

Website: www.unesco.org/newdelhi

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#### Discussion Paper

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#### 1. Introduction

It has been long recognized that changes in the environment can influence human movement patterns and behaviour. Human migration in response to change in environment has been one of the considered strategies of the vulnerable households, to move away from the area of risk (Mc Leman and Smith, 2006). For nomadic and pastoralist communities, seasonal movement is an essential part of their livelihood. Migration induced by climate change was noted as early as 1990, by the Intergovernmental Panel on Climate Change (IPCC), which emphasized: "The greatest single impact of climate change could be on human migration", with millions of people displaced by shoreline erosion, coastal flooding and severe drought. Since then there have been various estimates which report that climate change will be one of the key drivers of population movement and displacement. But, the focus has been on numbers. The estimates range from 200 million (Meyers, 2005) to 1 billion (Christain Aid, 2007). The figure by Meyers has become the generally accepted figure, even though it has almost little empirical basis (Brown, 2008). Similarly, Lambart (2002) has estimated that there will be 20 million people displaced by climate change in China, though this is also supported by little empirical evidence. The Stern review noted, "Greater resource scarcity, desertification, risks of droughts and floods, and rising sea levels could drive many millions of people to migrate" (Stern, 2006). When the International Organization for Migration (IOM) published that in 50 years there could be as many as 200+ million environmental migrants (IOM, 2008; Warner 2010), media, public, and research interest in the subject multiplied instantly. The media fascination with the issue led to reports from all across the world forecasting widespread migration of vulnerable populations fleeing their homeland (Bhagat, 2009; Sherriff, 2005; Bulman, 2005). These developments have led to debates and controversies regarding the climate change and migration topic (Hartmann, 2010). Most of the discussions revolve around how many numbers of migrants, where will it happen, what would be the consequences. Why it happens, beyond climate change but exploring climate change in wider contexts, is explored less often. Even when comparatively comprehensive overviews, such as Foresight (2011), tackle some of the why questions based on extensive literature analysis, underlying, long-term political drivers of assumptions behind the analysis are neglected (Felli and Castree, 2012).

The work done on climate change, migration, and adaptation broadly falls under two categories: (i) one that does not consider migration as adaptation but rather an outcome of failure to adapt, or (ii) second, which promotes migration as an important adaptation strategy. The estimates cited above reaffirm the first broad category, wherein the figures have certain underlying assumptions that presume that migration reflects the failure to adapt to changes in physical environment. This position reflects a negative connotation, wherein, migration is a forced option. Predominance of this point of view is also exemplified in the absence of mobility as an adaptation strategy in the cases collected under the UNFCCC database on distribution of different kinds and combinations of local coping strategies and adaptation practices (UNFCCC, 2014; Aggarwal and Perrin, 2009).

The second category of work has opposite and positive view on migration, as it considers migration as a chief adaptive response to socio-economic, cultural, and environmental change. It also highlights that migration, when planned and voluntary, can serve as an essential coping strategy for addressing climate stress (Mc Leman, 2009; Barnett and Webber, 2009). Yet, there is another school of thought that deliberates on capacity of social and ecological systems to adapt to the constraints, barriers of and limits to adaptation there by giving impetus to what adaptation can achieve and highlighting that there is insufficient evidence to draw conclusion about the

likelihood of migration as an adaptation strategy (Mortreux and Barnett, 2009). They emphasize on the fact that encouraging migration as solution to climate change impacts detracts from the need for adaptation policies and allow people to "lead the kind of life people value in places where they belong" (Adger and Barnett, 2005).

#### 2. Context and Issue

Migration as adaptation has been promoted in literature, but does it also resonate with ground perspectives of people who have to adapt? Do people—place bonds, local culture, place-identity and community cohesion limit this whole concept of migration as adaptation? As the UK Foresight (2011) report highlights that while environmentally motivated migration poses a challenge, the issue of people unable/unwilling to leave dangerous/risky circumstances/regions 'maybe more or equally significant'.

Therefore, migration as an adaptation to climate change can be constrained by variations in risk perceptions, distant nature of climate change, and failure to link current experiences with future events, as well as people not willing to leave their homelands. Though migration can be an adaptation strategy or a survival option, there are number of other interacting factors which determine people's decision to move or stay. Psychological literature shows that most individuals tend to respond to issues, risks or concerns, which they consider as immediate and personally relevant (Moser and Dilling, 2004; Paton et al., 2001). According to Adger (2009), climate change and its impacts, although concerning, are also generally believed to be removed in space ('not here') and time ('not yet'). Can physical impacts alone be considered as a trigger for people to consider leaving their homeland, and if migrating is adaptation, then can it be considered successful if it erodes people's values, culture, and place belongingness. As Adger et al. (2011) illustrate, there are "limits to the idea of adaptation, too-changes such as migration may ostensibly be adaptations, but cannot be considered successful if they result in damage to people's traditions, knowledge, social orders, identities, and material cultures". Should adaptation not focus on decreasing vulnerability, releasing migration pressures and allowing people to stay in their homeland and established communities?

This paper discusses different case studies around the world and highlights how the vision of an apocalyptic future and migration as means of adaptation is not shared by locals, who do not wish to leave and want *in situ* adaptation to be the focus.

### 3. When Migration is Adaptation

Migration has often been presented as a positive climate adaptation strategy. However, the statements presented in the literature do not clearly distinguish between conventional versus climate-induced migration. For instance, Scheffran et al. (2012) have described migrants as active social agents who can play an influential role in contributing to resilience and innovation in climate adaptation. They highlight how the multi-faceted relationship between migration and climate adaptation interacts in three ways and that includes 'migration-for-adaptation'. The case studies presented to substantiate this statement show how migrants have initiated and implemented development projects using their financial capital and social capital in the origin and destination countries in north-west Africa. However, to what extent these development projects have the additionality factor to be categorized as adaptation is not very clear. Also, migration in that region has been a traditional strategy in response to climate extremes such as drought. Hence, the findings of the study largely refer to development benefits contributed by the migrants in their home countries and are not necessarily induced by climate change.

Similarly, other scholars have supported migration as positively contributing to enhance the adaptive capacity of the communities in the vulnerable regions (Black et al., 2011; Thornton, 2011). The positive contribution however has been heavily focused on remittances from migrants and their positive effects such as sustaining access to basic needs in times of livelihoods shocks such as drought. Better access to financial resources can definitely help in coping with external shocks but to what extent can these be sufficient in addressing the objectives of adaptation can be explored further. Mc Leman and Smit (2010) have developed a conceptual model to investigate population migration as a possible adaptive response to climate change risks. Barnett and Webber (2010) have also presented migration as positively contributing to adaptation through benefits of remittances from migrants and also as migrants being channels of better access to knowledge and understanding about the world including climate change risks for the communities in their homeland. However, migration in this case is in search for better employment opportunities, a process that has been common traditionally. Though migration for better employment can contribute in increasing the adaptive capacity of the population, but can migration be asserted positively as adaptation to climate change? The study also clearly mentions that community resettlement should be the last resort for coping to climate change and even in low-lying highly vulnerable islands there is a need to explore the complete range of adaptation options in the region, their barriers, and limits.

Migration for strengthening the process of adaptation has been highlighted by means of remittances, by providing income diversification and better access to information and social networks (ADB, 2012). However the premise here is largely development focused wherein migration contributes to alleviate poverty. On the contrary, Sundari (2005) notes that the poorest households sell their assets upon leaving and experience a loss of land, housing, jewellery, livestock, and livelihoods thereby becoming more vulnerable than they were before moving. A lack of properly planned migration can pose serious risks to migrating communities.

Migration can be beneficial in contributing towards better financial access and in a way better coping strategies in the context of climate change but it is again place and context specific. However, literature to support the argument that migration or rather resettlement can be an adaptation strategy for the communities is limited. According to Warner (2010), there is still a need to discuss migration systematically in the context of adaptation strategies to climate change

and while some forms of environmentally induced migration may be adaptive, forced migration and displacement might be as a result of the failure of socio-ecological system to adapt.

## 4. Are People Migrating to Adapt?

The physical impacts of climate change are visible and uncontested, but do the vulnerable communities perceive themselves as threatened and see migration as a probable way of adapting to these changes? Is their risk perception of climate change in convergence with what the popular narratives emphasize? Do the dominant perspectives of them being 'victims' affect their everyday priorities, their decisions or responses to climate change? As Marino (2012) emphasizes, discourses surrounding climate change are producing additional stressors on vulnerable communities and goes on to call them 'insults and injuries of intervention'. Hulme (2008) furthers highlights a strong need for attention to the manner and language in which climate change is portrayed and translated for mass consumption. There is a tendency to dilute how societies responds to climate change as a simple cause-effect connection, wherein the inherent working structure of society is ignored and their risk perception, response, reasons for action versus inaction and their priorities and needs for adaptation are discounted. In climate change literature, migration has often been proposed as an adaptation strategy, but recently many context-specific case studies have contested this common understanding. Mc Namara and Gibson (2009) while recording perceptions of Pacific Island ambassadors assert that the focus of these nations is centred on retaining territory, nationality, and cultural identity. They oppose the 'exodus' scenario imagined by the outsiders, labelling them as 'climate refugees' in waiting. Instead, they appeal for assistance and resources which can allow them to live in their homeland.

Sometimes, populist and media construction of climate risk and how people respond to those risks can lead to a wrong understanding of the situation. Emerging empirical evidence contests that migration is a considered adaptation strategy by the people in question. In the Pacific islands, the island communities have often been projected as those in crisis and likely to be future climate change refugees (Lazrus, 2009). However, mobility has been a part of islanders past and present. How do they perceive this new alarmist manifestation of themselves? For example in Tuvalu, Mortreux & Barnett (2009) and Farbotkoand Lazrus (2012) highlight how Tuvaluans are popularly projected as first climate refugees; however, the local people fail to agree with their media constructed status. The Tuvaluans neither view their island as imminently disappearing nor their communities in crisis. The common picture of them invading borders as refugees is wrongly constructed and not shared by the locals who value their local lifestyle, culture, and community cohesion on the island and strongly reject these populist narratives. Though they understand and acknowledge the risks from climate change, their approach to adapting to those risks is embedded in their valuation of their everyday lives of being islander, and even if resources exist for them to migrate or relocate from the island, their prioritization, perception, and valuation can lead to decisions which may seem irrational from the outside, but when understood from within are extremely rational.

If migration was a preferred way of adapting for the Tuvaluans then the example of New Zeland's Pacific Access Category of migrants in response to climate change sheds lights on this assumption. The scheme allows upto 75 people from Tuvalu to migrate each year, and since it began in 2002,

only half the available places have been filled, thereby suggesting that even in Tuvalu where climate change has been presented as an alarmist threat for survival, people are not willing or eager to leave their homeland. Lazrus (2009) further notes that migration is a part of Tuvaluans identity and belonging; however, presenting it as an ultimate future option wherein the possibility of living in their homeland is little, and adaptation is only possible by means of migration, imposes a mistaken idea about adaptation wherein we discount the needs of people, their priorities, and willingness to not leave and live in their homeland. People have adapted and coped with climate-related impacts by means of moving away from area of risk but with the possibility of returning to the place which is their home. Their traditional adaptation strategy of migrating is now being forecasted as the only solution to their survival. Adger (2011) points to the need for policies and interventions that enable people to adapt in ways that allows them to lead the kind of lives they value in places they call home, rather than simply to foster adaptation.

Similarly, in Shishmaref, Alaska most regions are losing their land to sea erosion and relocation is the only survival option. Marino (2012) predicts that marginalized and minority communities are most likely to stay in these disaster prone areas/homeland. Vulnerability to climate change is not the only priority for local people of Shishmaref, they too like other regions have their traditions, culture and lifestyle and people continue to live their lives. She further provokes by highlighting how Shishmaref is of interest to public policy and researchers only as case study of 'climate change migration' while the local communities are interested in dialogue with these policy-makers and researchers as they consider 'Shishmaref is worth saving'. Should adaptation then not focus on these priorities and the needs of people and should their basic right to live in their homeland not be protected? Marino (2012) further illustrates the importance of incorporating local voice, priorities, and concerns while relocating people from vulnerable regions while also considering their social histories and traditional responses to natural hazards in order to facilitate relocation.

Maldives, the island nation made famous by the 'come before they sink' reference and the historic underwater meeting led by its President in 2009, has made it a sought-after destination for media stories on climate refugees and migration. As early as 1998, the then President Maumoon Abdul Gayoom expressed resistance to portraying his countrymen as future climate refugees in an apocalyptic future. He insisted on respecting them as sovereign citizens who do not wish to leave their homeland and urged for international support and action to help them stay (Gayoom, 1998). Though climate change and its impacts are uncontested in these islands, the push to publicize numbers of migrants may not be shared by local people who do not want to leave their island and communities. Although islanders observe changes in their island, it is challenging to ascertain what a certain level of seal-level rise means when it is translated into daily lives. President Gavoom appealed to the international community to mobilize attention and resources to assist them live in their homeland. He insisted on the sovereignty of his people in the face of media constructions and policy discourse produced by outsiders who suggested relocation as the only option. Instead of debating migration numbers, he asserted the focus should be on reducing climate change impacts such as sea water intrusion and degrading costal soil fertility which would affect the day to day lives of islanders. Mc Namara and Gibson (2009) while interviewing Pacific island ambassadors reported a common argument which was stressed on by most - "focus on migration rather than mitigation was not only defeatist but also globally irresponsible vision of the future".

India is home to many migrants. Migration across India's borders from neighbouring countries has been for a broad range of reasons such as economic, political, socio-cultural, and historical

linkages. Flow of migration has taken place generally from Bangladesh, Nepal, Sri Lanka, Tibet, Myanmar, and Pakistan. According to Census of India (2001) numbers of migrants from other countries in India constitute approximately 5 million of the total population i.e. 1.6 percent. It is interesting to note that environmental causes or climate change does not categorize as one the drivers of migration in the Census of India data. The key drivers for migration are 'employment', 'business', 'education', 'marriage' and 'others'. Other drivers such as natural disasters, social/political problems, housing problems, and migration of parents are combined in the others category. For climate change induced migration, any numbers will be extracted from this 'others' category thereby giving highly doubtful numbers.

While discussing climate change and migration in the Indian context, movement from Bangladesh to India is an immediate visual that comes to mind. But this cross border migration has been substantial and considered an established process with a majority of people moving to the Indian states of West Bengal and Assam (Samaddar, 1999; Ramachandran, 2005; ADB, 2012). Likelihood of increased economic opportunities as well as cultural and lingual similarities are the prime motivators for this kind of movement (Samaddar, 1999; Alam, 2003; Lahiri-Dutt, 2004; ADB, 2012). Several researchers have argued that climate change will play a major role in inducing people to migrate from Bangladesh to India on a large scale (Rajan, 2008; Panda, 2010). Myers (2002) adds that climate refugees from Bangladesh alone might outnumber all current refugees worldwide. He projected that 26 million refugees will come from Bangladesh. According to Homer Dixon (1994), Bangladeshi migrants who have moved due to reasons of environmental scarcity have expanded the population of India by 12 to 17 million over the last 40 years. But, these claims are supported with little empirical or ground evidence wherein climate change can be identified as a primary driver. This haziness and unexplained crunching of numbers question the basis of their calculation and also raise doubts whether climate change can be attributed as a primary driver for cross border migration.

Migration is a complex interplay of multiple factors (Perch-Nielsen et al., 2008). Bates (2002) opines that environmental changes affect migration decisions only after being filtered through the local socio-economic context. Climate change may emerge as new driver through a multiplier effect on existing push and pull factors of migration; however, a lot of uncertainty remains in assigning climate change as a significant reason. In this situation where migration is already an established process, assigning migration as probable climate adaptation strategy raises two main thoughts for discussion: (i) If migration is accepted as adaptation for people moving from Bangladesh to India, then can it be considered successful if it leads to communal and resource conflicts in India? (ii) and should a country like Bangladesh, renowned as a pioneer in community-based adaptation not promote its practices to make its communities more climate resilient and the focus be shifted to providing resources and finance, rather than promoting migration as an adaptation strategy? Wouldn't migration, if labelled as adaptation in this case, discount the very concept of adapting?

In 2005, the United Nations Environment Programme (UNEP) predicted that climate change would create 50 million climate refugees by 2010. It was anticipated that people would flee due to a range of disasters, impacts like sea-level rise, increases in the numbers and severity of hurricanes, and disruption to food production, etc. However, according to Atkins (2011), these regions identified as future hotspots of climate refugees are not only not losing people, they are actually among the fastest-growing regions in the world. Questioning UNEP's forecast, in 2011 Spiegel International released a new media story titled Feared Migration Hasn't Happened: UN Embarrassed by Forecast on Climate Refugees (Bojanowski, 2011). The map was withdrawn by

UNEP citing clarification that the map was originally produced by a newspaper (UNEP, 2013). The United Nations University (UNU) responded, claiming that forecast figures of environmental migrants varied widely because researchers were unsure of climate change scenarios themselves, unsure of how climate change would contribute to hazards, and unsure about how these hazards would affect people on the ground (Fiser, 2011). This again highlights how numbers have been the focus of the climate migration debate and the process itself and people in question — their priorities and choices have been ignored.

#### 5. Discussion

Adaptation to climate change is inevitably place and context specific and if migration is promoted as an all-purpose adaptation option in every context and place, then the objectives of adaptation are discounted. Adger and Barnett (2011) argue a need for more geographically and culturally nuanced risk appraisals that allow policy-makers to recognize the diverse array of climate risks to places and cultures as well as to countries and economies. Similarly, Hess et al. (2008) emphasize the importance of place for promoting resilience because identity and sense of place are central to community resilience, public health, and well-being more generally.

There is little doubt that migration decisions are complex and context specific in nature. Climate change can act as a multiple stressor on already existing vulnerabilities and emerge as an additional driver for already existing migration behaviour. With the exception of when a person's life is directly threatened, the decision to migrate is often made because of a variety of 'push' and 'pull' factors. Rarely is the decision to migrate made due to a single reason. Climate change emerges as new driver for forced and voluntary migration, either through changing existing trends (influencing poverty, increasing competition for natural resources) or creating new ones (e.g., rapid sea-level rise). A decision to move or stay is specific to people (household), societies, and environment systems. Instead of focusing on the questions of 'when, where, and how many migrants', there is need to understand the dichotomy of the situation wherein: (i) If people are unwilling to move from risky regions then what should adaptation do to enable them to live their lives in places they call home? (ii) Understanding how do communities become pushed towards migration and what are the challenges for successful relocation?

Migration as adaptation may be a grey area but climate-induced movement raises serious questions of human rights, sovereignty and concerns of place, identity, culture, values, psychological health and pressure on host community amongst others. Understanding local perspectives on these issues, prioritizing their adaptation needs and making them a primary stakeholder during the conception, design and implementation process are essential for successful adaptation.

The question of survival may force people with little choice to stay, to opt for migration. However, proposing migration without careful consideration of impacts, pre- and post-migration, can lead to chaos from legal, political, social, and cultural points of view. While proposing migration as a probable adaptation option, assessment of social impacts such as loss of values, culture, community cohesion, and varied risk perceptions is important. There needs to be careful consideration of place, identity and inclusion of person-place bonds to facilitate planning

and policy development that is appropriate to local context (Baxter and Armitage, 2012). In Kiribati, Kuruppu (2009) highlights how people are unwilling to migrate due to sea-level rise and discusses the role of religion for adaptation and how it can facilitate adaptation. Understanding vulnerabilities and needs of adaptation of specific people, societies and their systems, and how they perceive climate risks and what are their attitudes towards them adapting to this change is thus critical to successful adaptation. As noted earlier, *in situ* adaptations will be the most common response to climate change. Policy making therefore needs to address what is needed to allow communities to live in places they call home and aim to strengthen their preparedness and resilience. As migration may ostensibly be adaptation, but cannot be considered successful if it damages people's traditions, knowledge, social orders, identities, and material cultures (Adger and Barnett, 2011). Lastly, people living in risky and vulnerable regions could be unable to link current experiences of climate change with future events. The distant nature of climate change may lead them to act myopically, discounting the future risk.

This could be attributed to the temporality of climate change, where occurrences of future changes are identified in the present through climate models, but remain invisible, with impacts - which are neither spatially nor temporally consistent – unfolding over a time span of thirty to forty years. This mismatch between the scientific discourse and visible present leads to a situation where the local people (e.g. island communities) are unable to relate with impacts like sea level rise as it does not get revealed by their personal observations. So when climate change is not an everyday priority, the whole concept of migrating due to climate change even in the categorized vulnerable regions will not follow the popularized trends. In many cases, migration will be the last resort, which will only be considered if the different adaptation strategies have failed. Therefore, though migration could be a strategy to move away from an area of risk it should not overshadow the objectives of adaptation.

The objective of this paper is not to reject migration as a climate adaptation strategy but rather to shift the focus on people's perceptions and need for innovative and context-specific adaptation measures, which gives people a possibility to stay in their homeland rather than being forced to migrate.

## 6. Policy Recommendations

- Identifying the needs of adaptation in regions where migration is anticipated by outsiders but
  not shared by local communities, who are unwilling to leave, is critical to ensure, so that people
  can be better prepared and continue to live in their homeland. Migration is a complex, highly
  subjective, and context-specific process, and climate change will only add to this challenge.
  Public policy needs to deliberate on the possibilities and be prepared to manage these kinds
  of movements.
- Migration is a very context-specific process and therefore geographically and culturally nuanced assessments at the ground level are a prerequisite before arriving at any conclusion about the migrants and their priorities. This kind of assessment will also help decision-makers to recognize the diversity of climate risks and responses at different places and cultures. Governments and policy-makers need to consciously invest in this kind of research and

assessments in order to better understand ground situations and thereby make informed decisions which are both politically and culturally acceptable.

- The discourse in international negotiations should not be limited to relocation of vulnerable communities and discussing migrant numbers but rather focus on in situ adaptations which facilitate people to adapt while still living in their home countries. Accordingly, identification and prioritization of local adaptation strategies is required which can help in building resilience by minimizing the impacts on natural resources and livelihoods of communities.
- Loss and damage work is an emerging debate in international negotiations in the context of climate adaptation, however with little clarity about what constitutes loss and what damage is. In the context of climate-induced migration, there is likely to be erosion of local culture, place, values, and traditional knowledge. As these cannot be easily monetized or assigned quantitative values, international policy needs to discuss how this kind of loss from climate change can be estimated and how resources will be allocated for these elements which cannot be reduced to economic metrics. On the international platform, there needs to be a constructive debate to discuss how to compensate loss of homeland, culture, and values. Policy needs to deliberate on what will be the criteria for distribution of resources wherein it is challenging to establish what the loss is and how much is the damage. All these questions need to be discussed carefully at the international platform.
- Climate change and migration is a multi-layered and dynamic process which is still not completely understood. Policy making in such a context, where climate change as a cause of migration is uncertain and highly contextual and people specific, necessitates inclusivity of local populations in decision making wherein their views/perceptions and responses are democratically represented and not merely channelled into participatory programme processes. Their inclusivity needs to be built in from the conception stage on to design and implementation of any policy developed to address this complex issue.
- Data scarcity often plagues the empirical explanation of climate change and migration links. This leads to creative methods for estimating the magnitude of past, current, and future climate change induced migration—methods that are generally controversial. This lack of adequate data, particularly in terms of time series of environmental and demographic variables, is a constraint for methodological innovation and any conclusive results. In order for any analysis or empirical explanation to assist decision making, policy needs to invest in data collection and management. Data collection agencies need to be sensitized about climate change as a plausible driver for migration amongst already existing drivers. Institutional capacities need to be strengthened for understanding these issues so that when data is collected on ground, there is a background and knowledge about this issue.

#### **REFERENCES**

Asian Development Bank (ADB), 2012. *Addressing Climate Change and Migration in Asia and the Pacific*. Mandaluyong City, The Philippines: Asian Development Bank.

Adger, N and Barnett, J. 2005. Compensation for Climate Change Must Meet Needs. *Nature*, 435, p.328.

Adger WN, Barnett J, Chapin III, FS, and EllemorH, 2011. This Must Be the Place: Underrepresentation of Identity and Meaning in Climate Change Decision-making. *Global Environmental Politics*, 11, pp.1–25.

Aktins G, 2011. What Happened to the Climate Refugees? 11 April 2011. Available at http://asiancorrespondent.com/52189/what-happened-to-the-climate-refugees/ [Accessed 24 February, 2014].

Alam S, 2003. Environmentally induced migration from Bangladesh to India. *Strategic Analysis*, 27(3), pp.422–38.

Barnett J and Webber M, 2009. Accommodating Migration to Promote Adaptation to Climate Change. Swedish Commission on Climate Change and Development, Stockholm.

Barnett J and Webber M, 2010. Accommodating Migration to Promote Adaptation to Climate Change, Background Paper to the 2010 World Development Report, The World Bank, p.62.

Bates D C, 2002. Environmental Refugees? Classifying Human Migrations Caused by Environmental Change, *Population and Environment*, 23(5), pp.465–77.

Baxter J A and Armitage D, 2012. Place Identity and Climate Change Adaptation: A Synthesis and Framework for Understanding, *WIREs Climate Change*, 3, pp.251–66.

Bhagat S, 2009. What about 30 Million Climate Refugees? *The Times of India*, 15 December 2009. Available at http://timesofindia.indiatimes.com/world/europe/What-about-30-million-climate-refugees/articleshow/5338176.cms?referral=PM [Accessed 24 February 2014].

Black R, Bennett S R G, Thomas S M, and Beddington J R, 2011. Migration as Adaptation, *Nature*, 478, pp.447–49.

Bojanowski A, 2011. Feared Migration Hasn't Happened: UN Embarrassed by Forecast on Climate Refugees. Spiegel Online, 18 April 2011. Available at <a href="http://www.spiegel.de/">http://www.spiegel.de/</a> international/world/feared-migration-hasn-t-happened-un-embarrassed-by-forecast-on-climate-refugees-a-757713.html [Accessed 24 February 2014].

Brown O, 2008. Migration and Climate Change in Africa: An Overview, *IOM Migration Research Series*, 31. Geneva: International Organization for Migration.

Bulman E, 2005. UN Warns of Millions of Environmental Refugees. *The Associated Press*, 12 October 2005. Available at http://seattletimes.com/html/nationworld/2002555243\_refugees12. html [Accessed 24 February 2014].

Christian Aid, 2007. Human Tide: The Real Migration Crisis. London: UK.

Census of India, 2001.http://censusindia.gov.in/Census\_And\_You/migrations.aspx. Accessed at: (Accessed 22 April, 2014).

Farbotko C and Lazrus H, 2012. The First Climate Refugees? Contesting Global Narratives of Climate Change in Tuvalu. *Global Environmental Change*, 22, pp.382–90.

Felli R and Castree N, 2012. Neoliberalising Adaptation to Environmental Change: Foresight or Foreclosure? *Environment and Planning*, 44, p.1–4.

Foresight: *Migration and Global Environmental Change* (2011). Final Project Report the Government Office for Science, London.

Gayoom MA, 1998. International Assistance Can Save Our Peoples. In: *The Maldives: A Nation in Peril*, Edited by M A Gayoom. Ministry of Planning Human Resources and Environment, Malé, p.29.

Hartmann B, 2010. Rethinking Climate Refugees and Climate Conflict: Rhetoric, Reality and the Politics of Policy Discourse, *Journal of International Development*, 22(2), pp.233–46.

Hulme M, 2008. Geographical Work at the Boundaries of Climate Change, *Transactions of the Institute of British Geographers*, 33, pp.5–11.

Homer Dixon, Thomas F., 1994. Environmental Scar cities and Violent Conflict: Evidence from Cases", *International Security*, 19(1), pp.540

Intergovernmental Panel on Climate Change (IPCC), 1990. First Assessment Report, Edited by WJ McGTegart, Sheldon G W, and Griffiths D C. Canberra, Australia: Australian Government Publishing Service.

International Organization for Migration (IOM), 2008. *Climate Change and Migration: Improving Methodologies to Estimate Flows*, No. 31. Switzerland: International Organization for Migration, Research and Publications Unit.

Kuruppu N, 2009. Adapting Water Resources to Climate Change in Kiribati: The Importance of Cultural Values and Meanings, *Environment Science and Policy*, 12, pp.799–809.

Lahiri-Dutt K, 2004. Fleeting Land, Fleeting People: Bangladeshi Women in a Charland Environment in Lower Bengal, India, *Asian and Pacific Migration Journal*, 13(4), pp.475–95.

Lambert J, 2002. Refugees and the Environment: The Forgotten Element of Sustainability, Brussels, Belgium: The Greens/European Free Alliance in the European Parliament.

Marino E, 2012. Editorial (Special Issue Introduction), *Adding Insult to Injury: Climate Change and the Inequities of Climate Intervention*, *Global Environmental Change*, 22, pp.323–28.

Mc Leman R, 2009. Climate Change and Adaptive Human Migration: Lesson from Rural North America, In: *Adapting to Climate Change: Thresholds and Governance*, Edited by W N Adger. UK: Cambridge University Press, Ch.19, pp.296–310.

McLeman R A and Smith B, 2006. Migration as an Adaptation to Climate Change, *Climatic Change*, 76, pp.31–53.

Mortreux C and Barnett J, 2009. Climate Change, Migration and Adaptation in Funafuti, Tuvalu, *Global Environment Change*, 19, pp.105–12.

Myers N, 2002. Environmental Refugees: A Growing Phenomenon of the 21st Century, *Philosophical Transactions of the Royal Society*, 357(1420), pp.609–13.

Myers N, 2005. *Environmental Refugees: An Emergent Security Issue*. In: Session III – Environment and Migration, 13th Meeting of the OSCE Economic Forum, Prague, Czech Republic, 23–27 May 2005, pp.23–27.

Panda, A., 2010. Climate Refugees: Implications for India. *Economic and Political Weekly*, 14(20), pp.76-9

Perch-Nielsen SL, Battig MB, and Imboden D, 2008. Exploring the Link between Climate Change and Migration, *Climatic Change*, 91, pp.375–93.

Rajan C S, 2008. Climate Migrants in South Asia: Estimates and Solutions. Bangalore: Greenpeace India Society.

Ramachandran S, 2005. Indifference, Impotence, and Intolerance: Transnational Bangladeshis in India, *Global Migration Perspectives*, No. 42. Geneva.

Samaddar R, 1999. The Marginal Nation: Transborder Migration from Bangladesh to West Bengal. New Delhi, SAGE Publications.

Scheffran J, Marmer E, and Sow P, 2012. Migration as a Contribution to Resilience and Innovation in Climate Adaptation: Social Networks and Co-development in Northwest Africa, *Applied Geography*, 33, pp. 119–27

Sherriff L, 2005. Environmental Refugees Could Hit 50m by 2010. *The Register*. Available at http://www.theregister.co.uk/2005/10/12/environmental refugees/ [Accessed 24 February 2014].

Stern N, 2006. The Stern Review on the Economic Effects of Climate Change (Report to the British Government). London: HM Treasury.

Thornton F, 2011. Regional Labour Migration as Adaptation to Climate Change: Options in the Pacific. In: *Climate Change and Migration: Rethinking Policies for Adaptation and Disaster Risk Reduction*, Edited by Michelle Leighton, Xiaomeng Shen, and Koko Warner. SOURCE 'Studies of the University: Research, Counsel, Education' Publication Series of UNU-EHS No. 15/2011, pp.82–91.

UNEP, 2013. Environmentally Induced Migration Map: Clarification Available at http://www.grida.no/general/4700.aspx [Accessed 24 February 2014].

UNFCCC, 2014. Database on Local Coping Strategies, [Online]. Available at http://maindb.unfccc.int/public/adaptation/ [Accessed 24 February 2014].

Warner K, 2010. Global Environmental Change and Migration: Governance Challenges, *Global Environmental Change*, 20, pp. 402–13

#### What is the Internal Migration in India Initiative (IMII)?

The Internal Migration in India Initiative (IMII) was jointly launched by UNESCO and UNICEF in 2011, as a result of a two-day workshop on *Internal Migration and Human Development in India* (New Delhi, 6-7 December 2011), and in order to better respond to the many challenges raised by the internal migration phenomenon in India. Through the IMII, UNESCO and UNICEF wish to support the social inclusion of migrants in the economic, social, political and cultural life of the country, using a three-legged approach combining research, policy and advocacy.

The informal network created under the Internal Migration in India Initiative (IMII) has been recently transformed into a new web-portal titled Gender, Youth and Migration (GYM) which functions as a sub-community of practice of the United Nations Solution Exchange Gender Community. The GYM initiative hopes to bridge the gap and link researchers, practitioners and decision makers working on gender, youth and migration in India (http://www.solutionexchange-un-gen-gym.net).

#### What are the objectives of the IMII?

- Raise awareness on the need to prioritize internal migration in policy-making
- Advance knowledge on undocumented research areas on internal migration in India in order to support the design of better informed inclusive policies
- Support the development of a coherent legal and policy framework on internal migration
- Promote existing policies and creative practices that increase inclusion of all sections of the internal migrant population in society, particularly children and women
- Contribute to changing the negative perception of internal migrants in society



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