



United Nations  
Educational, Scientific and  
Cultural Organization

# National Workshop on Migration and Global Environmental Change in India

## Summary Report

4-5 March 2014



Government  
Office for Science  
 **Foresight**



**UKaid**  
from the British people

# National Workshop on Migration and Global Environmental Change in India

April 2014

Layout and design: Colorcom Advertising

Proof-reading: Kate Pond

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ISBN 978-81-89218-51-5

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The Foresight report can be downloaded at:  
<http://www.bis.gov.uk/assets/foresight/docs/migration/11-1116-migration-and-global-environmental-change.pdf>

*Printed in India*

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## Summary Report

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## Acknowledgements

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This summary report contains the major findings and deliberations of the National Workshop on Migration and Global Environmental Change in India, jointly organized by UNESCO, GO Science, UK and DFID on 4–5 March 2014 at India Habitat Centre, New Delhi, India.

UNESCO, GO Science and DFID are particularly grateful to the policymakers, academics, members of civil society and international organisations, as well as colleagues, who participated in the workshop and resolved to increase the visibility and recognition of migration in the context of global environmental change in India (in the order of speaking): Mr. Shigeru Aoyagi, Director and UNESCO Representative to Bhutan, India, Maldives and Sri Lanka; Prof. Sandy Thomas, Head of Foresight, Government Office for Science, United Kingdom; Prof. Richard Black, Pro-Director (Research & Enterprise), School of Oriental and Asian Studies, University of London, United Kingdom; Dr. Prodipto Ghosh, Member, Prime Minister's Council on Climate Change and former Secretary, Ministry of Environment and Forests, Government of India; Ms. Rekha Beri, Public Information and Spokesperson, UNESCO New Delhi; Amb. C. Dasgupta, Distinguished Fellow, TERI, and former Ambassador to China and the European Union; Prof. Andrew Geddes, Professor of Politics, University of Sheffield, United Kingdom; Shri Neeraj Sinha, Scientist F/ Senior Director, Office of the Principal Scientific Adviser to the Government of India (GoI); Shri Akhilesh Gupta, Advisor and Head, Technology Development and Transfer Division, Climate Change Division, Ministry of Science and Technology, Government of India; Dr. D.K. Sharma, Deputy Inspector General (Research and Training), Ministry of Environment and Forest (MoEF); Prof. Ram Bhagat, Professor and Head, Department of Migration and Urban Studies, International Institute for Population Sciences (IIPS), Mumbai; Prof. Sugata Hazra, Director, School of Oceanographic Studies, Jadavpur University, Kolkata; Dr. Partha Jyoti Das, Head, Water Climate and Hazard (WATCH) Programme, Aaranyak, Guwahati; Prof. Sanjoy Hazarika, Centre for North East Studies and Policy Research, Jamia Millia Islamia University, Delhi; Dr. Tasneem Siddiqui, Professor Political Science, University of Dhaka and Founding Chair, Refugee and Migratory Movements Research Unit (RMMRU), Dhaka, Bangladesh; Mr. Soumyadeep Banerjee, International Centre for Integrated Mountain Development (ICIMOD), Kathmandu, Nepal; Mr. Hasan Akhtar Rizvi, Chief Operating Officer, LEAD, Pakistan; Shri B. N. Satpathy, Senior Adviser (Environment & Forests, Science & Technology), Planning Commission, Government of India; Dr. Suman Bisht, International Centre for Integrated Mountain Development (ICIMOD), Kathmandu, Nepal; Dr. Giovanna Gioli, Post-doctoral Researcher, University of Hamburg, Germany; Ms. Himani Upadhyay, Associate Fellow, The Energy and Resources Institute (TERI), New Delhi; Dr. Anil Gupta, Associate Professor, Head of the Policy, Planning and Cross Cutting Issues Division and Training Section, National Institute of Disaster Management (Ministry of Home Affairs, Government of India); Mr. Dominik Bartsch, Chief of Mission, United Nations High Commission for Refugees (UNHCR India); Ms. Sabira Coelho, Consultant, International Organization of Migration (IOM Bangkok); Dr. Nasreen Chowdhury, Assistant Professor, Department of Political Science, University of Delhi and Member, Calcutta Research Group (CRG); Shri Rajeev Sadanandan, Joint Secretary and Director General, Labour and Welfare Division, Ministry of Labour and Employment, Government of India; Shri Rakesh Ranjan, Advisor Urban Affairs, Planning Commission, Government of India; Prof. Ravi Srivastava, Professor, Jawaharlal Nehru University, New Delhi; Prof. Amitabh Kundu, Jawaharlal Nehru University, New Delhi; Dr. Partha Mukhopadhyay, Centre for Policy Research (CPR), New Delhi; Shri Arun Maira, Member, Planning Commission, Government of India; Dr. Ramesh Jalan, Moderator of the Climate Change community of practice/United Nations Solution Exchange Web

Portal; Ms. Vandana Aggarwal, Economic Adviser, Ministry of Environment and Forests (MoEF), Government of India; Dr. Navroz Dubash, Senior Fellow, Centre for Policy Research (CPR), New Delhi; Ms. Marina Faetanini, Chief, Social and Human Sciences (SHS), UNESCO New Delhi.

The summary of the proceedings was prepared by Mr. Lingaraj Giriya-pura Jayaprakash, UNESCO Consultant on Migration and Global Environmental Change (MGEC), under the guidance of Ms. Marina Faetanini, Chief, Social and Human Sciences (SHS), UNESCO New Delhi, and the programme support of Ms. Pooja Dayal, UNESCO Consultant. We thankfully acknowledge the important contribution of UNESCO interns, Ms. Sankalpa Acharya and Mr. Pradeep Yadav.

The workshop greatly benefited from the close collaboration of several partners, notably: Ms. Rabab Fatima, Regional Coordinator & Advisor for South and South West Asia, Regional Advisor for Climate Change and Migration, Regional Office for Asia and the Pacific, International Organization for Migration (IOM) Bangkok; Ms. Sabira Coelho, South Asia Coordination Department, Regional Office for Asia and the Pacific, International Organization for Migration (IOM) Bangkok; Mr. Amit Bhardwaj, Officer in Charge, International Organization for Migration (IOM), New Delhi; Mr. Soumyadeep Bannerjee, Migration and Population Specialist, Livelihoods, International Centre for Integrated Mountain Development (ICIMOD), Kathmandu, Nepal; Dr. Malika Basu, Resource Person & Moderator, Gender Community, United Nations Solution Exchange; and Dr. Ramesh Jalan, Resource Person & Moderator, Climate Change Community, United Nations Solution Exchange.

Deepest gratitude is due to the Government Office for Science, Foresight, United Kingdom, whose funding and overall support has made this project possible, notably Mr. Jon Parke, Head of Foresight Follow-up, Government Office for Science (GOS), United Kingdom and Mr. Tom Ciuksza, Project Manager, Foresight Follow-up team, Government Office for Science (GOS), United Kingdom.

# I. Introduction

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## Proceedings

The proceedings are based on the presentations and discussions that took place in the National Workshop on Migration and Global Environmental Change in India that was jointly organized by the United Nations Educational Scientific Cultural Organization (UNESCO), New Delhi, the Government Office for Science (GO Science), United Kingdom, and the Department For International Development (DFID) on 4-5 March 2014 in New Delhi. Proceedings also draw from the policy query submitted through the Gender, Climate Change Communities and the Gender, Youth and Migration (GYM) sub-community of practice of the Gender Community/ United Nations Solution Exchange Web Portal, and the consolidated reply to the query.

## Context and Background

The workshop is a very important aspect within the framework of UNESCO's activities under the Internal Migration in India Initiative (IMII), launched in 2011 with UNICEF to address the multiple challenges faced by internal migrants through the angle of social inclusion, inclusive growth and human rights. This initiative intended to widen the scope of the debate by considering the implications of global environmental change for migration in India and the neighbouring countries.

Global environmental change is one of the biggest challenges faced today. Evidence suggests that global environmental change will impact migration through its influence on a range of social, political, economic, environmental and demographic drivers which themselves affect migration. While it will rarely be possible to distinguish individuals for whom environmental factors are the sole driver, a number of people worldwide could migrate due to environmental factors such as rising sea levels, heavier floods, more intense droughts and other climate-driven changes by 2050. Global environmental change is equally likely to prevent migration as it is to cause migration. Vulnerable groups of population may stay behind or be trapped.

Climate change is one of the more pronounced pathways through which global environmental change will express itself. While there has been a growing focus on adaptation to climate change there is a need for simultaneously planning for migration. There is evidence that millions of people will reside in areas of high environmental risk over the next five decades. More research is required on how environmental change in general and climate change in particular will affect the drivers of migration and how it can be addressed in policy. An interdisciplinary and multi-stakeholder approach is required to find solutions for the migration and global environmental change nexus and capacities in diverse areas such as sustainable urbanization, climate change adaptation, conflict resolution and humanitarian assistance are essential.

The Foresight MGEC report identifies the need for a strategic approach that recognizes the challenges as well as the opportunities of migration.

## Indian Scenario

India is highly vulnerable to climate change. The 4th IPCC Assessment Report predicts a median temperature increase of 3.3 degree C, a general weakening of the monsoon system, a decrease

in the number of rainy days and an increase in the intensity of extreme rain events for India. As Indian economy is inextricably tied to climate-sensitive sectors like agriculture, and which are already facing multiple stresses, climate change could further exacerbate these stresses. This would have implications not only at national level but also at a regional and state level.

India has a long, densely populated low lying coastline, an under developed and fragile Himalayas, a vast arid region. Water stress and access to non-polluted fresh water is already a significant problem in large parts of India, which negatively impacts on agricultural production. Areas of northwest India dependent on intensive agriculture are expected to be significantly affected and changing precipitation regimes will impact food security (ADB, 2012:23). Rising sea level will affect coastal regions where several mega cities, such as Mumbai, Kolkata, and Chennai, are located. Flooding along the major rivers along with storm surge impacts and greater salt water intrusion is likely to affect a large number of people due to high population density and poor urban planning (ADB, 2012:23). Further, the Himalayan region has 51 million people practicing hill agriculture whose vulnerability will increase (Gol, 2008:4) as a result of melting glaciers coupled with an intensification of the monsoon.

Many uncertainties remain about how populations in particular locations react to environmental changes, both sudden and of a slow-onset variety. For this reason, more focused research is required in order to inform decision making. The National Action Plan for Climate Change in India has established a 'National Mission on Strategic Knowledge for Climate Change' that calls for research on socio-economic aspects of climate change including impacts on migration patterns (Gol, 2008:5).

## Key Objectives

The national workshop intended to explore and examine the current state of knowledge on migration and global environmental change. The issues were examined in the light of the international study on migration and global environmental change titled 'Foresight: Migration and Global Environmental Change (MGEC), Final Project Report', The Government Office for Science, London (2011).

With the intention of informing the actions of key stakeholders from policy, academia, media and civil society, the potential implications of the findings of the Foresight study for India and its neighbouring countries were discussed and deliberated over during the workshop. The workshop aimed to document existing research on future impacts of global environmental change, notably climate change, on population mobility and engage and alert policy makers to the need to mainstream migration, displacement, and non-migration influenced by global environmental change into the national agenda.

Global environmental change is equally likely to prevent migration as it is to cause migration. Migration, be it international or internal, is a multi-causal and complex phenomenon where the role of human agency is paramount. The number of internal migrants worldwide was estimated at approximately 740 million in 2009, whereas the number of international migrants was estimated approximately at 210 million in 2010 (UNDP 2009 Human Development Report). For India, internal migrants are estimated at 400 million (Census 2011), approximately one third of the total population, whereas international migrants are estimated at 11.4 million (World Bank).

Furthermore, the workshop intended to create a space for co-learning among key stakeholders associated with migration and global environmental change. Through a series of presentations

and panel discussions, the workshop aimed to develop an overview of the present and anticipated situations in India, and explore opportunities to mainstream migration influenced by global environmental change into policy process.

The intended outcomes of the workshop included sensitizing the key stakeholders on the issue, disseminating the summary report, and eliciting policy recommendations through a dialogue between policy makers and other stakeholders.

### **Papers and Presentations**

Background research and specially commissioned research under this project will attempt to capture an overview of the migration and global environmental change nexus in India. Specific areas of research that will be presented at the workshop will include: mapping the potential overlap of regions of climate vulnerability with source and destination regions of migration in India and neighbouring countries; the migration – global environmental change nexus through the human rights approach; the migration – global environmental change nexus and its implications on human security; the remittances – adaptation – social protection perspective; the gender dimension of migration influenced by global environmental change; and the vulnerability of growing urban populations and cities. Recent research indicates that vulnerability as well as migratory responses is contingent on social inequalities at the intersection of gender, ethnicity, age and economic means. There is hence an urgent need to integrate such perspectives in policy frameworks addressing migration in the context of global environmental change.

The presentations and final papers can be downloaded from the following link: <https://www.dropbox.com/sh/raoolkdxm0oso5d/DT9a7dOZvF?n=8056385>.

## II. Proceedings

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**Tuesday 4 March 2014**

### Inaugural Session

**Welcome Remarks:** Mr. Shigeru Aoyagi, Director and UNESCO Representative to Bhutan, India, Maldives and Sri Lanka

**Introductory Remarks:** Prof. Sandy Thomas, Head of Foresight, Government Office for Science, United Kingdom; Prof. Richard Black, Pro-Director (Research & Enterprise), SOAS, University of London, United Kingdom

**Guest of Honour:** Dr. Prodipto Ghosh, Member, Prime Minister's Council on Climate Change and former Secretary, Ministry of Environment and Forests, Government of India

**Facilitator:** Ms. Rekha Beri, Public Information and Spokesperson, UNESCO New Delhi

**Mr. Shigeru Aoyagi** extended a warm welcome to the distinguished guests and participants in his address and stated that he hoped that the workshop would influence actions of key stakeholders from policy, academia, media and civil society and improve our understanding of the migration and global environmental change nexus in India and neighboring countries. Mr. Aoyagi added that migration is a very social process and an important survival strategy. Since time immemorial, people have been moving due to a variety of reasons. Regional imbalances and urbanization have been shaping migration patterns in the recent times. Mr. Aoyagi stressed that as early as 1990, the IPCC (Intergovernmental Panel on Climate Change) in its first assessment noted that 'Migration and resettlement may be the most threatening short-term effects of climate change on human settlements'. Mr. Aoyagi highlighted that it is mainly the government's responsibility to anticipate and plan for migration induced by global environmental change while at the same time addressing the needs of the current internal migrant population.

**Prof. Sandy Thomas** outlined in her introductory remarks the rationale for initiating the study on understanding the nexus between global environmental change and migration. She provided the organizational background, vision and mission of GO Science, UK. She noted that the mandate of the organization was to provide evidence for strategic policy making. Further, she felt that the workshop was a valuable platform to engage with key stakeholders within India and other countries and benefit from their experience and expertise.

**Prof. Richard Black** summarized the findings of the Foresight report in his short presentation. Acknowledging the assertion of the Intergovernmental Panel on Climate Change (IPCC) that "migration and resettlement may be the most threatening short-term effects of climate change on

human settlements”, he opined that the starting point of the Foresight study was rather different from the dominant narrative, in which global climate change leads to displacement that furthers conflicts and poverty.

He highlighted three key messages from the Foresight study. They were as follows:

1. Millions of people will be unable to move due to a variety of climate shocks.
2. Millions of people are already moving for a variety of reasons towards places that are already vulnerable.
3. Migration might help people adapt to climate change rather than being a negative outcome of it.

In the light of these three messages, he felt that the challenge was to design robust policies that help facilitate migration and understand the way in which migration could help adaptation. Another policy challenge was to address the pre-conditions that prevent migration, and thereby exacerbate the vulnerability of ‘trapped populations’ to the impacts of global environmental change. According to the estimates of the Foresight study there may be up to 190 million more people living on urban coastal flood plains by the 2060s. In this context Prof. Black highlighted that the phenomenon of internal migration is very critical to a country like India. He concluded his short presentation by hoping that some of these critical issues will be addressed during the deliberations of the workshop.

**Dr. Prodipto Ghosh** observed in his keynote address that migration has been a part of the human condition since times immemorial and has been closely linked with human evolution.

He drew the attention of the audience to the fact that *homo sapiens*, modern man emerged out of Africa, and there were waves of migration to other parts of the world. He further elaborated that there has been a very long history of migration driven by an urge to further human progress. In the Indian subcontinent the focal point of early settlement and civilization was the land between the rivers Indus and Saraswati. Due to certain biophysical changes the settlements moved further east towards the rivers Ganga and Yamuna.

He emphasized that it was very difficult to discern unique reasons for people to migrate. Drawing attention to several episodes from history - such as the case of the Indian partition of 1947, the influx of Tibetan refugees to India in the 1950s, the immigration of the Parsee community to India, and the migration of skilled workers from China and India to Silicon Valley in the United States - he observed that the drivers of migration are very diverse and migration benefits people who migrate as well as the receiving communities. He highlighted that the inherent social and economic inequalities in traditional village settlements in Indian states such as Bihar, Jharkhand, and Odisha has led to migrations to states like Gujarat and Tamil Nadu.

When the natural resource base is affected as in the case of global environmental change, migration is one of the important coping mechanisms for poor people. He stressed that quite often people are not happy to move away from their homes and migration is the last resort. He therefore advocated that the policy focus should be on development *in situ* to enhance people’s coping capacities.

Questions about migration destinations and obligations under historical responsibility have been highly disputed in the international climate change negotiations under UNFCCC. He provided the

examples of the countries of Maldives and Bangladesh and spoke about the obligations involved for the international community in resettling people from these regions in the context of climate change. He highlighted the complex ethical and human rights issues involved in such a proposal, especially to ensure that the cultural and social cohesion of the communities are maintained.

### Discussion

Important issues that were raised during the discussions were about resistance to internal migration in states like Maharashtra and the absence of a comprehensive policy on internal migration in India. The need for global agreement on trans-boundary migration in the context of climate change was also raised.

It was observed that resistance to migrants is nothing peculiar to the state of Maharashtra and is driven by misperceptions of job loss and threats to local cultures and social set up. Various political parties have capitalized on the issue to obtain electoral advantage, fuelling insecurity and resistance from local communities to migrants. On the absence of a policy on internal migrants in India, it was highlighted that the right to settle anywhere in India is a fundamental right as guaranteed by the constitution. It was felt that the policies on migration are evolving and require political will and consensus, especially at the state level. It was observed that a global agreement on migration in the context of climate change was inherently complex considering the challenge of negotiating multiple interests, economic considerations and social constraints.

## Session 1. Main Findings of the Foresight Report

*Foresight report on Migration and Global Environmental Change examines how profound changes in environmental conditions such as flooding, drought and rising sea levels will influence and interact with patterns of global human migration over the next 50 years. In this session key findings of the Foresight report and its relevance for India were shared through the keynote presentations.*

**Chairperson:** Amb. C. Dasgupta, Distinguished Fellow, TERI, and former Ambassador to China and the EU

**Keynote Presentations:** Prof. Richard Black, Pro-Director (Research & Enterprise), SOAS, University of London, United Kingdom; Prof. Andrew Geddes, Professor of Politics, University of Sheffield, United Kingdom

**Panellists:** Shri Neeraj Sinha, Scientist F/SR, Director, Office of the Principal Scientific Adviser, Government of India; Shri Akhilesh Gupta, Advisor and Head, Technology Development and Transfer Division, Climate Change Division, Ministry of Science and Technology, Government of India

**Prof. Richard Black** began his presentation by providing an overview of the composition and approach of the Foresight project. The project sought to explore and examine issues of migration and the global environmental change nexus on a global scale, considering a long term perspective through the analysis of key ecological regions, namely dry lands, low elevation coastal zones and mountain regions. The two time scales considered in the Foresight study were the 2030s and 2060s. The study not only considered climate change but also land degradation and coastal and marine degradation as key components of global environmental change. Further, the study acknowledged the importance of internal migration in low- and middle-income countries.

He highlighted that the Foresight study followed an interdisciplinary approach through the involvement of diverse international experts and stakeholders. Diverse regional perspectives were integrated into the study through a series of regional workshops in Dhaka, Istanbul, and Nepal. The study followed robust peer-review mechanisms, and the findings of the study were published in special issues of respectable journals such as *Global Environmental Change*.

While acknowledging the fact that there are important links between migration and environmental change, the Foresight study differed on the notion that climate migrants are displaced *en masse* as a consequence of global environmental change. The first key message of the study is that environmental change reduces the ability to migrate, as it erodes the financial or physical assets and capital required to finance migration. Millions of people will be unable to move due to a variety of climate shocks.

The second key conclusion is that people are as likely to move towards areas of high environmental risk, such as coastal regions, as they are to move away from them. The study noted that over the last four decades there have been considerable movements towards coastal regions worldwide, and more particularly in Asia. Rural-to-urban migration is expected to continue. Migrants who move into cities are often very vulnerable. Foresight advocates that the response to this is not to

try and prevent migration to cities. He added that schemes to try and prevent migration to cities have often failed in the past.

He highlighted that attempts to prevent migration could result in humanitarian disasters for those who are unable to migrate away from environmental danger, as there are important remittances and other benefits from migration. He asserted that migration might help people adapt to climate change rather than being a negative outcome of it.

Prof. Black referred to a study by Banerjee *et al.* (2011) that examined the perceived importance of remittance utilization for different household expenses across case studies in mountain regions in China, India, Nepal and Pakistan. The study found that migration remittances helped fulfill basic human needs like food, housing and healthcare across regions. Migration and associated remittances enabled people to cope with and recover from stress and shocks by building essential financial and social capital. He highlighted that if communities are not resilient then the resultant displacement could be costly, and added that facilitating migration now might well avoid destabilizing conditions in future.

The Foresight study follows a robust methodological approach based on assertions that migration is already happening, has multiple drivers, and that environmental change can impact all of these drivers. The study identifies five key sets of drivers - namely environmental, social, political, demographic, and economic drivers - that often coexist. The study observes that spatial or temporal variability in each of the drivers, whether actual or perceived, leads to migration (often in interaction with other drivers). It further cautions against simplistic assumptions of linking these drivers to migration in a linear way, as a series of intervening individual and institutional factors that prevent or facilitate migration, such as border control, household characteristics such as age, sex and levels of education, and the cost of moving.

In the three ecological regions considered in the study there is a very high dependency on natural resources in dry lands and mountain regions, and migration has been happening towards low elevation coastal zones. However, in many of the case studies considered in the study there was an inverse pattern of migration, illustrating the inherently complex relationship between migration and global environmental change.

Owing to social and political conditions people may not be able to move in some cases, and become trapped when environmental change exacerbates their impacts on vulnerable populations. Therefore, the study advocates the need to understand populations that may be trapped. This was illustrated through the example of Cyclone Nargis that hit Burma in 2008 and left 130 000 people dead. The inaccessibility of the affected people for international humanitarian assistance increased casualties to secondary impacts such as epidemics and lack of food and water. In this case people were unable to move due to political and not economic reasons.

**Prof. Andrew Geddes** focused his keynote presentation on the policy implications of scientific evidence produced in the Foresight study. He began by clarifying the policy approach adopted by the Foresight study on the issue of migration in the context of global environmental change. He noted that the report encompasses three distinct levels to address the diverse challenges to migration issues in the context of global environmental change as listed below:

- Reducing the impact of global environmental change on migration through reducing the pace of environmental change or its impacts and enhancing the resilience of vulnerable communities to environmental change.

- Effective planning for migration in the context of global environmental change by adequately addressing social protection gaps, planning for sustainable urban growth and adaptation, and mitigating social tension and conflicts.
- Recognize migration as an important adaptation strategy to deal with the impacts of global environmental change. Therefore emphasis has to be placed on facilitating migration as an adaptation strategy through managed relocation of vulnerable communities and building new cities.

The Foresight approach to policy making further stressed that the above levels of responses should be pursued both through a state-led top-down approach and appropriate bottom-up initiatives.

Migration as a part of demographic change will continue to rise with or without global environmental change, and therefore Prof. Geddes elaborated on the need to follow multiple levels at the same time alongside efforts to reduce the pace and intensity of global environmental change. He then detailed three important priorities for policy makers to address migration in the context of global environmental change.

### **Priority for policy makers 1: The need for greater policy focus on urban areas**

Migration may not be a negative phenomenon if administrations plan for it proactively by ensuring the necessary infrastructure is in place. In an Indian context, planning for sustainable urbanization is a very critical policy priority as an estimated 590 million people are expected to be living in the cities of India by the 2030s, mostly as a result of rural-to-urban migration. If enough provisions aren't made, the report opines that cities could face a 'triple jeopardy future' with the following characteristics:

- The population in lower income cities will continue to grow significantly in future.
- This challenge will be compounded by the fact that most of these growing cities are located in the highly vulnerable lower elevation coastal zones, dry lands or near mountains; and are increasingly threatened by environmental change.
- People who move to the cities are often among the most vulnerable.

Therefore, migrants should not be marginalized in the planning process. The study advocates the need to get long-term planning decisions on vulnerable cities right. Further, it highlights three focal areas to consider in the long-term urban planning process. They are:

- Planning for sustainability and for resilience to global environmental change by paying due attention to the following issues:
  - Water availability and quality in growing cities
  - Exposure to environmental hazards such as floods and landslides
  - Long term loss of low lying land
- Urban strategic planning should include the vulnerability of migrants.
- Cities also require more strategic decision-making about their long-term location and protection including future sea-level-rise scenarios as well as rural-to-urban migration projections.

Prof. Geddes reiterated that the report does not suggest that migration should be prevented, but rather be recognized as a challenge that can be managed if planned for.

### **Priority for policy makers 2: Enhancing resilience to global environmental change**

Enhancing resilience to global environmental change involves many measures, such as enhancing livelihoods, and creating appropriate social protection schemes and insurance mechanisms among others. It is important to factor in migration while thinking about these measures to build resilience. Further, migration is likely to continue in spite of enhanced resilience. For these reasons it is important for the policy processes to accept migration as an ongoing phenomenon and explore opportunities in migration to build resilience.

### **Priority for policy makers 3: Migration as a part of the solution**

Worldwide, one of the objectives of adaptation projects has been to prevent the need for migration. This paradigm views migration as a failure of adaptation. Instead, the Foresight study emphasizes the need to make the most out of migration as adaptation. Migration should not be thought of as the last resort to the adverse impacts of global environmental change. The Foresight study argues that carefully planned and managed migration can be an enabler of adaptation. Therefore, the Foresight study highlights the need for an enhanced recognition that migration is a part of the solution rather than the problem, especially from the international funding agencies for adaptation. Drawing on positive externalities associated with remittances and enhanced awareness of the migrant groups among others, the Foresight study makes a strong case for adaptation that builds on migration.

The study emphasizes that overall the adaptation funds should not be used to enable people to stay or move but to enhance people's mobility choices. Prof. Geddes concluded his keynote presentation by highlighting the role of migration as a proactive approach towards building resilience, reducing vulnerability and representing a transformational and strategic approach to adaptation.

**Dr. Neeraj Sinha** provided a background on the drafting of the National Action Plan on Climate Change (NAPCC). Of the eight missions in the NAPCC, Dr. Sinha felt that the mission on strategic knowledge of climate change is of relevance to the discussion on migration and global environmental change. While principally agreeing to the findings of the Foresight report, Dr. Sinha felt that various specific ministries of the Government of India, such as the Ministry of Science & Technology and the Ministry of Environment and Forests, should focus on the scientific measures that could help generate better livelihood means for such displaced or migratory populations. He opined that scientific measures could be aimed at increased harvesting of various resources available in the seas and oceans, and increased agricultural production from a given piece of land.

**Dr. Akhilesh Gupta** provided an overview of the two missions under the NAPCC that are coordinated in the department, namely:

- National Mission on Strategic Knowledge for Climate Change
- National Mission on Sustaining the Himalayan Ecosystem.

He drew the attention of the audience to key environmental drivers of migration in India. There has been an observed increased trend in the frequency and intensity of extreme weather events over the last 50 years. Drawing on the findings of the fourth assessment report of the IPCC, he highlighted that sea level has risen considerably during the same time. Further, he made reference to the projected adverse impacts of climate change on the countries of Bangladesh and Maldives in South Asia. In an Indian context, studies indicate an increase in trends in various hydro-meteorological hazards such as flash floods and droughts. He highlighted that the problem is compounded by lower adaptive capacity in the country. He added that the lack of financial, institutional and technological capacity and access to knowledge enhances the vulnerability of the Indian population to various climatic hazards. Dr. Gupta highlighted the growing urbanization trends across the country.

The second part of Dr. Gupta's presentation focused on outlining the *National Mission on Strategic Knowledge for Climate Change* (NMSKCC). The objectives of the mission were to build scientific capacity, fill the key knowledge gap on climate change and provide policy directions for adaptation and mitigation actions.

He concluded his presentation by acknowledging that significant internal migration is taking place in India. He highlighted the need to map the additional influence of global environmental change on migration within India, and its trans-boundary implications in the South Asian region. He informed the participants that the Department of Science and Technology (DST) of the Government of India is planning to initiate a study on migration and the global environmental shortly under the NMSKCC.

### Discussion

Some of the important issues raised during the discussion were about the need for settling on terminologies such as 'climate migrants' and 'environmental refugees' for policy action; the assessment of economic losses due to migration; the need for an India-scale study on migration influenced by global environmental change. It was felt that the conceptual framework provided in the Foresight report is a starting point for a more detailed analysis at the Indian scale. On the question of terminologies, it was said that Foresight study makes a conscious attempt to depart from formulations such as 'environmental refugees' and 'climate migrants', as those formulations tend to assume a direct causal link between environmental change and migration.

**Amb. Dasgupta** emphasized in his concluding remarks that the poor often lack the capacity and resources to deal with the impacts of climate change. While acknowledging that the Foresight report has important implications for India, he felt that Indian researchers need to closely examine the findings in the domestic context as well as the broader South Asian context. In carrying out the above-mentioned studies, he felt it was particularly important to factor in the vital contribution of inclusive economic and social development in building coping capacities to deal with the impacts of environmental change and, in particular, climate change. He concluded that this had a direct bearing on the scale of migration, both domestic and international.

## Session 2. Migration and Environmental Change in Key Vulnerable Regions of India

*Global environmental change is projected to adversely impact climate-sensitive sectors such as agriculture and forestry in the long term. This is expected to have a cascade effect on livelihoods, particularly in vulnerable areas such as coast lines, mountainous regions and along the river deltas. Thus, this session explored the diverse implications that global environmental change and migration will have on resilience of communities in India.*

**Chairperson:** Dr. D.K. Sharma, Deputy Inspector General (Research and Training), Ministry of Environment and Forest (MoEF), Government of India

**Presentations:** *Global Environmental Change Vulnerability and Migration in India: Overlapping of Hot Spots*, Prof. Ram Bhagat, Professor and Head, Department of Migration and Urban Studies, International Institute for Population Sciences, Mumbai; *Environmental Change and Migration from Indian Sundarban: The Need for an Adaptation Policy*, Prof. Sugata Hazra, Director, School of Oceanographic Studies, Jadavpur University, Kolkata; *Global Environmental Change and Implications for North East India*, Dr. Partha Jyoti Das, Head, Water Climate and Hazard (WATCH) Programme, Aaranyak, Assam

**Dr. D.K. Sharma** introduced the thematic focus of the session. He drew the attention of the participants to the key vulnerable regions in India, namely the coastal zones, dry arid region and the mountainous regions of the country.

**Prof. Ram Bhagat** highlighted in his presentation that India is one of the most vulnerable countries to climate change. He added that India had a large area in highly vulnerable regions such as coastal zones, mountains and dry lands, and vulnerability in these regions was compounded by underdevelopment and a large population dependent on rain-fed agriculture.

He then presented the theoretical framework that underpinned his study on identifying overlapping hotspots for migration and global environmental change. The concept of vulnerability was central to the theoretical framework. He defined the concept of vulnerability as the likelihood that an individual or group will be exposed to the adverse impact of climate change, and their capacity to adjust to it. The theoretical framework consisted of a series of variables - exposure to climate change; the underlying socioeconomic conditions; external drivers such as globalization, political factors and conflicts - that, either singularly or in combination, influence the vulnerability of communities leading to mobility outcomes as a livelihood strategy. The framework viewed vulnerability as the net outcome of interaction between climate change stress and the socio-economic capacity to adapt. Migration is one of the potential means of adaptation to climate change.

Prof. Bhagat made a reference to O' Brien's (2004) study that examined the exposure of Indian agriculture to the impacts of climate change and globalization. The study mapped district level mapping of climate change vulnerability, which was measured as a composite of adaptive

capacity, district vulnerability and climate sensitivity (dryness and dependency on monsoon) under exposure to climate change. Making multiple references to existing studies, he observed that there are about 100 million seasonal and temporary migrants in India, predominantly from scheduled tribes (STs), scheduled castes (SCs), and landless rural households.

He observed that coastal states are more urbanized and some of them are net in-migrating states. He highlighted that a population of about 73 million live in the low elevation coastal zone (the area located between 0 and 10 metres above sea level) comprising about three percent of the land area and six percent of India's population. He added that India's prominent mega cities like Mumbai, Kolkata and Chennai are located in the highly vulnerable coastal region. Further, he observed that quite a number of industrial, commercial and tourist centers like Surat, Mumbai, Panaji, Mangalore, Trivandrum, Kochi, Vishakhapatnam and Puri that have attracted migration are located in the coastal regions. Based on existing studies, he emphasized that the coastal states of Goa, West Bengal, Kerala, Tamil Nadu, Odisha, and Gujarat are most vulnerable to the impacts of climate change. Through a matrix, Prof. Bhagat demonstrated that high in-migration and high biophysical vulnerability overlap in the case of coastal regions. In dry land regions that are characterized by high biophysical vulnerability, the matrix indicated that there is very high out-migration.

Making reference to the fundamental right to migrate and settle as guaranteed by the Indian constitution, Prof. Bhagat opined that while the constitution guarantees freedom of movement and settlement within the territory of India, there are strong barriers to migration. He contrasted the Indian case with that of China where migration is highly regulated and restricted.

He concluded his presentation by examining key policy issues associated with migration influenced by global environmental change. He suggested that migration must be recognized as a means of adaptation to climate change and also an outcome of choice.

Making reference to the work on the Social Inclusion of Migrants in India by UNESCO-UNICEF (2013) he added that negative attitudes towards migration need to be eradicated. He advocated for the inclusion of migrants in various social security programmes and the easing of institutional barriers to obtaining various documents like proof of identity. He highlighted the need to mainstream climate change and migration into urban planning and into programs like JNNURM. He advocated for strengthening the national database on migration (Census and NSSO).

**Dr. Partha Jyoti Das** highlighted the natural, anthropogenic and climate drivers of environmental change in the context of northeast India in his presentation. He observed that it is difficult to differentiate internal migration that is triggered only by environmental factors. Based on the primary observations, he indicated that environmental causes definitely had a strong influence on people's decision to migrate. He added that a large number of people, especially young males, have migrated from places vulnerable to natural disasters. Reduction in ecosystem services and diminishing soil fertility had also compelled people to move to other places in search of alternative livelihoods or resources.

He then elaborated on the nature of internal migration in northeast India. He observed that traditionally migration has tended towards cities like Guwahati. In recent years, evidence suggests that people migrated to states like Karnataka, Tamil Nadu, Kerala, Andhra Pradesh, Gujarat and Maharashtra. He observed that the lack of documentation, research and policy support towards

internal migrants has been a serious constraint for any action to enhance their resilience.

He made reference to important natural hazards with an anthropogenic footprint in the region. The region is plagued by multiple disasters like droughts and floods, riverbank erosion and land degradation. He added that ecosystem degradation enhanced the sensitivity of the region to these disasters.

He provided an overview of the flood situation in northeastern India, focusing more on Assam. Pointing towards government estimates of the years between 1953 and 2004, Dr. Das stated that all together the seven states of the region suffered a loss of Rs. 1,729 crores<sup>1</sup> due to flood damage. He added that Assam has the largest flood-prone area in the country, with 40 percent of the state's total geographical area prone to floods. He highlighted that the most visible impact of floods has been riverbank erosion. Surveys indicated that there has been an increased rate of bank erosion in recent decades in the river Brahmaputra and its tributaries.

Dr. Das made references to important studies on climate change in the region. Studies indicated an increasing trend in rainfall during monsoon months and a decreasing trend in the winter months. He added that there has been a significant retreat of glacier mass and volume in the upper parts of the Brahmaputra river basin. He opined that this could lead to hydrological extremes of floods and droughts affecting the livelihoods of people in the Brahmaputra basin. In 2006 15 districts of Assam had below normal (nearly 40% below normal) rainfall in the region. More than 75 percent of the 26 million people associated with livelihoods related to agriculture were affected.

He concluded his presentation by acknowledging that a large proportion of internal migration is caused wholly or partly by environmental processes and changes. He added that climatic change adds another layer of complexity and uncertainty to this interplay of cause-and-effect dynamics, thus enhancing adverse impacts on the adaptive capacity of vulnerable people that may result in voluntary or involuntary displacement and migration. He opined that anthropogenic interventions such as the construction of river dams in the region could further exacerbate the natural hazards and associated factors that contribute to internal migration.

**Prof. Sugata Hazra** discussed high population density in the Indian Sundarban. He highlighted that the state of West Bengal is highly vulnerable to climate change, with the southern part of the state being vulnerable to sea level rise, the western part of the state to droughts, and the northern part of the state to extreme precipitation events. He added that the high population density of the state has made it highly sensitive to the impacts of climate change.

He elaborated using the case of the Ganges Brahmaputra delta in the Sundarban region of southern West Bengal. While observing that there are a lot of studies done on the Bangladeshi part of Sundarban, the Indian Sundarban has been under studied. Drawing on the study by Hutton (1994), Prof. Hazra mentioned that a sea level rise of 1 metre could displace 3 million people from the Indian Sundarban region. Referring to the same study, Prof. Hazra opined that there is scope for overestimation in research studies. He stressed the need for detailed *in situ* studies to avoid gross overestimation of the impact and consequent quantum of migration.

He provided a brief introduction to the biophysical and socio-economic characteristics of the Sundarban delta. He highlighted that the region is reeling under a series of stressors such as cyclones and floods. He observed that there has been a considerable change in the sea surface

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<sup>1</sup> 1 crore is equal to 10,000,000 (ten million) in the Indian numbering system

temperature in the northern Bay of Bengal region. Further, he pointed to an analysis of the data from the Sagar Island tidal station that indicated a rise in sea level. He also observed that in the recent past there has been a delay in the onset of monsoon by over 15 days. He made reference to the Indian Meteorological Department's observation of an increasing frequency and intensity of cyclones in the northern Bay of Bengal region.

He highlighted the fact that the embankments in the Sundarban islands are the lifeline of the region. Making reference to the submergence of the first inhabited island in the region - the Lohachara Island in 1996 - Prof. Hazra highlighted that the submergence resulted in the displacement of island dwellers. He added that during the period between 1975 and 2012 there has been significant erosion of land area in the region. He mentioned that the islands of Suparibhanga and Bedford were submerged along with the Khasimara, Khasimara Char and Lakshmi Narayanpur Bagpara. He highlighted that the island of Ghoramara succumbed to severe coastal erosion leading to the displacement of around 6 000 people from the five villages on the island. He opined that a more sustainable alternative for the Sundarban region will be to initiate a planned resettlement of 1 million people from extremely vulnerable low-lying areas to the hinterlands of Sundarban.

He concluded his presentation by stressing the need to anticipate migration due to both, slow onset events like droughts and rapid onset events like cyclones. He further called for novel approaches to adaptation that are gender-sensitive. He noted that the issues of displacement and rehabilitation of internally displaced people due to climate change should be given due consideration in the design of policies and programs such as the NAPCC. He also stressed the need to evolve better scientific methods and frameworks of estimating migration from sending area and receiving area.

**Dr. Sharma**, in his remarks as chairperson, observed that there are significant data and research gaps on the issue of global environmental change and migration in India. He also added that there is a need to integrate the concerns of global environmental change and migration into our planning process. He opined that issues such as this should be addressed through an integration of perspectives from science and the social sciences. He made reference to the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) scheme of the Government of India that dealt with migration due to economic reasons. Acknowledging the inevitability of migration, he termed it a 'necessary evil'.

### Discussion

An inherent mismatch in the design and implementation of policies and programmes in different scales of government was highlighted. The issue of the lack of research funds to carry out studies at the local level was also raised. Framing the issue of migration in Sundarban as an adaptation strategy or as an adverse impact of climate change was questioned.

### Session 3. Regional Perspectives

*South-Asia has been identified as one of global hot-spots of climate change impacts, which in turn impacts various drivers of migration in the region. Furthermore, the interplay of global environmental change and migration varies at different governance scales. This session focused on different regional dimensions of migration in the context of global environmental change, and notably climate change.*

**Chairperson:** Prof. Sanjoy Hazarika, Centre for North East Studies and Policy Research, Jamia Millia Islamia University, Delhi

**Presentations:** *Climate Change and Human Insecurity: Migration as an Adaptation Strategy in Bangladesh*, Dr. Tasneem Siddiqui, Professor Political Science, University of Dhaka and Founding Chair Refugee and Migratory Movements Research Unit (RMMRU), Bangladesh; *Labour Migration, Remittances, and Adaptation to Environmental Change: Case Study from the Hindu Kush Himalayan Region*, Mr. Soumyadeep Banerjee, International Centre for Integrated Mountain Development (ICIMOD), Kathmandu, Nepal; *Migration and Climate Change: the Experience of Pakistan*, Mr. Hasan Rizvi, Chief Operating Officer, LEAD Pakistan

**Prof. Sanjoy Hazarika** introduced the theme of the session and highlighted the need to consider the scale, economics and political considerations of migration in our analysis. He also stressed the need to have policies that are inclusive and sensitive to the concerns of vulnerable populations.

**Dr. Tasneem Siddiqui** presented the findings of the empirical study that was carried out in Bangladesh on the migration experiences of people from regions exposed to climatic stresses through a short documentary titled *Living on the Go*.

*Living on the Go* highlights the high vulnerability of Bangladesh to climate change and examines ways in which people adapt to diverse stressors through migration. Travelling across Bangladesh, the documentary explores various determinants of vulnerability in Bangladesh. In the Ganga Brahmaputra delta of Southern Bangladesh, which was severely affected by Cyclone Aila, the livelihood base of vulnerable populations has been eroded in spite of improved coastal defence mechanisms. In this context, the decision to migrate or not has been a challenging one. The documentary traces the fate of two brothers, one of whom migrated to a city while the other stayed in the village post Cyclone Aila. The documentary then highlights the complex social institutional factors associated with migration. It further adds that migration remittances have enabled people to cope with diverse stressors with little institutional support. Internal migrants in Bangladesh lack government support and are engaged in informal sectors creatively and without any state assistance. Due to the lack of recognition of internal migrants, they have been subjected to exploitation. The documentary questions the dominant approach of designing interventions that largely focus on preventing migration. It asserted that migration is an important strategy to deal with all kind of stressors, including climatic stressors. The documentary concludes by stressing the need to have appropriate rights and social protection mechanisms for internal migrants.

Based on the quantitative analysis of people's responses, Dr. Siddiqui asserted that it was difficult to distinguish climatic drivers *vis-à-vis* non-climatic drivers of migration. While the study recognized that climate change is an influential driver of migration, it is also driven by a host of socio-economic factors. Dr. Siddiqui reiterated that migration is multidimensional, and that it is important to acknowledge that not all types of migration are sensitive to climate change. She stated that most of the respondents of the survey attributed socioeconomic conditions such as poverty, unemployment and other socioeconomic reasons as their reasons for migration. In contrast, only 10 percent of the respondents attributed their primary reason for migration to climatic stresses.

Based on a review of existing policies on migration, disaster management and climate change, Dr. Siddiqui stressed the need to accommodate voluntary labour migration as one of the adaptation tools. She further added that overseas employment policy should incorporate provisions to facilitate international migration from climate change-affected areas. She called for the design of a comprehensive policy that aimed to protect the rights of internal migrants. She concluded her presentation by stressing that it is important to consider voluntary labour migration, both internal and international, as one of the adaptation strategies.

**Mr. Soumyadeep Banerjee** highlighted in his presentation the diverse types of adaptation involved such as anticipatory and reactive measures, planned and autonomous among others. He then outlined the main objective of the study that was carried out by ICIMOD. The objective of the study was to understand the circumstances under which labour migration can be considered an adaptation to increased stresses and shocks related to climate or environmental change. He observed that migrants not only bring remittances but also new skills, social networks and technology that enhance their resilience to deal with climatic stresses. Drawing from an earlier study on remittances, Mr. Banerjee pointed out that the mean volume of remittance per transfer was estimated at USD 80 in Assam. He added that remittances contributed to about 45 percent of annual household income in Assam. He highlighted that most of the remittances were used to cater to necessities like food, housing, consumer goods, health and education. Another important observation from the study was that remittance inflow increased in the aftermath of floods, and was used to procure provisions during the lean period. He highlighted the resilience potential of remittances by stating that in Assam remittances have been used to rebuild livelihoods, reconstruct houses, and for flood preparedness. He observed that remittances not only enabled the diversification of incomes but also sectoral and geographical diversification, thereby reducing their dependency on a single sector, region and livelihood.

He provided an overview of the scope, approach and key research questions that shaped their ongoing study of migration and global environmental change. He added that the study chose to contrast migrant households and non-migrant households from the case study villages. The study intended to understand if migrant households had increased capacity, better flexibility, and better strategies to deal with climate variability driven by floods. He highlighted that the ultimate objective of the study was to contribute to the empirical evidence for the global discourse on migration and adaptation. He added that the study particularly focused on providing actionable recommendations for the concerned government institutions, non-governmental organizations, and international development agencies to deal with the issue of migration in the context of environmental change. On the methodological approach followed in the study, Mr. Banerjee stated that the study follows a mixed methods approach through the use of quantitative as well as qualitative research methods. He also highlighted that an analysis of various policies and

programmes on disaster management, social protection, environment and climate change was underway with the intention of identifying opportunities and gaps in existing policies to factor in migration.

**Mr. Hassan Rizvi** clarified at the outset that his presentation was based on a research study carried out by his organization as a part of their initiative on research on vulnerability and resilience. He highlighted that the study attempted to synthesize existing knowledge on climate change and migration, and was the first of its kind to be initiated in Pakistan. He further elaborated on the significance of the study by stating that the study aimed to understand the situation in Pakistan through the application of cutting edge methods, theories, and conceptual models. He elaborated on the key objectives of the study. The primary objective of the study was to identify major hotspots of environment- and disaster-related migration in Pakistan, and attempt to mainstream the concept of climate change-triggered migration in Pakistan and identify legal, policy and financing mechanisms to be put in place for the regulation of migration.

Mr. Rizvi clarified the scope of the study as the study is largely qualitative in nature and is based on secondary literature and key informant interviews. He also clarified that the study examines migration as an adaptation strategy as well as an impact of climate change.

In the last part of his presentation, Mr. Rizvi shared key findings from the study. One of the important findings from the study was that environmental drivers seldom work in isolation from the social, economic and demographic issues. Noting that geography is an important determinant of vulnerability, he further added that it is the political economy that determines the extent and intensity of consequences suffered by vulnerable communities. He also cautioned about the simplistic assumption of a direct deterministic link between climate change and migration. However, he added that the impacts of climate change can interact with existing socio-economic vulnerabilities to create new forms of migration in future. He also highlighted the urgency of the need to situate migration within the framework of adaptation.

He acknowledged the absence of a national migration policy in Pakistan as an important policy gap as it could lead to reactive interventions with maladaptive outcomes. He opined that policy responses must build on an understanding of the existing patterns of internal and international migration as they already have some links with environmental change. He also called for a more robust census data collection in Pakistan by factoring in internal migration due to environmental factors. While highlighting the need for an official recognition of the potential of migration as an adaptive strategy to climate change, he concluded his presentation by stating that it was essential to mainstream migration-related concerns into development and climate change policy sooner rather than later.

**Prof. Sanjoy Hazarika** observed that a national policy on migration was extremely critical and necessary in the region. Through the example of migrants from northeastern India residing in Delhi, Prof. Hazarika highlighted that they were discriminated against due to their difference. He opined that it was therefore important to understand the complex dynamics associated with migration in the present context before even trying to comprehend the climatic influences of migration.

## Discussion

Questions were raised on the receptiveness of various governments in the region to the issue, and the associated realities of working with those governments. Making reference to the National Youth Policy in India, which inadequately factors in migration, a question was raised on the experiences of Bangladesh and Pakistan in mainstreaming migration concerns into youth policy. It was mentioned that Pakistan has a new climate change policy that was launched at the beginning of 2013. The provincial governments were more receptive and could be engaged in a constructive dialogue on the issue. Increasing trends in the feminization of agriculture due to out-migration of the males in the household was highlighted.

## Wednesday 5 March 2014

### Session 4. Social inequalities and Compounded Vulnerabilities

*Recent research indicates that vulnerability as well as migratory responses is contingent on social inequalities at the intersection of gender, ethnicity, age and economic means. There is hence an urgent need to integrate such perspectives in policy frameworks addressing migration in the context of global environmental change. This session highlighted the need to integrate bottom up perspectives in the understanding of migration induced by global environmental change.*

**Chairperson:** Shri B. N. Satpathy, Senior Adviser (E&F and S&T), Planning Commission, Government of India

**Presentations:** *Holding the Fort: A Case Study on Remittances, Adaptation and Gender from Assam*, Dr. Suman Bisht, International Centre for Integrated Mountain Development (ICIMOD), Kathmandu, Nepal; *Gender, Migration and Climate Change in the Indus Basin*, Dr. Giovanna Gioli, Post-doctoral Researcher, University of Hamburg, Germany; *Migrating to adapt? Contesting Dominant Narratives of Migration and Climate Change*, Ms. Himani Upadhyay, Associate Fellow, The Energy and Resource Institute (TERI), Delhi

**Shri B.N. Satpathy** introduced the speakers and thematic focus of the session. He then shared the details of relevant activities undertaken by the Planning Commission of the Government of India. He stated that sustainability is the cornerstone of the inclusive growth agenda pursued in the 12<sup>th</sup> five year plan of the government. He further elaborated that the impacts of climate change could undermine efforts in reducing social inequality and group inequality. He asserted that the poor are more vulnerable to the impacts of climate change. He observed that if we do not deal with climate change in a timely manner, extreme weather events could adversely impact the poor and the marginal sections of society.

**Dr. Suman Bisht** raised the fundamental question 'Who migrates?' in her presentation, while acknowledging that migration is a key response to environmental and non-environmental pressures. Based on findings from research studies in the river basins of the Hindu Kush mountainous region, she stated that migration is highly gendered in terms of both drivers and impacts, which differ between men and women due to inherent hierarchies and differential relationships that exist in households. She observed that in the Hindu Kush Himalayan region, migration as part of a livelihood diversification strategy is generally restricted to men.

She highlighted the significance of the Hindu Kush mountain region from a climate change context. Highlighting that they were the '*water towers of Asia*', with the glaciers in the region giving rise to nine major river basins, Dr. Bisht added that they have ecological, aesthetic, and socio-economic significance for not only the people who derive their day-to-day subsistence from the mountains but also for the population downstream who depend indirectly on these resources for irrigation and drinking water.

She highlighted that in South Asia adaptive migration as a response to climate-related environmental changes is often a gendered response. She also drew the attention of the participants to the fact that in South Asia household decision making is highly contested, and women often have unequal bargaining power in decision making. She asserted that the gender dimension of adaptations has not been adequately understood, and added that it is important to understand gender dimensions of migration in the context of adaptation. She highlighted the role of remuneration in strengthening the adaptive capacity of women in dealing with environmental stressors like floods in the context of male out-migration.

Through the example of increasing amounts of fallow land in Nepal due to lack of labour, Dr. Bisht stressed that the out-migration of men enhances the vulnerability of the women of the household who stay back. She concluded her presentation by stressing the need to have a targeted approach towards women in the design of adaptive policies to deal with climate change and migration.

**Dr. Giovanna Gioli** explored the nexus between remittances, social transformation and global environmental change in Pakistan through a gender lens in her presentation. She stated that remittances through labour migration are increasingly understood as a possible positive form of adaptation to deal with global environmental change. She argued that it was important to understand the underlying social context in dealing with global environmental change and migration. She further asserted the need to understand gender both as a structure and as a process that underpins a social context.

Through the case study from the Swat Valley in Pakistan that was severely affected by the 2009 Indus river floods, Dr. Gioli noted that there has been a massive labour migration to Saudi Arabia and the United Arab Emirates from the Khyber Pakhtunkhwa province of the Swat Valley, and the region receives a very large volume of remittances. She reiterated that the migration was highly gendered with only the male members of the household migrating out of the region. She then outlined the methodological approach of the study as using a mix of quantitative and qualitative methods.

She provided a brief outline of the social structure in the Swat Valley, which has been traditionally stratified according to hierarchies shaped by gender, ethnicity, caste and land ownership. Owing to the unique geographical setting of the region, she noted that social and ecological niches have co-existed, shaping ethnic relations in the region. She identified three socio-ecological zones in the region: the Kalam forest area in the northern part dominated by ethnic Kohistani; the agro-forest zone of Malam Jabba; and the lower scrub forest zone in Barikot, the most densely populated and urbanized area, inhabited predominantly by Pashtun, the land owners, and Gujars, the cattle herders. She observed that the traditionally marginalized communities such as the Gujars are increasingly investing in land and are altering existing social dynamics in the region. She highlighted that social status gained by a migrant-sending household coupled with the technological improvement brought by remittances has led to a reduction in women's work. Further, she added that the Gujar women no longer labour outside the household due to the newly-acquired higher standard of living and the associated social status.

Dr. Gioli observed that there has been an increasing tendency to imitate and comply with the Pashtun code of conduct. She observed that the practice of *purdah* (gender segregation) was widely prevalent in the region and is interpreted as an indicator of the household's honour. She further added that adherence to *purdah* (traditionally practiced by Pashtuns) is socially stratified

and depends on economic resources and on the position occupied by the household in the social divisions of the village.

In the aftermath of the floods of 2009-2010, she opined that due to migration people were able to relocate and self-organize quickly. She concluded that migration functions as an insurance against risk at the level of the household in the face of environmental and economic shocks and is undertaken both within the country and beyond it.

**Ms. Himani Upadhyay** chose to highlight the need for *in situ* adaptation of future migrants by questioning dominant narratives around the discourses on migration in her presentation. She opined that popular discourses on migration as adaptation or as failure to adapt do not resonate with on-the-ground perspectives of people in regions such as Maldives and Lakshadweep islands who have been identified as future climate migrants in popular narratives. She questioned the tendency in popular discourses to assume a direct cause-effect relationship between global climate change and migration. Drawing attention to the work of Castles (2002) she highlighted that estimates of migrants are just estimates of populations at risk. While raising several important questions - such as looking at migration as adaptation if people were forced to migrate, or voluntarily migrated for survival with little possibility to return to their homeland - she highlighted that migration as an adaptation to climate change can be constrained by variations in risk perceptions, the distant nature of climate change and failure to link current experiences with future events.

She further discussed the issues through case studies of Lakshadweep and Maldives. She highlighted that a sense of 'place belongingness' was important for people in the islands in terms of their identity, culture, local traditions, and community cohesion. Differing from the catastrophic framings of the issue of climate change on small islands, she added that climate change is not an everyday priority in the region. She indicated that it was important to enhance local research capacities, and migration as an adaptation option should be discussed locally. She concluded her presentation by stating that there was a need to promote *in situ* adaptation focusing on local priorities, people's choices and their institutional contexts rather than simply to foster migration.

### Discussion

There was a question on categories of terminologies used to understand and assess people's perceptions of climate change. In the context of India, there was a question that inquired into the nature of the gendered utilization of remittances. Further, there was a question as to whether short term migration and remittances can offset the need for long term migration and dislocation. During a discussion of vulnerable communities' perceptions of climate change, it was stated that researchers focus on weather events such as precipitation change and floods instead of an umbrella term like climate change. Perceptions were often shaped by past experience, and it was important to elicit responses through the use of terms that people can relate to. In response to a question on the gendered nature of remittance use, it was highlighted that there has been a huge body of work on issues such as the feminization of agriculture and education.

## Session 5. Global Environmental Change, Migration and Human Rights

*Studies suggest that global environmental change induced migration can have adverse implications for the realization of entitled human rights. Therefore there is a greater need to integrate human rights principles in the discussion on global environmental change induced migration and vice versa. While today's international legal framework provides a degree of protection to those displaced by environmental factors and climatic events, there is no global consensus on a definition for such a group. Likewise, there are gaps in the legal system in recognizing migration in the context of environmental change. How can we facilitate recognition of the mobility of vulnerable communities in the policy process and effective protection of basic human rights?*

**Chairperson:** Dr. Anil Gupta, Associate Professor, Head of the Policy, Planning and Cross Cutting Issues Division and Training Section, National Institute of Disaster Management (Ministry of Home Affairs, Government of India)

**Presentations:** *The Migration-Asylum Nexus: The Challenges of Mixed Migration and Impact on Refugees*, Mr. Dominik Bartsch, Chief of Mission, UNHCR India; *Climate Change and Migration: Assessing the Impact and Consequences*, Ms. Sabira Coelho, Consultant, International Organization of Migration (IOM Bangkok)

**Panellist:** Dr. Nasreen Chowdhury, Assistant Professor, Department of Political Science, University of Delhi and Member, Calcutta Research Group (CRG)

**Dr. Anil Gupta** highlighted in his introductory remarks that the climate change challenge comprises many cross-cutting issues spanning multiple sectors and research domains. He made reference to disaster risk reduction and gender issues among others. He stressed the need to integrate human rights concerns into efforts to deal with climate change, especially at the local level. He flagged several important concerns in his remarks, such as the need for international frameworks and laws that pay adequate recognition to environmental migration, particularly as a result of climate change. He highlighted that there were severe 'push and pull' factors driving migration. He opined that climatic hazards were an important push factor for migration in India. He also highlighted the conceptual difference between environmental migration and disaster migration. He stated that environmental migration is a very slow and chronic process, whereas disaster migration can be a sudden process. He called for a holistic understanding of vulnerability, paying due attention to macro conditions as well as micro contexts in a particular region. Opining that internal migrants were equally vulnerable, he called for policies to be more sensitive to the concerns of internal migrants. He also highlighted the need to understand the environmental dimensions of migration and associated conflicts.

**Mr. Dominik Bartsch** highlighted the humanitarian challenges of climate change and associated migration in his remarks. He clarified the conceptual differences between the four terms 'refugee', 'migrants', 'internal migrants' and 'internally displaced people'. He stated that a refugee has a guaranteed right by international convention. He added that to be considered a refugee,

the individual needs to demonstrate persecution in their home country leading to a compelling condition to cross the border. He highlighted that although the internationally accepted legal definition of 'refugee' does not include 'climate change refugees', this does not imply that those in voluntarily displaced due to environmental factors and those who have lost their homes and families due to natural disasters are any less morally or legally worthy of international protection than those traditionally identified by the 1951 Refugee Convention. He provided the examples of Tibetans and Sri Lankan Tamils to illustrate this concept.

Drawing the attention of the participants to the concept of migrants, Mr. Bartsch added that migrants move voluntarily to seek better living conditions. Extending a similar line of thought, Mr. Bartsch stated that migrants within a country were termed 'internal migrants'. He added that internally displaced people are similar to refugees, but move only within the borders of their home country.

He added that there was a plethora of reasons driving migration. He highlighted that climate change has the potential to exacerbate political, economic and social marginalization, and induce chronic poverty and underdevelopment. He added that it is important to recognize the emerging humanitarian challenges of climate change to mobility, and stressed the need to work towards improving institutional frameworks and international laws to address this issue. He also stressed the need to strengthen supporting recovery mechanisms and sustainable development efforts in vulnerable areas.

Mr. Bartsch drew the attention of the participants to the Nansen Initiative, launched in October 2012 by the governments of Norway and Switzerland. He added that the Nansen Initiative is a state-owned consultative process, outside of the United Nations, to build consensus among interested states on how best to address cross-border displacement in the context of sudden and slow-onset disasters. By giving reference to the legal backdrop provided for the protection of refugees by the UNHCR, Mr. Bartsch highlighted the evolving international mechanisms to internalize the emerging issues of climate change into the discussion on migration and displacement.

**Ms. Sabira Coelho** highlighted in her presentation the key concerns associated with the issue of the climate change and migration nexus in the Asia-Pacific context. She stated that the Asia-Pacific region is home to about 4 billion people, of which over 1.8 billion are estimated to be poor. She stressed the fact that the region has been exposed to multiple hazards and was one of the global climate change hotspots.

She further elaborated on the challenges of addressing the issue at the Indian national level. She stated that India too had witnessed a series of climatic hazards such as extreme precipitation events, floods, droughts and cyclones. She also highlighted that in the year 2012 alone over 9 million people were displaced in India due to natural disasters. She referred to various indices devised by global agencies to map vulnerability and demonstrated that India has been listed as highly vulnerable in each of the indices. She emphasized that the sectors of agriculture and coastal regions in India were particularly vulnerable to the impacts of climate change. She added that both sudden and slow-onset events impact food production, livelihoods and settlement options, and ultimately threaten the realization of developmental objectives.

She highlighted that India had staggering urban growth and it was necessary to examine urbanization from a climate resilience perspective. She made mention of some of the existing Indian policies and programs on climate change such as the National Action Plan on Climate Change

(NAPCC), and the Disaster Management Policy of 2008. Highlighting the inherent weakness in the design of these policies, Ms. Coelho pointed out that these policies do not address the issue of internally displaced persons. Further, she added that it was important to consider migration as a strategy for adaptation within the framework of these policies.

The second part of her presentation focused on elaborating on the status of migration existing in international discussions on climate change under UNFCCC. She highlighted that migration had been identified as the “greatest single impact” of climate change in the first assessment report of the Intergovernmental Panel on Climate Change (IPCC). She noted that most of the global discourse on migration in the international climate negotiations approached it from a security perspective.

She drew the attention of the participants to paragraph 14(f) of the Cancun Declaration of the Conference of Parties (CoP 16), which invited all parties ‘to enhance action on adaptation by taking measures to enhance understanding, coordination, and cooperation with regard to climate change induced displacement, migration and planned relocation’. She also highlighted the Rio+20 declaration of the United Nations Commission on Sustainable Development that made a commitment ‘to seize the opportunities and address the challenges associated with demographic change including migration’.

She observed that one significant limitation in the existing discourse on migration was the overemphasis on the negative dimensions of migration in the context of climate change. She stressed that this thinking was an important factor in limiting effective mainstreaming of migration influenced by climate change into policies. She also highlighted the need to have enhanced collaboration and cooperation amongst all stakeholders.

She provided a brief overview of the position of her organization, IOM, on the issue of climate change and migration. She highlighted that preventing forced migration due to environmental factors to the furthest extent possible was central to their objectives on the issue. She further added that IOM intends to facilitate migration as one of the important climate change adaptation strategies.

She concluded her presentation by calling for a proactive approach from the policy-making community by considering migration as a viable coping and adaptation strategy. She also felt that it was necessary to raise the awareness of various stakeholder groups on the complex linkages between migration and climate change.

**Dr. Nasreen Chowdhury** provided a brief background on her research group. Based on the work of the Calcutta Research Group, she highlighted resource crises driven by environmental degradation as an important driver of forced migration. She highlighted that CRG has been examining the questions around the politics of ownership and access to resources that shape migration outcomes. She observed that the questions of access were steeped in gender and caste hierarchies and had significant bearing on forced migration. Making reference to the *Voices Report* of the Calcutta Research Group, she observed that out of 206 people interviewed in India on comprehension of the reasons for internal displacement, most of the respondents weren’t able to pinpoint specific reasons for displacement. Making reference to the work of Mukhopadhyay (2009) on relief and rehabilitation activities in the aftermath of Cyclone Aila, she noted that people fought over distribution of the relief materials. She further added that in some villages there were apprehensions that the government would acquire more land for the construction of embankments.

She therefore highlighted the need to consider the issue of resource conflicts in the discussions around migration and global environmental change. She opined that a resource conflict framework provided a useful tool to entangle the power relations that govern access to resources, particularly debates on relief and redistribution. She then referred to the accounts of Nirmal Mahato who demonstrated that environmental degradation led to the migration of people from Purulia in West Bengal to Assam and nearby coal fields. She highlighted that the degradation of the environment was primarily driven by the colonial policies of the time, such as encouragement to convert forests into cultivable land, and the increased use of ponds as a source of irrigation. She added that these policies led to a series of droughts in the region as the traditional hydrological management system of the tribal population in the region had been disrupted. Highlighting various research studies, she stated that large-scale migration due to famines during colonial India had much to do with the policy of the state that encouraged commercial agriculture at the cost of eroding traditional institutions and people's way of life.

Drawing the audience's attention to the floods of the river Kosi in Bihar, she suggested that breaching embankments affected millions of vulnerable people in the Saharsa, Madhepura and Supaul regions of the state. She observed that most out-migration from the state of Bihar was to the states of Punjab and Haryana. Based on the case studies, she asserted that it was difficult to point out one single reason for migration, and added that resource crises and control have been important factors in shaping migration decisions.

## Session 6. Migration - The Role of Human Agency

*Migration, be it internal or international, is a multi-causal and complex phenomenon where the role of human agency is paramount. This session intends to highlight the non-environmental drivers of migration in India. It is imminent to understand the nature of complex interactions that occur in the interface of demographic change, regional imbalances and urbanization in shaping migration patterns. The discussions and deliberations of this session laid the conceptual foundation to understand the nature of migration challenges and focus on the socio-economic and cultural factors that explain the changing pattern of migration and urbanization.*

**Chairperson:** Shri Rajeev Sadanandan, Joint Secretary and DG, Labour and Welfare Division, Ministry of Labour and Employment, Government of India

**Presentations:** *Migration in India: Provision in Schemes*, Shri Rakesh Ranjan, Advisor Urban Affairs, Planning Commission, Government of India; *Understanding Internal Migration: Features, Trends and Policy Challenges*, Prof. Ravi Srivastava, Jawaharlal Nehru University (JNU), Delhi; *Understanding Internal Migration and Urbanization in India*, Prof. Amitabh Kundu, Jawaharlal Nehru University (JNU), Delhi

**Panellist:** *A Few Data Stories about Migrants*, Dr. Partha Mukhopadhyay, Centre for Policy Research (CPR), Delhi

**Shri Rakesh Ranjan** highlighted in his presentation the multi-scalar nature of governance mechanisms in India at the national, state and local levels. He added that the dynamics within the government varied across the scales, and the state level was the most appropriate unit to initiate a dialogue on migration. He highlighted that a city should provide for the basic needs of migrants such as water, sanitation, transport, and shelter among others, through affordable and accessible mechanisms.

He drew attention to the mismatch between the design of policies and programmes for their implementation. He highlighted the case of JNNURM, the single largest intervention in India. He added that the central objective of the mission was to promote inclusive urban development, which has not been realized in any of the 65 target cities of the mission. He asserted that basic urban services should be extended to migrants, and that it was important to treat migrant populations on a par with the urban poor. However, he also acknowledged that the migrant is not equally placed to access the services provided by the government. He then provided a snapshot of a series of government interventions in urban areas that had a bearing on the welfare of urban poor in general, and on the migrant population in particular.

He referred to the case of massive investments that were made in urban transport in the 11<sup>th</sup> five year plan, and clarified the rationale for the investment. He stated that policy makers hoped that investments in transport would catalyze the development of labour markets and make the cities more inclusive. He highlighted that the union government had responded to the recommendation of the Prof. Kundu Committee Report (2012) on housing shortage by providing assistance of up to 75 percent of capital costs and up to 75 percent of operation and maintenance for shelters for the homeless under the *National Urban Livelihood Mission*. He also added that there has been

a lukewarm response to the scheme from the states as no proposals were received from the states. Giving this example he reiterated the importance of constructive engagement with the state governments.

He highlighted the case of *Rajiv Awas Yojana*, the national housing programme that had provisions for incremental improvements of both slums and rental housing. He also highlighted that a bill for the protection of livelihoods and regulation of street vendors has been passed by parliament to safeguard the interests of street vendors, who are often migrants.

He observed that there was no discrimination in the delivery of the mentioned programmes based on domicile status. He felt that a lack of awareness of various schemes has been a significant barrier to their effective utilization by needy communities. He observed that there is a greater need to improve access to publicly-provided services in India.

He highlighted the need for a fundamental shift in approach to managing cities: from providing basic services to making cities an engine of growth with efficient labour markets.

**Prof. Ravi Srivastava** pointed out in his presentation that in the last two decades there have been new patterns of agglomerating urban growth. He also added that during the same period there had been slow growth in the sectors of agriculture and rural livelihoods. He highlighted that over recent decades there has been increasing inter-sectoral productivity between the organized sector and unorganized sector, as well as among primary, secondary and tertiary sectors.

He added that employment growth in services and construction had been brisk. He observed that most new employment was in the non-farm sector. Referring to the negative growth in the agricultural sector, Prof. Srivastava added that construction has witnessed around 40 percent of employment growth over the last two decades. As a backdrop to these changing employment trends, he highlighted that the nature of employment that existed in the construction, manufacturing and service sectors attracts migrant populations. He reiterated that agriculture and rural livelihoods have been under tremendous stress over the last two decades.

Referring to the changing patterns in labour mobility due to changing patterns of employment, Prof. Srivastava observed that new patterns of long-distance and inter-state migration have emerged in the recent past. He further highlighted the slow growth in core urban areas in response to industrial and urban policy.

He observed that it was very important to address the needs of vulnerable migrants. He added that there has been enormous diversity in patterns of out-migration, with very different patterns of vulnerability for different groups of out-migrants. He highlighted that rural-urban circulation is now driven mainly by the rapid increase in construction activity and demand for services in the cities. He added that most of the vulnerable migrants were concentrated in casual work, informal self-employment, and informal regular work. He estimated that about one in six workers could be a vulnerable migrant, with the total vulnerable migrant population estimated to be about 80 to 90 million.

In contrast to China, Prof. Srivastava observed that there was a lack of systematic thinking on migration policy in India. He called for strong advocacy for such a policy. He outlined the probable elements of the migration policy as including, among other things, a strong regional and rural development framework, an inclusive urbanization process, and adequate social protection for the migrants.

He further called for a universal social protection regime that consisted of rights-based social protection. He hoped that the social protection regime could provide basic education, universal health care, food security, right to housing, and right to work among other services.

While referring to the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), the most significant intervention in rural areas, Prof. Srivastava observed that MGNREGA had a positive impact on reducing female distress migration, and a positive impact on rural wages. However, he noted that there were regional variations in the trends. He observed that the long-term impact of MGNREGA on rural livelihoods is yet to be understood completely. He concluded his presentation by outlining the need for a comprehensive, multi-pronged approach to migration and social protection

**Prof. Amitabh Kundu** observed in his presentation that internal migration will be adversely impacted by climate change. He highlighted the need for filling the data gaps as it would enable cross-national comparisons of internal migration. Prof. Kundu highlighted that even in 2013 cross-national comparisons of internal migration were in their infancy. He added that there has been a growing focus on international migration by diverse agencies, such as the United Nations, the World Bank and the OECD, in addition to several national governments. Prof. Kundu highlighted that even in countries that have collected and maintained data on internal migration, comparisons were hindered by widespread variation in data collection practices, and time scales of data measurements undermine the utility of the data sets for inter-country comparative studies on internal migration.

He observed that migration is one of the three important drivers of urban growth along with natural growth rate and aerial expansion. Further, he added that the natural population growth rate is declining in both urban and rural areas in most of the countries of South Asia. He also added that statistics showed that the rate of decline in the natural growth of rural areas was faster than urban areas. Prof. Kundu made reference to the data from the World Urbanization Prospects on the proportion of urban population to total population in Asian countries, and highlighted that the percentage of urban population in most of the Asian countries up to 2000-2005 was less than 50 percent of the total population. He highlighted that in the Asian context, except for China, the urban-rural growth differential has gone down in the recent past. He highlighted that there has been exclusionary urban development in the recent past. He therefore opined that distress migrants have lower potential to settle in cities now than 20 years ago. He further added that the character of urban migrants in India has also changed in the recent past. Based on his analysis, he highlighted that there has been an increase in migration for education and commercial reasons rather than livelihood enhancement.

**Dr. Partha Mukhopadhyay** posed the very basic question of ‘what can be called rural in India?’ in his presentation. Making reference to the latest available data, he questioned the myth that rural India was agrarian. He further highlighted that the share of the workforce in rural areas in the construction sector has grown to almost 75 percent during the 10-year time period between 2000 and 2010. He also pointed out that apart from high-end services, a large proportion of activity operates in rural India. He asserted that the rural livelihoods were diverse, complex and had significant opportunities for adaptation. Making reference to the settlement structures in villages, Dr. Mukhopadhyay observed that more than 50 percent of the populations live in villages that are dense and large. He added that the large, dense rural settlements had great potential to add local attractiveness to cope with the impacts of climate change. He highlighted that the

urbanization question in India was not about moving people but about morphing places. He added that almost a third of the growth in urban population between 2001 and 2011 was the reclassification of villages as census towns.

He then contrasted the migration footprint across the cities of Mumbai, Bangalore, Hyderabad, Kolkata and Chennai. Highlighting the case of the coastal city of Mumbai, which is inherently vulnerable to climate impacts, Dr. Mukhopadhyay observed that Mumbai's suburban region has experienced a net reduction in migration in the last 10 years. He also added that peripheral areas of the Mumbai region such as Thane, Raigad and Panvel had experienced an increase in migration during the same period. He observed that Bangalore had a very large footprint of migration, drawing migrants from all over the country. He opined that unlike China, most of the migration to Indian cities in future may not be towards coastal cities. He also highlighted that it was essential to understand existing patterns of migration in order to understand the climate change additionality to migration. Making reference to the popular stereotype of migrants being employed in largely low-skilled services, Dr. Partha Mukhopadhyay opined that it was incorrect. He added that migrants from rural areas tend to be employed in manufacturing and traditional services such as trade and transportation, while those from urban areas were employed in public services like health, education and modern business services. He concluded his presentation by stating that migrants were an integral part of the economic engine of the city.

### Discussion

The discussions focused on the vulnerability of migrants, the need for pro-migrant policies and the need to integrate migration into city development plans under JNNURM. It was highlighted that migration and urban poverty were dominant features in the guidelines prepared by the Ministry of Urban Development of the Government of India, called the National Spatial Urban Development Programme. There have been severe implementation gaps in most of the programme that limited the realization of the desired policy objectives. The panel asserted that migration and urbanization should be viewed not only from the point of view of an economic uplift, but also from the social dimension. They highlighted that migration policy has not evolved in India as it was severely contested by various states and other stakeholders.

**Shri Rajeev Sadanandan** observed in his concluding remarks that migrants were not important political constituents as they seldom vote. He opined that this had limited political attention to the welfare of migrants.

## Session 7. Towards a Policy Roadmap for the Migration and Global Environmental Change Nexus in India

**Chairperson:** Shri Arun Maira, Member, Planning Commission, Government of India

**Presentations:** *Key Policy Elements*, Prof. Richard Black, Pro-Director (Research & Enterprise), SOAS, University of London; *Key Findings from UN Solution Exchange Query*, Dr. Ramesh Jalan, Moderator of the Climate Change community of practice, United Nations Solution Exchange Web Portal

**Panellists:** Dr. Prodipto Ghosh, Member of the Prime Minister's Council on Climate Change and Member of the Scientific Advisory Council of the Union Cabinet; Ms. Vandana Aggarwal, Economic Advisor, Ministry of Environment and Forests, Government of India; Dr. Navroz Dubash, Senior Fellow, Centre for Policy Research (CPR), Delhi

**Prof. Richard Black** outlined that the Foresight report was prescriptive in its policy recommendation. He added that the report proposed a range of measures while outlining their merits and demerits. He added that while the Foresight study recognizes migration as a potential adaptation strategy, it does not propose to support migration as an adaptation strategy. He highlighted that the Foresight report does not advocate for any financial assistance from governments for migrants from highly vulnerable areas. He observed that the study acknowledged the need for protecting populations that are vulnerable to the impacts of climate change. He reiterated that it was very difficult to disentangle the drivers of migration. He acknowledged that erratic monsoons had adverse impacts on agricultural livelihoods that could further drive migration. Referring to Mr. Ranjan's remark on the need for planning for sustainable cities, Prof. Black stressed that there was scope to provide support for vulnerable migrants. He concluded his presentation by highlighting that there was a wide range of policy routes to deal with migration influenced by global environmental change.

**Dr. Ramesh Jalan** synthesized key messages from the consolidated reply of the policy query. He stated that the responses highlighted the importance of mainstreaming environmental and climate change considerations into migration management policy and practice, and to bring forced migration issues into global environmental and climate change discourse. He highlighted that it was important to understand probable pathways through which global environmental change affected the drivers of migration in India.

He added that competition over resources had the potential to create tension between locals and non-locals, and would increase the vulnerability of migrants. He called for incorporating migration concerns relevant to climate adaptation into government policies and programmes. He observed that it was important to understand the choices, trade-offs and opportunities associated with the design policies that harness the potentials of migration in a changing environment and climate scenario, and build the resilience of the migrants and their families. He highlighted the need for cooperation between countries in the region, especially in terms of early warning and

## Policy Query on Migration and Global Environmental Change

With the intention of complementing the learnings from the workshop and reach out to broader online communities, a policy query was posted in the Gender and Climate Change communities of practice and the Gender, Youth and Migration (GYM) sub-community of the Gender Community/ United Nations Solution Exchange Web Portal. Ms. Vandana Aggarwal, Economic Advisor to the Ministry of Environment and Forests, Government of India initiated the policy query. Key questions posed in the policy query were as follows:

### Understanding the migration and global environmental change nexus in India:

*What are the probable pathways through which global environmental change in general and climate change in particular will affect the drivers of migration in India?*

*How can migration concerns, be incorporated into various policies and programs of the government that are relevant for climate adaptation?*

Over a period of three weeks, as many as 21 responses from multi-disciplinary practitioners, researchers and policy makers were received. Through informed discussions the participants were able to share insights, resources, and experiences on migration and global environmental change nexus. A consolidated reply was then shared at the closing of the workshop. The consolidated reply can be downloaded at:

Link 1 <http://www.solutionexchange-un-gen-gym.net/>

Link 2 <http://www.solutionexchange-un.net.in/communities/gender>

Link 3 <http://www.solutionexchange-un.net.in/communities/climate-change>

sharing experience, knowledge, and technical expertise. He observed that it was important to mainstream environmental and climate change considerations into migration management policy and practices.

He concluded that more attention was needed to identify and test new frameworks for managing potential movements in the context of global environmental change. He highlighted that the members of the solution exchange community suggested that regulations like the Coastal Regulation Notification (2011) were tightened and rigorously monitored.

**Shri Arun Maira** observed in his remarks that we lack the capacity to comprehend and address the challenges of migration in general, and in the context of global environmental change. He requested each of the panelists to present their thoughts on addressing the issue.

**Dr. Prodipto Ghosh** highlighted that vulnerability reduction should be the central focus of our attention while dealing with global environmental change and migration. He added that it was important to address vulnerability by focusing on enhancing livelihoods at risk, and reducing their natural resource dependency. He advocated for enhancing adaptive capacities *in situ*. Observing that migration was often the last resort of vulnerable communities, Dr. Ghosh opined

that it was important to enhance the resilience of people. He also called for the development of a comprehensive plan on internal migration. He concluded by highlighting the need to have an international regime on involuntary climate migration as part of the 2015 climate agreement. He added that the regime should be based on the principle of common but differentiated responsibility.

**Ms. Vandana Aggarwal** called for a holistic approach to migration at the state and central level in her remarks. She pointed out that the existing laws are inadequate to address the concerns of migrants effectively. She further added that climate change has been an emerging challenge and the Indian Constitution is silent on the issue. She further added that it was important to shift our attention from reactive responses such as relief to long term pro-active rehabilitation measures. She also called for a comprehensive review of various policies and programmes to mainstream migration and global environmental change. She called for greater engagement between the migration and global environmental change communities.

**Dr. Navroz Dubash** highlighted in his recommendations that migration is absent from the various state action plans on climate change. Highlighting that the state was the right unit for discussions on migration, he stated that there has been a fragmented approach towards policy making on this issue. He also noted that the absence of a deliberative process had limited progress on this issue. Observing the need for understanding future patterns of migration based on predictive capacity, he stressed the need to integrate climate science with local knowledge. He advocated for evidence-based policy making on climate change through the utilization of regionally downscaled climate change information. Highlighting that the requirements of climate science were changing, he observed that it was important to update our understanding of various climate drivers. Highlighting the need for building a process of deliberation among key stakeholders, he called for the design of integrated frameworks that consider multiple objectives. He concluded by observing that it was important to create appropriate incentive structures within the government institutions to use such frameworks.

### Discussion

In the discussion, the participants highlighted the need for having similar workshops at the state level, and called for constructive engagement with state governments. The participants also called for improving existing national rehabilitation and resettlement policies by making them more inclusive. Another important observation from the participants was the mismatch of objectives and outcomes at the various levels of governance in India at the national, state and local levels. It was stressed that there is a lack of communication between the various tiers of governance.

## Concluding Session: The way forward?

**Shri Arun Maira**, Member, Planning Commission, Government of India

**Prof. Sandy Thomas**, Prof. Sandy Thomas, Head of Foresight, Government Office for Science, United Kingdom

**Ms. Marina Faetanini**, Chief, Social and Human Sciences (SHS), UNESCO New Delhi

**Shri Arun Maira** highlighted in his concluding remarks that the impacts of climate change are borne by nature-dependent communities. By referring to his interaction with a Nigerian poet on climate change in Nigeria, Mr. Maira highlighted that although women in Nigeria hadn't heard the phrase 'climate change', they had witnessed the phenomena in their daily lives as the distance travelled to collect water had increased in the recent past. He highlighted that the purpose of cities was to further human development with minimal state support. He asserted that cities should enable social mobility and secure livelihoods with a lower burden on public resources.

He highlighted that most of the issues that we confront today cannot be addressed through a single domain or discipline. He observed that it was important to look at issues through a systems perspective through the careful understanding of individual elements of the system and their interconnections. By observing that accumulating data in disciplinary silos will be useless, he called for evolving new integrative frameworks. He asserted the need for a deliberative process, not only with experts in various domains but also with the people whose voices are often unheard. He highlighted the need for novel governance approaches that are participatory in nature. Referring to the objectives of environmental sustainability, inclusion and greater participation in governance listed in the 12<sup>th</sup> five year plan document, Mr. Maira highlighted the need for their effective realization in policies and programmes.

He concluded his presentation by stressing the need for developing models that provide for co-learning among different stakeholder groups. He highlighted the need to consider the system as a whole by understanding individual aspects of the system and their interactions. He called for the identification of more locally relevant, context-specific solutions for environmental problems. He stressed the need for lateral connections with issues as well as various departments.

**Prof. Sandy Thomas** observed that the findings of the Foresight report should be examined in the light of country-specific contexts. She also clarified the conscious use of the term 'global environmental change' instead of 'climate change'. She highlighted that the rationale was also to consider issues of land degradation and land use change as drivers of migration. She cautioned about gross generalization of the issue as there were many powerful drivers of migration, and it was very hard to disentangle them. She also stressed the need to create networks between the domains of climate change and migration, and for a closer interaction between them. She suggested that UNESCO could take the lead in that area, as a follow-up to this workshop. She concluded by highlighting the need for a comprehensive policy on internal migration in South Asia.

**Ms. Marina Faetanini** stressed that an important policy recommendation of the workshop lies in reasserting the need for a comprehensive policy on internal migration in India. Such a policy is all the more necessary now, in order to cope with the additional challenge of global environmental change and climate change and its impact on people's mobility. Ms. Faetanini also observed that internal migration is not given due attention by the international community, and it was opportune to acknowledge the complexity and the magnitude of the internal migration challenge. As such, and in order to increase exchange of knowledge on internal migration worldwide, Ms. Faetanini proposed a BRICS research-policy meeting on internal migration to be hosted by the Planning Commission of the Government of India (BRICS is a group of developing countries comprising Brazil, Russia, India, China and South Africa). In concluding, Ms. Faetanini expressed immense gratitude to all the distinguished participants in the workshop and to the Government Office for Science, United Kingdom, for its much appreciated support.

### III. Key Policy Recommendations

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Migration should not be viewed as the last resort to the adverse impacts of global environmental change. The Foresight study argues that carefully planned and managed migration can be an enabler of adaptation. Migration can play an important role as a proactive approach towards building resilience and representing a transformational and strategic approach to adaptation to global environmental change.

The following recommendations are based on the presentations, discussions and deliberations of the two day National Workshop on Migration and Global Environmental Change, as well as the responses to the policy query cross – posted on several communities of practices of the United Nations Solution Exchange Web Portal: Gender, Climate Change and Gender, Youth and Migration (GYM) sub-community of practice of the Gender Community.

#### **Plan effectively for migration in the context of global environmental change by adequately addressing social protection gaps, planning for sustainable urban growth and adaptation, and mitigating social tension and conflicts:**

In the next few decades, India is projected to experience one of the most dramatic settlement transitions in history. Therefore planning for sustainable urbanization is a very critical policy priority. Most of the medium and small towns are already grappling with infrastructural challenges to accommodate rapid population growth, environmental degradation and resource availability.

#### **Adopt a comprehensive policy on internal migration in India and neighboring countries:**

This is necessary to understand and comprehend the complex challenge of migration now, and also as a starting point to cope with the additional challenge of global environmental change in future.

#### **Undertake a comprehensive review of various policies and programmes to identify entry points to mainstream migration and global environmental change concerns:**

It is important to internalize migration issues into policy initiatives such as disaster management plans, drought-prone area management programmes, flood control initiatives and the National Action Plan on Climate Change (NAPCC). It is also critical to climate proof various sectoral policies such as the National Water Policy, the Jawaharlal Nehru National Urban Renewal Mission (JNNURM), solid waste management, urban infrastructure and land-use planning.

## The National Action Plan on Climate Change (NAPCC)

On June 30, 2008, Prime Minister Manmohan Singh released India's first National Action Plan on Climate Change (NAPCC), which outlines the existing and future policies and programmes addressing climate mitigation and adaptation. The plan identifies eight core "National Missions" running until 2017, and various ministries are appointed as nodal points for preparing and implementing detailed implementation plans. The plan identifies measures that promote development objectives while also yielding co-benefits for addressing climate change effectively.

The eight National Missions of NAPCC are:

- National Solar Mission
- National Mission on Enhanced Energy Efficiency
- National Mission for Sustainable Habitat
- National Water Mission
- National Mission for Sustaining the Himalayan Eco-system
- National Mission for Green India
- National Mission for Sustainable Agriculture
- National Mission on Strategic Knowledge for Climate Change

Important ongoing initiatives that have significant co-benefits in terms of vulnerability reduction are, among others:

- Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS);
- National Food Security Mission (NFSM);
- National Watershed Development Programme in Rainfed Areas (NWDPA);
- Drought Prone Area Programme (DPAP);
- Desert Development Programme (DDP);
- Artificial Recharge;
- National Programme on Repair, Renovation and Restoration (NPRRR);
- Command Area Development and Watershed Management (CADWM);
- Integrated Afforestation and Eco-Development Projects Scheme;
- National Cyclone Risk Mitigation Project;
- Disaster Management Act;
- National Rehabilitation and Resettlement Policy.

In all of these programmes and projects, strategies can be mainstreamed at various stages of policy formulation, such as policy planning, resource allocation, and implementation at the various levels of decision-making. There is a need for improving existing national rehabilitation and resettlement policies by making them more inclusive.

In considering unplanned urbanization in India and the projected increase in the frequency and intensity of climatic hazards, a holistic approach to urbanization is needed. Urban municipal bodies need to include future sea level rise scenarios as well as rural-to-urban and urban-to-urban migration projections into their strategic plans. There is a need to mainstream climate change and migration into urban planning and into programmes like the Jawaharlal Nehru National Urban Renewal Mission (JNNURM).

The Swaminathan Committee Report (2007), which was set up to review the working of the coastal regulation zone in India, reiterated the need to embed climate change concerns in coastal zone planning and management. It suggested the demarcation of setback lines by considering long term sea level rise scenarios and the modification of coastal regulation zones accordingly.

Various state governments in India have outlined State Action Plans on Climate Change along the lines of the NAPCC. These plans have a bearing at regional, sub-regional, block and *taluka* levels, and also to different sectors of the economy. It is important to factor migration challenges into the context of climate change within the framework of the State Action Plans on Climate Change.

## Jawaharlal Nehru National Urban Renewal Mission (JNNURM)

JNNURM was launched in 2005 and is the single most important source of developmental investment in urban India with a fund of around USD 10 billion targeting 60 large cities across the country. Around 14 of the 63 chosen cities in the mission lie in the coastal zones of the country, with significant exposure to cyclones, floods, storm surges and sea level rise. Although the mission aimed to address the challenges of urban poverty alleviation, infrastructure development and urban governance - which can significantly reduce vulnerability and enhance resilience to climate change - disaster risk mitigation was ignored in the design of the mission and a component dedicated to disasters is absent in the mission document. JNNURM has since evolved into its new phase (JNNURM II) with the focus of planned development of cities.

### **Bridge the gap between the design and implementation of existing policies, rules and regulations:**

There is a plethora of policy initiatives spanning different sectors and departments that could potentially enhance the resilience of communities vulnerable to climate change as well as enable better responses to internal migration challenges. Elaborate policy initiatives on urban poverty alleviation, watershed management, land use guidelines, agri-extension programmes, flood zone regulations and coastal regulation zone (CRZ) notifications detailing an elaborate set of responses are already in place. For instance, the 1991 CRZ Notification allows no new construction in zone 1, which is within 500 metres of the high tide line. However, improper implementations of these regulations have resulted in continuous development in vulnerable areas increasing their

sensitivity to climatic hazards. Therefore there is a need for supporting and strengthening the existing rules and regulations through better implementation and monitoring.

**Establish a better inter-agency coordination:**

Global environmental change and migration issues are inherently cross-cutting in nature, spanning across sectors, regions, systems and so on. Therefore there is a need for better inter-agency coordination across all scales. The coordination of diverse ministries and departments such as Environment and Forests, Urban Development, Housing, Water Resources, Labour and Employment, Rural Development, Transport, Home Affairs, Tribal Affairs, Power, Communications, Social Justice, Housing and Urban Poverty, municipal governance and others at national, state and local levels, along with many non-governmental organizations poses great challenges for inter-agency coordination. Appropriate institutional mechanisms should be created to ensure better coordination between various ministries and departments at National, State and local levels.

Improving institutional capacities and linkages among sectoral programmes pertaining to poverty alleviation, urban development, rural development livelihood enhancement, housing, water and climate risk management.

**Promote strategic knowledge on global environmental change and migration:**

It is important to understand the probable pathways through which global environmental change affects the drivers of migration in India. A host of inter-dependent variables across physical, ecological, social and economic systems can influence the interaction between migration and global environmental change. A significant amount of conceptual and empirical work is required to better understand the interactions of these variables at local and regional scales. The mandate of the National Mission on Strategic Knowledge for Climate Change (NMSKCC) is to foster evidence-based policy making on climate change by integrating climate science with local knowledge, and to update the current understanding of various climate drivers through the utilization of regional climate modelling as well as robust impact assessment tools and methods.

However, the mission is silent on migration challenges in the context of climate change. There is a greater need to map the additional influence of climate change on migration within India, and its trans-boundary implications in the South Asian region. The NMSKCC document should not only acknowledge the challenge of migration influenced by climate change but should also create appropriate mechanisms for data collection, management and dissemination that pertain to migration. A holistic assessment of vulnerability to global environmental change in general and climate change in particular is needed through paying due attention to macro conditions as well as micro contexts in a particular region. The mission document should also highlight the need to understand future patterns of migration influenced by global environmental change based on state-of-the-art predictive capacity.

**Reduce the impact of global environmental change on migration through reducing the pace of environmental change or its impacts and enhancing the resilience of vulnerable communities to environmental change:**

Enhancing adaptive capacities of vulnerable populations *in situ* by focusing on local priorities and their institutional contexts. Vulnerability reduction approaches should be gender-sensitive.

**Recognize migration as an important adaptation strategy to deal with the impacts of global environmental change:**

Strengthen national databases on internal migration in the National Census and National Sample Survey Organization (NSSO) surveys.

Raise the awareness of various stakeholder groups on the complex linkages between migration and climate change.

# Annexes

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## BIOGRAPHIES OF SPEAKERS

### Inaugural Session

#### Shigeru Aoyagi

Mr. Shigeru Aoyagi joined UNESCO in July 2002, as Chief of the Literacy and Non-Formal Education (NFE) section within the Education Sector at Headquarters. In this capacity, he has supervised, managed and coordinated the section's work within the framework of Education For All (EFA), as well as its work on Literacy and Non Formal Education (NFE) for the four regional programmes for universalization of primary education and the eradication of illiteracy.

After his assignment in Paris, he was appointed to Director of the UNESCO Office in Kabul and UNESCO Representative to Afghanistan in December 2006. During his term in Afghanistan until December 2011 he successfully promoted UNESCO's field of competence, Education, Science, Culture, Communication and Information in Afghanistan in close collaboration with government authorities, UN agencies, and NGOs. In January 2012, he was appointed as Director of UNESCO Office in New Delhi and UNESCO Representative for Bhutan, India, Maldives and Sri Lanka.

#### Sandy Thomas

Professor Sandy Thomas is the Head of Foresight at the Government Office for Science. She trained as a scientist at the University of London (BSc Botany and Zoology, PhD Plant Genetics). After lecturing in genetics at the University of London, she became a Research Fellow at Science and Technology Policy Research Unit (SPRU) at the University of Sussex (1987-1997) focussing on the life sciences, biotechnology and intellectual property rights. From 1997-2006, she served as Director of the Nuffield Council on Bioethics through a secondment from the University of Sussex.

Over the past decade, she has published widely on the development of public policy for biotechnology, particularly on intellectual property rights. She has also served on several national committees, including the DFID Commission on Intellectual Property Rights in Development.

#### Richard Black

Prof. Black has been Pro-Director of Research and Enterprise at the School of Oriental and African Studies (SOAS), University of London, since September 2013. Prior to joining SOAS, Richard was Head of the School of Global Studies at University of Sussex. He trained as a geographer at Oxford and Royal Holloway, University of London. From 2009-2011, Richard was Chair of the Lead Expert Group for a foresight project on migration and global environmental change within the UK's Government Office for Science. He was editor of the Journal of Refugee Studies from 1994-2009 and was elected as an Academician of the Academy of Social Sciences in 2012. Richard's research has focused on the relationship between migration and poverty,

forced migration, and most recently on migration in the context of climate change, and he has field experience across various countries of sub-Saharan Africa.

### **Prodipto Ghosh**

Dr. Ghosh, a multidisciplinary professional specializing at the interface of science, economics, and public policy, was a member of the Indian Administrative Service (IAS) from 1969 until 2007, when he retired as Secretary, Environment and Forest, Government of India. He was appointed Distinguished Fellow at TERI in 2007 and is actively involved in climate change and sustainable development policy.

He currently serves as Member of the Prime Minister's Council on Climate Change; Member of the National Expert Committee on Climate Change, and Scientific Consultant in the Office of the Principal Scientific Adviser to the Govt. of India. He is a member of the Eminent Persons Group on G-20 matters set up to advise the Ministry of Finance. He was a Member of the Independent South Asia Commission on Poverty Alleviation (ISACPA). He is also Chair of the Task Force on Climate Change of the Federation of Indian Chambers of Commerce and Industry (FICCI). Dr. Ghosh has c.40 peer reviewed publications in the area of energy, environment, and development, and several books in these fields. Dr Ghosh has a Ph.D in Economics and Policy Analysis from the Carnegie-Mellon University, Pittsburgh PA and a B.Tech in Chemical Engineering from the Indian Institute of Technology, New Delhi.

## **Session I**

### **Chandrashekhar Dasgupta**

Chandrashekhar Dasgupta (b. 1940) was an Indian Foreign Service officer from 1962 to his retirement in 2000. Among other posts, he served as Ambassador to the European Union (1996 – 2000) and as Ambassador to China (1993 – 1996). Dasgupta has had a long association with international negotiations on climate change and other sustainable development issues. He is presently a Member of the Prime Minister's Council on Climate Change; Distinguished Fellow at TERI; and Member of the UN Committee on Economic, Social and Cultural Rights. He is the author of *War and Diplomacy in Kashmir 1947-48* and numerous articles on environmental issues and international affairs. Dasgupta has been awarded the Padma Bhushan by the President of India.

### **Richard Black (See Inaugural Session)**

### **Andrew Geddes**

Andrew Geddes is Professor of Politics at the University of Sheffield, UK where he served as Head of the Department of Politics between 2008-11. He was a member of the Lead Expert Group that oversaw the UK Government Office for Science report *Migration and Global Environmental Change: Future Challenges and Opportunities* (2011). Between 2014 and 2019 he will hold an Advanced Investigator grant awarded by the European Research Council for a 5-year study of global migration governance.

### **Neeraj Sinha**

After his schooling in Mumbai, Hyderabad and New Delhi, Mr. Neeraj Sinha graduated with distinction, in the year 1987, from the Regional Engineering College, Surat, Gujarat, in Mechanical Engineering. After a brief stint of a few months in the private sector, he joined the Government of India (the Department of Non-conventional Energy Sources – now the Ministry of New and Renewable Energy, MNRE) in the year 1989. After doing extensive field duty in a field Office of the MNRE in Jaipur during April, 1989 to November, 1992, he joined the headquarters of that Ministry in New Delhi.

Amongst the various activities that he handled in the MNRE headquarters during his more than 9-year stint there, prime were new and up-coming technologies (such as electric vehicles, alternate fuelled vehicles, hydrogen energy and geothermal energy) and biomass-based power generation (including bagasse based co-generation). He joined the Office of the Principal Scientific Adviser to the Government of India (PSA's Office) in December, 2001 and is continuing there as a Senior Director.

He has actively contributed to the preparation of the National Action Plan on Climate Change, which was released by the Prime Minister of India on the 30<sup>th</sup> of June, 2008. He is now pursuing research on “III-Nitrides for energy related (Photovoltaic and LED) applications” for the award of Ph.D. He has co-authored more than 20 scientific papers on this subject. Mr. Sinha is a life Member of the Institution of Engineers (India) and the Administrative Staff College of India, Hyderabad.

### **Akhilesh Gupta**

Dr. Akhilesh Gupta obtained his M.Sc. degree in Physics from Lucknow University and PhD degree in Atmospheric Sciences from IIT, Delhi.

He joined India Meteorological Department in 1985 and worked there as Meteorologist until 1994. He then joined National Centre for Medium Range Weather Forecasting where he worked in the field of location specific weather forecasting and numerical weather modelling and coordinated All India Agro-advisory Service until 2006. Dr Gupta worked in the Disaster Management Cell of Department of Science & Technology during 2006-07. He worked as Adviser to the Union Minister for Science and Technology and Earth Sciences during 2007-09. Dr Gupta worked as Head, Climate Change Programme Division of Department of Science & Technology, and Government of India during 2009-2012. Dr Gupta has been the Secretary to University Grants Commission during Nov 2012 to Nov 2013. Currently, Dr Gupta is heading Technology Development and Transfer (TDT) and Climate Change Programme (CCP) Divisions. As Head, CCP, he is coordinating two National Missions on Climate Change under National Action Plan on Climate Change launched by the Government.

Dr Gupta has published over 100 research papers in various National and International journals. He is co-author of 3 books, author of over 200 articles and nearly 300 reports.

## Session II

### D.K. Sharma

Dr. Dvijendra Kumar Sharma belongs to the 1988 batch of Indian Forest Service, now serving as Deputy Inspector General of Forests (Research & Training). He has carried out doctoral work at IIFM, Bhopal on forest fire management and policy issues. He has also completed PG Programme in Public Policy & Management from IIM, Bangalore and PG Diploma in Environmental Law from NLSIU, Bangalore.

Dr. Sharma has written many articles on PA Governance, Environmental issues, NTFP Management, Forest Fire issues, improvement in forestry sector and also written books on NTFPs and Biodiversity of Tripura. He, as a leader of diverse teams, was instrumental in formulation and setting up of first Rubber wood treatment plant in Tripura state. He has served in various capacities in the state and central government including IIFM, Bhopal.

### Ram B. Bhagat

Dr Ram B. Bhagat is currently working as Professor and Head, Department of Migration and Urban Studies, International Institute for Population Sciences (Deemed to be University), Mumbai. He holds Master Degree in Geography from the Centre for the Study of Regional Development, Jawaharlal Nehru University, New Delhi and PhD in Demography from IIPS Mumbai. Dr. Bhagat was associated with Tata Institute of Social Sciences during 2002-2003 under the UGC Research Award.

Dr. Bhagat was actively associated with Working Group on Urbanisation set up by the International Union for the Scientific Study of Population, Paris, (IUSSP) and attended its four important meetings at Salvador (Brazil 2001), Bellagio (Italy) 2002, Minneapolis 2003 and Marrakech 2009. He was also a member of the IUSSP committee on Demography of Armed Conflict during 2006-09. Dr. Bhagat was Co-ordinator of the Concurrent Evaluation of National Rural Health Mission, funded by Ministry of Health and Family Welfare, Govt. of India during 2009-2011. He was also the Co-coordinator of the Environmental Information System (ENVIS) on population and environment at IIPS funded by Ministry of Environment and Forests, Government of India ([www.iipsenviis.nic.in](http://www.iipsenviis.nic.in)) from 2007 to 2013. Dr. Bhagat is currently associated with UNESCO-UNICEF India Migration Initiative as a Resource Person, and prepared a policy paper on "Migrants' Right to the City". He is also Member of Scientific Committee, Global Migration Network, Columbia University and Member Advisory Committee, Unit of International Migration, Centre for Development Studies, Thiruvananthapuram established by Ministry of Overseas Indian Affairs, Government of India.

### Partha Jyoti Das

Dr. Partha J. Das is an environmental researcher of Aaranyak, a Guwahati based nongovernment organisation and heads its 'Water, Climate and Hazard Programme'. He did his M.Phil and Ph.D. in Environmental Science from Gauhati University specializing on water resources, climatology and hydrology. He has carried out research projects on climate variability in northeast India, environmental impacts of large river dams in northeast India, wetland based livelihoods, climate change adaptation, water governance, access to justice and information in water related issues, and community based forest and wildlife conservation. He has published several research papers, abstracts, reports and articles on these subjects. He has also delivered invited talks and seminar

presentations extensively on water issues, climate change and disaster risk reduction. He works closely with communities and local civil society organisations on these issues.

Presently he is working on documentation of climate change adaptation practices, governance of flood adaptation, community based flash flood risk management, and satellite based rainfall and flow estimation in the Brahmaputra Basin in northeast India in collaboration with the International Centre for Integrated Mountain Development (ICIMOD, Kathmandu). He believes in utilising the information and knowledgebase derived through research for advocacy for conflict resolution, community empowerment and water security for the people.

### **Sugata Hazra**

Dr. Hazra, Professor in Coastal Management, and Director, School of Oceanographic Studies, Jadavpur University, Kolkata, India, has been involved with researches on Oceanic Resources & Coastal Management. Some of the areas include Climate Change and Populus Deltas, Tsunamis & Coastal Disaster, Marine Fishing Zone Prediction & validation, Carbon Flux Estimation, and Bio Optical Studies for OCEAN SAT II data validation in the northern Bay of Bengal. He was a member of the XVth Indian Antarctic Expedition. He has done pioneering work related to vulnerability and impact of Climate Change in Sundarban, West Bengal. He has been working as Principal Investigator of various scientific projects of the National Government and Non Govt. Organizations like WWF, IUCN etc and is also Dy. Leader(India), DECCMA and ESPA Delta Project.

He is a member of the national task force for Bay of Bengal Large Marine Ecosystem (BOBLME) in India. Member, West Bengal State Coastal Zone Management Authority and state fluoride task force, drafting committee of state climate action plan. He has several publications in National & International Journals and Monographs to his credit.

## **Session III**

### **Sanjoy Hazarika**

Professor Sanjoy Hazarika holds the Dr. Saifuddin Kitchlew Chair at Jamia Millia Islamia, New Delhi, where he is also Director, Centre for North East Studies and Policy Research. He has been a member of various academic organisations and official committees, including the Justice Jeevan Reddy Committee to Review AFSPA, the Society of Indian Institute of Advanced Studies, Shimla, and the North East India Studies Programme, Jawaharlal Nehru University. Hazarika has worked as a newspaper correspondent, columnist and documentary filmmaker. His books include *'Rites of Passage'*, *'Strangers of the Mist'*, *'Writing on the Wall'* and *'The State Strikes Back: India and the Naga Insurgency'*.

### **Tasneem Siddiqui**

Dr. Tasneem Siddiqui is the founding Chair of RMMRU and a professor of Political Science at the University of Dhaka. She has published extensively on international and internal migration and Bangladeshi diasporas. Dr. Siddiqui was also instrumental for policy reforms such as the lifting of the ban on female labour migration in Bangladesh (2004) and the liberalisation of central bank policies on remittance transfers. Her current research concentrates on the impact of migration on climate change. Through research-informed policy advocacy, she seeks to change the negative

rhetoric surrounding environment-induced migration and transform it into one of the adaptation tools.

Dr. Tasneem Siddiqui is one of the key members that drafted the National Overseas Employment Policy of Bangladesh. She served on the Board of Directors for the Migrant Welfare Bank and on the high level committee that prepared the draft Emigration and Overseas Employment Law. In the past, she served as chair of the Asia Pacific Migration Research Network (APMRN) and South Asia Migration Resource Network (SAMREN).

### **Soumyadeep Banerjee**

Mr. Soumyadeep Banerjee, an Indian national, is the Migration and Population Specialist at the International Centre for Integrated Mountain Development (ICIMOD), Kathmandu. Mr. Banerjee specializes in research on labour migration, remittances, vulnerability, and adaptation in the Hindu Kush Himalayan (HKH) region. Soumyadeep has undertaken research studies in Bhutan, China, India, Nepal, and Pakistan. He is also pursuing a D.Phil. degree in Geography from the University of Sussex, United Kingdom. His D.Phil. research examines the circumstances under which labour migration can build adaptive capacity in sending households and/or increase community resilience. He holds an M.Phil. degree in Population Studies and a M.A. degree in Geography from the Jawaharlal Nehru University, India, and a M.A. degree in Migration Studies from the University of Sussex, United Kingdom.

### **Hasan Akhtar Rizvi**

Hasan Rizvi has more than 30 years of experience spanning academia, development sector and technology entrepreneurship, and has been a pioneer in more than one area. The first 10 years of his career were devoted to research in astrophysics, cosmology and high energy physics culminating in his work at the European Centre for Nuclear Research (CERN) for four years. Moving to the use of Information and Communication Technologies for development, he brought email and Internet to Pakistan – under the aegis of a UNDP project - and set up the first knowledge portals and networks of practitioners highlighting the issues of environment – including climate change - and development for the country. He became one of the Program Directors of the World Conservation Union (IUCN) in Pakistan, he led its Education, Communications and Knowledge Management programs and helped set up and managed one of the most innovative technology companies in Pakistan – Five Rivers Technologies (Pvt.) Ltd. - known for its cutting edge work in information management; all this while also teaching applied science, knowledge management and technology entrepreneurship courses at a private university. Currently he is working as the Chief Operating Officer of LEAD Pakistan, spearheading its work in research, knowledge management and communications.

## **Session IV**

### **B. N. Satpathy**

As Sr. Adviser in Planning Commission, Satpathy looks after two divisions, namely, Environment & Forests Division and Science & Technology Division. He is also the Chairperson of the Oversight Committee of the National Data Sharing and Access policy of Government of India in Planning

Commission. In this role, he is in charge of the Open Data Initiative of Government of India. As Chairman of an Expert/Working Group on construction of e-Readiness index for India, he has been guiding the team in designing and implementation of e-Readiness Indicators for India for 2009- 10 onwards to support the global measurement on Network Readiness of World Economic Forum (WEF) and ICT Development Index of International Telecommunication Union (ITU). As Chairman of another expert/working group of ICT measurement and indicators, his leading role has been to design a framework for measurement of ICT Indicators in the country in order to support global monitoring and measurement of ICT for Development.

### **Suman Bisht**

Dr. Suman Bisht joined ICIMOD, Nepal, as a Gender and Climate Change Expert in January 2012, with a special focus on the role of women and gender in adaptation to climate change. She is working on integrating and strengthening gender analysis in various initiatives under Adaptation to Change Program including the Himalayan Climate Change Adaptation Programme (HICAP). Dr. Bisht, an Indian national, has a doctorate from the Department of Sociology, Delhi School of Economics, Delhi University, India. She has more than 12 years of experience in mainstreaming gender in development work across different sectors. She has worked with grassroots organizations, women's groups, trade unions, and national and international NGOs in India, Sri Lanka, Vietnam, Rwanda and most recently in Nepal and China. Dr. Bisht has contributed to national-level perspective documents on institutionalizing and mainstreaming gender in development work and has also been involved in quantitative and qualitative research and documentation on gender-based violence and sexual and reproductive health issues. She has many published articles and has co-authored a book, *From Thought to Action: Building strategies on violence against women*.

### **Giovanna Gioli**

Dr. Gioli is postdoctoral researcher at the research group Climate Change and Security (CLISEC) of the University of Hamburg. Gioli's research interests focus on human-environment interaction and more specifically on the interface between rural livelihoods, environmental change, socio-economic marginalization, and gender. She has led two projects on migration as an adaptation strategy to environmental change in the Indus river basin, (GEM, "Gender, Environment and Migration) and she is currently the principal investigator of a project funded by the Center for a Sustainable University (KNU) addressing the nexus between migration, gender, socio-political transformation and environmental change in North Western Pakistan.

Drawing on political ecology, participatory research and community based adaptation approaches, Gioli's work addresses also the role of perceptions in shaping responses to risk and adaptive strategies. She has spent extended periods of fieldwork and capacity building in South Asia (Nepal and Pakistan) and has recently established the international network on Gender, Climate Change and Conflict (GCCN) at the University of Hamburg.

### **Himani Upadhyay**

Himani Upadhyay is an Associate Fellow at the Earth Science and Climate Change Division at TERI, India. Her current research focuses on interdisciplinary issues associated with human dimensions of climate change, primarily aiming to assess climate change vulnerability and

adaptation strategies leading to policy recommendations. She particularly focuses on what makes people and the places they live in vulnerable to climate change impacts and how this vulnerability is measured, monitored, and assessed and consequently how adaptation strategies can be designed to integrate climate change issues into policy proposals.

## Session V

### Anil K. Gupta

Dr. Anil K. Gupta, Head of Policy Planning Division and Head of Training Management Cell, joined the National Institute of Disaster Management in 2006 as Associate Professor. His areas are disaster management, climate-change adaptation and NRM, with focus on risk/vulnerability assessment, planning and management. He did his Post-Doctoral work at NEERI Nagpur (CSIR) and received Young Scientist Award in 1996. He is Fellow of Earth Scientists Society. He was Reader & Head of Department of Environment & NRM since 2003 and founder Director of Institute of Environment & Development Studies at Bundelkhand University. Earlier he worked at the Ambedkar Central University of Lucknow, Disaster Management Institute (Govt. of MP, Bhopal), National Mineral Development Corporation, and CICON Environment Technologies. He has supervised several Ph.D. and PG research, has over 100 publications including 4 books, 4 training modules and 44 papers in refereed journals. He implemented several research/coordinated projects supported by GIZ Germany, UNDP, UNEP, CDKN, ICSSR, and MoEF, focussing on drought, floods, climatic-risks, coastal hazards, DM planning, environmental knowledge and legislation. He has 23 experiences of research including 17 years teaching/training and 10 years administrative experience.

### Dominik Bartsch

Mr. Dominik Bartsch was appointed as the Chief of Mission of UNHCR in India and the Maldives. He took up his assignment on 17 July 2013. Trained as a development economist, Mr. Bartsch has been with UNHCR for over twenty years and served in various capacities with the refugee agency including in Afghanistan and, most recently, as Head of Operations in Dadaab, Kenya. He was seconded to the Department for Peacekeeping Operations (DPKO) in 2005 and subsequently attached to the newly created Peace building Support Office (PBSO), in the office of the UN Secretary General.

### Sabira Coelho

Sabira Coelho is a consultant with IOM's Regional Office for Asia and the Pacific, working on South Asia and climate change and migration issues. She has authored an article called "Assam and the Brahmaputra: A case of recurrent flooding and internal displacement" in the State of Environmental Migration 2013 and an article entitled "Human Rights, Climate Change, Environmental Degradation and Migration: A new paradigm" along with Ms. Rabab Fatima and Ms. Anita Wadud that will soon be published as a part of IOM-MPI's Issue in Brief series. She has a Master's degree in International Development from Sciences Po, Paris.

### **Nasreen Chowdhory**

Nasreen Chowdhory is an Assistant Professor in the Department of Political Science, Delhi University. Dr. Chowdhory received her Ph.D. from McGill University in the Department of Political Science with a focus on Comparative Politics and South Asia. Her dissertation “Belonging in Exile and ‘Home’: the Politics of Repatriation in South Asia” examines the question of belonging among refugee communities in South Asia. Before joining Delhi University, Dr. Chowdhory has taught at Asian University for Women, Chittagong and Concordia University, Montreal, Canada. Her research interest includes forced migration and refugee studies, ethno-politics, state formation, and citizenship. Dr. Chowdhory has been associated with Action Refugee in Montreal; South Asian Centre for Immigrants (CERAS), Canadian Council for Refugees, Calcutta Research Group and International Association for Study on Forced Migration. She is presently the Executive Member (Treasurer), in IASFM.

## **Session VI**

### **Rajeev Sadanandan**

Shri Rajeev Sadanandan is currently serving as Joint Secretary & Director General (Labour Welfare), Ministry of Labour & Employment on Central Deputation and holds a post graduate degree in English. Previously he was the Principal Secretary, Health Department, Govt. of Kerala. He is looking after the welfare activities of the workers in unorganized sector including enactment and formulation of various Acts applicable to unorganized workers. He is also looking after a flagship scheme viz., Rashtriya Swasthya Bima Yojana for the health insurance cover of the BPL families and some other categories of unorganized workers.

### **Rakesh Ranjan**

Mr. Rakesh Ranjan is Director of Housing and Urban Affairs Division in Planning Commission, Government of India. Managing urbanisation has emerged as a key challenge as well as opportunity for ensuring high and inclusive economic growth. In this important position, he has contributed significantly in drafting the policies and programmes for urbanisation for the 12th plan period.

In India, the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) is the main programmatic intervention at the federal level to ensure efficient urbanisation. Considering his experience, he was nominated as a member of the Committee on JNNURM-II for effectively re-launching the programme. In addition, recently, he has been nominated as convener of the committee on Capacity Building and Urban Planning. Recently, he had the opportunity to study various aspects of urban strategic planning in cities like Paris, Strasbourg and Bordeaux in France. His other major responsibility is to examine proposals of large urban transport projects and help in optimal restructuring and financing of such projects.

He is post graduate in Economics and a gold medallist diploma holder in Post Graduate Programme on Public policy and Management from Indian Institute of Management Ahmedabad. Earlier, he had an illustrious career in the prestigious Indian Police for which he was awarded Police medal for meritorious service by the President of India. His current interests are economic growth, public policy and management of urban settlements.

### Ravi Srivastava

Prof. Srivastava is Professor of Economics and Chairman of the Centre for the Study of Regional Development, Jawaharlal Nehru University. He is a member of the Governing Council of the Indian Council for Social Science Research (ICSSR). His research interests focus on labour migration, human development, rural poverty and decentralization. He was Visiting Fellow and Professor at the University of Oxford, Osaka and Amsterdam. He served as a full-time Member of the National Commission for Enterprises in the Unorganised Sector. He was in charge of major research projects sponsored by several international organizations, government agencies and NGOs. Prof. Srivastava received his education from the Delhi School of Economics, Jawaharlal Nehru University. He holds a PhD from the University of Cambridge.

### Amitabh Kundu

Dr. Amitabh Kundu, Professor of Economics at the Centre for the Study of Regional Development has been a Visiting Professor at the University of Wuerzburg, Germany for the last three months. He was nominated a member of National Statistical Commission in 2006. He has been a Visiting Professor at University of Amsterdam, Maison des Sciences de l'Homme, Paris, University of Kaiserslautern and South Asian Institute Heidelberg, Germany. He has undertaken International research for UNDP, UNESCO, UNCHS, ILO, Government of Netherlands, University of Toronto, Sasakawa Foundation etc.

He has worked as Director at various institutes such as National Institute of Urban Affairs, Indian Council of Social Science research and Gujarat Institute of Development Research. Currently he is in the Editorial Board of Manpower Journal, Urban India, Journal of Educational Planning and Administration, Indian Journal of Labour Economics. He has about thirty books and two hundred and fifty research articles, published in India and abroad, to his credit. His recent books are *Paradoxes of Rationality and Norms of Human Behaviour* (Ed. with ArashFazli), *India: Social Development Report* (Chief Editor), Oxford University Press, *Handbook of Urbanisation*, (with Sivaramakrishnan and Singh) OUP, *ICT for Human Development: Towards Building a Composite Index for Achieving the Millennium Development Goals*, UNDP, *Inequality, Mobility and Urbanisation: China and India* (Ed.), Manak Publications, *Informal Sector in India*, (Ed. with Sharma), Institute for Human Development, *Poverty and Vulnerability in a Globalising Metropolis: Ahmedabad*, (Ed. with Mahadevia), Manak.

### Partha Mukhopadhyay

Partha Mukhopadhyay, PhD has been a Senior Research Fellow at the Centre for Policy Research since 2006. Prior to this, he was part of the initial founding team at Infrastructure Development Finance Company (IDFC), where as a part of their Policy Advisory Group, he was involved in nurturing the development of policy and regulatory frameworks necessary for the flow of private capital into infrastructure projects in a manner that provided efficient service to the final user. He has also been with EXIM Bank of India, as the first Director of their Eximius Learning Centre in Bangalore, and with the World Bank, in what then was the Trade Policy Division in Washington. He has been associated with a number of government committees and has also taught at IIM, Ahmedabad, XLRI, Jamshedpur and at School of Planning and Architecture in Delhi. His research interests are in infrastructure, urban development and the development paths of India and China. He has a PhD in Economics from New York University and an MA and M Phil from the Delhi School of Economics.

## Session VII

### Arun Maira

Arun Maira is a Member of the Planning Commission chaired by the Prime Minister of India. In this ministerial level position, he is responsible for facilitating the shaping of policies and programs relating to industrialisation and urbanisation in the country, and tourism. He has a combination of hands-on leadership experience, consulting experience to leadership teams internationally, and thought-leadership as an author and speaker on the subjects of leadership and organisation transformation.

Arun Maira was a member of the Tata Administrative Services and worked in several senior positions in the TATA Group in India and abroad for 25 years until 1989. He was on the Board of Tata Motors (then called TELCO) from 1981 to 1989. He worked with Arthur D. Little Inc (ADL), the international management consultancy, in the USA from 1989 to 1999, and consulted with companies across the world on issues of growth strategies and transformational change. During this time he was Managing Director of Innovation Associates, an Arthur D. Little subsidiary, Leader of ADL's North American Manufacturing Practice and Leader of ADL's World-wide Organization and Strategy Practice.

Prior to his appointment on the Planning Commission, Arun Maira has served on the boards of several large Indian companies, including companies in the Tata, Birla, Godrej, Hero, and Mahindra Groups. He has been a Member of The Confederation of Indian Industry's (CII) National Council for many years, as well as Chairman of several of CII's National Councils, including the National Council for Corporate Governance, and Chairman of CII's Leadership Summit. Arun Maira was Chairman of Save the Children, India, and Chairman of the Axis Bank Foundation. He has served on the boards of several Indian and international management education institutions.

Arun Maira was born in Lahore on 15 August 1943. He received his M.Sc. and B.Sc. in Physics from St Stephen's College, Delhi University.

**Richard Black** (See Inaugural Session)

### Ramesh Jalan

Dr. Ramesh Kumar Jalan, the Resource Person & Moderator, Climate Change Community, Solution Exchange, UN since its inception in 2009, has over 28 years of experience in the environment, sustainable development and climate change sector. He holds a PhD in Municipal Solid Waste Management from Indian Institute of Technology, New Delhi, India; Master of Business Laws (MBL) from National Law School of India University; Master of Science in Materials Engineering, Chemical Engineering, Industrial & Management Engineering from Rensselaer Polytechnic Institute, Troy, New York, USA and Bachelor of Engineering (Honours), Chemical Engineering, BITS, Pilani, Rajasthan, India. His past association with UNIDO as National Programme Officer (Energy & Environment) and also with other reputed organizations, many of them in the private sector, has provided substantial policy, technical advisory and project management experience.

He has over 100 publications to his credit, including a large number based on the work done by the Climate Change Community at the United Nations. He co-authored the trainer's toolkit on Low Carbon Lifestyles, which was published by United Nations Development Programme (UNDP)/

Global Environment Facility (GEF), Small Grants Programme (SGP), Centre for Environment Education (CEE) as part of the Project “Low Carbon Campaign for the XIX Commonwealth Games 2010, Delhi, India”.

The International Association of Educators for World Peace (NGO Affiliate of United Nations: ECOSOC, DPI, UNESCO, UNICEF) at its 33rd World Environment Congress held on 5-6th June, 2013 awarded him the Green and Clean International Development Award for his outstanding contribution in the area of climate change management.

**Prodipto Ghosh** (See Inaugural Session)

### **Vandana Aggarwal**

Vandana Aggarwal is presently the Economic Adviser at the Ministry of Environment and Forests with additional charge of Statistical Adviser and Divisional Head (Economic Cell, Plan Coordination, Trade & Environment, Environmental Information Systems, Statistical Cell). She is enrolled at Jawaharlal Nehru University for a PhD. in Economics and has a Masters of Arts in Economics degree from Delhi School of Economics and B.A (Honours) IN Economics from Lady Shri Ram College, University of Delhi. Previously she was Adviser and earlier Director, Cabinet Secretariat, Government of India and Director, Secretariat for Infrastructure, Planning Commission, Government of India. She has also served as Director, Trade Policy Division, Department of Commerce.

### **Navroz Dubash**

Navroz K. Dubash is a Senior Fellow at the Centre for Policy Research, New Delhi. His current research looks at the emergence of a “regulatory state” in the developing world, with particular reference to infrastructure sectors, and to the interface between global climate negotiations and national policy instruments and politics. Other major areas of work include the political economy of energy in India and Asia, climate change policy, the role of civil society in global environmental governance, international financial institutions, and local institutions for water management. In addition to publishing in various journals he is also active in Indian policy fora and is on the editorial board of several international journals. He formerly held positions as Associate Professor at Jawaharlal Nehru University, IDFC Chair Professor of Governance and Public Policy at the National Institute of Public Finance and Policy (New Delhi), and Senior Associate at the World Resources Institute, Washington DC. He has a long history of engagement with civil society organizations, including as the first international coordinator of the Climate Action Network, from 1990-92. He has also consulted and conducted training programs for a variety of international and Indian institutions.

Dr. Dubash holds Ph.D. and M.A. degrees in Energy and Resources from the University of California, Berkeley, and an A.B. in Public and International Affairs from Princeton University.

## Concluding Remarks

**Arun Maira** (See Session VII)

**Sandy Thomas** (See Inaugural Session)

### **Marina Faetanini**

Since 2007, Marina Faetanini is heading the Social and Human Sciences Sector (SHS) of UNESCO New Delhi Office, where she has developed, within the framework of the MOST (Management of Social Transformations) and the Social Inclusion Programme, a new set of activities focusing on capacity building of city professionals, and development and dissemination of good practices on social integration in urban settings. As such, she has published, among others, *Historic Districts for All – India: A Social and Human Approach to Sustainable Revitalization*, as well as *Urban Policies and the Right to the city in India – Rights, Responsibilities and Citizenship*, and organized numerous workshops and social policy dialogues on inclusive urban policies. In 2011, she initiated the Internal Migration in India Initiative (IMII) to support the social inclusion of internal migrants in the economic, social, political and cultural life of the country using a three-legged approach, combining research, policy and advocacy. Several publications have been launched in 2012 and 2013, such as *For Better Inclusion of Internal Migrants in India: Policy Briefs*; and *Social Inclusion of Internal Migrants in India*.

Before taking up her current position in 2007, she worked at UNESCO Headquarters from 2003 to 2006 with the Foresight Section and with the Human Security, Democracy and Philosophy Section, and coordinated the sub-Regional Forum of Ministers in charge of Social Development from South Asia, launched by UNESCO in 2006, and whose Third Ministerial Conference took place in Sri Lanka in 2011 on *Social Protection Policies in South Asia*.

Prior to joining UNESCO in 2003, Marina Faetanini worked as an environmental activist with the World Wide Fund for Nature (WWF-France) on climate change related issues (2000-2003) and as a diplomat from the Republic of San Marino at the United Nations (New York, USA, 1995-1999) and at the Council of Europe (Strasbourg, France, 1992-1995). She graduated from the *Ecole Normale Supérieure* of Saint-Cloud, France in *Lettres et Sciences Humaines* (Humanities) in 1983 and holds a D.E.A (equivalent to M.A.) in Romance Studies from the University of *La Sorbonne Nouvelle*, Paris, France (1987).

## FINAL AGENDA

### Tuesday 4 March 2014

#### 10:00 - 11:30 | Inaugural Session

- **Welcome Address by Chairperson Mr. Shigeru Aoyagi**, Director and UNESCO Representative to Bhutan, India, Maldives and Sri Lanka
- **Introductory Remarks by Professor Sandy Thomas**, Head of Foresight, Government Office for Science, United Kingdom
- **Special Remarks by Professor Richard Black**, Pro-Director (Research & Enterprise), SOAS, University of London, United Kingdom
- **Special Address by Chief Guest, Shri Prodipto Ghosh**, Member of the Prime Minister's Council on Climate Change and Member of the Scientific Advisory Council of the Union Cabinet

*Followed by Media Interaction*

Moderator: Ms. Rekha Beri, Public Information and Spokesperson, UNESCO New Delhi

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#### 11:30 – 11:45 | Tea/Coffee Break

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#### 11:45 – 13:15 | Session 1: Main Findings of the Foresight Report

**Chair:** Ambassador Chandrashekhar Dasgupta, Distinguished Fellow, TERI, and Former Ambassador to China and EU

#### **Keynote Presentations - Foresight Report on Migration and Global Environmental Change (MGEC)**

- Prof. Richard Black, Pro-Director (Research & Enterprise), SOAS, University of London
- Prof. Andrew Geddes, Professor of Politics, University of Sheffield

#### **Panellists:**

- Shri Neeraj Sinha, Scientist F/ Senior Director, Office of the Principal Scientific Adviser to the Government of India
- Shri Akhilesh Gupta, Advisor and Head, Technology Development and Transfer Division, Climate Change Division, Ministry of Science and Technology, Government of India

**Open Discussion: Questions and Answers**

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**13:15 – 14:15 Lunch**

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**14:15 – 15:30 | Session 2: Migration and Global Environmental Change in Key Vulnerable Regions of India**

**Chair:** Dr. D.K. Sharma, Deputy Inspector General (Research and Training), Ministry of Environment and Forests (MoEF), Government of India

**Presentations:**

- **Global Environmental Change Vulnerability and Migration in India: Overlapping of Hot Spots**, Prof. Ram Bhagat, Professor and Head, Department of Migration and Urban Studies, International Institute for Population Sciences (IIPS), Mumbai
- **Global Environment Change and Implications for North East India**, Dr. Partha Jyoti Das, Head, Water Climate and Hazard (WATCH) Programme, Aaranyak, Guwahati
- **Environmental Change and Migration from Indian Sundarban: The Need for an Adaptation Policy**, Prof. Sugata Hazra, Director, School of Oceanographic Studies, Jadavpur University, Kolkata

**Open Discussion: Questions and Answers**

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**15:30 – 15: 45 | Coffee/Tea Break**

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**15:45 – 17:15 | Session 3: Regional Perspectives**

**Chair:** Prof. Sanjoy Hazarika, Centre for North East Studies and Policy Research, Jamia Millia Islamia University, Delhi

**Documentary film: *Living on the Go*** directed by Mr. Arjun Pandey, a film by Television for the Environment.

**Presentations:**

- **Climate Change and Human Insecurity: Migration as an Adaptation Strategy in Bangladesh**, Dr. Tasneem Siddiqui, Professor Political Science, University of Dhaka and Founding Chair, Refugee and Migratory Movements Research Unit (RMMRU), Dhaka
- **Labour Migration, Remittances, and Adaptation to Environmental Change: Case Study from the Hindu Kush Himalayan Region**, Mr. Soumyadeep Banerjee, International Centre for Integrated Mountain Development (ICIMOD), Kathmandu
- **Migration and Climate Change: The Experience of Pakistan**, Mr. Hasan Akhtar Rizvi, Chief Operating Officer, LEAD Pakistan

**Open Discussion: Questions and Answers**

19:30 – 22:30 | Welcome Dinner

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Wednesday 5 March 2014

9:30 – 11:00 | Session 4: Social inequalities and Compounded Vulnerabilities

**Chair:** Shri B. N. Satpathy, Senior Adviser (E&F and S&T), Planning Commission, Government of India

**Presentations:**

- **Holding the Fort: A Case Study on Remittances, Adaptation and Gender from Assam**, Dr. Suman Bisht, International Centre for Integrated Mountain Development (ICIMOD), Kathmandu
- **Gender, Remittances and Environmental Change: Evidence from the Upper Indus Basin**, Dr. Giovanna Gioli, Post-doctoral Researcher, University of Hamburg
- **Migrating to adapt? Contesting Dominant Narratives of Migration and Climate Change**, Ms. Himani Upadhyay, Associate Fellow, TERI

Open Discussion: Questions and Answers

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11:00 – 11:15 | Coffee/Tea Break

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11:15 – 13:00 | Session 5: Global Environmental Change, Migration and Human Rights

**Chair:** Dr. Anil K. Gupta, Associate Professor, Head of the Policy, Planning and Cross Cutting Issues Division and Training Section, National Institute of Disaster Management (Ministry of Home Affairs, Government of India)

**Presentations:**

- **The Migration-Asylum Nexus: The Challenges of Mixed Migration and Impact on Refugees**, Mr. Dominik Bartsch, Chief of Mission, United Nations High Commission for Refugee (UNHCR India)
- **Climate Change and Migration: Assessing the Impact and Consequences**, Ms. Sabira Coelho, International Organization for Migration (IOM Bangkok)

**Panellist:**

- Dr. Nasreen Chowdhory, Assistant Professor, Department of Political Science, University of Delhi and Member, Calcutta Research Group (CRG)

Open Discussion: Questions and Answers

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**13:00 – 14:00 | Lunch Break**

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**14:00 – 15:30 | Session 6: Migration - The Role of Human Agency**

**Chair:** Shri Rajeev Sadanandan, Joint Secretary and Director General, Labour and Welfare Division, Ministry of Labour and Employment, Government of India

**Presentations:**

- **Migration in India: Provision in Schemes**, Shri Rakesh Ranjan, Advisor Urban Affairs, Planning Commission, Government of India
- **Understanding Internal Migration: Features, Trends and Policy Challenges**, Prof. Ravi Srivastava, Jawaharlal Nehru University, Delhi
- **Understanding Internal Migration and Urbanization in India**, Prof. Amitabh Kundu, Jawaharlal Nehru University, Delhi

**Panellist:**

- Dr. Partha Mukhopadhyay, Centre for Policy Research, Delhi

**Open Discussion: Questions and Answers**

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**15:30 – 15:45 | Coffee / Tea Break**

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**15:45 – 17:00 | Session 7: Towards a Policy Roadmap for the Migration and Global Environmental Change Nexus in India**

**Chair:** Shri Arun Maira, Member, Planning Commission, Government of India

**Presentations:**

- **Key Policy Elements**, Prof. Richard Black, Pro-Director (Research & Enterprise), SOAS, University of London
- **Key Findings from UN Solution Exchange Query\***, Moderators of the Gender, Climate Change and Gender, Youth and Migration (GYM) sub-community of practice of the Gender Community/ United Nations Solution Exchange Web Portal, Dr. Malika Basu and Dr. Ramesh Jalan

**Panellists:**

- Shri Prodipto Ghosh, Member of the Prime Minister's Council on Climate Change and Member of the Scientific Advisory Council of the Union Cabinet
- Ms. Vandana Aggarwal, Economic Adviser, Ministry of Environment and Forests (MoEF), Government of India

- Dr. Navroz Dubash, Senior Fellow, Centre for Policy Research

**Open Discussion: Questions and Answers**

**17:00 – 17:30 | Concluding Remarks: The Way Forward?**

- Shri Arun Maira, Member, Planning Commission, Government of India
- Prof. Sandy Thomas, Head of Foresight, Government Office for Science, United Kingdom
- Ms. Marina Faetanini, Chief, Social and Human Sciences (SHS), UNESCO New Delhi

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## 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 Internal Migration In India Initiative (IMII) is now an informal network of 200 researchers, NGOs, policy makers, UN agencies and key partners, such as UN Women, UN-HABITAT, International Organization for Migration (IOM) and Sir Dorabji Tata Trust, determined to raise the profile of internal migration in India and to propose policy changes and creative practices for better inclusion of internal migrants in society.

## 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

