



Report on 1st Round of Stakeholder Engagement, D 1.1.3



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About DECCMA Working Papers

This series is based on the work of the Deltas, Vulnerability and Climate Change: Migration and Adaptation (DECCMA) project, funded by Canada's International Development Research Centre (IDRC) and the UK's Department for International Development (DFID) through the **Collaborative Adaptation Research Initiative in Africa and Asia (CARIAA)**. CARIAA aims to build the resilience of vulnerable populations and their livelihoods in three climate change hot spots in Africa and Asia. The program supports collaborative research to inform adaptation policy and practice.

Titles in this series are intended to share initial findings and lessons from research studies commissioned by the program. Papers are intended to foster exchange and dialogue within science and policy circles concerned with climate change adaptation in vulnerability hotspots. As an interim output of the DECCMA project, they have not undergone an external review process. Opinions stated are those of the author(s) and do not necessarily reflect the policies or opinions of IDRC, DFID, or partners. Feedback is welcomed as a means to strengthen these works: some may later be revised for peer-reviewed publication.

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1. Introduction

The description of work for Work Package 1 envisages four separate rounds of stakeholder engagement. This report presents the activities undertaken as part of the first round of stakeholder engagements. The activities conducted under Work Package one aimed at engaging with stakeholders at the national and the district level. Community engagement was done by Work Package 3 and will not be covered in this report. The engagement activities were therefore a mix of workshops, inviting a range of stakeholders from the national policy level, as well as stakeholders from the district level which took place in the case study areas: Bangladesh (Ganges-Brahmaputra-Meghna (GBM) delta); Ghana (Volta delta); and in India (GBM and Mahanadi deltas). This synthesis report combines the individual reports produced by country teams for each of the engagement events held in each case study area.

As noted in the Stakeholder Engagement Plan, there were a number of key objectives for this first round:

- National / District:
 - Preliminary ideas about governance issues / barriers to policy and legal implementation ((1.2 and 1.3)
 - Identification of / discussion of national adaptation options (including identification of key pieces of literature that shape policy makers choices/decision making) – and introduce idea of doing this at different time horizons (WT6.1.2)
 - Scope adaptation finance initiatives (WT6.6.1)
 - Preliminary thoughts on conceptualisation of relationship between biophysical and socio-economic drivers of migration (5.1)
 - Start to engage stakeholders to buy into the project and to think about the end point – i.e. the development of adaptation fund proposals
- Expert:
 - Key bio-physical and socio-economic climate change hotspot components (2.1)
 - Identify key pieces of literature that shape policy makers choices/decision making

As will be clear from the reports, not all of the above could be met during the first round, but because the stakeholder mapping process and the engagement planning process are dynamic, insofar as they are reviewed annually, it is anticipated that where possible and appropriate, gaps will be addressed in the immediately following round.

2. Bangladesh

2.1. National Stakeholder Workshop – 10 May 2015

2.1.1. Summary

The 1st National Level Stakeholder Workshop of the DECCMA Bangladesh Consortium was held on 10 May 2015 as part of the 1st round of stakeholder engagement events planned in the project. A total of 28 participants from 22 organizations participated in the event, representing a wide range of stakeholders, including policy makers, funders, planners, line agencies/ implementers, research organizations, development projects, donors, NGOs and Civil Society Organizations. The principal aim of the workshop was to raise awareness of the project and to provide a jump-start in engaging stakeholders to buy into the project. The specific objective was to get the preliminary feedback from the stakeholders on a number of issues, including project objective and activities, identification relevant for the project and how to engage with them, major issues or problems (and their priorities) in terms of adaptation and migration, major governance challenges in addressing issues effectively, barriers to policy and legal implementation, adaptation policy analysis and adaptation policy inventory, and relationship between biophysical and socioeconomic drivers of migration.

The participants emphasized engaging with the villagers, the primary stakeholders, for evidence-based policy making. More engagement with local government institutions was suggested. One-to-one meetings followed by organized consultation meeting and network building via emails, facebook, etc were suggested as useful means for stakeholder engagement. Important governance issues in the context of adaptation identified by the stakeholders include natural disasters, salinization, water logging, food security, livelihood support system, lack of earning opportunities/ changes in livelihoods, health, crisis of drinking water, (lack of) cyclone shelter, climate resilient housing, uses of common properties by individuals and communities, sustainability of current adaptations, mal-adaptation, and top-down system (corporate power structure). Important governance issues in the context of migration include climatic and man-made hazards, river bank erosion, flood, sea level rise, lack of income, lack of employment opportunities, creation of local jobs (so that people can adapt locally), vulnerability of women (gender inequality), voluntary versus involuntary migration, uncertainty in receiving areas, insecurity in both sending and receiving areas, migration rights, need for decentralization of EPZs (to reduce volume of migration), absence of departments or agencies for monitoring of internal migration, and people's limited access to adaptation implemented by Government

Existing governance systems have had limitations in addressing the above mentioned issues. The importance of useful distribution and use of annual development budget of the government as well as other projects, making the planning process more inclusive of local people, need for improving coordination between government organizations and NGOs and knowledge transfer and management among institutions and between institutions and people were highlighted. The major barriers to implementation of policies and laws identified by the stakeholders include lack of awareness, lack of education, lack of gender sensitiveness, lack of political will, lack of manpower in institutions responsible for policy translation and implementation, lack of vertical coordination, lack of accountability and transparency, cultural barrier, and lack of confidence and trust in implementing agencies.

The participants wondered if adaptation inventory made in the project should make a distinction between 'adaptation' and 'risk reduction'. The importance of documenting the community Risk Assessment (CRA) in terms of adaptation was highlighted, since some of the union level disaster

management committees have been very pro-active active in this regard. There are big gaps between planned adaptation and local needs. Hence, conducting a primary inventory of autonomous adaptation practices and documenting it is essential.

2.1.2. Introduction

The 1st National Level Stakeholder Workshop was held on 10 May 2015 as part of the 1st round of stakeholder engagement planned in the DECCMA project across all three consortia in Bangladesh, India and Ghana. For Bangladesh, the first round of engagement was expected to start earlier. However, the 1st National Workshop could not be organized as planned in either February or March 2015 because of the political turbulence that prevailed in the country. It was only possible in May 2015 as the situation improved.

BUET had engaged in a series of virtual meetings with the northern WP1 Lead in relation to preparing stakeholder engagement plans. One important criteria was to ensure that all relevant stakeholders are linked across the whole project. Work packages 1, 2, 3 and 6, all have substantial stakeholder engagements, with WP3 and WP6 meant to having substantial engagement at local and community levels. Another important criteria was to ensure that the resources are best utilized. As agreed in the stakeholder engagement plan, stakeholder engagement will take place at four levels: national, expert, district and community, and there will be four rounds of stakeholder interactions in the GBM study area. Each round will comprise of a number of workshops, meetings and interviews, taking place at various geographical and administrative levels, and each addressing potentially different types of stakeholders. The stakeholder interactions are to take place with the objectives of raising awareness of the project, getting preliminary feedback from the stakeholders on a number of issues, including governance issues/ barriers to policy and legal implementation, national adaptation options, adaptation finance initiatives, conceptual relationship between biophysical and socio-economic drivers of migration, and starting to engage stakeholders to buy into the project, in the first round; developing (endogenous and exogenous) scenarios (qualitative narratives) with stakeholders and validating demographic and migration hotspot analysis in the second round, reviewing and validating quantitative estimates of scenario narratives and brainstorming migration/ adaptation survey findings to identify and rank effective adaptation options for the GBM delta in the third round, and discussing all autonomous and planned adaptation options developed as part of WP6 in the fourth round.

The 1st National Level Stakeholder workshop was organized mostly in accordance with the stated objectives. However, as substantial progress had been made on adaptation policy analysis and inventory of adaptation options, the workshop provided an opportunity to disseminate the findings on the same among the wider audience present in the workshop.

As the baseline climate hotspots maps (from WP2) are available now together with the migration maps (from WP3), comparison between the hotspot and migration maps has made it possible to select the locations for district/ local level workshops as part of the 1st round of stakeholder engagement. Two district level workshops are planned in August 2015 following the consortium meeting in Ghana. Community engagement (through FGDs) has, however, already started in candidate locations determined based on hotspot and migration maps.

2.1.3. Aims and objectives

As mentioned above, the 1st National Level workshop was mostly aligned with the stakeholder engagement plan (SEP) for the 1st round of events. The principal aim of the workshop was to raise awareness of the project and to provide a kick-start in engaging stakeholders to buy into the project. The specific objective was to get the preliminary feedback from the stakeholders on a number issues, including the following:

- Project activities in general
- Stakeholders relevant for the project, and how we engage with them (WP1)
- How we work towards research into use (RiU)?
- Major issues or problems (and their priorities) in terms of adaptation and migration that should be studied (WP3/WP6)
- Challenges in addressing issues effectively (WP3/WP6)
- Governance issues and barriers to policy and legal implementation (WP1)
- Adaptation inventory, criteria for successful adaptation (WP6)
- Preliminary findings from policy analysis (WP6)
- Relationship between biophysical and socioeconomic drivers of migration (WP5)

2.1.4. Agenda for workshop

The agenda for the workshop is provided in Appendix-I. Very briefly, the workshop started off with an *inaugural session*, with Prof. Khaleda Ekram, the honorable Vice-Chancellor of BUET gracing the event as the Chief Guest. Prof. GM Tarekul Islam, Director of IWFM, BUET gave the welcome speech and Prof. Munsur Rahman, Principal Investigator in DECCMA Project from the Bangladesh Consortium, gave a brief introduction of the Project.



Prof. Khaleda Ekram, Vice-Chancellor of BUET gracing the National DECCMA workshop as Chief Guest

There were four technical sessions in total, designed so as to address the objectives of the workshop set beforehand. In **Session 1**, Prof. Mashfiqus Salehin gave a more detailed presentation on the DECCMA project activities with a view to setting up the platform for discussion in this session as well as the other subsequent sessions. The participants had opportunities to discuss the overall aim and activities of the DECCMA project In the plenary discussion. In addition, they were able to take part in a guided discussion on who the relevant stakeholders are (not present in the workshop), the best

method of stakeholder engagement, present gaps in major issues or problems (and their priorities), and problems and challenges in addressing issues effectively.

In **Session 2**, moderated by Prof. Mashfiquis Salehin, the participants were divided into three breakout groups, in which they discussed the important governance and management issues with gaps and barriers to policy implementation. Discussion in each group was facilitated by BD researchers in DECCMA. Each group made a brief presentation in plenary following agreement in their respective group discussion.



Participants engaged in group discussion in breakout session

Instead of trying to get feedback from the participants on adaptation options in general terms, **Session 3** provided an opportunity to get specific feedback from them on the adaptation policy analysis and adaptation inventory prepared as part of WP6 activities. Two presentations were made on policy analysis, one by Mr. Meer Ahmed Tariqul Omar (DECCMA PhD Fellow) and the other by Ms Qazi Aniqua Zahra (Research Associate). The findings from adaptation inventory were presented by Prof. Shahjahan Mondal (IWFM, BUET) and Mr. Mohammad Towheedul Islam (RMMRU). The session ended with a plenary discussion.

Prof. Tasneem Siddiqui (RMMRU) and Prof. Munsur Rahman (IWFM, BUET) moderated **Session 4** on conceptualization of relationship between biophysical and socio-economic drivers of migration.

Prof. Anisul Haque (IWFM, BUET) briefly introduced the biophysical issues and the climate change hotspot maps (based on single and multi-hazards and socio-economic vulnerability). Prof. Tasneem Siddiqui then explained the theoretical perspective on the drivers of migration, how environmental, social, economic, demographic and political drivers singly and in combination impact on migration decisions, and the lack of (or need for) consideration of the role of other adaptation options in the analytical framework.



Participants engaging in the plenary session

2.1.5. Invitees and Attendees

Invitation list was prepared based on the stakeholder map developed as part of WP1 activities. A total of 28 participants from 22 organizations showed up during the event (list provided in Appendix-II), although the invitee list (provided in Appendix-II) included individuals from more than 60 organizations, representing policy makers, funders, planners, line agencies/ implementers, research organizations,

development projects, donors, NGOs and Civil Society Organizations. One main reason for a relatively low level of participation was that a few other workshops were organized by other programmes on the same day, most notable being the one by International Organization for Migration (IOM). The DECCMA workshop date could not be shifted because the invitations for the DECCMA workshop were sent out 7 days prior to the event, while the invitations for the others seemingly were sent out with only 2-3 days of notice. Among the 28 participants, only 5 participants were female. This represents a low percentage, in consideration of what DECCMA envisages, suggesting that greater efforts will be needed in future to increase women participation in the workshops.

2.1.6. Findings from technical sessions

Session 1: The stakeholders were asked to raise issues, questions or expectations regarding the aims, objectives and activities of DECCMA project. In addition, there were asked to give feedback to the following questions:

- ⇒ Are we missing important stakeholders?
- ⇒ How do we engage with the stakeholders?
- ⇒ How do we work towards research into use?

In spite of clarifications made in the presentation, one important question or concern that came from the participants in this session as well as in Session 4 was how migration is viewed in the project, i.e. whether migration is viewed as a choice of adaptation or 'forced' adaptation, whether the project will promote or protect migration, and whether the project will be interested in finding out alternatives to migrations (e.g. creating short-term job opportunities in the sending areas and coming up with other solutions for 'climate refugees') and hence protect forced migration.

The participants observed that there are big gaps between planned adaptation and local needs. Hence the pertinent question (from the participants) was whether the project would be looking at both planned and autonomous adaptation.

With regards to the stakeholders, a question was raised about the definition of 'stakeholders' used in the project. The villagers (victims of climate change) are the primary stakeholders in their role as 'Information Providers' and hence it is of utmost importance to engage with them for evidence-based policy making. The moderator made the clarification that the local stakeholders form the most important part of the communication engagement strategy. In their opinion, local government institutions were important stakeholders missing in the workshop.

On the planning for stakeholder engagement, one suggestion came to start with primary stakeholders in the first round followed by others, which would ensure that voices of local stakeholders are represented and hence will help evidence-based policy making. One-to-one meetings followed by organized consultation meeting may be more useful for generating awareness and involve the stakeholders more actively in the project. The participants also emphasized the importance of network building via emails, facebook, etc.

Session 2: This session was dedicated to governance questions in the context of adaptation and migration. In three break-out groups, the participants were presented with the following questions:

- ⇒ What are the important governance issues in the context of adaptation?
- ⇒ What are the important governance issues in the context of migration?
- ⇒ What are the gaps in governance systems?

⇒ What are barriers to implementation of policies and laws?

The responses to the first two questions are summarized below:

Important governance issues in the context of adaptation

1. Natural disasters	8. Crisis of drinking water
2. Salinization	9. (Lack of) cyclone shelter
3. Water logging	10. Climate resilient housing
4. Food security	11. Uses of common properties by individuals and communities
5. Livelihood support system	12. Sustainability of current adaptations
6. Lack of earning opportunities/ Changes in livelihoods	13. Mal-adaptation
7. Health	14. Top-down system (corporate power structure)

Important governance issues in the context of migration

1. Climatic and man-made hazards	8. Voluntary versus involuntary migration
2. River bank erosion	9. Uncertainty in receiving areas
3. Flood	10. Insecurity in both sending and receiving areas
4. Sea level rise	11. Migration rights
5. Lack of income; lack of employment opportunities	12. Need for decentralization of EPZs (to reduce volume of migration)
6. Creation of local jobs (so that people can adapt locally)	13. No department for internal migration (no proper monitoring of internal migration)
7. Vulnerability of women (gender inequality)	14. People's limited access to adaptation implemented by Government

Problem of good governance has been an issue. Existing governance systems have had limitations in addressing the above mentioned issues. One key issue is how the annual development budget of government as well as other projects are distributed as used, and whether major concerns such as construction of cyclone shelters or increasing resilience against storm surges have received adequate attention. There have been efforts made in changing planning process from top-down to be more

people inclusive. However, people's participation still lag behind in terms of being meaningful. There is still lack of coordination between government organizations and NGOs and lack of knowledge management among institutions and between institutions and people. There are also problems with local governance systems. The district budget is not always properly spent, and there are gaps in communication of adequate information from the institutions to the local people, implying a lack of inclusion in decision making.

The participants identified a number of barriers to implementation of policies and laws. These include:

- Lack of awareness and capacity
- Lack of education
- Lack of gender sensitiveness
- Lack of political will
- Lack of manpower in institutions responsible for policy translation and implementation
- Lack of vertical coordination (from Ministry to Departments to rural people)
- Lack of accountability and transparency (not enough monitoring of if target is achieved or not, i.e. no 'Report Card')
- Cultural barrier (people do not go to get benefits; this is especially true for women)
- Corruption
- Lack of confidence and trust in implementing agencies

Session 3: This session was dedicated to adaptation options and policy contexts. A summary of preliminary findings that were presented from analysis of policy documents in the contexts of 'adaptation', 'migration' and 'women and gender', and adaptation inventory are provided below.

In the analysis of policies under the lens of 'adaptation', it was found that major focus has been given on mainstreaming climate change issue in all policies and plans. Special attentions are being given on developing climate resilient coastal infrastructure like coastal embankments, multi-purpose cyclone shelters etc. Nevertheless many climate change adaptation issues like optimal polder height have dearth of scientific data and research findings to take appropriate policy decisions. Interfacing among stakeholders, scientific community and policy makers needs to be improved to reflect stakeholders' aspirations into policy planning through recommendations from scientific research community.

Migration has been most emphasized in Bangladesh Climate Change Gender Action Plan 2013. It is also mentioned in Bangladesh Climate Change Strategic Action Plan 2009 and Sixth Five Year Plan (2011-2015). Others discuss migration insignificantly. Migration is implicitly discouraged in the National Environment Management and Action Plan (NEMAP), 1995. Bangladesh Population Policy 2012 discourages migration to urban areas. Women and gender have been addressed in many policies, most notably in the recent ones. However, most of them have been addressed in socio-economic contexts rather than climate (change), except the Bangladesh Climate Change Strategy and Action Plan 2009, National Adaptation Program of Action (NAPA) 2009, and Bangladesh Climate Change and Gender Action Plan, 2013. In summary, overseas migration and migration due to economic reasons have been focused in most policies, whereas migration has not been not addressed as a climate change adaptation option in any of the policies. Migration of the male population focused in the Gender Action Plan, and it seems women were assumed to stay back and adapt to the climate change circumstances and work on mitigating it.

The major findings from adaptation inventory include: (i) agriculture sector has the largest share of adaptation (34%) followed by water resources (16%); (ii) majority of the adaptations (59%) are reactive in nature; (iii) Most of the adaptation (73%) are in response to chronic stress; (iv) only in 21% cases, there has been any attempt to make the adaptation gender appropriate; (v) only 12% of adaptations show any link to migration; (vi) 63% of the adaptations appear to be sustainable in the long run.

The presentations received good appreciation from the participants. They did raise a few questions and had a few observations. One suggestion was to consulting the Haor Master Plan, which would provide a lot of information on adaptation practices. One key question was whether the inventory made any differentiation between 'adaptation' and 'risk reduction'. A pertinent question was to what extent adaptation in the inventory focused on disaster risk reduction (DRR). Question was raised whether the inventory provides any information on how much focus of adaptations has been on system resilience and how much on human resilience. A few participants expressed their surprise at the findings attempts to make the adaptation gender appropriate have been limited. This raises question why this has been the case given that NGOs have been working for long in socio-economic adaptation taking into consideration of gender issues. This is in line with the big gender focus in the Disaster Management Act. Since the inventory was on planned adaptation options based on secondary literature and sources, one query from the participants was whether the DECCMA project is also going to document primary inventory of autonomous adaptation practices. The participants also highlighted the importance of documenting the community Risk Assessment (CRA) in terms of adaptation. CRA is a participatory method to assess local hazard, risk, and vulnerability, capacity to cope and finally explore the options to reduce potential risks to be adopted by community at risk. They observed that some of the union level disaster management committees (who received training from CDMP) have been very pro-active active in this regard.

There were a few observations made about the review of a few policies. For example, one participant observed that the Coastal Zone Policy 2005 discusses the issues of water supply and sanitation (WASH) contrary to what was presented. The National Environment Management and Action Plan (NEMAP) 1995, a visionary document produced even when the issue of climate change was not at the forefront, covered almost all adaptive practices. Hence, sufficient reflection needs to be there in the policy analysis.

Session 4: As mentioned before, this session was dedicated to the conceptualization of relationship between biophysical and socio-economic drivers of migration. The session was facilitated through introduction of the biophysical issues acting singly or in combination, the theoretical perspective on the drivers of migration, how environmental, social, economic, demographic and political drivers impact on migration decisions, and the importance of considering other adaptation options in the framework.

Rather than deliberating on different bio-physical and socio-economic pathways of migration and adaptation, discussion by the participants in this session, however, was mostly confined to the two school of thoughts on migration, i.e. the issue of looking at migration positively or negatively. Climate change is one complexity among many complexities linked to migration. So, in addition to tackling climate change impacts, creation of job opportunities for the local people is also very important. The local people will then decide whether local level adaptation through income generation is sufficient or out migration is more lucrative. Lack of political decentralization has been a cause for less protection against forced migration. Dhaka and Chittagong are much more developed compared to the other districts. It is important to improve the growth centers all over the country and establish connectivity between them. This needs to be made a part of the climate change policy directive.

2.1.7. Conclusions and next steps

The 1st National Stakeholder Workshop has largely been successful in achieving its desired objectives. It was able to generate considerable awareness and interests among the stakeholders, especially those who attended the workshop. The rigorous invitation process (sending individual invitation by email and by post, followed by telephonic communication) meant that a wider community is at least aware of the DECCMA project, which will also help future engagement with them. The number of participants could have been much larger had there not been other programmes conducted on the same day by other institutions. The number of women participants were less than expected. Greater efforts need to be made to bring more women participants to the workshops.

Given the considerable number of issues planned to be addressed in the four technical sessions, the workshop was able to generate adequate interaction among the stakeholders and between project partners and stakeholders in a short time. However, while useful and specific feedback were obtained from the participants in a few sessions (e.g. Session 2 and 3), the information obtained was not very specific for the others (e.g. Session 4).

The next immediate steps are to conduct two district level workshops (as part of 1st round of events) in August 2015 and start conducting expert interviews. These will be finalized in the July 2015 consortium meeting in Ghana.

2.1.8. Appendix- I: Agenda of workshop

D E C C M A



1st National Level Stakeholder Workshop

DEltas, vulnerability and Climate Change: Migration and Adaptation

10 May 2015

Venue: IWFm, Institute Bhaban, Palashi, BUET

Programme Schedule

08:30-09:00	Participants arrive
09:00 - 09:45	Inaugural Session
09:00 - 09:10	Welcome address by Director, IWFm, BUET
09:10 - 09:25	Introduction of DECCMA Project by Prof. Munsur Rahman
09:25-09:35	Address by the Chief Guest Prof. Khaleda Ekram, Vice-Chancellor of BUET
09:35 - 10:15	Tea Break
10:15-11:45	Session 01
10:15 -10:45	Presentation on DECCMA Project activities - Prof. Mashfiqus Salehin
10:45 - 11:30	Plenary discussion: Gaps in major issues or problems (and their priorities) being studied; problems and challenges in addressing issues effectively; stakeholders and the best method of stakeholder engagement.
11:30 - 12:30	Session 02
11:30 - 12:15	Group discussion: Governance issues/ barriers to policy and legal implementation
12:15 - 13:00	Group presentation and discussion
13:00 - 14:00	Lunch
14:00 - 15:40	Session 03
14:00 - 14:20	Presentation on policy review: Meer Ahmed Tariqul Omar & Quazi Aniqua Zahra
14:20 - 14:40	Presentation on adaptation inventory - Prof. Shahjahan Mondal and Towheedul Islam
14:40 - 15:15	Plenary discussion
15:15 - 15:45	Tea Break
15:45 - 17:00	Session 04
15:45 - 16:10	Conceptualisation of relationship between biophysical and socio-economic drivers of migration - Prof. Tasneem Siddiqui and Prof. Munsur Rahman

16:10 - 17:00 Plenary discussion

17:00 Closing

2.1.9. Appendix-II: List of participants

External Participants

SL No	Named Individual	Host Institution
1	Dr. Md. Anwar Hossain	Dhaka University
2	Nafiz Ifteakhar	SANEM
3	Md. Arif Abedin	Water Resources Planning Organization (WARPO)
4	Md.Ekram Ullah	Water Resources Planning Organization (WARPO)
5	Dr.Md.Abdul Alim	Dept. of Fisheries
6	Mohammad Ismail	USTC,CTG
7	Quazi Mohammad Inam -E-Elahi	LGED
8	Dr.Md.Abdus Sabur	DOF,Bangladesh
9	Ahmadul Hasan	UNDP
10	Hamidul Ahsan	EIMS
11	Dr.Rumena Yasmeen	BIRRI
12	Siddiqur Rahman	Shushilan
13	Md.Shafiul Alam Chowdhury	Bangladesh Forest Dep.
14	Hyeng Geun Ji	IOM
15	Sukhee Chae	IOM
16	Shohrab Hossain	Department DM
17	Md.Mahmuduzzaman	PKSF
18	Dr.Hamidul Huq	CSD,ULAB
19	Mst.Karimon Nesha	CNRS
20	Eng.Md.Lutfur Rahman	RRI
21	Dr.Hideaki Koniyan	JICA
22	Lioy Shah	CUL,Bangladesh
23	Mahfuz Misha	Jamuna Television
24	Mahmud Hasan Tuhid	GIZ
25	Reaj Morshed	GIZ
26	Md.Afjal Hossain	GIZ
27	Afroza Haque	BCAS
28	Arfan Uzzaman	BCAS

Participants from project

1	Prof. Md. Munsur Rahman	IWFM, BUET
2	Prof. Mashfiqus Salehin	IWFM, BUET

3	Prof. Rezaur Rahman	IWFM, BUET
4	Prof. Anisul Haque	IWFM, BUET
5	Prof. A. Fazal M. Saleh	IWFM, BUET
6	Prof. Shahjahan Mondal	IWFM, BUET
7	Mohammed Abed Hossain	IWFM, BUET
8	Md. Anisur R Majumdar	IWFM, BUET
9	Md.Rashedul Islam	IWFM, BUET
10	Md.Mahabub Arefin	IWFM, BUET
11	Meer Ahemed Tariqul Omar	IWFM, BUET
12	Momtaz Jahan	IWFM, BUET
13	Rubaiya Kabir	IWFM, BUET
14	Md. Izazul haq	IWFM, BUET
15	Noor -E-Asmaul Husna	IWFM, BUET
16	Qazi Aniqua Zahra	IWFM, BUET
17	Muhammad Shahriar Shafayet Hossain	IWFM, BUET
18	Wasif-E-Elahi	IWFM, BUET
19	Md. Monowar-ul Haq	IWFM, BUET
20	Ms.Sumaiya	IWFM, BUET
21	Md.Jakir Hossain	IWFM, BUET
22	Md.Fatin Nihal Sarker	IWFM, BUET
23	Uzzal Kumar Halder	IWFM, BUET
24	Md.Ahsan Habib	IWFM, BUET
25	Rifat Ara Rimi	IWFM, BUET
26	Md. Mohiuddin Sakib	IWFM, BUET
27	Dr. Tasneem Siddiqui	RMMRU
28	Mohammad Rashed Bhuiyan	RMMRU
29	Mohammad Shahidul Islam	CEGIS
30	Malik Fida A Khan	CEGIS
31	Dr.Md.Anwar Hossain	Dhaka University
32	Dr Anwara Begum	BIDS
33	Dr Nabiul Islam	BIDS
34	Dr Munir Ahmed	TARA

2.2. District Level Stakeholder Workshop Khulna – 31 August 2015



Venue : CSS Ava Center, Khulna.
Date : 31 August, 2015
Time : 9.30 AM – 2.30 PM

UNIVERSITY OF
Southampton



WARPO
পানি সম্পদ পরিকল্পনা সংস্থা

JJS Jagrata
J u b a
Shangha

Event Details

Project Title	DEltas, Vulnerability and Climate Change: Migration and Adaptation (DECCMA) Project	
Workshop Title	District level stakeholder workshop	
Date of the workshop	31 st August, 2015	
Duration	One (1) day	
Time of the workshop	9.30 am to 2.30 pm	
Management and Organized by	Institute of Water and Flood Management (IWFM) of Bangladesh University of Engineering and Technology (BUET), Water Resource Planning Organization (WARPO) and Jagrata Juba Shangha (JJS)	
Participants	University Teacher, Media People, NGO Group, Local Community People (Koyra, Dacope, Terokhada)	
Program Schedule		
Time	Program/ Activities	
09.30 am-9.55 am	Registration	JJS
9.55 am-10.00 am	Welcome Speech	ATM Zakir Hossain Executive Director Jagrata Juba Shangha (JJS)
10.00 am-10.30am	Introduction to DECCMA Project	DrMashfiqusSalehin Professor, Bangladesh University of Engineering and Technology (BUET)
10.30 am-10.45 am	Workshop Objective	Dr Mohammad ShahjahanMondal Professor, Bangladesh University of Engineering and Technology (BUET)
10.45 am- 11.15 am	Tea Break	
11.15 am- 12.45 pm	Group Discussion	Dr.MashfiqusSalehin Professor, Bangladesh University of Engineering and Technology (BUET)
	Theme 01: Governance- Issues, Gaps and Barriers	Dr Mohammad ShahjahanMondal

12.45 pm- 13.15 pm		Professor, Bangladesh University of Engineering and Technology (BUET)
	Theme 02: Climate Change Adaption	Mohammad RashedBhuiyan
	Theme 03: Migration	Md. EkramUllah Principle Investigation Officer WARPO
13.15 pm- 13.30 pm	Summary and Closing	Participants
13.30 pm	Lunch	

2.2.1. Introduction

A “District Level Stakeholder Workshop” has been organized jointly by the Institute of Water and Flood Management (IWFM) of Bangladesh University of Engineering and Technology (BUET), Water Resource Planning Organization (WARPO) and Jagrata Juba Shangha (JJS) on 31st August, 2015 at 9:30 am to 2:30 pm at the location of CSS Ava Center, Khulna under ‘DELTAs, vulnerability and Climate Change: Migration and Adaptation (DECCMA) Project’. The DECCMA is a consortium project under the Collaborative Adaptation Research Initiative in Africa and Asia (CARIAA) program funded by Canada’s International Research Centre (IDRC) and the UK’s Department for International Development. The Lead Partner Institutes are University of Southampton- UK (Project Lead), Institute of Water and Flood Management (IWFM) of BUET Bangladesh, Jadavpur University - India and University of Ghana- Ghana. Besides, there are a number of other partner institutes associated with the Lead Partners from each Country. The other partner institutes in the Bangladesh component are Refugee and Migratory Movements Research Unit (RMMRU) of University of Dhaka, Center for Environmental and Geographic Information Services (CEGIS), Bangladesh Institute of Development Studies (BIDS), Bangladesh Space Research and Remote Sensing Organization (SPARRSO), Technical Assistance for Rural Advancement (TARA) and Jagrata Juba Shangha (JJS).

The research is aimed at climate change impact and an adaptation issue in two deltas in South Asia (GBM and Mahanadi deltas) and one delta in Africa (Volta Delta). Deltas are vulnerable areas and are considered as hotspots to climate change and sea level rise. The researchers in the DECCMA project will work with the Governments and a wide range of stakeholders of the delta regions to understand how people are adapting to the physical effects of climate change and human interventions, such as sea level rise, alongside socio-economic pressures in the delta regions and implications of different adaptation options to those challenges. There will be a particular focus on assessing migration as an adaptation in deltaic environments (in the context of other adaptation options) under changing climate. The project aims to develop methods to predict how these deltas may evolve over the next 50 to 100 years and provide Governments with the knowledge and tools to ensure future policy can maximize planning services and programmes to the benefit of the region’s population.

A total number of 90 people participated in the workshop, including representatives from local government institutions, non-government organizations, media, academics and about 40 community people from two Upazila (Koyra, Dacope) of Khulna. The participants discussed in groups on different issues, including governance and management aspects associated with climate change adaptation and migration, gaps in the governance system, barriers in policy and legal implementation, types of adaptations (both planned and autonomous) being practiced and reasons for their success and failure. They also discussed on the nature of migration from the area and their drivers, migration trends among different livelihood groups and gender dimensions of migration.

2.2.2. Objective of the workshop

The main objective of the workshop was knowledge sharing through conversation between different stakeholders, such as University teachers, Government officials, News and electronic media, NGOs group and local community people.

Preparatory Activity

■ Technical sector

- JJS had developed the concept note, content and handout of this orientation.
- All the logistics for this orientation had been developed and managed by JJS.
- Tentative budget and participant category had been developed by JJS and it had been finalized by BUET.
- All the reporting and documentation had been developed by JJS.
- Workshop had been facilitated by BUET representative.

■ Management sector

- JJS had finalized venue, participant, resource person, logistics, food, conveyance through proper communication.
- Need base support had been provided from JJS to the facilitators
- Press release had been ensured by BUET and JJS representative through communicating with journalist.

Program start time and date: 9.30 am, 31st August, 2015

Session Start Time:9:30 am



Registration and Ensured Logistics Support from JJS: Registration start from 9:30 am at CSS Ava Centre facilitated by JJS.

Participant Category: Participants category was fixed by BUET team and communication with the participants was done by JJS.

The participants were
✓ University Teacher

- ✓ Government Official representatives
- ✓ Electronic and Print Media representatives
- ✓ NGO representatives
- ✓ Local Community (Koyra, Dacope, Terokhada) Participants

Orientation for the workshop was divided into three different sessions

1. Inaugural session
2. **Main** session
 - ✓ Introduction to DECCMA Project
 - ✓ Workshop Objectives
 - ✓ Group Discussion
 - ✓ Group Presentation
3. Summary and Closing session

Welcome Speech:MrATM Zakir Hossain, Executive Director of JJS expressed his gratitude to everyone, who came from different Universities (BUET, KUET, DU and KU), Government officials, Print and Electronic Media, NGO group and local participants. In this session, MrZakir mentioned that if we want discussion about climate change, then we must go Dacope and Koyra region as those areas flooded in near future. Mr Hossain also presented the comparison between present and past scenario of coastal areas to identify the climate change impact. At last, he expressed his gratitude to everyone for coming in the workshop.



2.2.3. Inaugural session

The participants introduced themselves in inaugural session. Then main speaker of the workshop, Professor Dr Mashfiq Salehin from IWFM, BUET facilitated the session. After the inauguration, he delivered his speech on different aspects of the workshop.

2.2.4. Introduction to workshop and Objective Described by Professor Dr Mashfiq Salehin

Professor Salehin started his speech with explanation of the concept of the project. He further described the evolution concept and purposes of this project, then he identified the climate change problem and how this program helps to enhance from this situation. He showed the geographical context of Bangladesh, explained how natural disaster such as salinity, cyclone, flood etc. damages the south west coastal region in his presentation. He identified some major issues in the south west coastal areas, which are

- Concept on adaptation (Climate change, low income capacity)
- Climate change
- Impact of sea level rise
- Problems with deltas
- The climatic problem region in the world respect
- Threatened deltas with sea-level rise and subsidence
- Reason behind to evolution of this project

- Some example about strategy of climate change resist and
- Some migration problems etc.

He presents deltas study site in DECCMA

- ✦ South Asia: GBM and Mahanadi deltas
- ✦ Africa: Volta Delta

DECCMA Consortium

- ✦ Northern
- ✦ Bangladesh
- ✦ India
- ✦ Ghana

Full Bangladesh Consortium

- ✦ BUET
- ✦ CEGIS
- ✦ BIDS
- ✦ WARPO
- ✦ RMMRU
- ✦ SPARSO
- ✦ TARA
- ✦ JJS



He also mentioned that DECCMA project aims to

- ✦ Evaluate the effectiveness of adaptation options in deltas
- ✦ Assess migration as an adaptation in deltaic environment under a changing climate
- ✦ Deliver policy support on sustainable development

In his presentation he also explained the seven (7) DECCMA objectives, its outcomes and impacts. After this, he clarified the basic three (3) themes for group discussion, these are

- Governance: Issues in the context of adaptation and migration, Gaps , needs and barriers
- Climate change adaptation: identify vulnerable upazila, unions, ward, para/mahallah, Types of adaptation being practiced, implementation of adaptation practice, successful or failure of adaptation
- Migration: situation of migrants, nature of migration, trend of migration, gender dimension of migration

Mr Md. Saddam Hossain, divisional statistics officer, inquired about the aim of the project and whether the project will identify the impact of climate change. Dr Salehin replied, the project will identify climate change issues by structured questionnaire survey (around 30000), these also delineate the impact of climate change in a structured manner. Md. Saddam Hossain further added that, BBS can provide these data as they are preparing a data set based on this issues. He suggested to engage local data enumerator for data collection process as local people know their condition well.

Mr S.M. Zahid Hassan, Bureau Chief, The Daily Observer, inquired whether the project is emphasizing on adaptation or migration. Dr Salehin replied the project will see both adaptation and migration eventually as these two things are interlinked each other.

Group formation for discussion

After this discussion section, Dr Mashfiqus Slaehin and ATM Zakir Hossain forms six groups based on three thematic areas. The name of the groups were:

- ✚ Government official Group
- ✚ University teachers Group
- ✚ Media (electronic and print) and NGO Group
- ✚ Dacope community Group
- ✚ Koyra-1 Community Group
- ✚ Koyra-2 Community Group

Tea Break

After forming this group, around 15 minutes break are provided for tea.

2.2.5. Group Discussion

After tea break, group discussion started. People sat together group wise and they discussed on three thematic areas based on some pre-defined question.

1) Governance

- What are the important governance issues in the context of adaptation?
- What are the important governance issues in the context of migration?
- What are the gaps in governance systems?
- What are barriers to implementation of policies and laws?



2) Climate Change Adaptation

- Name of Upazila or Union of the district that experienced climate hazards
- Types of adaptation being practiced
 - ✚ Self-initiative
 - ✚ With external help
 - ✚ Change/ trend in livelihood diversification
- Implementers of adaptation practices (Organizations/ Institutions/ Communities and their activities)
- Successful or failed adaptation practices (and why?)
- Problems faced in implementing adaptation options

3) Migration

- In what situation do people migrate rather than adopt locally
- Nature of migration from the area (Weights/ reasons – relation to environmental/ climate variability/ hazards)



- ✚ Seasonal: rural to rural as agriculture or other work such as brick kiln labour
 - ✚ Temporary: rural to urban, e.g. construction or rickshaw pulling
 - ✚ Permanent: rural to urban, e.g. working in the garments etc.
 - ✚ Cross border
 - ✚ International
 - ✚ Forced migration? Location? (e.g. erosion/ cyclonic storm surge)
- Trend of migration
 - ✚ Increase sharply, steadily or not significantly over last 20 years?
 - ✚ Future migration to increase or decrease due to climate stress
 - ✚ Migration status for different livelihood groups
- Any link of migration with unavailability of local jobs
 - ✚ Why local jobs are not available?
 - ✚ Did flood, drought, storm surges, salinity, water logging have any roles?
 - ✚ Demographic, HH poverty or any other reasons behind migration?
- Gender dimension of migration

Based on the above three thematic areas and its issues all the six group discussed among themselves and they wrote it down in sheet. After 75 minutes discussion, the groups then presented their findings.

2.2.6. Presentation from government officials (Md. Saddam Hossain, Bangladesh Bureau of Statistics)

In the presentation, Md. Saddam Hossain and his team presented some issues and pointed out on the three thematic areas.

Governance

Important issues for governance

- ✚ River bed management
- ✚ Subsidy for livestock production
- ✚ Micro credit
- ✚ Poverty database preparation
- ✚ Cultivation of vegetables of dikes
- ✚ New crops variety (Short duration and salinity tolerant)

- ✚ Canal re-excavation (TRM, Drainage system improvement)
- ✚ Shrimp aquaculture
- ✚ Fresh water aquaculture
- ✚ Cyclone shelters

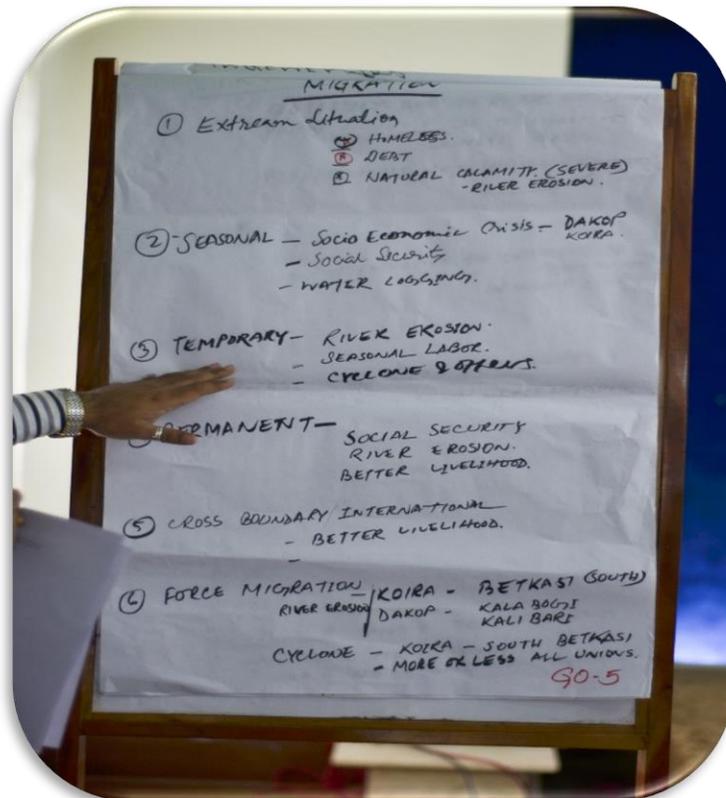
Gaps and barriers of governance

- ✚ Mismanagement
- ✚ Lack of coordination
- ✚ Lack of proper planning
- ✚ Lack of finding
- ✚ Shortage of skilled manpower
- ✚ Inappropriate/ inadequate research
- ✚ Lack of proper monitoring mechanism

Climate change Adaptation

Union wise most vulnerable areas of Koyra and Dacope Upazila

- ✓ Koyra
 - ✚ South Bedkashi
 - ✚ North Bedkashi
 - ✚ Moharajpur
 - ✚ KoyraSadar
 - ✚ Mohessoripur
- ✓ Dacope
 - ✚ Sutarkhali
 - ✚ Tildanga
 - ✚ Kamarkhola
 - ✚ Baniashanta



Adaptation being practiced

- ✓ Self-practice
 - ✚ Make house more resilient
 - ✚ Home stead vegetation
 - ✚ Fish culture
 - ✚ Backyard livestock production
 - ✚ Cultivation of crops on dikes
- ✓ External practice
 - ✚ Awareness and training
 - ✚ Micro-credit and subsidy
 - ✚ Supply of seeds
 - ✚ Rehabilitation and reconstruction
 - ✚ Alternative livelihood (Reduce stress on forest)

Implementation Authority

- BRDB
- Agriculture office
- Fisheries office
- BWDB
- LGIS etc.

Success or failed Adaptation Practice

- ✓ Success
 - ✚ Timely impose
- ✓ Failure
 - ✚ Inadequate production and marketing
 - ✚ Inadequate pricing
 - ✚ Communication
 - ✚ Fund generation and coordination

Migration

Situation for migration

- ✚ Homeless family
- ✚ Debt
- ✚ Natural Calamities (flood, storm, river erosion, cyclones etc.)

Types of migration and its reason

- ✓ Seasonal
 - ✚ Socio-economic crisis
 - ✚ Social security
 - ✚ Water logging
- ✓ Temporary
 - ✚ River erosion
 - ✚ Seasonal labor
 - ✚ Cyclone and others disaster
- ✓ Permanent
 - ✚ Social security
 - ✚ River erosion
 - ✚ Better livelihood
- ✓ Cross boundary/ international
 - ✚ Better livelihood
- ✓ Force migration
 - ✚ River erosion
 - ✚ Cyclone

Trend of Migration

- ✓ Steadily
 - ✚ Due to river erosion
- ✓ May increase
 - ✚ Due to impact of climatic stress
- ✓ Permanent
 - ✚ Day labors
 - ✚ Farmers

Link of migration with availability of local jobs

Mr Hossain added that there is a strong link between migration and availability of local jobs. Due to lack of job opportunities in local sector, people are migrated in the urban sector for better livelihood.

Gender Dimension of Migration

- ✚ Females moves to garments sector, because they have better opportunities in this sector
- ✚ Male goes for day labor purposes
- ✚ Male and Female ratio of migration: 70% and 30%

2.2.7. Presentation from local community group stakeholder (Razia Begum, Dacope Upazila)

MsRazia Begum presented the findings on behalf of her team and she pointed out some major issues based on migration and climate change.

Migration

Situation for migration

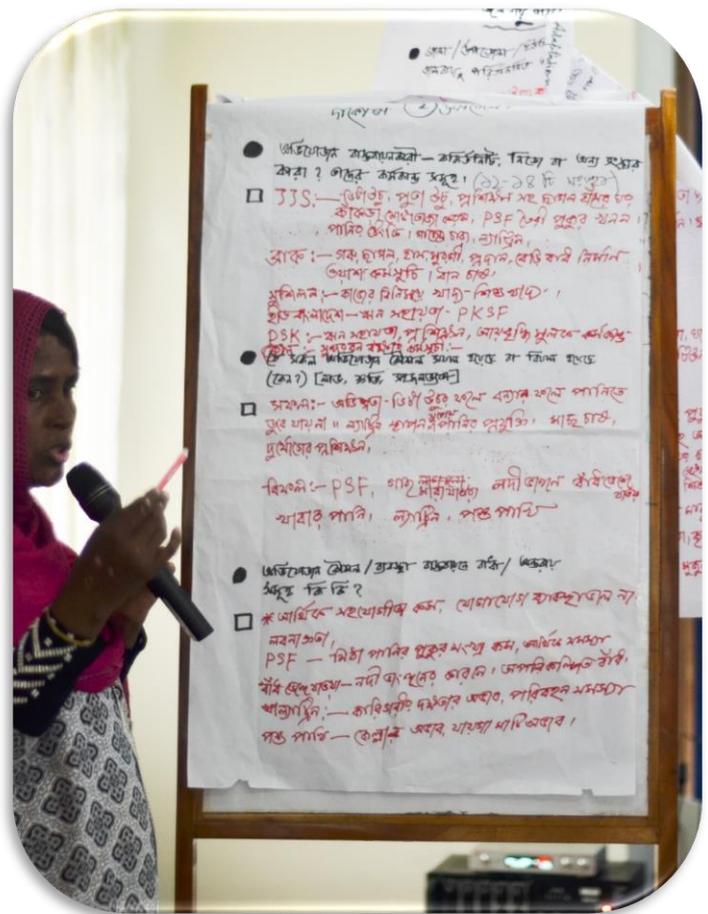
- ✚ High river erosion
- ✚ Lack of income generating activities
- ✚ Population increase
- ✚ Over flooded
- ✚ Frequent disaster

Types of migration and its reason

- ✓ Seasonal
- ✓ Temporary
- ✓ Permanent
- ✓ Legally in foreign country
- ✓ Illegally in foreign country

This group identified some major reasons of migration, which are

- ✚ Climate change
- ✚ Lack of employment opportunities, which is increasing day by day
- ✚ Less income for climate change
- ✚ Decreasing rate of natural resources at the Sundarbans such as fish and other resources
- ✚ Virus in aquaculture
- ✚ High rate of salinity
- ✚ Due to climatic disaster, damage in farm land, aquaculture, livestock etc.



Trend of Migration

- ✓ Increasing rapidly
 - ✚ Due to climate change and lack of income generating activities
 - ✚ More man are migrated than women
 - ✚ In future, It will increasing more

Link of migration with availability of local jobs

- Lack of local job opportunity force people to migrate

Gender Dimension of Migration

Women don't want to migrate, because they have several opportunities of earning through income generating activities. Among these

- ✚ Small business
- ✚ Livestock
- ✚ Tailoring
- ✚ Vegetable gardening
- ✚ Day labor
- ✚ Fishing
- ✚ Housewife
- ✚ Take care of children

Problems of migration

Ms Begum added most of the cases male people are migrated for earning livelihood. At this time especially female household faces several problems

- ✚ Women pass their life with big trouble
- ✚ Safety problem
- ✚ During disaster, children, pregnant, old age people feel trouble
- ✚ Livestock problem
- ✚ Food, health, water related problem

Climate change Adaptation

Union wise most vulnerable areas of Dacope Upazila

- ✓ Dacope
 - ✚ Sutarkhali
 - ✚ Kamarkhola
 - ✚ Koilashganj
 - ✚ Baniashanta

Climate change impact

- ✚ Salinity
- ✚ Flood
- ✚ River erosion
- ✚ Heavy rain
- ✚ Drought
- ✚ Cyclone
- ✚ Deforestation
- ✚ Water logging
- ✚ Seasonal variation etc.

Adaptation being practiced

- ✓ Self-practice
 - ✚ Raise homeland
 - ✚ Tree plantation
 - ✚ Build strong house
 - ✚ Raise height of tube-well, latrine, and pond side etc.
- ✓ External practice (Government and NGO)
 - ✚ Road construction

- ✚ Government allowance
- ✚ Education facilities
- ✚ Health facilities
- ✚ Institution building
- ✚ Raise height of different infrastructure such as home, tube-well, pond etc.
- ✚ Training
- ✚ Economic assistance
- ✚ Rain water harvesting
- ✚ Tree plantation

Implementation Authority

She further added about 12-14 organization work for the betterment of the local people in Dacope. These are:

- ✚ JJS: Household plinth raising, training, PSF, water tank, tree plantation, direct economic assistance etc.
- ✚ BRAC: Livestock, Build beri-badh, wash programme, rice cultivation
- ✚ Shushilon: Food for work, Child food programme
- ✚ Heed Bangladesh: Loan, PSF
- ✚ PKSf: Loan, training, IGA etc.

Success or failed Adaptation Practice

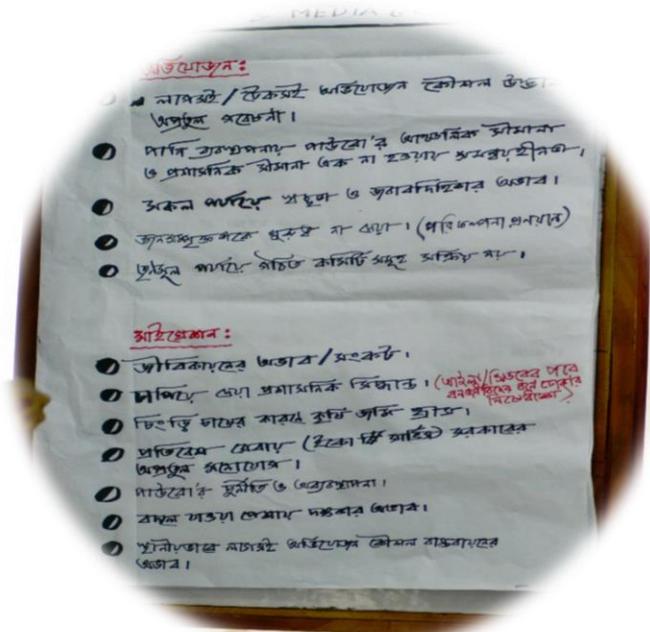
- ✓ Success
 - ✚ Homeland raising, as a result house don't flooded
 - ✚ Latrine
 - ✚ Fresh water
 - ✚ Aquaculture
 - ✚ Training on disaster
- ✓ Failure
 - ✚ PSF
 - ✚ Tree Plantation
 - ✚ Beri-badh

Obstacles for adaptation

- ✚ Lack of economic assistance
- ✚ Bad communication system
- ✚ Salinity
- ✚ Non sustainable beri-badh
- ✚ Lack of technical assistance
- ✚ Lack of kella
- ✚ Unplanned beri-badh etc.

2.2.8. Presentation from NGO and Media Group (Md. Shahinur Rahman, Asroy Foundation)

He presented the findings on behalf of his team and he pointed out some major issues based on migration and climate change.



Climate change Adaptation

- ✓ Lack of research on sustainable adaptation techniques
- ✓ There is no regional and administrative jurisdiction of PAUBO
- ✓ Lack of accountability and transparency
- ✓ Lacking of people participation in planning period
- ✓ Non activeness of local committee

Migration

- ✓ Lack of livelihood
- ✓ Inappropriate administrative decision
- ✓ Decreasing agricultural land due to shrimp culture
- ✓ Lack of government interest (eco service)
- ✓ Corruption of PAUBO
- ✓ Lack of technical knowledge in a changing situation

- ✓ Lack of locally sustainable strategy on adaptation
- ✓ Political force
- ✓ Human trafficking
- ✓ Lack social bindings

Governance

Important issues and gaps of governance

- ✓ Non publication of law and order, that's why people don't know their right
- ✓ Inappropriate intervention of law and orders
- ✓ Out dated law and order
- ✓ Lack of good governance
- ✓ Outlook people right
- ✓ Non accessibility of common people in decision making process
- ✓ Lack of monitoring
- ✓ Lack of coordination
- ✓ Political influence
- ✓ Organizational bindings etc.

2.2.9. Presentation from University teacher Group (Prof. Dr Mostafa Saroar, Khulna University)

Prof. Dr Mostafa Saroar presented all the issues as a representative of University Teacher Group. Basically he provided some ideas on the all issues. The findings of this presentation are given below:

Climate change Adaptation

- ✓ Strategic
 - ✚ National level strategy are there but not linked with local context
- ✓ Financing
 - ✚ Donor funds focus on development, they overlook adaptation
- ✓ Implementation
 - ✚ National – local link not established
 - ✚ Empowerment missing
- ✓ Administration
 - ✚ Corruption
 - ✚ Lack of institutional strength
- ✓ Attitude
 - ✚ Resource base, but not process base



Practice adaptation strategy

- ✚ Rising platform
- ✚ Shift of crop
- ✚ Diversification
- ✚ Saline tolerant cropping
- ✚ Livelihood training
- ✚ Integrated fish farming
- ✚ Seasonal migration
- ✚ Sundarbans based migration

Failure and problem of adaptation practice

- ✓ Failure
 - ✚ Lack of operating mechanism
 - ✚ Cost effective technology
 - ✚ Commercial approach
- ✓ Problem
 - ✚ Techno rather than eco
 - ✚ Lack of mitigation investment for exposure minimization
 - ✚ Short term project and show case good practice

Migration

- ✓ No strategy on pro or anti migration
- ✓ No safety net for migrants
- ✓ Lack of tenure security
- ✓ Lack of livelihood alternatives
- ✓ Lack of capacity

2.2.10. Presentation from local community group (Koyra) stakeholder (Ms Rebeka Sultana, Koyra Upazila)

Ms Rebeka sultana presented as a representative of her team and pointed out some major issues based on climate change and migration.

Climate change Adaptation

Union wise most vulnerable areas of Koyra Upazila

- ✓ Koyra
 - ✚ Uttar Bedkhashi: Padma pukur, gatihgeri, gazipara, hazotkhali, sakbaria, horihorpur, katkata
 - ✚ DakkhinBedkhashi: Jorsing, ghorilal, angtihara, golkhali
 - ✚ Koyrasadar: 4 and 5 no. koyra, Modinabad, gobra, horinkhola
 - ✚ Moharajpur: Sutirkona, sutirdhar, morolerchok, mothbari, pobnarbadh, Protapsoroni, bauliaghata, loka, doshalia.

Adaptation being practiced

- ✓ Self-practice
 - ✚ Salinity resistant rice, vegetable, fish culture
 - ✚ Tree plantation
 - ✚ Build strong house
 - ✚ Raise height of tube-well, latrine, and pond side etc.
- ✓ External practice (Government and NGO)
 - ✚ Raise height of different infrastructure such as home, tube-well, pond etc.
 - ✚ Training from NGO and agriculture office
 - ✚ Livestock (cow, goat etc.)
 - ✚ New farming technology

Implementation Authority

She added, about 12-14 organization work for the betterment of the local people. These are:

- ✚ JJS
- ✚ CREL
- ✚ Shushilon
- ✚ Prodipon
- ✚ BRAC
- ✚ SUS
- ✚ Uttaran
- ✚ Islamic Relief
- ✚ Red Crescent
- ✚ GonoMukhi
- ✚ Concern Worldwide
- ✚ Wateraid
- ✚ DPHE
- ✚ Agriculture, Fisheries and forest office



Success or failed Adaptation Practice

- ✓ Success
 - ✚ Fish culture
 - ✚ Pati bona
 - ✚ Vegetable

- ✚ Create alternative livelihood (Tayloring)
- ✓ Failure
 - ✚ Beri-badh
 - ✚ Livestock

Obstacles for adaptation

- ✚ Lack of community awareness
- ✚ Economical problem
- ✚ Lack of sincerity
- ✚ Greater intensity of salinity

Migration

Situation for migration

- ✚ Lack of employment for climate change
- ✚ Salinity
- ✚ Health problem
- ✚ Threat of disaster

She claimed that climate change is one of the major reason of migration (cyclone, flood, heavy rain, river erosion etc.)

Types of migration and its reason

- ✓ Seasonal (Agricultural work, brick making)
- ✓ Temporary (Day labor, sunderban etc.)
- ✓ Permanent (New job, garment etc.)
- ✓ Legally in foreign country (Black)
- ✓ Illegally in foreign country (Develop country)

This group identified some major reason of migration, which is

- ✚ Lack of employment opportunities
- ✚ Lack of food
- ✚ High rate of salinity, that's why there is low agricultural productivity
- ✚ River erosion
- ✚ High disaster threat

Trend of Migration

- ✓ Increasing sharply
 - ✚ From 2009, due to AILA more people are migrated for earnings
 - ✚ Before 2009, women doesn't go, but recently women also migrate for better livelihood
- ✓ Future Scenario
 - ✚ Due to rapid river erosion it will be increase more
 - ✚ If alternative income opportunity is not possible, then it will be increase

Link of migration with availability of local jobs

The groupthink there is close link with availability of local job. But there is little opportunities to change their profession.

Gender Dimension of Migration

Before 2009, only male people are migrated but at present both male and female migrate from this region. They migrate from there because due to several disaster event they suffer very much. As a result for the safety of future generation they migrate from there.

Major places of migration

Among Bangladesh, they generally migrate to

- ✚ Dhaka
- ✚ Khulna
- ✚ Barisal
- ✚ Madaripur
- ✚ Norail
- ✚ Gopalganj
- ✚ Hilly region etc.

2.2.11. Presentation from local community group (Mixed Group: Koyra, Terokhada, Dacope) stakeholder (Asma Khatun)

Asma Khatun presented on behalf of her team and she pointed out some major issues based on climate change and migration.



Climate change Adaptation Union wise most vulnerable areas of Koyra Upazila

- ✓ Koyra
 - ✚ Uttar Bedkhashi
- ✓ Terokhada
 - ✚ Ajhogor
- ✓ Dacope
 - ✚ Sutarkhali
 - ✚ Kamarkhola

Adaptation being practiced

- ✓ Self-practice
 - ✚ Raise height of beribadh and house
 - ✚ Salinity resistant rice, vegetable, fish culture
 - ✚ Tree plantation
 - ✚ Build strong house
 - ✚ Raise height of tube-well, latrine, and pond side etc.
- ✓ External practice (Government and NGO)
 - ✚ Farmer Field school
 - ✚ Raise height of different infrastructure such as home, tube-well, pond etc.
 - ✚ Training from NGO and agriculture office
 - ✚ Livestock (cow, goat etc.)
 - ✚ New farming technology

Implementation Authority

She added some organizations are working for the betterment of the local people. These are:

- ✚ JJS
- ✚ CREL
- ✚ Shushilon
- ✚ Prodiapon

- ✚ BRAC
- ✚ Agriculture, Fisheries and forest office

Success or failed Adaptation Practice

- ✓ Success
 - ✚ Fish and vegetable culture
 - ✚ Create alternative livelihood (Tayloring)
- ✓ Failure
 - ✚ Beri-badhm from PAUBO
 - ✚ Livestock

Obstacles for adaptation

- ✚ Lack of proper adaptation knowledge

Governance

- ✚ Lack of proper understanding on government issues
- ✚ Government officer don't go to field, but NGO worker go field visit and know their situation well

Closing

After a long discussion and presentation event, Prof. Dr Mashfiqus Salehin from BUET expressed his gratitude to all and he added he is totally astonished to see this information. He also added that the information gained from the workshop exceeds his expectations. At last Prof. MashfiqusSalehin offer flower to MrATM Zakir Hossain, Executive Director of JJS and they thanked everyone for attending at the workshop and making it a success.



2.2.12. Annex

Climate change workshop held

A daylong workshop titled 'Deltas, vulnerability and climate change: Migration and Adaptation' was held at the conference room of CSS Ava Center of Khulna city yesterday.

A Khulna based non-government organisation 'Jagrata Juba Shangha (JJS)' organised the workshop in cooperation with University of Southampton-UK, Institute of Water and Flood Management of Bangladesh University of Engineering and Technology (BUET), funded by International Development Research Centre of Canada and Department for International Development (DFID) of UK.

Mashfiqus Salehin and Md Shahjahan Mondal, professors of BUET, Mohammad Rashed Bhuiyan of Dhaka University, Md Ekram Ullah of Water Resource Management, project coordinator Md Anisur Rahman, Deputy Director of Department of Agricultural Extension (DAE), Khulna Md Abdul Latif, spoke on the occasion.

INDEPENDENT NEWS/AGENCY

The Daily Tribune-2

The Daily Tribune

Khulna: Tuesday, Sep 01, 2015

Workshop on DECCMA project held in Khulna

II Staff Reporter II
A district level workshop on the Deltas, vulnerability and climate change: migration and adaptation (DECCMA) Project was held at CSS Ava Center in Khulna city today (Monday).

It was jointly organized by the Institute of Water and Flood Management (IWFM) of Bangladesh University of Engineering and Technology (BUET), Water Resources Planning Organization (WARPO) and Jagrata Juba Shangha (JJS). The "Deltas, vulnerability and Climate Change: Migration and Adaptation (DECCMA)" is a consortium project under the Collaborative Adaptation Research Initiative in Africa and Asia (CARIAA) program funded by Canada's International Development Research Centre (IDRC) and the UK's Department for International Development (DFID). Presided over by Professor Mashfiqus Salehin of the institute of Water and Flood Management (IWFM) of Bangladesh University of Engineering and Technology (BUET), the workshop was addressed by Md. Ekramullah of the Water

Resources Planning Organisation (WARPO), Executive Director of NGO Jagrata Juba Shangha (JJS) A. T. M. Zakir Hossain and Director General of WARPO Abdur Rob Mian.

Professor Mashfiqus Salehin while addressing the workshop said that the research is aimed at climate change impact and adaptation issues in two deltas in South Asia and one delta in Africa. Deltas are vulnerable areas and are considered as hotspots to climate change and sea-level rise.

The researchers in the DECCMA Project will work with the governments and a wide range of stakeholders of the delta regions to understand how people are adapting to the physical effects of climate change and human interventions such as sea level rise, alongside socio-economic pressures in delta regions and implications of different adaptation options to those challenges. There will be a particular focus on assessing migration as an adaptation in deltaic environments under a changing climate. The project aims to develop methods to predict how

these deltas may evolve over the next 50 to 100 years and provide governments with the knowledge and tools to ensure future policy and can maximize planning services and programmes to the benefit of the region's population. A total of 70 people participated in the workshop. They included representatives from local government institutions, non-government organizations, media, academics, and about 40 community people from Koyra, Dacope and Terokhada upazilas of Khulna district.

The participants discussed in groups on different issues, including governance and management aspects associated with climate change adaptation and migration, gaps in the governance system, barriers in policy and legal implementation, types of adaptations, both planned and autonomous, being practiced and reasons for their success and failure. Nature of migration from the area and their drivers, migration trends among different livelihood groups, and gender dimensions of migration also came under discussions in the workshop.

দৈনিক পূর্বাস্থান

খুলনাঃ মঙ্গলবার ১ সেপ্টেম্বর ২০১৫

জলবায়ু পরিবর্তনজনিত অভিবাসন ও অভিযোজন বিষয়ক কর্মশালা

স্টাফ রিপোর্টার II জলবায়ু পরিবর্তনজনিত কারণে উপকূলীয় অঞ্চলের অধিবাসীদের অভিবাসন ও অভিযোজন বিষয়ক জেলা পর্যায়ের অংশিদারিত্বমূলক কর্মশালা গতকাল সোমবার নগরীর সিএসএস আভা সেন্টারে অনুষ্ঠিত হয়।

পানি ও বন্যা ব্যবস্থাপনা ইনস্টিটিউট, বাংলাদেশ প্রকৌশল ও প্রযুক্তি বিশ্ববিদ্যালয়(বুয়েট) এবং উন্নয়ন সংস্থা জাহাজ যুব সংঘের(জেজেএস) যৌথ উদ্যোগে এ কর্মশালায় সরকারী বেসরকারী সংস্থার প্রতিনিধি শিক্ষাবিদ, মিডিয়া কর্মী এবং কয়রা, দাকোপ ও তেরখাদা এলাকার অংশিদার জনগোষ্ঠী অংশগ্রহণ করেন।

কর্মশালায় স্বাগত বক্তৃতা করেন, জেজেএসের নির্বাহী পরিচালক এটিএম জাবির হোসেন। ব-রাস, বৃষ্টি এবং জলবায়ু পরিবর্তন : অভিবাসন এবং অভিযোজন বিষয়ক গবেষণা প্রকল্প সম্পর্কে ধারণা দেন বুয়েটের প্রফেসর মুশফিকুল সালেহীন। অন্যায়ের মধ্যে বক্তৃতা করেন প্রফেসর মোহাম্মদ শাহজাহান মন্ডল, মোহাম্মদ রাশেদ ভূইয়া, মোঃ একরাম উল্লাহ প্রমুখ।

কানাতার ইন্টারন্যাশনাল ডেভেলপমেন্ট রিসার্চ সেন্টার (আইডিআরসি) এবং যুক্তরাজ্যের ডিপার্টমেন্ট ফর ইন্টারন্যাশনাল ডেভেলপমেন্ট (ডিএফআইডি)র অর্থায়নে গত বছর ফেব্রুয়ারী মাস থেকে দেশের ১৯টি জেলায় এ গবেষণা কার্যক্রম শুরু হয়েছে। যা চলবে ২০১৮ সালের নভেম্বর মাস পর্যন্ত। এ গবেষণার অংশ হিসেবে অংশিদারিত্বমূলক এ কর্মশালা গতকাল অনুষ্ঠিত হয়।

কর্মশালায় জলবায়ু পরিবর্তনের ফলে উপকূলীয় অঞ্চলের মানুষের দুর্ভোগ-দুর্দশার মানচিত্র ফুটে ওঠে। এওজন এ কর্মশালায় অংশগ্রহণ করেন।

2.3. District Level Workshop Ramgoti – 18 November 2015

2.3.1. Findings from the District Level Stakeholders Workshop in Ramgoti, Lakshmipur by DECCMA Bangladesh

DECCMA Bangladesh team organized 2nd District Level workshop at Ramgoti Upazila of Lakshmipur District on November 18, 2015. The objectives of the workshop were three fold:

- i. To explore migration, adaptation and governance issues of Ramgoti Upazila related to climate change.
- ii. To compare the findings with the 1st District Level Workshop held at Khulna on August 31, 2015
- iii. To sensitize different upazila/local level stakeholders about the DECCMA project



Refugee and Migratory Movements Research Unit (RMMRU) and Bangladesh University of Engineering Technology (BUET) jointly organized the workshop with the help of the local Upazila Nirbahi Office (UNO). There were 104 participants (69% Male and 31% Female) from different communities, government organizations, NGOs and media.

To conduct the group discussion, the participants were divided into five different groups: three community groups, one government officials and one media and NGO representatives. Each group was facilitated by a DECCMA member who collected the responses from the relevant group. A lively and informative group discussion took place which was later shared and validated among other groups through the oral presentation from different groups.

The responses from different stakeholders on different issues are as following:

Hazard Types

1. River erosion	2. Storm surge	3. Salinity	4. Flood
5. Cyclone	6. Waterlogging	7. Drought	8. Sea level rise

Table: 8 different hazard types

Migration: Types, Reasons and Destination

Patterns:

- a) Seasonal /Temporary
- b) Permanent

Type:

- a) Internal
- b) International (very low)

Nature:

- c) One Family Member
- d) Whole family (The number is moderate or high when they migrate within the same upazila, but the number is very low when they migrate to other places e.g. other upazilas, district town and divisional towns)

Reasons:

- 1. River erosion
- 2. In pursuit of better life (voluntary)
- 3. Storm surge
- 4. Sea level rise
- 5. Temporary migration for climatic hazards
- 6. Lack of job opportunity

Destination:

- 1. Upazilla (Sub-district)
 - a) Within same upazila: Char to Char
 - b) To other upazilas within the same district:

2. District Town:
 - a) Within the same district: Lakshmipur
 - b) To other districts (but not divisional town): Noakhali, Feni, Bhola
3. Divisional Town:
 - a) Within same division: Chittagong
 - b) To other divisions (but not the capital): Barisal
4. Capital: Dhaka
5. International: Oman

Adaptation: Types, Results and Recommendations

Types:

1. Government Initiatives:
 - a) Resettlement Projects: *Guchhogram, Asrayon project*
 - b) Shelter Projects: *Cyclone Centre, Killa*
 - c) Protection Initiatives: Coastal dam, *Meghna* river protection dam, building sluice gate
 - d) Agricultural Intervention: Cultivation of flood tolerant rice variety
 - e) Fishing Intervention: Restriction in fishing during breeding/reproduction season

Relevant Organizations/Projects: Prime Minister's Office; Water Development Board; Department of Fisheries; Water Resources Planning Organization (WARPO); Cyclone Preparedness Programme (CPP)

2. NGO Initiatives:
 - a) Resettlement Projects: *Guchhogram*, resettlement centres
 - b) Agricultural Intervention: Cultivation of hybrid crops
 - c) Advocacy Initiative: Awareness building

Relevant Organizations: Community Development Centre (CODEC); Centre for Natural Resource Studies (CNRS)

3. Self-initiatives:
 - a) Tree plantation in vacant land and mangrove forest
 - b) Change of Profession: (i) fisherman/farmer to rickshaw puller, Brick field workers, micro business; (ii) fisherman to farmer
 - c) Employment of Female Members: (i) garment workers in divisional town (Chittagong); (ii) local income earning activities: making caps, mats etc.

d) Raising livestock (hen, duck)

e) Raising plinth

4. Other Interventions:

a) Reserve rain water adjacent to *Killa*

b) Drinkwater from river using *Phitkiri* (Alum)

Result of Adaptation (Successful Adaptation/Maladaptation):

1. Successful Adaptation:

a) *Meghna* river bank protection

b) *Asrayon* project

c) Livestock farming (hen, duck)

d) Soybean cultivation

e) Women Employment: Cap making

2. Maladaptation:

a) Reducing depth of connecting canals/ water bodies

b) *BishwaBer*

Barriers:

1. Inefficient money transaction

2. Insufficient funding

3. Lack of sustainability/proper planning

4. Lack of coordination with experts/interagency

5. Management and supervision

Recommendations:

1. Increased height of the roads

Governance Issues:

Existing Gaps/problems:

1. Embankment and river protection mechanisms are not efficient

2. Irregular river dredging

3. Inequitable distribution of resources

4. Lack of proper management of in resettlement interventions(*Guchogram*, resettlement centres)
5. Inefficient number cyclone centres and *Killa*
6. Lack of coordination in among different stakeholders in different development interventions
7. Lack of forest coverage

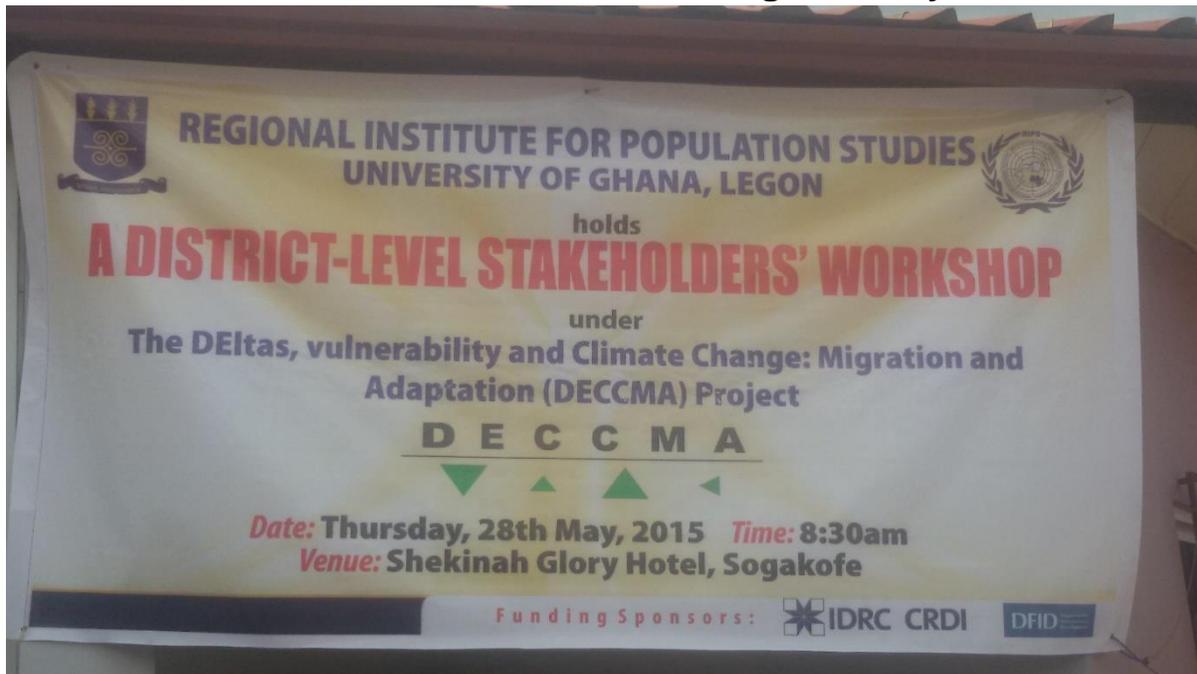
Gender Issues:

1. Women's Participation in income generation activities followed by disasters (garment worker, cap and mat making)
2. Fewer natural resources (firewood, vegetables, fruit) available to provide family members
3. Increased domestic (duck/ hen rearing) and financial responsibilities

Considerable number of participants from different stakeholder groups (government officials, NGOs, media personnel, community members) participated in the workshop and expressed their opinions willingly. Learning about the potential of DECCMA project, participants shared their knowledge with DECCMA Bangladesh team members without much reservation. Significant number of female participation also enlightened DECCMA Bangladesh with their concerns. Overall, the workshop provided DECCMA Bangladesh team with insightful and interesting information for their research activities.

3. Ghana

3.1. District Level Stakeholder Meeting – 28 May 2015



DATE: THURSDAY 28th May, 2015

VENUE: SHEKINAH GLORY HOTEL - SOGAKOFE

Organised by:

REGIONAL INSTITUTE FOR POPULATION STUDIES (RIPS)

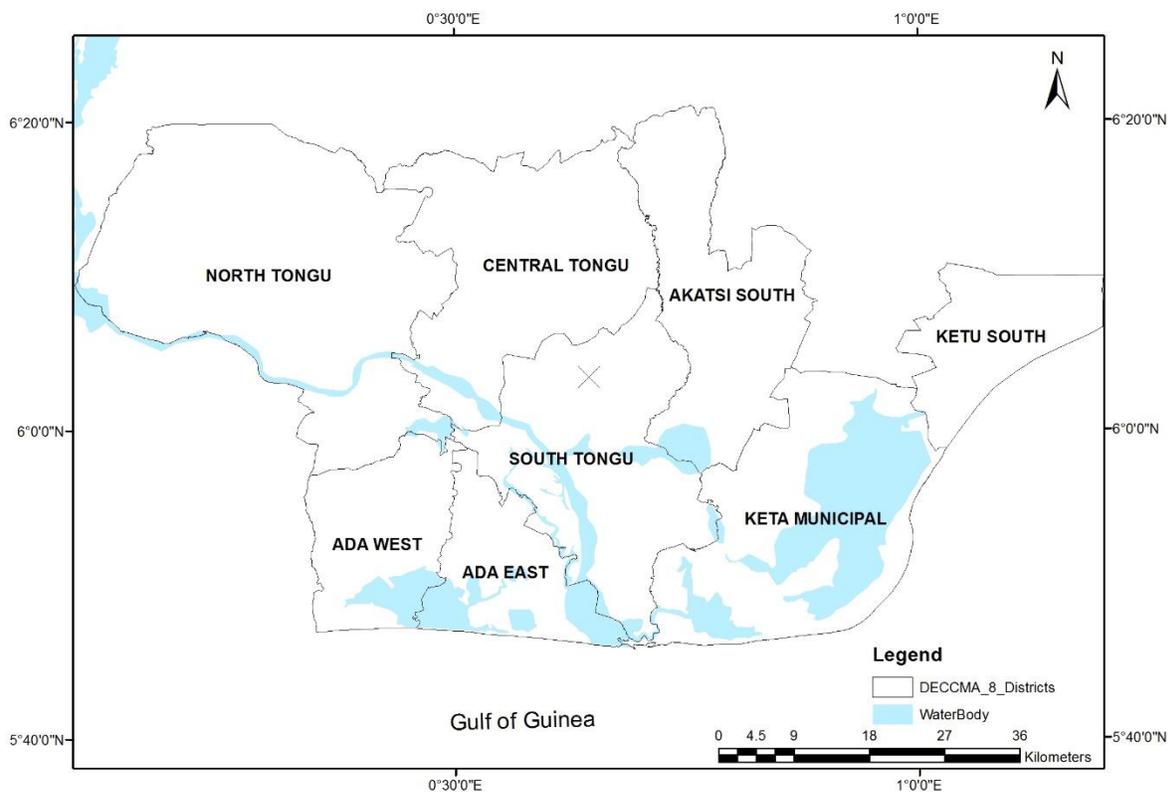
UNIVERSITY OF GHANA, LEGON

3.1.1. INTRODUCTION

A one-day workshop was organised by the Regional Institute for Population Studies (RIPS), University of Ghana at the Shekinah Glory Hotel in Sogakope, on the 28th of May, 2015 under the Deltas, vulnerability and Climate Change: Migration and Adaptation (DECCMA) Project.

The workshop brought together traditional rulers, Municipal and District Chief Executives, local officials representatives of community groups and others from the eight administrative assemblies within the Volta Delta (Figure 1). The districts included Ada West, Ada East, North Tongu, Central Tongu, South Tongu, Keta, Akatsi South and Ketu South (See Appendix A for List of Participants).

Figure 1: Map showing the Eight Districts



3.1.2. Aims and objectives

An initial stakeholder engagement at the national level brought on board three districts – Ada East, Ada West and Keta. However with further delineation of the study area, the districts identified have increased to eight which necessitated the engagement of the others. Therefore, the main objective of the workshop was to introduce stakeholders to the DECCMA Project and also identify specific challenges within the delta relating to

climate change, migration and adaptation from their perspective. It was expected that this workshop would contribute to creating awareness on the project and also give the project team the opportunity to engage with the districts for a better identification and understanding of issues relating to climate change impacts within the region. This workshop was also used as an opportunity to validate the stakeholders relevant to the project at the district levels. These objectives were spelt out to participants by Dr. Cynthia Addoquaye Tagoe, the Project Coordinator and Work Package 1 Lead.

The structure of the workshop included the screening of two documentaries on the Impact of Climate Change in Ghana and Bangladesh after which an in-depth presentation on the DECCMA Project and the Consortium was made by the Deputy Principal Investigator, Dr Appeaning Addo (See Appendix B for Programme). This was then followed by group discussions guided by a set of questions attached in Appendix C to identify the specific issues of Climate Change, Environment, Migration, Adaptation and other issues pertaining to the region. Participants in this first session were put into groups by their districts to deliberate on the relevant issues as experienced by them as well as the stakeholders in their districts. In a second brainstorming session, participants were grouped again but this time across their districts to discuss possible synergies and collaboration for the sustainability of the project by also identifying similar projects like DECCMA in their districts. The guide for this session is attached (Appendix D). The workshop was facilitated by Mr. Winfred Nelson, a consultant and a member of WP1 and Dr. Adelina Mensah, also a consultant and the lead for WP6. Some pictures of the participants at the workshop are attached in Appendix F.

3.1.3. Key findings for each work task clearly identified

Some of the key findings identified included the following:

Climate change issues

- Flooding and erosion
- Out-migration
- Invasion of water hyacinth/water weeds
- Drought
- Storm surge
- Deforestation

Forms of Adaptation

- Out-migration
- Broken homes due to out-migration of men and youth
- Child trafficking
- Alternative livelihoods
- Education

- Creation of safe havens
- Early warning systems

In two of the districts (South Tongu and Akatsi South), it was revealed that the issue was not that of out-migration rather it acted as a hotspot for receiving migrants. This has financial implications for it tends to place heavy reliance on infrastructure services (See Appendix D attached for details). The attraction of these two districts is mainly the economic and trading opportunity. They serve as economic hubs with international dimensions with easy access and connections to the neighbouring country of Togo. Specifically, South Tongu, as a destination area, attracts people from various places including international migrants. Migration into the district is more due to its attractive pull factors than push factors in other areas of the delta. Sogakope, the capital, originally served as a transit point for traders and consumers along the West African corridor. Overtime, some have permanently settled in the area to establish their businesses. Some women migrants have particularly moved in to engage in the sale of food items to travellers at customs and police checkpoints in Dabala and Sogakope. Proximity to the main river has aided the establishment of rice and fish farms which have attracted both farmer and fisher folk. There is also a growing tourism industry in the area which has attracted migrant workers. Due to the growing population in the area, many civil and public servants have had to be transferred from all over Ghana to assist in administration and service (e.g. education and health) delivery in the district leading to further population growth and a growing market for business and commerce.

Akatsi South seems to have particularly received migrants from other parts of the Volta Delta. Out of the about 27 percent in-migrants in the district, about 74 percent are from elsewhere in the Volta Region. Majority (60.6%) of these in-migrants from other areas in the region had, as at the 2010 Population and Housing Census, been living in the district for less than ten years. The proximity of Akatsi South to the Keta Lagoon makes it an optimum choice for fisher folk from the Keta and Ketu South areas, especially those who suffered habitat loss due to erosion and inundation. The choice of Akatsi South as a destination area has been influenced by the availability of land for housing and agriculture, and the presence of relatives or existing networks.

3.1.4. Number of invitees and attendees - including affiliation and gender disaggregation of both invitees and attendee

A total of twelve participants per district – comprising of officials from the assemblies, the communities, the traditional authorities, youth groups, community-based organisations (CBOs) and the media - were invited from the eight (8) districts. A total of 69 participants consisting of chiefs and queen mothers, municipal and district chief executives, community members and the media (See Appendix A). Female participants formed about 35 percent of these.

3.1.5. Key element of agenda item and detailed summary of issues / questions / requests raised by stakeholders, including any issues of particular relevance to women (if any raised).

Generally the agenda focussed on climate-related issues in the lower Volta as well as coping mechanisms usually adopted by the communities. Suggested remedies to some of the more difficult issues such as those involving huge costs such as the Keta Sea Defence Wall, were also discussed. The gathering was also used to update the stakeholders' list. These were done in two brainstorming sessions.

For the first session, the group discussions were guided by the following questions:

1. What are the environment/climate-related issues in the lower Volta?
2. What are the adaptation (reactive /planning) mechanisms of communities?
3. What are suggested remedies to the issues

There were two main tasks for each group. The first required each group (district/municipal) to discuss and present, according to a proposed format, issues of climate change and environment, migration and adaptation relevance, and economic issues among others pertaining to specific locations in their various districts. They also discussed the remedies (anticipatory or reactive, proposed or on-going) within their districts. The second main task was for the participants to identify stakeholders from the previous task and their roles (See Appendix D attached)

The crosscutting issues identified included flooding which was reported in all the 8 districts. Two of the districts reported on invasion of water hyacinth, erosion, storm surge and deforestation and six out of the eight districts reported out-migration as a main form of adaptation which has led to increase in broken homes and child trafficking. Other forms

of adaptation reported include alternative livelihoods, safe havens, early warning systems and education. It is however difficult to ascribe all these to climate change solely though it can be said that effects have intensified.

In a second breakout session, participants were assigned to five groups by systematic random sampling to deal with synergies. The second set of discussions focused on three key issues: how to work together to ensure the sustainability of the delta; the presence of similar projects in the districts and the presence of private sector partnerships in the district/municipality (See appendix E).

3.1.6. Requests raised by stakeholders, including any issues of particular relevance to women (if any raised)

With reference to women the main issues raised were that of the migration of the men and youth to other places leaving the women and children behind. As a result there are increases in broken homes, child trafficking and increases in social vices. The women become the bread winners of the home.

Participants called for the involvement of key agencies such as the Environmental Protection Agency and National Disaster Management Organisation in future programmes.

3.1.7. Meeting Conclusions and Next Steps

Overall the workshop identified the specific crosscutting issues relating to climate change and migration within the Volta Delta communities. The main issues identified include erosion, flooding, drought, loss of property and lives, food insecurity storm surge prevalence of bilharzia which relate to climate change and environment. With regards to migration, out migration of the youth farmers and fishers folk is a main challenge in hotspots and immigration which results in broken homes, child trafficking, and pressure on social amenities among others. It was also clear that various efforts are being made locally and nationally to adapt to the situation including creation of alternative livelihoods, education, creation of safe havens, early warning systems, sea defence among others.

As next steps, there will be follow-up of stakeholders to their various districts for more interaction as the project rolls out. It is expected that this will be done in collaboration with Work Package 3 and 6 especially in relation to the engagement of communities for the field work.

At WP1 level, efforts will be made to maintain the contacts at the district level and ensure a cordial working relationship with stakeholders at that.

A more substantive task is the organisation of the Experts' meeting to discuss some of the issues that came up in relation to climate change effects in the lower Volta by the end of August/Early September.

3.1.8. Appendices:
Appendix A: Participants' List

SOUTH TONGU

No	Name of Participant	Sex	Position	District/Institution
1	Kusitor J. Atsu	M	Operations	NADMO
2	Mama Adzesu III	F	Chairperson on customary land	Fievie Customary land Secretariat
3	Bright Agbenyo	M	Head of operations	NADMO
4	Helen Dzide	F	Gender Desk Officer	South Tongu
5	Edward Holley Woyome	M	Assistant Social Dev't Planning officer	S. Tongu
6	Khadija Yakubu	F	Assistant Social Dev't Planning officer	S. Tongu
7	Araba Abakah	F	Asst. Director	S. Tongu
8	Samuel Eworyi	M	DCE	STDA
9	Sefakor Fummy	F	Asst. Planning Officer	STDA
10	Grace Mensah	F	Asst. Planning Officer	STDA
11	Ben Amekudzi	M		STDA
<u>ADA EAST</u>				
12	Nakaar Desiree	F	W/L Ranger	Wildlife Div. of FC
13	Nene Kerker Zomabi III	M	Traditional Ruler	Ada East
14	Felicia A. Akorli	F	Coordinator	NADMO
15	Emily Amerdjoe	F	Gender Desk Officer	AEDA
16	John N. Ahorlu	M	DCE	AEDA
17	Nutifafa M. Sefenu	M	Social Worker	AEDA
18	G. Y Gadzekpo (Togbe)	M	DCD	AEDA
19	Salifu Abdul-Mujeeb	M	Budget/Planning	AEDA

AKATSI SOUTH

20	Mama Avebo II	F	Queenmother	Akatsi
21	Torgbui Aho IV	M	Traditional Ruler	Akatsi Mornenu
22	Samuel K. Wuadi	M	DCE	Akatsi South
23	James K. Dorkah	M	NADMO	Akatsi South
24	Jerry Agbo	M	Cord.	NYA
25	Wisdom Attigah	M	D.P.O	Akatsi South
26	Naomi Adenusi	F	AHRM	Akatsi South
27	Emmanuel Dorkordi	M	Social Dev't	Akatsi South

NORTH TONGU

28	Tetty Sylvanus	M	Dist. Planning. Officer	NTDA
29	Yom Agbitor	F	DCD rep	NTDA
30	Beauty Tetteh	F	Secretary	NADMO
31	Babuh Eric	M	C.D.O	NTDA

32	Lott Linda K.	F	C.D.O/Gender Off.	NTDA
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KETA

33	Togbi Edihoo II	M	Traditional ruler	Keta Mun.
34	Nicholas Nai Adjei	M	MCD	Keta Mun
35	Abdul-Kareem Fuseini	M	Manager	Keta
36	Celestina Attipoe	F	MCDO	Keta
37	Alex Attakpah	M	NADMO	Keta
38	Joel Degue	M	Youth Group	Keta
39	Nunekpedu Jacob	M	Planning Officer	Keta
40	Faustina Borklee	F	Gender Desk Officer	Keta
41	Hon. Sylvester Tornyevah	M	MCE	Keta

ADA WEST

42	Alhassan Ziblim A.	M	DCD	Ada West
43	Gilbert Akaba	M	DBA	Ada West
44	Exorgbe A. K Divine	M	C.D.O	Ada West
45	Philomina Anim	F	Gender desk	Ada West
46	Nene Saki Keteni IV	M	Ada traditional council Rep	Ada West
47	Abborie Emmanuel	M	AEDA	Ada West
48	Emmanuel Willingdoo	M	Prog. Officer FSDA-GH	Ada West

KETU SOUTH

49	Elizabeth Awo Yaan	F	Denu Youth Ass. Sec	Ketu South Mun.
50	Trinity G.K Yevoo	F	Municipal Officer	Ketu South
51	Nyavor Frederick	M	Syband (NGO) team leader	Ketu South
52	Bright Ofori Kwaku	M	Administrator	NADMO
53	Thomas K. Allah	M	Zonal Cord.	NADMO
54	Banini Dzorgbenyni	F	Planning Officer	Ketu south
55	Ivy Ashiley	F	ADPO	Ketu South

CENTRAL TONGU

56	Charles Ocloo	M	Administrator	NADMO
57	Atokple Lucky	F	CDO	Department SWCD
58	Joseph M. Gbeku	M	Youth Repr.	Adidome
59	Togbe K. Tutu V	M	Trad. Leader	New-Bakpa
60	Michael Tetteh	M	ABA	Central Tongu Dist. Ass
61	Edith Akli	F	SDO	Central Tongu Dist.
62	Courage Godzo	M	D.P.O	Central Tongu
63	Mary Theodora Agbenyenu	F	DCE	Central Tongu

MEDIA

No	Name of Participant	Sex	Position
64	Sam Kush	M	Shine 96.9 FM, Akatsi
65	Senanu Wemaker	M	GNA
66	Noah Dameh	M	Radio Ada
67	Raymond Peniyena	M	Jubilee Radio
68	George Awudza	M	Head of Programs
69	Christopher Pappoe	M	Prog. Head, Dela Radio Adidome

Appendix B: Programme Outline

Time	Activity		Lead(s)
08.30 – 9.:30 am	Arrival & Registration Refreshments will be provided		Registration desk
9.30-9:45 am	Welcome and Introduction to the Workshop	<ul style="list-style-type: none"> Welcome Context and Goals of the Workshop Expected Outputs Workshop programme 	Dr. Cynthia Addoquaye Tagoe
9:45-10:00 am	Introduction of participants	<ul style="list-style-type: none"> Interaction of participants 	Facilitators*
10:00 -10:20 am	Deltas and Climate Change (Video)	<ul style="list-style-type: none"> DECCMA Ghana Video Discussions 	Facilitators*
10:20 -11:20 pm	Brainstorming activity I	<ul style="list-style-type: none"> What are climate related issues in the lower Volta? What are coping mechanisms of communities? Who are important stakeholders? What are suggested remedies to the issues? 	Facilitators*

11:20 -12:00 pm	Presentation	<ul style="list-style-type: none"> • Presentation on the DECCMA Project and its activities. • Discussion 	Dr. Kwasi AppeaningAddo
12:00-1:00 pm	Brainstorming Activity II	<ul style="list-style-type: none"> • What are relevant community issues that can be addressed by DECCMA? 	Facilitators*
1:00-2:00 pm	Lunch Break		
2:00-3:00 pm	Cont'd		Facilitators*
3:00 pm	Evaluation/Closing		Facilitators*

**Mr. Winfred Nelson and Dr. Adelina Mensah*

Appendix C: Brainstorming Session I Guide

Municipality/District:.....

ISSUES	SPECIFIC ISSUES	LOCATIONS	REMEDIES 1) (ONGOING/PROPOSED) 2) (REACTIVE/PLANNED)
CLIMATE CHANGE AND ENVIRONMENT			
MIGRATION RELEVANCE			
ADAPTATION RELEVANCE			
OTHERS (ECONOMY ETC.)			

STAKEHOLDER MAPPING FORM

Municipality/District:.....

	TYPE/DETAILS	ROLE
POLITICIANS		
GOV'T MINISTRIES/ DA/ POLICY ANALYSTS/ BUREAUCRATS		
DEVELOPMENT PARTNERS		
NGOs		
RESEARCH GP/ PROJECT		
TRADITIONAL AUTHORITIES		
PRIVATE SECTOR		
MEDIA		
OTHERS (Philanthropist)		

Appendix E: Brainstorming Session II Guide

Group	How can we work together to ensure sustainability of the Lower Volta	Are there similar projects in your district/municipality? Name them	Are there any private sector partnerships in your district/municipality?

<p>Group 1</p>	<ul style="list-style-type: none"> • Promotion of early warning systems • Community resilience through early warning (CREW) <ul style="list-style-type: none"> ○ Implementation in other district <ul style="list-style-type: none"> • Access routes • Media, information vans etc. before, after and during disasters 	<ul style="list-style-type: none"> • Yes <ul style="list-style-type: none"> ○ Tree growing (mangroves) ○ Awareness of climate change impact on health ○ Sensitisation on climate change ○ Clearing of aquatic weeds by VRA/EPA ○ Dredging of Volta River 	<ul style="list-style-type: none"> • Yes <ul style="list-style-type: none"> ○ Fertilizer production from aquatic weeds (IBIS)
<p>Group 2</p>	<ul style="list-style-type: none"> • Collaboration with institutions, local and international development partners to <ul style="list-style-type: none"> ○ dredge the Lower Volta ○ remove aquatic weeds • Sea defense wall (appeal to central government) • Investment opportunities / economic activities should be created • Reforestation of the river banks • Inter-district sensitisation on migration and its consequences 	<ul style="list-style-type: none"> • Yes <ul style="list-style-type: none"> ○ Removal of aquatic weeds by VRA ○ Dredging of river (VRA & PPP) ○ Planting of trees along river by communities 	<ul style="list-style-type: none"> • Yes <ul style="list-style-type: none"> ○ Removal of weeds (ZOIL) ○ Tree planting (SNV, Netherlands) ○ Worst form of Child labour* (IMO)
<p>Group 3</p>	<ul style="list-style-type: none"> • Formation of an organisation (an umbrella body) • Sensitisation/Awareness creation of people along Lower Volta • Enforcement of local by-laws • Planting of coconut trees along coastal stretch by community and Forestry Commission • Provide alternative livelihood for people 	<ul style="list-style-type: none"> • Coconut tree planting in Ada East, Keta and Ketu South • Coastal protection in Ada & Keta • Removal of water hyacinth by EPA and VRA in Ada 	<ul style="list-style-type: none"> • Yes <ul style="list-style-type: none"> ○ Tree planting (SNV, Netherlands) ○ Improved smoker in Ada & Keta (SNV)

	mining sand in Lower Volta		
Group 4	<ul style="list-style-type: none"> • Inter-district collaboration <ul style="list-style-type: none"> ○ Sharing of ideas and best practices ○ Doing away with political differences ○ Sensitisation ○ Advocacy for coastal zone protection policy by government • Formation of Implementation Committee comprising target district 	<ul style="list-style-type: none"> • Community resilience through early warning (CREW project) – Agordoe • Sea defense – Ada East • Salt mining – Ketu South, Keta • Weed harvesting - Ada 	<ul style="list-style-type: none"> • SNV • EPA
Group 5	<ul style="list-style-type: none"> • Creating of alternative livelihoods to reduce pressure on Lower Volta • Sharing of ideas among districts/municipalities • Bringing on board law enforcement agencies • Teaming up to sensitise the people • Dissemination of information among the people • Mandatory budget for EPA activities • Common radio programmes/Town Hall meetings • Sub-committees to manage the coastal zone within districts/municipalities • 	<ul style="list-style-type: none"> • South Tongu being helped by VRA • Sea defense/ Coastal protection project • Preservation of mangroves by Wildlife 	<p>Funding of CREW project (UNDP) Suncity Hotel Solving & Creating problem meeting* (Diamond Cement)</p>

Appendix F: Pictures



DECCMA Team Members with Traditional Leaders and Chief Executives



A section of participants at the workshop



A presentation by Dr. Appeaning Addo on Deltas and Climate Change



Sections of the participants during the brainstorming sessions



The Project Coordinator, Dr. Cynthia Addoquaye Tagoe explaining a point during the group discussions



A group picture with the stakeholders

DISTRICT-LEVEL STAKEHOLDERS' MEETING

VENUE: NINGO-PRAMPAM DISTRICT

DATE: 4TH SEPTEMBER, 2015

Time	Activity		Lead(s) Responsible
08.30 – 9.:30 am	Arrival & Registration		Registration Desk
9.30 - 9:45 am	Welcome and Introduction to the Workshop	<ul style="list-style-type: none"> • Welcome • Context and Goals of the Workshop • Expected Outputs • Workshop programme 	Dr. Cynthia Addoquaye Tagoe
9:45 - 10:00 am	Self-Introduction		Participants
10:00 -10:20 am	Deltas and Climate Change (Video)	<ul style="list-style-type: none"> • Bangladesh/Ghana/India 	Facilitators*
10:20 -11:50 am	Brainstorming Session	<ul style="list-style-type: none"> • Group Work (1, 2, 3) • Discussion 	Facilitators*
11:50 -12:10 am	Presentation	<ul style="list-style-type: none"> • Presentation on the DECCMA Project and its Activities • Discussion 	Dr. Cynthia Addoquaye Tagoe
12:10 – 12:40	Plenary Session	<ul style="list-style-type: none"> • Cross Fertilization of Ideas/Synergies 	Facilitators*
12:40 -1:00 pm	Evaluation & Wrap Up	<ul style="list-style-type: none"> • Way Forward 	Facilitators*
1:00	Closing/Lunch		

**Mr. Winfred Nelson and Dr. Adelina Mensah*

4. India

4.1. Combined Report on Stakeholder Activities and Outputs (Progress for the period July 2014 - June 2015)

4.1.1. Executive Summary

The Centre for Environment & Development (CED) is the Lead for Work Package 1 from DECCMA-Team India.

The components of the Stakeholder Engagement Plan was formulated and sent to the Northern Team but it is now being elaborated according to the recent guideline (D1.1.1). The first State level Stakeholder Workshops for Indian Bengal Delta (IBD) in West Bengal and also for Mahanadi Delta in Odisha have been completed. This was followed by the first District level Stakeholder Workshop for one of the two districts of IBD of North 24 Parganas. The reports on each of the Stakeholder Workshops were made and duly sent to the Northern Team (D1.1.3).

For the governance analysis (D1.2.1 & D1.2.2), following the protocol provided by the Northern Team, the documents are being collated at both the national and international level.

4.1.2. Aims & Objectives

- To identify the Key Stakeholders and why they are considered relevant, in the sending or in the receiving area
- To arrange State Level Stakeholder Meet, involving both IBD and MD (November 29th, 2014)
 - Reasons for Migration/Adaptation Options/Problems in Implementation/Problems of Governance
- To arrange One District Level Stakeholder Meet for IBD in West Bengal (January 22nd, 2015)
 - Expectations from the Project, Problem in Governance & its Implementation, Priorities relevant to the Project/ Biophysical and Socio-economic drivers of Migration
- To arrange State Level Stakeholder Meet only for MD in Odisha (February 7th, 2015)
 - Preliminary ideas about Government issues to Policy and legal implementations/thoughts on drivers of Adaptation and Migration

4.1.3. Key Findings

The Stakeholder engagement activities and the results (period of July 2014 – July 2015) for WP.1 DECCMA-India is as follows:

WT.1.1: Stakeholder Engagement

D1.1.1 Stakeholder Engagement Strategy

Level of stakeholder engagement: There will be four rounds of stakeholder workshops in both the Deltas at different levels- State, Expert and District. The State level will be held in the main administrative centre at Kolkata for Indian Bengal Delta and at Bhubaneswar for Mahanadi Delta. The first state level workshops were held accordingly in the respective locations. For the district level stakeholder workshop, there would be two in the case of ISD- North and South 24 Parganas and six in case of MD- Cuttack, Kendrapara, Khorda, Jatsinghpur, Jajpur and Puri. The locations for the District level workshops will be conducted in consultation with the other WPs, mainly 2, 3 and 6. The first district level workshop for ISD was held in Dhamakhali, Sandeshkhali Block II, for the district of North 24 Parganas. The Expert level workshop is yet to take place.

Timing: As decided, the timing of the workshop has to be roughly a year between each event also ensuring that such workshops do not clash with important seasonal, social and cultural calendars. For this, a list of holidays and other important events was prepared for the mapping process.

Issues to be addressed: The issues that would be addressed in these workshops are likely to change in each round of engagement. In the first round, views of the stakeholders on governance barriers to policy and legal implementation, adaptation options, scope for adaptation finance initiatives, relationship between bio-physical and socio-economic drivers of migration, would be addressed, also engaging with the stakeholders to buy into the project and think about the end point. In the second round, the preliminary findings of each of the relevant work packages would be put forward for review and comments by the stakeholders. The third round would involve assessing the interaction between planned and autonomous adaptations, barriers to successful implementation of adaptation policy and impact of autonomous adaptation on policy choices, discussion on what is successful migration and final conceptual model on relationship between bio-physical and socio-economic drivers of migration. The fourth round would solely focus on autonomous and planned adaptations based on the findings of WP.6.

Communication strategy: Stakeholder engagement involves effective communication with the stakeholders and efforts will be taken to ensure that they are informed about the project research progress, outputs of preceding workshops, expectations of next engagement, viewpoints of stakeholders on any issues, findings of such workshops. As such, the communication strategies for each of the stakeholders and also the purpose of engagement have been charted out as to what would be suited to each of them, besides the planned workshops. (Table.1) The community strategies for the stakeholders of both IBD and MD are similar.

Table.1: Communication strategy

Sl. No.	Category	Communication method(s)	Purpose of engagement
1.	Politicians	Telephone/Email	To impress upon need for Action for Adaptation in consonance with the objective of DECCMA.

2.	Government Departments	Telephone/Email	To motivate to implement Disaster Management Plan, Early Warning System, Construction of Rescue Shelters and implement Climate Action Plan of the State (Sundarbans sub-sector), following major objectives of the project.
3.	Local Bodies/Authorities	Telephone/Email	To take necessary action at the local level for Adaptation and to assist in Planned Migration, if unavailable, as a part of the DECCMA project study.
4.	Academic/Research Groups	Telephone/Email	To highlight through continuous research, current situation and sensitize the policy makers on the need for action, as an input to the ongoing DECCMA exercise.
5.	I-NGOs	Telephone/Email/Print media/Flyers/Social media	To undertake awareness programme amongst the communities on Climate Change impact and also help community in the process of Adaptation, in consonance with the major goals of the DECCMA project.
6.	Women Self Help Groups	Telephone/Email/Print media/Flyers/Social media	To create an enabling environment for the women to cope up with the Climate Change Adaptation and also to maintain the family unit in case of male migration, in tune with the objective of Gender Equity in the DECCMA project.
7.	Media	Email/Telephone//Press Conference	To reach wider readership by publication periodic results of the DECCMA project.
8.	Private Group	Telephone/Email/Print media/Flyers	To make the members aware about vagaries of Climate Change, need for Adaptation and impress of need for external assistance in the process of Adaptation, especially focusing on the women.

- **D1.1.2 Fast track output mapping report for each delta (internal)**

This work task aims at establishing gender-sensitive meaningful partnerships with key stakeholders, decision makers and community based representation, which it hopes to achieve through engagements with these stakeholders at various scales. The stakeholders for both the Deltas (IBD & MD) were identified at the State and at the District level, from deliberations between the partner organizations in the country meets. In case of the Indian Bengal Delta (IBD), a total of 38 stakeholders have been identified from different categories like Politicians, Local

bodies/authorities, Government department, Academic/Research groups, I-NGOs, Women Self Help Groups, Media and Private organization.

The stakeholders have been further delineated in terms of their scale, why they are relevant, their relevance to the sending area or the receiving areas, their interface with the project in terms of policy uptake, advice from users/those affected, expert advice and legacy/post-project follow up. As it is imperative to make such stakeholder engagements gender-sensitive, care must be taken to formulate/construct our workshops in such a manner so as to ensure as much as possible equitable participation of women.

Further these stakeholders were assessed in terms of their interest/influence for effective identification of critical groups, individuals and institutions, based on current situation analysis. This has been expressed in a scale of 0-10, with 0 being the lowest and 10 the highest. (Table 2 & 3) This has been graphically represented in Fig. 1 for IBD and Fig. 2 for MD. Dividing the stakeholders in the possible four categories viz., Low influence, high interest; high influence, high interest; high influence, low interest and low influence, low interest.

Fig. 1: Stakeholder Interest/Influence Matrix for IBD

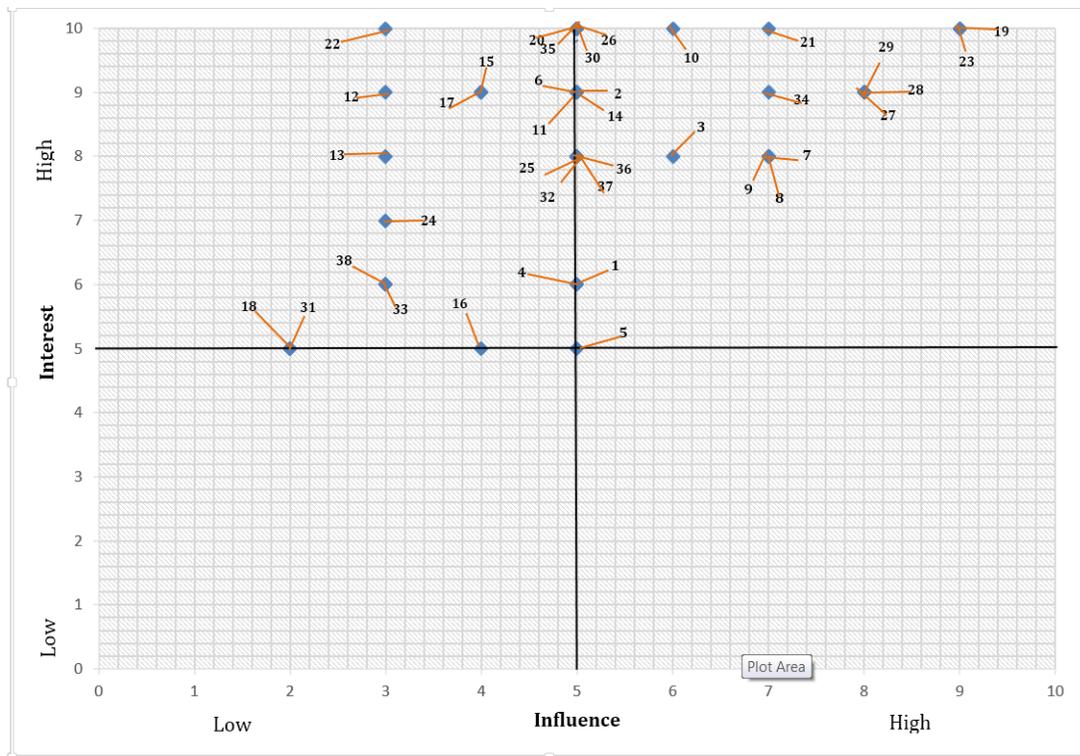


Table.2: Indian Bengal Delta: Stakeholder Mapping

Name	Category	Scale	Why relevant?	Relevant to sending areas	Relevant to receiving areas	Interface with project				Interest	In
						Policy uptake	Advice from Users / those affected	Expert advice	Legacy / post-project follow-up		
Member of Parliament	Politician	National	Policy Making	Facilitating Planned Movement only	Facilitating Resettlement and Rehabilitation	+	-	-	+	6	
Member of Legislative Assembly	Politician	District	State Level Policy Making	Facilitating Planned Movement only	Facilitating Resettlement and Rehabilitation	+	+	+	+	9	
Chairman of Zilla Parishad	Politician	District	District Level Policy making	Facilitating Planned Movement only	Facilitating Resettlement and Rehabilitation	+	+	-	+	8	
Local Bodies/Authority	Local Bodies/Authority	Block	Block level administration	Facilitating resource management	NA	-	+	-	+	6	
NITI Aayog*	Government Department	State	Deals with state level Annual and Five Year Plans of development	NA	NA	+	-	+	+	5	

Sundarbans Affairs Department (SAD)	Government Department	State	For better, time targeted action & monitoring of program	Can help in Planned Migration from sending areas	If migration within the ISD	+	-	+	+	9	
Agriculture Department	Government Department	State	For promotion of sustainable agriculture	Loss of agricultural land due to erosion and salinization of soil	Providing new farmland	+(Agr.policy)	+	-	+	8	
Fisheries Department	Government Department	State	For promotion of brackish water fisheries through extension service	Loss of opportunity due to declining fish catch	NA	+(Fishery policy)	+	-	+	8	
Forest Department	Government Department	State	For Mangrove Afforestation and for construction of embankments to prevent flooding	Loss of forest cover after cyclone and loss of opportunity to collect NTFP	NA	+(Forestry policy)	+	-	+	8	
Irrigation and Water ways Department	Government Department	State	For Mangrove Afforestation and for construction of embankments to prevent flooding	Loss of embankment, protecting islands below sea level	NA	+(Irrigation policy)	+	-	+	10	

Panchayat & Rural development	Government Department	State	For empowering Local Self Governance with better budget and technical skill	Demographic changes and loss of human resources	If migration in rural areas, then absorbing additional population	+	+	-	+	9	
Women & Child Development	Government Department	State	For supporting efforts to stop child trafficking	Change in the social structure due to male migration	NA	+	+	-	+	9	
Health & Family Planning	Government Department	State	For supporting Primary Health Centres with Doctors, Nurses & Mid Wives	NA	Absorbing additional population and reaching out with the government programmes	+ (Health & Family Planning policy)	+	-	+	8	
Environment	Government Department	State	For following up State Climate Action Plan	Change in climatic conditions, endangering human life and livelihood	NA	+	+	+	+	9	
Dept. of Refugee, Relief & Rehabilitation	Government Department	State	For relief and rehabilitation	Undertaking planned migration programme	Planning for resettlement and rehabilitation	+	-	-	+	9	
Dept. of Labour	Government Department	State	For better policy on labour migration and	Loss of labour force after disaster	Gaining labour force	+	-	-	+	5	

			protection of rights of labours								
WBREDA	Government Department	State	Renewable Energy Plant (viz. Solar, Wind, Biomass)	Creating opportunity for better lives and livelihood by renewable electricity connection	Providing electricity in the area of resettlement	+	-	+	-	9	
WBSEB	Government Department	State	For Power grid connection	Creating opportunity for better lives and livelihood by electricity connection	Providing electricity in the area of resettlement	+	-	-	+	5	
School of Oceanography, Jadavpur University	Academic/Research Group	State/District	Provide inputs through research in ISD	Academic research on vulnerability and impact assessment	Social research on the mode of resettlement	-	-	+	-	10	
Dept. of Marine Science, University of Calcutta	Academic/Research Group	State/District	Provide inputs through research in ISD	Academic research on vulnerability and impact assessment	NA	-	-	+	-	10	
School of Environmental Science, Jadavpur University	Academic/Research Group	State/District	Provide inputs through research in ISD	Academic research on vulnerability and impact assessment	NA	-	-	+	-	10	

Dept. of Environmental Science, University of Kalyani	Academic/Research Group	State/District	Provide inputs through research in ISD	Academic research on vulnerability and impact assessment	NA	-	-	+	-	10	
WBUASF	Academic/Research Group	State/District	Provide inputs through research in ISD	To suggest alternative culture fishery practices in the changing environmental conditions for adaptation	NA	+	+	+	+	10	
Dept. of Geography, University of Calcutta	Academic/Research Group	State/District	Provide inputs through research in ISD	Academic research on vulnerability and impact assessment	NA	-	-	+	-	7	
CARITAS (NGO)	Academic/Research Group	State	Provide inputs through research in ISD	Interact with the academic institutions for assessing possible social impact	NA	-	-	+	-	8	
Centre for Environment & Development	Academic/Research Group	State/District	Carrying out investigation into the social and environmental including Climate Change for last 20 years	Academic research on vulnerability and impact assessment	Social research on the mode of resettlement	+	+	+	+	10	

WWF-I	INGO	State/District	Adaptation to Climate Change	Monitoring of current situation, suggesting adaptation alternatives	NA	+	+	+	+	9	
TSRD	NGO	District	For grassroots level action and representation from the self help group	Collect information on Adaptation & Migration in Gosaba Block of IBD	NA	-	+	+	+	9	
ENDEV	NGO	District	Action Research in Indian Sundarbans Delta	Collate data from 7 Blocks on Adaptation and 5 Blocks on Migration	Analyze condition of immigrants in receiving areas after Planned Migration with Human Rights	-	+	+	+	9	
PUPA	NGO	District	Action Research in Indian Sundarbans Delta	To assist the local population in livelihood improvement programmes	NA	-	+	+	+	10	
NEWS	NGO	District	Action Research in Indian Sundarbans Delta	Undertaking programme of carbon sequestration through mangrove afforestation	NA	-	-	+	+	5	

DRCSC	NGO	District	Action Research in Indian Sundarbans Delta	Assisting the livelihood improvement programme	NA	-	+	+	+	8	
SISH	NGO	District	For providing Health care support through mobile and fixed centre	Assisting in the healthcare delivery programme	NA	-	+	-	+	6	
LWSIT	NGO	District	For community based initiative and formation of Self Help groups	Collect information on Adaptation & Migration from Mathurapur Block I-II	NA	-	+	+	+	9	
JYDC	NGO	District	For community based initiative and formation of self help groups	Collect information on Adaptation & Migration from Sandeshkhali I-II	NA	+	+	+	+	10	
Women Self Help Groups	Women Self Help Groups	District	Assisting the women with empowerment of skills and improvement of livelihood	Making local women group, opening bank accounts, helping skill development and empowering	NA	+	+	-	+	8	

				for better livelihood							
Media	Media	State/District	Acts as the fastest channel of communication to a wide range of audience	To bring to the notice of citizens and the government, the plight of the people in distress	To focus the status of the people (emigrant) in the new areas of settlement	-	-	+	+	8	
Inner Wheel	Private	District	Deals with the women issue and supported programme in ISD	To assist the women members in earning skill and to assist the orphan children to find shelter	NA	-	+	-	-	6	

The same process for Stakeholder Mapping has been followed in the case of Mahanadi Delta, where 28 stakeholders were identified through discussions with the partners of the country teams and categorized into Politicians, Local bodies/authorities/Government departments, Academic/Research groups, I-NGOs, Women Self Help Groups and Media. These stakeholders were further delineated in terms of the components as mentioned above in the Stakeholder Mapping process of IBD. The interest/influence of each of the stakeholders have also been charted out.

Table.3: Mahanadi Delta: Stakeholder Mapping

Sl. No.	Name	Category	Scale	Why relevant?	Relevant to receiving areas	Interface with project	Interest	Influence
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					Relevant to sending areas		Policy uptake	Advice from Users / those affected	Expert advice	Legacy / post-project follow-up		
1.	Member of Parliament	Politicians	National	Policy Making	Facilitating Planned Movement only	Facilitating Resettlement and Rehabilitation	+	-	-	+	6	5
2.	Member of Legislative Assembly	Politicians	District	State Level Policy Making	Facilitating Planned Movement only	Facilitating Resettlement and Rehabilitation	+	+	+	+	9	5
3.	Chairman of Zilla Parishad	Politicians	District	District Level Policy making	Facilitating Planned Movement only	Facilitating Resettlement and Rehabilitation	+	+	-	+	8	6
4.	Local Bodies/Authorities	Local Bodies/Authority	Block	Block level administration	Facilitating resource management	NA	-	+	-	+	6	5
5.	NITI Aayog	Government Departments	State	Deals with state level Annual and Five Year Plans of development	NA	NA	+	-	+	+	5	5
6.	Chilika Development Authority	Government Departments	State/District	Sustainable Management of the Wetlands	NA	NA	+	+	+	+	10	9

7.	Agriculture Department	Government Departments	State	For promotion of sustainable agriculture	Loss of agricultural land due to erosion and salinization of soil	Providing new farmland	+	+	-	+	8	7
8.	Fisheries Department	Government Departments	State	For promotion of brackish water fisheries through extension service	Loss of opportunity due to declining fish catch	NA	+	+	-	+	8	7
9.	Forest Department	Government Departments	State	For Mangrove Afforestation and for construction of embankments to prevent flooding	Loss of forest cover after cyclone and loss of opportunity to collect NTFP	NA	+	+	-	+	8	7
10	Irrigation and Water ways Department	Government Departments	State	For Mangrove Afforestation and for construction of embankments to prevent flooding	Loss of embankment , protecting islands below sea level	NA	+	+	-	+	8	7
11	Panchayat and Rural	Government	State	For empowering Local Self Governance	Demographic changes and loss of	If migration in rural areas, then absorbing	+	+	-	+	9	5

	development department	Departments		with better budget and technical skill	human resources	additional population						
12	Dept. of Women & Child	Government Departments	State	For supporting efforts to stop child trafficking	Change in the social structure due to male migration	NA	+	+	-	+	9	3
13	Health and Family Planning Department	Government Departments	State	For supporting Primary Health Centres with Doctors, Nurses & Mid Wives	For supporting Primary Health Centres with Doctors, Nurses & Mid Wives	NA	+	+	-	+	8	3
14	Environment	Government Departments	State	For following up State Climate Action Plan	For following up State Climate Action Plan	Change in climatic conditions, endangering human life and livelihood	+	+	+	+	9	5
15	Dept. of Refugee, Relief & Rehabilitation	Government Departments	State	For relief and rehabilitation	For relief and rehabilitation	Undertaking planned migration programme	+	-	-	+	9	4
16	Dept. of Labour	Government	State	For better policy on labour migration	For better policy on labour migration	Loss of labour force after disaster	+	-	-	+	5	4

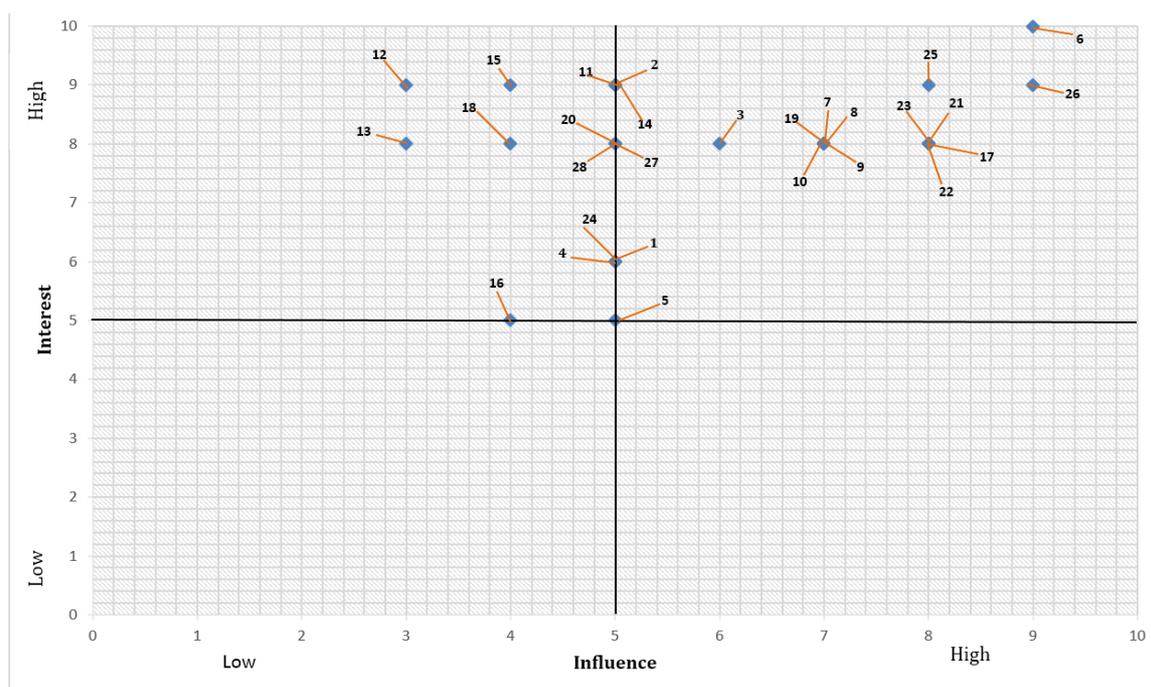
		Departments		and protection of rights of labours	and protection of rights of labours							
17	ICZMP	Academic/Research group	State/District	For sustainable coastal management plan	Implementation of Coastal Zone Management Plan is expected to lessen the impact of Climate Change through precautionary approach	If properly implemented ICZMP results can help reduce the process of out-migration by safeguarding the livelihood at the local level.	+	+	+	+	8	8
18	Department of Marine Sciences, Berhampur University	Academic/Research group	State/District	Coastal processes study due to Climate Change	Academic research on vulnerability and impact assessment	NA	-	-	+	-	8	4
19	Department of Women Study, Utkal University	Academic/Research group	State/District	Research on Migration	Will help focus on the issue of women empowerment, identify the areas needed for skill development and create	In case of women migration, prior empowerment will help to access better opportunities in the receiving areas.	-	+	+	+	8	7

					enabling situation to adapt							
20	OUAT	Academic/ Research group	State/District	Research on Soil characteristics	Can through process of research and demonstration suggest better method of adaptation in agricultural farming in the coastal zone	NA	-	-	+	-	8	5
21	WWF-I	INGO	State	Adaptation to Climate Change	Sensitization of the coastal population on the impact of Climate Change and need for local level adaptation	NA	+	+	+	+	8	8
22	IUCN	INGO	State	For organizing awareness through conferences	Offer broad guideline to the national and state government on the Climate Change impact in the coastal zone.	Can help in mobilizing international fund for resettlement of the migrant population.	+	+	+	+	8	8
23	UNDP	INGO	State	For Financial assistance	Assist state government in the	Help in mobilizing fund for resettlement	+	+	+	+	8	8

				to undertake studies in order to climate change adaptation and also emergency assistance	preparation of the Climate Action Plan	of the climate-migrants from the international community						
24	UNICEF	INGO	State	For mother and child care program and also emergency assistance during climate related disaster	Help in assisting better implementation of mother and child care programme, including immunization , skilled delivery at home and introduction of nutrition programme	Can help at the initial stage by rendering health care support system to the emigrant population in their new area of resettlement	+	+	+	+	6	5
25	NET-Coast (A group of 10 NGOS working on Climate Change and other alternative Livelihood)	NGO	State/District	For community based initiative and formation of Self Help groups	Help in propagating awareness amongst the target population on the possible impact of climate change and need for adaptation	Better skilled emigrant populations will be having more opportunities to work as a skilled labour and thereby earn higher wages to support the family	+	+	+	+	9	8

					and also in skill development								
26	Pallishree	NGO	State/District	Acts as the fastest channel of communication to a wide range of audience	Help in communicating the impact of climate related calamities to the wider audience	Help the government in drawing up proper migration action plan, atleast within the state	+	+	+	+	9	9	
27	Women Self Help Groups	Women Self Help Groups	District	Assisting the women with empowerment of skills and improvement of livelihood	Making local women group, opening bank accounts, helping skill development and empowering for better livelihood	NA	+	+	-	+	8	5	
28	Media	Media	State/District	Acts as the fastest channel of communication to a wide range of audience	To bring to the notice of citizens and the government, the plight of the people in distress	To focus the status of the people (emigrant) in the new areas of settlement	-	-	+	+	8	5	

Fig. 2: Stakeholder Influence/Interest Matrix for MD



The stakeholder mapping would be done once in every year, as the stakeholders are subject to change during the course of the project, when repetitive stakeholder interactions are conducted.

The analysis of the Stakeholder Engagement based on first two state level meets and one District level meet indicate that no stakeholder could be identified in the categories of Low influence, Low interest and High influence, Low interest. Future stakeholder meets however, may expectedly bring in such stakeholders.

- **D1.1.3 Stakeholder Reports from initial Stakeholder interactions (internal)**

The first **State level workshop** was organized by Jadavpur University on 29th November, 2014 in Kolkata. There were 36 attendees in the workshop from both Indian Sundarbans and the Mahanadi Deltas, out of which the identified stakeholders were, 27. A total of 10 women participants (27%) were present during the workshop. The IBD stakeholders from West Bengal included representatives from the Government Departments (Dept. of Planning / Sundarbans Affairs Department), Gender Experts, NGOs/CBOs (WWF-I/TSRD/JYDC/SSDC/Caritas), Academic Institution (Dept. of Geography, Vidyasagar University) and Media (The Telegraph/Indo-Asian News Services). The Stakeholders for Mahanadi Delta, Odisha, included Government Departments (OSDMS/Dept. of Water Resources/DFO/CDA) and NGOs (Pallishree/Netcoast /APOWA). The responsibility for collating the minutes of the meeting was given to CED which was duly sent to the Northern Team. Questions were put forward to the stakeholders present, on which they were asked to deliberate upon (divided into 05 groups) and present their findings. The questions were: (i) reasons for migration in both the deltas; (ii) identify national/state adaptation options and factors influencing the choices of these; (iii) the problems/issues/challenges that prevent issues being effectively addressed or policy options being implemented; (iv) any problems with governance (legal, institutional, policy) framework that promote or inhibit kinds of adaptation by people in the case areas.

Deliberating on the group discussions and findings, it was observed that more or less similar issues have been raised by the groups:

- Migration of people can be witnessed from the deltaic regions due to climatic and non-climatic reasons.
- Disaster Risk Reduction as the only adaptation option is not effective.
- The lack of coordination between various government departments and between the existing policies was identified.
- There is no existing policy on Migration related Rehabilitation and Resettlement policy in India or in the states concerned.
- Knowledge Portal in which the current research and findings and other related links is being developed by DECCMA.

Indian Bengal Delta - The first District level workshop was organized by Centre for Environment and Development on 22nd January, 2015 at Dhamakhali, Sandeshkhali Block II, North 24 Parganas, IBD. The said region was chosen as it is the central point of communication for the people of North 24 Parganas. Total number of women participants was 48 as against the total participation of 118 (40.67%) and as such, can be considered as a desired figure for gender equity. Following the same agenda as undertaken in the State level Stakeholder, the Presentees were divided into groups of five and were asked to deliberate on the following questions: (i) What was the reaction of the community during 'Natural Disaster'/ 'Cyclone Aila' in 2009?; (ii) Effectiveness of the Early Warning System, if any?; (iii) Experience of Post-Disaster 'Cyclone Aila' scenario?; (iv) What Adaptation measures, in terms of lives, livelihood was taken by the community or the government, if any?; (v) Experience of Post 'Cyclone Aila' period's relief?; (vi) Is there any case of Migration from the area?; (vii) If yes, who were the principle migrant- able bodied male/some selected members/entire family?; (viii) What are the preferred areas of migration noted in the region?

It was observed that:

- The people were unprepared for Cyclone Aila in 2009 and they were not given prior warning, which resulted in large scale loss of lives and property. Major impact during the post-Aila period, was the inability to cultivate due to salinization of the agricultural land through salt water intrusion.
- The issue of absence of lack of appropriate Disaster Management system, including lack Early Warning System and absence of Cyclone Shelters, was pointed out by the participants and should be given immediate attention in view of the extreme vulnerability of IBD.
- The adaptation activities that were undertaken were mostly short-term options.
- Even after five years of Cyclone Aila, poor and marginalized community are still to get Government support to rebuild dwelling houses and continue to live in misery, in make shift of polythene covered shelters in high dyke areas.
- Mostly migrants are able bodied males and few female and largely single migrant from each family who normally send financial help to the families back in the delta area and the visit the family only once in a year.
- The most preferred areas of migration include, the peri-urban areas of Kolkata and neighbouring or far away states of Tamil Nadu, Kerala, Gujarat, Andaman etc and even to international destinations like the Middle East countries.
- To achieve successful migration, failing Adaptation or as a part of Adaptation, immediate all out effort should be made to empower the able bodied male and women with appropriate skill development viz. plumbing, carpentry, electrical wiring, masonry, painting, stitching of garments, as demand for such skilled people are increasing all over the country.
- The implementation of the State level Climate Change Action Plan including the sub-sector of Indian Sundarbans has still not started.
- In spite of fund being released for construction of concrete embankment after Aila, the Land Acquisition Policy of the state was prevented to achieve the target, because of

unwillingness of the people to part with land that is needed for broader embankments and as a result only 20% of the target has been reached. However, stakeholders seem to be doubtful of the effectiveness of any reconstructed embankments in case of cyclones hitting with greater intensity

Mahanadi Delta - The first State level Stakeholder Workshop was organized by Chilika Development Authority on 7th February, 2015 in Bhubaneswar, Odisha for Mahanadi Delta. The objective of the workshop was to sensitize the different stakeholders about the DECCMA project and to seek their inputs which would be relevant to the project. There were 48 participants representing 23 organizations (Government departments /Bureaucrats/Scientists/Experts/NGOs) in the workshop. The same agenda in the state level workshop was followed.

The summary of findings of the group discussions were:

- Increase in frequency and intensity of extreme climatic events over the years.
- Change in cropping pattern and decrease in productivity
- Salinization of land has led to agricultural failure- the main livelihood of the people.
- Coastal erosion has led to villages being severely affected, leading to their relocation by the government creating socio-economic stress on the villagers.
- Lack of knowledge of adaptation methods and technology on the problem of salinization and water logging.
- Educated individuals migrating out of the villages to the cities within and outside the state for better employment, education and health services.
- There is a stark wage disparity between the rural and urban labour force.
- Lack of awareness of government schemes.
- Lack of alternative livelihoods and dearth of vocational training for the same.
- Women and children are the ones who are left behind and face hardships.

4.1.4. Next Steps in coming 6 months

- Conduct Stakeholder Workshop for South 24 Parganas district (WT1.1)
- Review of (national and international) Governance legislation (WT1.2)
- Preparation of National Governance Context Report (D1.2.1)
- Preparation of International Governance Context Report (D1.2.2)
- Analysis of barriers to law and policy to be started in November 2015 (WT1.3)

5. Conclusions and Outlook for the 2nd Round of Stakeholder Engagement

An evaluation of the first round of stakeholder engagement showed, that most aims (as specified in the stakeholder engagement plan) have been achieved. The following table (Table 1) summarises the evaluation:

Table 1: Evaluation of 1st round of stakeholder engagement

<u>Objectives of 1st round</u>	Bangladesh	India	Ghana	Comments for next round
Identification of relevant stakeholders (was not specified in engagement strategy, though implicit)	✓ villagers as “vicitms of climate change” seen as the main information provider and primary stakeholder (not quite reflected in the maps!)	✓ □□□□□this was reflected in the participants and stakeholder maps.	✓ Yes, a very long list of stakeholders. This needs to be refined in the second round.	
Validation for stakeholder engagement/ communication strategy (only implicit in the strategy)	✓ Suggestion from stakeholders: start with primary stakeholders, give local ppl/ local government a strong voice	✓ Yes, very clear and detailed communication strategy.	✓ Somewhat – very broad and a bit generic. Needs refinement.	
Preliminary ideas about governance issues / barriers to policy and legal implementation ((1.2 and 1.3)	✓ A list of governance issues and barriers were identified. This needs to be followed up in the second round and feed into barriers to implementation-	✓ To some extent. Though quite broad/ superficial. More detail will be necessary for the next round	X □□□□□□□□□□ Focus was on climate change related issues, but even those lacked focus and detail. However, governance and barriers were not specifically addressed in the workshop.	Ghana: collect data on governance issues and barriers to implementation

			This needs to be done in round 2!	
Identification of / discussion of national adaptation options (including identification of key pieces of literature that shape policy makers choices/decision making) – and introduce idea of doing this at different time horizons (WT6.1.2)	✓ Planned adaptation vs. local needs, question of how DECCMA interprets migration (good or bad?) Adaptation inventory identified	✓ Somewhat - “Disaster Risk Reduction as the only adaptation option is not effective.” This needs to be explored in more depth in second round.	X <input type="checkbox"/> / ✓ somewhat, though often logic or relevance not clear. This needs to be strengthened, made more explicit and needs in-depth data in the second round.	Ghana: Adaptation options and the logic of why stakeholders prefer one option over another needs to be strengthened and more in-depth data needs to be collected.
Scope adaptation finance initiatives (WT6.6.1)	X □□□□□□□□	X □□□□□□□□	X □□□□□□□□	All: so far no exploration of scope for adaptation finance initiatives, largely because the level of awareness of this issue is relatively low in participating stakeholders. Preliminary work on this will begin in round 2.
Preliminary thoughts on conceptualisation of relationship between biophysical and socio-economic drivers of migration (5.1)	✓ Somewhat - Rather than deliberating on different bio-physical and socio-economic pathways of migration and adaptation, discussion by	✓ Yes, relates also to the general identification of problems, governance issues, livelihoods. Done for both	✓ To an extent – Identification of climate change issues and how they might relate to migration, and gender-sensitive	

	the participants mostly confined to the two school of thoughts on migration, i.e. the issue of looking at migration positively or negatively	IBD and Mahanadi.	problems this migration can cause. More detail and in-depth analysis is needed in round 2.	
Start to engage stakeholders to buy into the project and to think about the end point – i.e. the development of adaptation fund proposals	X - missing	✓ Yes, thought about end point, though not in relation to adaptation fund proposal. Rather the emphasis was on capacity building and teaching ppl better professional skills.	X - missing	Bangladesh & Ghana: invite stakeholders to think about the endpoint of the project and what they want to see from it.

However, the table demonstrates, that some points were missing from the stakeholder engagement. Mainly, this includes a lack of data on opinions of stakeholders in Ghana regarding governance issues and adaptation options. This shortcoming will be addressed in the second round of stakeholder engagement. Here, opinions from stakeholders will be collected and their insights sought. In addition, the table also shows that so far stakeholder engagement has not yet addressed the legacy of DECCMA, for example in the form of scoping adaptation finance initiatives or thinking about the end point of the project in the form of a proposal to the Adaptation Fund. Whereas the stakeholder engagement plan specified to start engaging stakeholders in thinking about the research outcomes and legacy, during the first round of stakeholder engagement it became apparent that this is yet too early. Therefore this aspect will be slowly introduced throughout the stakeholder engagement, possibly in the second round of engagement, but mainly during the third round. The Ghanaian case study area stretches across 10 different districts, and in the absence of completed hotspot mapping for WPs 2 and 3, it is difficult for effective district level stakeholder engagement to take place across all 10. Efforts will need to be made to target key districts and those where participation levels are highest in order to ensure that maximum impact can be achieved at this stage.

The second round of stakeholder engagement has started in November 2015. The second round will close gaps from the first round, and start engaging more closely with key stakeholders relating to DECCMA's Research into Use Strategy. In terms of content, Work Package one will consult stakeholders on which are barriers to policy and legal implementation, as well as present the research outputs which have been derived thus far from DECCMA. A full schedule of the second round plans is available in the Stakeholder Engagement Plan.

