



DECCMA's approach to the incorporation of gender



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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

Deltas, vulnerability and Climate Change; Migration as an Adaptation (DECCMA) is a five-year, multi-country research project within the Collaborative Adaptation Research Initiative in Africa and Asia (CARIAA). DECCMA was designed through a lens of gender sensitivity. In practice this means that the aims, objectives and research questions were all formulated with a consideration of gender differences and how to investigate them. It also has implications in terms of the research process and methodology employed – to ensure that both men and women (reflecting different socio-economic characteristics and castes as appropriate) have equal opportunity to participate and have their opinions heard. In order to ensure equal opportunity, flexible and gender-sensitive approaches to data collection will be employed. Being able to illuminate any gender differences within analysis of the research findings will ensure that recommendations arising from the project are also gender sensitive. This is important because gender-blind research, when applied to practical use, runs the risk of inadvertently reinforcing existing gender inequalities (Tanner et al, 2015; Alston, 2013; Figueiredo and Perkins, 2012; Arora-Jonsson, 2011; Vincent et al, 2010). Since DECCMA's research, and thus the findings, will be gender-sensitive, this means that the practical application of those findings can contribute to achieving outcomes of gender equality and contribute to transformation in gender relations.

The paper provides an overview of DECCMA's gender-sensitive design; how the design was elaborated; and the ongoing steps to ensure that the aims and objectives are met through a gender-sensitive research process. The second section provides a brief review of the literature, highlighting the importance of gender in migration and adaptation, which inform the gender lens applied to DECCMA's design. The third section reviews the aims, objectives and research questions of the programme, and highlights how the key elements for gender sensitivity are embraced. The fourth section investigates how the research process will be gender-sensitive, and the mechanisms that DECCMA has put in place to support this. Section five offers a conclusion.

2. Gender, adaptation and migration

2.1 Background to gender

Gender refers to the (often invisible) power relations between men and women. Factors such as sex, and other identifiers such as race, are biological – in that we are born *with* them. However, gender and social status are socially constructed – we are born *into* them in that society determines what it means to be a boy or girl, or man or woman, or to be a member of a particular social group (Momsen, 2004). These inherent social constructions carry specific roles, status and expectations which are manifest at a variety of levels, from the household to the community to the country. Individuals may also self-identify as neither male nor female, or both male and female; as well as members of different social groups. Particularly with social groups, individuals may vary their self-identity depending on the circumstances and the perceived power that belonging to particular social groups may afford them. For example, aside from being female, a woman may have multiple identities depending on her ethnicity, religion and socio-economic background. This concept is known as intersectionality (McCall, 2005).

Differential constructions of gender leads to a situation of gender inequality. Inequality between the sexes is not due to biological factors but is determined by the learnt, unequal and inequitable treatment socially accorded to women (CIGN, 2012). Gender roles are linked to (but not caused by) biological differences. Although it does vary according to regions, cultures and religions, throughout the world there are gender-specific differences in what men and women are expected to do; the knowledge they have; what they consume; their lifestyles; their control of power and resources; their decision-making capacity and spheres of influence (Rijkers and Costa, 2012; Djoudi and Brockhaus, 2011; Paavola, 2008; ILO, 1998). As a result of poorer access to resources, their vulnerability to climate change is also often exacerbated: in Tanzania, for example, the social status of women means that they are more

likely to experience food and nutrition insecurity since food is preferentially distributed among other family members (Nelson and Stathers, 2009). In patriarchal societies, which make up most of the world, there are very entrenched roles for men and women, and these often intersect with other social identifiers such as age, ethnicity, caste, religion, wealth and class. It is thus also important not to assume that “women” and “men” form homogeneous groups because their gender interacts with other social identifiers to create unique circumstances.

Since they are socially constructed, however, gender relations can change over time and space. Currently no country has yet achieved a perfect situation of gender equality, and, according to a recent report by the World Economic Forum, this outcome will not be achieved until 2095 (WEF, 2014). However, the same report concludes that the greatest progress made towards gender equality is in Scandinavia (Iceland, Finland, Norway, Sweden, and Denmark) with only one developing country (Rwanda) featuring in the top ten.

Gender equality does not mean that men and women are the same, but it refers to the equal enjoyment by women, girls, boys and men of rights, opportunities, resources and rewards which are socially constructed. In essence, gender equality means that rights and opportunities are the same irrespective of whether someone is born male or female or the role they choose to fulfil in society. This is important because, other than in spheres such as voting, inheritance and property rights, and education, trying to treat men and women, and boys and girls, equally may serve to reinforce inequality. This is because men and women, and boys and girls, often have different needs that should be accounted for. For example, allowing all children equal access to the same school classes may actually result in the exclusion of girls who are reluctant to attend due to the presence of male classmates or teachers. Instead, in order to achieve an outcome of gender equality, a gender equitable process may need to be applied. Gender equity is the process of being fair to both women and men. Given the patriarchal nature of most societies, a critical element of this is often positive discrimination to enable empowerment of women, with a focus on identifying and redressing power imbalances.

2.2 Gender and migration

The nature of migration in general is methodologically difficult to investigate (Gemenne, 2011). Various families of drivers of migration exist: economic, political, social, demographic and environmental, and migration decisions and flows are affected by the operation, and intersection, of these drivers in particular contexts (Black et al, 2011). Environmental change, including climate change, affects the availability and reliability of ecosystem services and exposure to hazards – and the effect of the environment is dependent on the unique context. As a result, determining individuals for whom environmental factors are the primary influence in their decision-making process is often very difficult (Adger et al, 2014; Foresight Migration and Global Environmental Change, 2011; Brown, 2008). This contributes to varying perspectives in the literature: some sources point to changes in extreme events under climate change, such as droughts and floods, affecting migration patterns (Boko et al, 2007); some point out that past responses to droughts and extreme weather events have not typically caused large increases in migration (Suckall et al., submitted; van der Geest, 2011; Tacoli, 2009); and others call for greater investigation of the interlinkages between typical economic migration drivers and environmental stresses from climate change (Lilleør and Van den Broeck, 2011). Nonetheless, migration has been proposed to be a likely adaptation strategy in poor communities (Barnett and Webber, 2010).

The way in which household composition (including gender) affects migration patterns, which in turn affect adaptation, needs to be further investigated (Stephenson et al, 2011). Migration is expensive and requires various forms of capital (financial, in the form of money; and also social, in the form of networks and contacts with people in the destination location) (Foresight Migration and Global Environmental Change, 2011). This can limit its existence as an option for women relative to men,

since gender roles typically accord women lower economic status and weaker control of financial resources.

Many parts of the developing world, including Africa and Asia, have a long history of both internal and international labour migration. However, these migration flows are strongly gendered. In Ethiopia, for example, drought has been correlated with higher rates of male labour migration (Gray and Mueller, 2012). Gender constructions also often dictate that women stay at home to undertake their reproductive activities, whilst men move to engage in productive activities (Kevane, 2004; Becker, 1979). However, there are now increasing opportunities for women to participate in labour markets as a result of globalisation and world trade trends, even where this is the case they continue to earn less relative to men, and are over-represented in the informal sector, where earnings are typically lower and more uncertain (Lambrou and Piana, 2006; Kabeer, 2008).

As a process, migration affects both receiving and sending areas. For women who remain behind, gender roles and relations can be affected by the migration. In some cases, men may send remittances to other male family members, reinforcing existing gender hierarchies and vulnerabilities (Sørensen, 2005). Women who remain at home often have existing gender inequalities reinforced, as they are often more exposed than men to exploitation, can experience sexual violence and they are often forced into long-hours and low-paying jobs (Goh, 2012; Jolly and Reeves, 2005). If the role of environmental change is to intersect with the more traditional economic driving forces of migration (e.g. Afifi, 2011), it is possible that migration flows will continue to be male-dominated – although this field is very understudied. Similarly, the effects of migration on gender roles and relations is little understood (Rao and Mitra, 2013). In India, the caste system also plays a key role in intersecting with gender roles to determine migration impacts (Borooah et al, 2014).

2.3 Gender and adaptation

As noted above, differential access to the resources required for adaptation gives rise to gender differences in vulnerability to climate change. Similarly there is significant evidence that women's higher vulnerability to weather-related disasters results in higher numbers of death, and death at younger ages (Adger et al, 2007; Neumayer and Plümper, 2007). However, whilst literature around gender and adaptation has focused traditionally on binary distinctions between "men" and "women", there is an emerging, more nuanced, understanding of how the social construction of gender interacts with other social identifiers to enable or impede adaptive capacity.

Recognition that gender and various social identifiers interact in complex ways to produce or reduce vulnerability has also typically been overlooked, including how climate change affects relative poverty and social inequality (Leichenko and Silva, 2014). In hurricane Katrina, for example, social inequality stemming from wealth and ethnicity intersected to produce high levels of vulnerability (Anastario et al, 2009; Jenkins and Phillips, 2008). Political ecologists are also beginning to address the ways in which institutional practices shape access to resources and control over decision-making processes, including through the social construction of gender and its intersection with other factors that shape inequalities and vulnerabilities (Tschakert, 2013; Bee et al, 2013; Tschakert and Machado, 2012). Interrogating the nature of vulnerability of other groups, such as children and the elderly, is emerging (UNICEF, 2011; Baker, 2009). Investigating the relationship between climate change and ethnicity/caste is also currently significantly under-researched (Nelson, 2011).

There are various mechanisms through which adaptation to climate change can be supported. At the national level these can include physical and technical solutions (e.g. climate-proofing infrastructure). Institutional adaptations, such as the creation of climate change policies and strategies are also important. However, there is also scope for adaptation to be supported through development interventions. Conceptually it can be viewed as spanning a continuum from "regular" development activities that also reduce vulnerability to a range of climate hazards and risks, to highly targeted

adaptation measures designed to address specific, identifiable and quantifiable climate risks (McGray et al, 2007). In the literature there is now a move away from talking about adaptation and rather considering adaptive development (Agrawal and Lemos, 2015; Fazey et al, 2015; Wise et al, 2014). This is because adaptation implies a tangible end-point when, in reality, it is not possible to mainstream climate change at one point and consider the job complete. Instead the mainstreaming of climate considerations and how to modify development to ensure it is adaptive as climate change unfolds, as well as how it is projected to continue in the future, needs to be an ongoing process. Adaptive development is thus enabled by adaptive institutions and information-based policy intervention. Explicit consideration of how to encourage sustainable development (and generic adaptive capacity) as well as specific adaptive capacity is thus required (Eakin et al, 2014).

The gender dimension of development has long been recognised, and so there is scope for adaptive development to also be gender-sensitive and also pro-poor. Social protection, in its protective, preventive, promotive and transformative forms, has witnessed a rapid rise in popularity on the development policy agenda in recent years, as growing empirical evidence shows that it can contribute effectively to poverty reduction whilst also moving people into productive livelihoods and securing social rights (IDS, 2011; Devereux and Sabates-Wheeler, 2004). Given that major livelihood risks that can reinforce poverty can include climate hazards and disasters, the concept of adaptive social protection has arisen at the convergence of social protection, climate change adaptation and disaster risk reduction. Adaptive social protection is a new, integrated approach to reduce the vulnerability of poor people in developing countries. It works on the understanding of the interlinked nature of the shocks and stresses that poor people face today – and the potential synergies to be gained from bringing together social protection, disaster risk reduction and climate change adaptation (Béné et al, 2012). Adaptive social protection is typically targeted at marginalised social groups with the express intention of improving well-being and social equality. The importance of gender-sensitivity has been highlighted, and guidance documentation produced (Jones and Holmes, 2010; Holmes and Jones, 2010).

At the local level, individual and communal adaptations to climate change can only be enabled when there is an understanding of the nature of climate risk and how it may affect livelihoods. Access to climate services (i.e. the climate information and knowledge that is needed to support decision-making – see Vincent et al, submitted) and social protection are outlined here as two enabling factors for tangible mechanisms. Firstly, in terms of access to climate services, there is a need to ensure more adaptation includes the information required to anticipate and undertake anticipatory preparation measures to reduce vulnerability to both incremental climate change but also, particularly, the likelihood of extreme events. There is now increasing focus on providing climate services that are timely, tailored and targeted (Vaughan and Dessai, 2014; Bostrom et al, 2013), although in practice this is not yet widespread (ALP, 2014). Ensuring gender sensitivity in this endeavor is essential to ensure access of both men and women. Since men and women typically have different education levels, particularly in the older generations, information needs to be made available in local languages and in non-written form in order that it can be accessed by women (UNECA/ACPC, 2011). In some cases women and men have also been found to prefer different communication channels to receive climate services, with men preferring to hear it on the radio and women preferring face-to-face briefings from an extension officer (Archer, 2003). Recent trials in Kenya have been working to ensure that crop and livestock extension officers are able to understand weather and climate information in order to issue appropriate agro-advisories for men and women (ALIN, 2013). Highlighting the growth in interest in this arena, the World Meteorological Organisation held its third gender conference with the theme “Gender Dimensions of Weather and Climate Services” in 2014.

3. DECCMA aims, objectives and research questions

Globally, deltas are dynamic systems and are currently home to more than 500 million people. However, they are extremely sensitive to various parameters that will be affected by climate change,

including fluvial flooding, droughts and sea level rise. Thus, there is concern that existing strategies to cope with changes in the biophysical environment may be inadequate in the context of climate change. Migration is already an established household adaptation to cope with environmental and economic change. This can be both a successful form of adaptation, increasing the resilience of the migrant household, and unsuccessful, perpetuating vulnerability in a new location with differential impacts on men and women.

To develop a deeper understanding of the linkages between climate change, adaptation, migration and vulnerability in deltas, the DECCMA project is conducting research that is informed by the natural and social sciences across one large delta: the Ganges-Meghna-Brahmaputra (GMB) in Bangladesh; and two smaller deltas, the Mahanadi in eastern India, and the Volta in Ghana.

The dual **research aims** are:

- (1) To assess migration as an adaptation in deltaic environments with a changing climate; and
- (2) To deliver policy support to create the conditions for sustainable, gender-sensitive, adaptation.

The **objectives** are:

- (1) To understand the governance mechanisms that promote or hinder migration of men and women in deltas
- (2) To identify climate change impact hotspots in deltas where vulnerability will grow and adaptation will be needed
- (3) To understand the conditions that promote migration and its outcomes, as well as gender-specific adaptation options for trapped populations, via surveys
- (4) To understand how climate-change-driven global and national macro-economic processes impact on migration of men and women in deltas
- (5) To produce an integrated systems-based bio-physical and socio-economic model to investigate potential future gendered migration under climate change
- (6) To conceptualise and evaluate migration within a wide suite of potential adaptation options at both the household and delta level
- (7) To identify feasible and desirable adaptation options and support implementation of stakeholder-led gender-sensitive adaptation policy choices

Answering these questions will be enabled through six work packages, the relationship between them is shown in the structure of DECCMA in Appendix A.

The knowledge generated through the research will encourage appropriate gender-sensitive policy responses to ensure that the most vulnerable in deltas are able to adapt, and how adaptation policy effectiveness can be maximised. The analysis will guide sustainable and equitable development of deltas and will:

- (1) Identify gender-differentiated stakeholder-relevant scenarios of local/regional/delta level vulnerability to climate change;
- (2) Identify options for effective climate adaptation for men and women in the poorest groups in deltas; and
- (3) Lead to the development of gender-sensitive adaptation funding proposals in the three deltas (DECCMA proposal).

These aims and objectives are consistent with the CARIIA cross-consortia Gender and Equity Working Group Log Frame Gender Indicator, which emphasises the importance of integrating gender within research themes (CARIIA, 2014). DECCMA's approach to integrating gender into its activities is different because it has been included since the proposal phase. This is in contrast to other approaches, where the objectives and research questions are devised and then, following the inception phase, revised or added to in order to ensure a gendered angle is considered. This means that, during the

inception phase when the operationalisation of research questions has taken place and the methodology refined, all researchers have been aware that they are including the consideration of differences between men and women in their investigations. The question, therefore, has been more *how* to do this, rather than what the question should be.

Throughout the inception phase, several working definitions have been finalised, and these have all been designed to reflect gender sensitivity. Within migration, for example, the DECCMA definition is qualified by a number of recognitions, which include:

“...The propensity to migrate, and to engage in the different forms of migration, often differs between men and women, reflecting context-specific predominant gender roles and relations...

...Migrants remain part of a linked sending-receiving system. Many migrants are transnational: financial and emotional ties to places of origin are rarely severed, although their manifestations may vary over time with implications for gender roles and relations.

Migration can have both a positive and/ or negative impact on the wellbeing of the migrant and the household and community, and gender relations within the household and community from which he or she originates.”

The project briefing note summarising key adaptation issues and debates for DECCMA also highlights gender among the barriers to adaptation, and includes gender dimensions as a key component for the systematic literature review of adaptation in the deltas (Suckall et al, 2014).

4. Ensuring a gender-sensitive research process

4.1 Gender-sensitive methodology

Actively ensuring that the aims, objectives and research questions of DECCMA have considered gender and social equity from the initial proposal means that all researchers have been committed to the need to disaggregate data collection by sex. This is a prerequisite to gender analysis and will allow the consortium to effectively address the gender-sensitive research questions. However, particularly in the case of primary data collection, disaggregating into men and women and taking account of different social identifiers often requires a different approach to how the research is undertaken. This reflects the need for additional information on how the high-level objectives translate into the research process (Timmers, 2014).

Whilst collecting sex-disaggregated data is an important aspect that allows analysis of differences between men and women, it is also critical to undertake an equitable research process. This means that, where primary data collection is taking place, there should be opportunities for the voices of men and women (and men and women of different classes, social groups, castes, religions, etc.) to be heard, and that will require fitting around the gendered nature of roles and relations that determines spatial and temporal patterns of activity (for more information, see Jost et al, 2014). In the same way that girls may be reluctant school classes alongside boys or taught by male teachers, women may not be comfortable speaking in front of men during focus groups that involve both sexes. To achieve equality in the outcome, women may need to be treated differently, but equitably. For example, focus groups that are streamed by gender may need to be held. Similarly, researchers may need to be flexible with the timing and/or location of research activities in order to fit around gendered roles (for example holding women’s focus groups in people’s houses if religious norms prevent women from gathering in public places). To this end, the development of a gender-sensitive methodology has been undertaken during the inception phase in close consultation with all the work packages.

4.2 Defining a gender-sensitive methodology within DECCMA

Table 1 summarises the main work packages within DECCMA and their aims and key methods (a graphical representation of the linkages between them is available in Appendix A). Given the linkages

between the work packages in meeting the overall objectives and aims, some have more scope for the direct inclusion of sex-disaggregated data and a gender-sensitive approach (e.g. work packages 1, 3 and 6). The inputs to some work packages are contingent upon the research findings of other work packages (e.g. work package 2 and 5), whilst others are highly dependent on analysis of existing data, and thus constrained by the availability of that data and whether or not it is sex-disaggregated (e.g. work packages 2 and 4). This section takes work packages 1, 3 and 6 in turn to outline the process so far to define a gender-sensitive methodology at the activity level.

Work package 1 is the DECCMA-wide work package concerned with coordinating the needs for stakeholder engagement throughout the project. This work package is concerned with the various needs of different work packages for stakeholder engagement for data collection, or to approve or validate research work that has been completed during the project, or to help guide the direction that research efforts should take. Its Stakeholder Engagement Plan outlines four separate rounds of stakeholder engagement (Adams et al, 2015a). 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. These will take place in Bangladesh (Ganges-Brahmaputra-Meghna), Ghana (Volta) and in India (Ganges-Brahmaputra-Meghna and Mahanadi).

Stakeholder engagement will take place at national/state and district level, and at community level. In order to ensure gender-sensitivity, the different education levels and responsibilities of men and women will determine the way in which (and where) the engagement takes place. For national/state and district level workshops several things will be recorded: the sex-disaggregation of invitees and attendees (along with their positions); and the respective contributions from men and women, showing balance of contributions and potentially highlighting issues of particular interest to either sex. For community level engagement, separate focus groups will be carried out for males and females, each run by members of the same sex. The timing of meetings may be more critical at the community level than at higher levels. Local events or priorities that affect attendance of particular groups will be taken into account in planning and, in particular, meetings will be carried out at times of day convenient for women and men who will have different duties. Ensuring that there are sufficient field staff for male-female pairs to enter households to interview, so that men speak separately with men, and women speak separately with women, will also be important. In the event that any mixed meetings are held, recording of the sex-disaggregation of attendees will take place.

Work package 3 is investigating migration as an outcome of vulnerability and/or as an adaptation to climate change and Work Package 6 is examining the types of adaptations which exist in deltas. A Community Engagement Plan has been drafted (Adams et al, 2015b). This covers an exploratory qualitative phase (intended to inform the design of the survey and the sampling strategy). Being gender-sensitive in this work package will require two elements: ensuring sex-disaggregation of data (to enable analysis highlighting similarities/differences between men and women); but also being flexible in the implementation of the methodology to ensure that both men and women have equal opportunities to participate and share their opinions.

Consistent with the approach outlined in work package 1, the Community Engagement Plan highlights the need to ensure that there are sufficient field staff for male-female pairs to enter households to interview. At community level, groups and meetings will always be conducted separately with men and women, and any meetings, the survey and individual interviews will be carried out at times of the day convenient for both men and women with different. At national and district level, where women's education levels will have evened out the power relations, it may be appropriate to have mixed groups. In this case, the sex of participants will be recorded and it is important that the note-taker highlights which comments are made by men and which are made by women (and in particular topics on which men and/or women's opinions dominate).

Table 1: Main work packages within DECCMA and their aims and key methods

Work package	Aims	Key methods
1 - Governance systems and gender-sensitive stakeholder engagement	Triple purpose of engaging stakeholders in the project, understanding the capacity of the governance system to support migration in the context of other adaptation, and leaving a policy and practical legacy from the research, e.g. the submission of international climate finance proposals to deliver gender-sensitive sustainable adaptation in deltaic environments under a changing climate.	Stakeholder analysis, governance analysis, stakeholder engagement
2 - Vulnerability, hazard and climate change hotspot mapping	To define and map key hazards/environmental stressors, and socio-economic vulnerability under various climate scenarios, and from a historical, current and future perspective to understand the magnitude and location of impacts.	Conceptual modelling, scenario development, mapping of various physical and socio-economic parameters
3 - Migration as an outcome and determinant of vulnerability in deltaic populations	To provide a broad understanding of the demographic situation in each of the deltas and the current and future projected sex-disaggregated migration patterns.	Quantitative household survey, qualitative semi-structured and key informant interviews, scenario development
4 - Economic modelling of the impacts of climate change	To provide a tool that allows policy makers to see how different climate scenarios affect the economic options in the delta and how these in turn affect vulnerability and sustainability in the region and to link economic factors to the availability of jobs and livelihoods in the delta and thereby to potential migration fluxes (to identify gender-sensitive adaptation options)	Non-survey methods, economic modelling
5- To produce an integrated model that assesses adaptation and migration in deltas	To develop methods to assess adaptation choices in deltas with a strong focus on migration through assessment methods and a modelling tool which considers the bio-physical, economic and socio-economic drivers of migration, the potential migration fluxes of men and women, potential trapped populations, and assess the influence of other autonomous and planned adaptation processes and decisions. These integrated assessment methods can be utilised to conceptualise and investigate potential future migration of men and women under climate change and different adaptation policy choices.	Integrated assessment modelling
6 - Identifying and evaluating feasible and acceptable planned and autonomous adaptations	To identify and evaluate the scope, types, and sustainability of adaptation options (including migration) occurring in deltas; and to engage stakeholders to deliver concrete proposals for international climate finance to implement effective anticipatory gender-sensitive adaptation.	Quantitative (household) survey, qualitative interviews and focus groups, policy analysis

4.3 Ensuring ongoing support for the effective integration of gender and social equity within work packages

Actively ensuring that the aims, objectives and research questions of DECCMA have considered gender and social equity from the initial proposal means that all participating researchers have been committed to the need to disaggregate data collection by sex. As outlined above, collecting data for gender analysis also requires differences in how the research is undertaken. Whilst gender specialists will be trained in such methods, this is not the case for the members of the DECCMA team, whose wide-ranging backgrounds span subjects from engineering to demography to economics as well as interdisciplinary and qualitative social sciences. As a result, DECCMA has contracted gender specialists as part of the project team, as well as ensuring that there are team members with a gender background working at country level in Bangladesh, Ghana and India. Gender training, in addition to *ad hoc* support, is incorporated within DECCMA's capacity building strategy (DECCMA, 2015). The first whole consortium meeting in June 2014, for example, included a dedicated training session on gender, including what gender is, why it is important to investigate, and how a gender lens can be applied to the research process.

5. Conclusion

The danger with cross-cutting issues such as gender and social equality is that separating them out can cause them to seem abstract and distant, whilst adding them on at a later stage may result in the perception of additional effort on the part of the researchers. DECCMA's approach to inclusion of gender began at the proposal development stage, and this is evident from the gender-sensitive aims and objectives. Recognising that not all consortium members have gender backgrounds, there is specific inclusion of gender-sensitivity training within the consortium capacity building strategy. In addition, gender specialists have been included in the consortium to provide ongoing support and inputs as the research commences and results become available for analysis. Currently DECCMA is at the stage of beginning the research but, as results emerge, the analysis will also be undertaken with a gender lens.

Gender inequalities remain pervasive worldwide, but the differing extents to which they play out reflect social constructions and the intersectionality of gender with other social identifiers that together create various power relations. These power relations can influence migration patterns and types which can, in turn then affect gender roles and relations, but empirical information in this regard is currently lacking. Likewise, there has long been recognition of the importance of gender in adaptation but the generation of nuanced information beyond the differences between men and women is also in its infancy. There is little in terms of adaptation initiatives that are specifically targeted towards marginalised socio-economic groups (Ford et al, 2014). Gender-sensitive research design means that DECCMA has much to contribute to gender debates, as well as ensuring that the applications of findings, in terms of supporting adaptation, are gender-sensitive, and do not reinforce existing inequalities.

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Appendix A: Structure of DECCMA and linkages between work packages

