



FINAL TECHNICAL REPORT

Climate Change Project in the Niger Delta



Empowering Women as Key Leaders in Promoting Community-Based Climate Change Adaptation and Disaster Risks Reduction Initiatives in the Niger Delta



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Abstract

Although climate change affects everyone in their paths, women and girls in the Niger Delta region of Nigeria are most at risk to climate change impacts due to their heavy reliance on climate-vulnerable natural resources, limited asset base, and limited access to adaptive measures and disaster risks reduction strategies. This is also attributed to their gendered differences in the capacity to cope with such events and insufficient access for women to information and early warnings. While women's vulnerability is almost always assumed, their unique capacities and contributions to adaptation and across the disaster management cycle (mitigation, preparedness, response and recovery) have not been well recognized and documented in the Niger Delta region. Women empowerment and participation is critical to effectively promote climate change adaptation practices as well as manage disaster risks and designing, resourcing and implementing gender-sensitive disaster risks reduction policies, plans and programmes. The project was designed to ensure the inclusion of an increasingly diverse range of actors at community and sub-national levels in the development and scaling up of innovative approaches on community-based climate change adaptation and disaster risks reduction.

The project carried out four major work packages in response to the five main objectives of the project focusing, in the first place, on knowledge development in which research on patterns and impacts of climate change on rural communities in Delta State was examined and documented. Second, pilot intervention activities were implemented in ten target communities during which women led the delivery of various types of climate change adaptation including disaster risks reduction strategies. Third the capacity of key stakeholders on action research on climate change and adaptation to climate change; disaster risks reduction including the promotion of gender equality, which is essential for the recognition of women as leaders in climate change adaptation. The beneficiaries of the capacity building activities include research team members, junior researchers, project staff, postgraduate students and more importantly community based women, girls, men and traditional leadership. Finally, knowledge translation was carried out entailing the mobilisation of policy makers, women leaders and other stakeholders to collaborate with the research team and also facilitate policy linkage, uptake and adoption of tested community-based climate change adaptation and disaster risks reduction initiatives.

The implementation of the project resulted in filling the gaps in empirical data and information on how vulnerable rural households particularly women and girls within them are impacted by climate change and variability and how they adapt to these variations in climate. Gender equality was accepted by both men and women following the capacity building on the need for gender equality which was carried out in the ten target/pilot localities. It also led to the reduction in the vulnerability and enhancement of the resilience and adaptive capacity of rural communities, especially women and girls, to the adverse impacts of climate change in the Niger Delta.

Key Words: climate change, public participation, adaptation, gender equity, women empowerment, policy makers, community-based groups, disaster risks reduction, capacity building, pilot activities, Steering Committee, Management Committee, knowledge translation.

1. RESEARCH PROBLEM

The coastal zone of Niger Delta, which harbours some of the most strategic industries on which the economic development of Nigeria depends, has been experiencing environmental changes caused by climate change. The reported sea-level rise and repeated ocean surges have not only worsened the problems of coastal erosion in the Niger Delta, the associated inundation has increased problems of floods, intrusion of sea-water into fresh water sources, affecting agriculture, fisheries, settlements and general livelihoods. In spite of the obvious vulnerability of the Niger Delta region to climate change, the empirical investigation of climate variability and long term change, particularly women and girls' vulnerability and local adaptation strategies, have not been given sufficient attention. Local research on climate change issues has been generally weak and limited. Research is therefore needed to support improved understanding of the extent of past, current and future climate variability and potential climate change impacts in the Niger Delta region of Nigeria, as a basis for developing adaptation options.



Photo: Effect of climate change in the Niger Delta –Flooding and Pest invasion of Crops

Furthermore, rural communities in the Niger Delta that depend on natural resources for their livelihoods are particularly at risk to climate change impacts and therefore critical to climate change amelioration. Rural communities need support to strengthen resilience and increase their ability to manage climate change disaster risks. The preferred and sustainable solution is to support rural communities to better manage and adapt to climate change pressures through community-based adaptation. It is essential to put rural communities in Niger Delta at the centre of actions on climate change and disaster risks reduction by empowering their inhabitants to adopt and adapt climate change strategies in innovative ways based on current and future evidence, so as to give them not only the ownership but also the confidence to take leadership of the process. One of the challenges faced by rural inhabitants including women and girls in the Niger Delta is simply a lack of access to information that would facilitate planning and disaster risks management. Ensuring that rural inhabitants are able to access critical information such as seasonal forecasts and early warnings will support their efforts to manage their livelihoods.

Although climate change affects everyone in their paths, women and girls in the Niger Delta are most at risk to climate change impacts due to their heavy reliance on climate-vulnerable natural resources, limited asset base, and reduced access to adaptive measures. This is also attributed to

their gendered differences in the capacity to cope with such events and insufficient access for women to information and early warnings. While women's vulnerability is almost always assumed, their unique capacities and contributions to adaptation and across the disaster management cycle (mitigation, preparedness, response and recovery) have not been well recognized and documented in the Niger Delta region. Women serve their communities as leaders in ways that often go unrecognized by national and sub-national governments in Nigeria. In fact, women's individual and collective knowledge and experience in natural resource management at the household and community levels equip them with unique skills that benefit adaptation and disaster risks reduction efforts. Women shape behaviour and transmit culture and knowledge through kin and social networks, which are critical to risk prevention and response efforts. Women empowerment and participation is critical to effectively manage disaster risks and designing, resourcing and implementing gender-sensitive disaster risks reduction policies, plans and programmes. Women's leadership in civil society organizations can provide the potential for their participation in more formal processes of disaster response and recovery efforts. Consequently, adequate capacity-building measures need to be taken to empower women and girls for preparedness and alternate livelihood means in post-disaster situations in the Niger Delta region.

It is against this backdrop that this project was designed to strengthen the ability of women, girls and other stakeholders in rural communities in the Niger Delta to make informed decisions and manage likely climate change driven pressures on their livelihoods. The project was designed to ensure the inclusion of an increasingly diverse range of actors at community, sub-national and national levels in the development and scaling up of innovative approaches on community-based climate change adaptation and disaster risks reduction. The project was expected to lead to the reduction in the vulnerability and enhancement of the resilience and adaptive capacity of rural communities, especially women and girls, to the adverse impacts of climate change in the Niger Delta. It was also designed to lead to the emergence of a governance structure to manage climate change in the Niger Delta with local climate knowledge incorporated in national and sub-national development planning. The study focused on filling the gaps in empirical data and information on how vulnerable rural households particularly women and girls within them are impacted by climate change and variability and how they adapt to these variations in climate.

2. OBJECTIVES

The overall objective of the research project was to contribute to socially-equitable development in Niger Delta region by promoting women-led, community-based initiatives on climate change adaptation and disaster risk reduction. The project has five specific objectives organized into four work packages: **Knowledge development** (objective 1), **Pilot activities** (objective 2), **Capacity building** (objective 3), and **Knowledge translation** (objectives 4 & 5) as follows:

- (i) *Increase understanding of the varied impacts of, responses to, and adaptations to climate change in rural communities to enable identification of effective and affordable community-based approaches*

This objective has been achieved. This objective which entails surveys of the vulnerability and adaptation patterns in rural Niger Delta and their impact on women and girls as well as the

prevailing gender characteristics, was achieved in the first year of the project implementation and evidence emanating from the survey documented in the project research report. In addition to the robust analysis and documentation of the overall findings of the varied impacts and local adaptation to climate change in the project research report submitted in year one of project implementation, the second and third year of the project also saw team members and mentees doing series of analysis of the collected field data, documented, and published findings in various peer reviewed journals, monographs and other outlets. This is discussed in detail under project activities and outputs below.

(ii) Improve climate-change adaptation and disaster-risk reduction strategies in rural communities by testing and validating the most effective and affordable women-led, community-based initiatives

This objective which entails the implementation of women-led community-based interventions on climate change adaptation and disaster risks reduction in ten pilot communities was successfully realised. Although the mobilization of the target beneficiaries commenced in the first year of the project, the second and third years were dedicated to the identification and selecting the 10 pilot communities for intervention, selection of the key drivers i.e. women, girls and men who were members of the project communities, to lead the implementation process and to critically examine climate change adaptation and disaster risks reduction initiatives that can be implemented and tried in their various communities. Again, all of these objectives were successfully implemented as discussed later under project activities' section of this report.

(iii) Scale out validated community-based initiatives by strengthening local capacities to generate the necessary conditions to adapt these climate-change adaptation and disaster-risk reduction strategies

This objective which entails the training of women, girls and their leaders, community-based project implementation committees led by women, and other key stakeholders including the project team, the project steering and management committees, to empower them on adaptation and disaster risk reduction initiatives as well as strategies for implementation, was realised in the second and third years of project period. However, the project team was faced with a series of challenges related to government imposed lockdown and movement restrictions as measures to contain the spread of the Covid-19 pandemic. This, eventually slowed down project activities in the second year period of project implementation. The project team quickly adjusted when the bans and restrictions on movement and gathering was finally lifted. It must be pointed out that the project team has learnt new ways of doing research and undertaking intervention activities in rural communities in the face of the covid-19 pandemic and the likes. Details of the activities carried out in achieving this objective are discussed under project activities' section below.

(iv) Scale up community-based initiatives by promoting interactions between researchers, policy makers, and women leaders

This objective which entails the mobilisation of policy makers, women leaders and other stakeholders to collaborate with the research team and also facilitate policy linkage, uptake and adoption of tested community-based climate change adaptation and disaster risks reduction initiatives, has been considerably achieved. The various activities which included the

establishment of a coalition of women and girls in Delta state, comprising representatives of the 10 participating project communities and their respective local government area policy/decision makers; and advocacy activities carried out by women and volunteered men and community leaders, are documented in the activities' section of this report.

(v) Increase integration of women-led community-based adaptation strategies into policy and planning by the Delta State Executive and Legislature

This objective which entails engaging with Delta state government and indeed other sub-national governments in the Niger Delta region to integrate women-led community-based climate change adaptation strategies into planning by the various governments was achieved to greater extent in the course of implementing this project. The Covid-19 pandemic disrupted project activities during the second year of the implementation of project. This was especially due to the restriction of movements and ban of gathering in persons and holding regular face-to face meeting with policy makers. The project team actually took time to adjust to the new normal in engaging key stakeholders following the outbreak of Covid-19 pandemic as most of the senior researchers struggled to learn the new technologies such as engaging in virtual meetings, engaging in group calls, and attending dialog via video conferencing arrangement, engaging in group chat, e t. c. However, with time the project team adjusted and adopted these new approaches as well as other emerging policy engagement strategies to achieve this objective. The results of these new approaches and associated positive influences on policy uptake are discussed in this report.

3. METHODOLOGY

The implementation research project was guided by the theory of change which clearly articulates the intended activity (the '**if**' part), and the expected change it will bring about (the '**then**' part). It was based upon the premise that **if** women in rural communities of the Niger Delta region are empowered to play key roles in climate change adaptation and disaster risks reduction, **then** the inhabitants of these communities will benefit from improved livelihoods and disaster preparedness, **because** the activities of the program including improved accessibility by women to information on climate change adaptation, the establishment of a forum of interaction between women and policy makers and the building of women's capacity will help them begin to take leadership roles in the promotion of community-based climate change adaptation and disaster risks reduction activities. Under these conditions, **if** community-based intervention programs on climate change adaptation and disaster risks reduction are implemented in pilot communities, **then** women in these communities will be able to implement, on their own, programs to promote the adoption of various climate adaptation strategies which will lead to the reduction of vulnerability to climate change. Reduction of the vulnerability of rural communities to climate change will contribute to improved livelihoods, social equity and a reduction of out-migration. At the same time policy and decision makers and other non-state actors that will be playing key roles in the project's implementation will adopt and scale up the outcome of the project in other parts of the Niger Delta.

The research was carried out in Delta State which is one of the thirty-six states forming the Federal Republic of Nigeria and one of the nine states in the Niger Delta region. The state came into existence on 27 August 1991, when it was created as a separate state from the former Bendel

State by the then Military Government. Delta State was initially made up of twelve political divisions called Local Government Areas (LGAs), which later increased to 19 in 1996. Presently there are 25 LGAs in Delta State. The project was implemented in 10 local government areas selected in the three ecological zones in Delta state as follows:

- (a) Mangrove Swamp (Warri South, Isoko South, Burutu and Patani);
- (b) Freshwater Swamp (Ethiope East, Ughelli South, and Sapele) and
- (c) Lowland Forest (Ika South, Aniocha North and Ndokwa East)

Following the administrative structure of Delta state, the LGAs targeted in Mangrove Swamp ecological zone were in Delta South Senatorial District. Those in Freshwater Swamp were in Delta Central Senatorial District. Finally, those in Lowland Forest zone were in Delta North Senatorial District.

Both secondary and primary data were collected in the first year of project implementation. In the first and second quarter of the first year the project research team, supported by the mentees, had several meetings to design and finalise the research protocol entailing the production of the following four survey instruments used for primary data collection. The instruments can be access [here](#).

- (i) Research Subject Information and Consent Form for Respondents;
- (ii) Key Informant Interview Guide;
- (iii) Questionnaire for household surveys; and
- (iv) Focus Group Discussion Guide.

A combination of both quantitative and qualitative data collection techniques were used. Quantitative data collection entailed the administration of between 400 and 450 household questionnaires in each selected LGA and thereafter a total of about 4,000 successfully completed household questionnaires were retrieved cleaned up and used for the quantitative data analysis. An average of between 1,250 and 1,500 household questionnaires were used in the analysis in each of the three ecological zones.

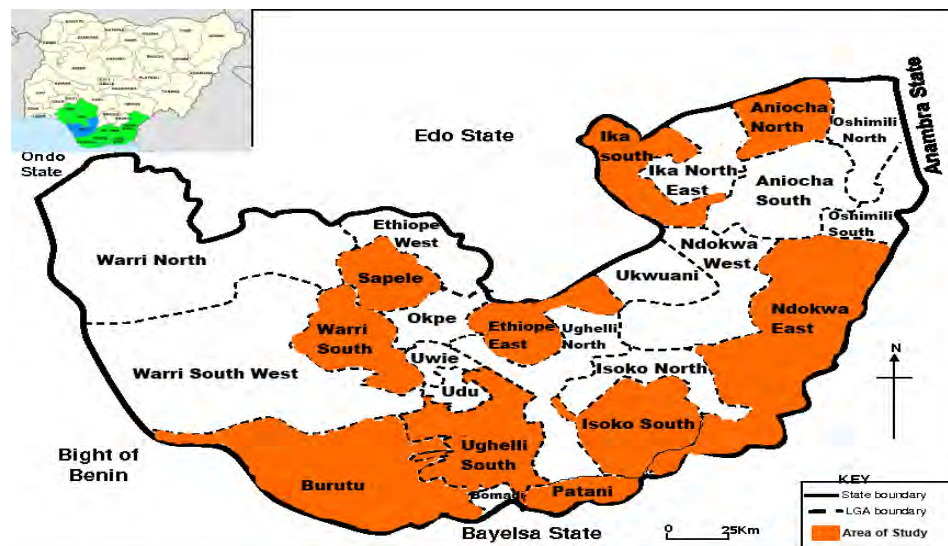


Fig. 1. Map of Delta State showing Local Government Areas of Project Implementation

The qualitative data collection entailed the conduct of key informant interviews and focused group discussions amongst mainly community-based stakeholders. A total of 107 key informants, with at least ten identified in each LGA were interviewed in the three ecological zones. Also three categories of focus group discussions were organised in each target LGA comprising “all males”, “all females” and a mix of “males and females”, respectively. Hence a total of 30 focus group discussions were organised in the three ecological zones. The activities entailing the data collection, entry, analysis and documentation of the preliminary results were all completed in the first year of project implementation.

After a thorough review of the climate change situation in Delta State based on the research conducted in the 10 LGAs across the 3 ecological zones, 10 communities (1 in each LGA) were selected for the intervention activities as follows: **Otorho Agbon** in Ethiope East LGA, **Uzere** in Isoko South LGA, **Aboh** in Ndokwa East LGA, **Onicha-Ugbo** in Aniocha North LGA, **Alifekede** in Ika South LGA, **Agoloma** in Patani LGA, **Ekamkpamre** in Ughelli South LGA, **Ayakoromo** in Burutu LGA, **Amajomata** in Sapele LGA and **Igbudu** in Warri South LGA.

Following the selection of the 10 pilot communities for intervention activities, a thorough investigation into the women-led climate change adaptation and disaster risk reduction in the ten selected communities was carried out using a modified version of the project survey instruments used in year one and the results documented. The details of the activities undertaken in the selection of the 10 pilot communities for intervention and the strategies adopted in empowering women, girls and other key stakeholders to achieve the overall objective of the climate change project in Delta state are documented in the project activities’ section of this report.

4. PROJECT ACTIVITIES

The various activities undertaken to achieve the specific objectives of the research project are documented in this section of the report. Please note that where applicable references are made to links for a detailed information on any of the activities reported. The report in this section is organised according to the specific objectives of the project.

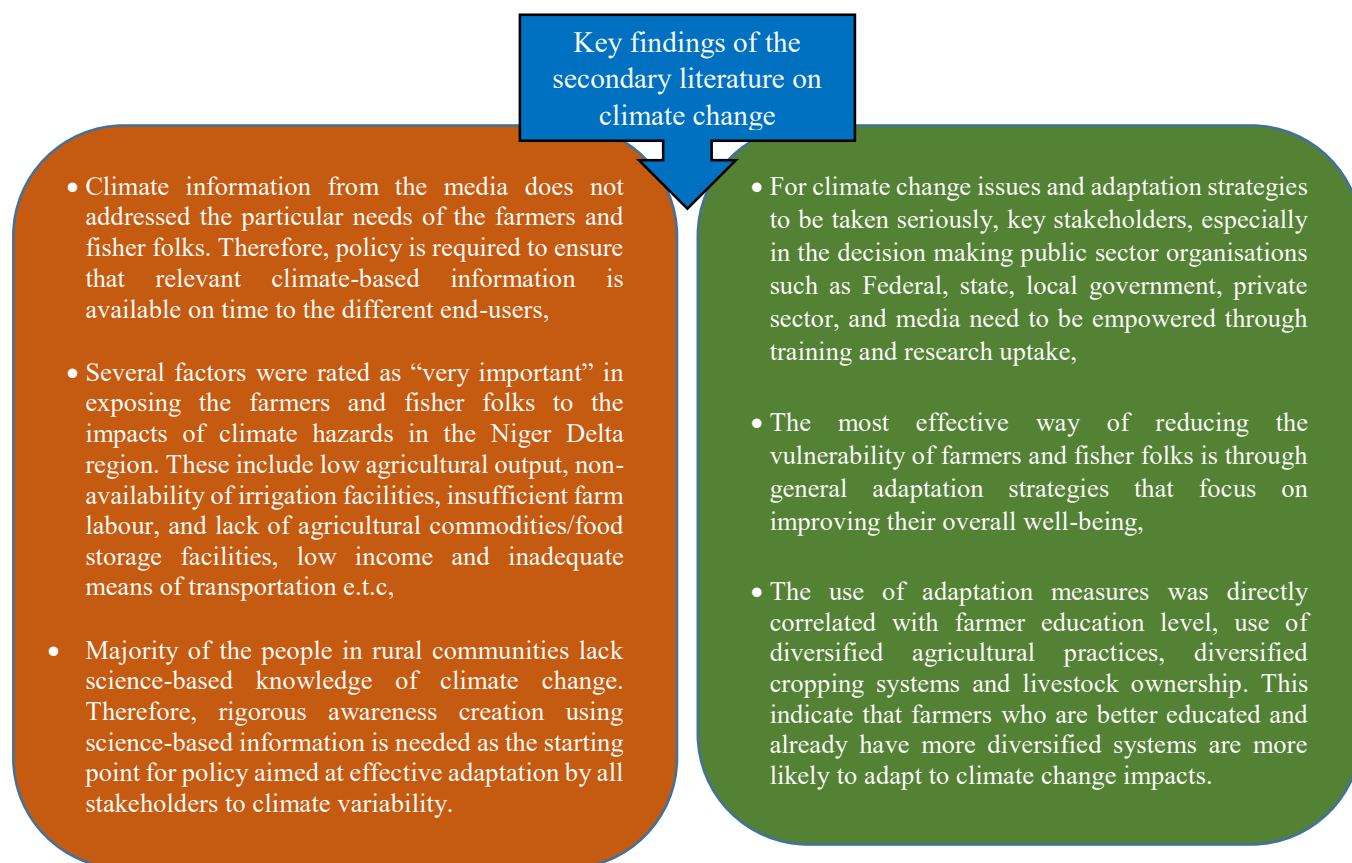
5.1. Knowledge Generation Activities

5.1.1. *(Objective 1): Increase understanding of the varied impacts of, responses to, and adaptations to climate change in rural communities.*

The activities carried out in the implementation of this project to achieve this objective relate largely to data collection, analysis and presentation of the findings. Both secondary and primary data were collected in the first and second year period of the project. These and many other activities implemented in the course of executing this project are documented below.

A Review of Secondary literature on Climate Change in the Niger Delta:- The review of the secondary literature with particular reference to adaptation and the role of women was done in the first year to complement the findings from the field survey so as to enhance knowledge of the patterns of vulnerability and adaptation in the communities of Delta State. The review of the literature shows that observed changes in Nigeria’s climate will continue at least through 2030.

It was also found that indigenous knowledge of climate change adaptation is not preserved or widely appreciated in most communities in the Niger Delta region. This knowledge may be facing the danger of extinction. It was recommended that the use of indigenous knowledge should be promoted through patronizing the services of custodians of this knowledge. Other key findings are depicted below.



Execution and Supervision of Quantitative and Qualitative Data Collection: A combination of both quantitative and qualitative data collection techniques were used. Surveys were carried out in the three main ecological zones in Delta State as follows: Mangrove Swamp, Freshwater Swamp and Lowland Rainforest. A total of 4,000 household questionnaires were cleaned and used for the quantitative data analysis. Respondents to household surveys in the three ecological zones comprised of males 46.00 percent and Females 54.00 percent.

Table 1: Percentage Distribution of Respondents according to sex

Ecological Zones	Male (%)	Female (%)
Mangrove Swamp	46.00	54.00
Freshwater Swamp	40.00	60.00
Lowland Rainforest	51.00	49.00
Total	46.00	54.00

A total of 107 key informants, with at least ten (10) identified in each LGA were interviewed in the three ecological zones. Those who responded to key informant interview were

female (51.4 percent) and male respondents (48.6 percent), while a total of 30 FGDs were conducted in the three ecological zones.

The findings of the survey show that on the average, the highest proportions of persons employed were engaged in the Agriculture, Forestry and Fishing Industry. Employment in agricultural and other related activities was followed by those in trade or selling activities and general services. What emerges from the nature of employment in the communities was that mining and quarrying play an insignificant source of employment for the people of the state. This implies a high level of dependence on the rich biodiversity of the Niger Delta region. The implication of this for vulnerability to climate change is significant, as the changes in the climate variables will have direct impacts on households' income and livelihoods.

The survey shows that about 32.3 per cent of the employed in the surveyed households indicated that they earn less than 10,000 Naira per month (this is less than 20USD at the time of this report). The proportion increased to between 30.7 percent and 49 per cent in the income group (10,000-20,000 Naira per month). At income level of above N20,000 Naira, the proportion of the employed in that group declined to between 31.5 per cent and 47.2 per cent. These findings on income level in the Niger Delta region have implications for vulnerability, adaptive capacity and overall adaptation to climate change in the communities.



Photo: Field Staff in Local boat to Access a community in Ughelli South LGA, During Data Collection



Photo: Field Staff in FGD with Female-only Group during Data Collection

Among the effects of flooding in the Niger Delta are the destruction of crops, livestock, houses, farm, building and equipment. This has led to a reduction in farm output, build-up of diseases and infections, contamination of water, death, sickness, increase in costs of farm activities, and psychological trauma among the rural inhabitants of this region. Only about 30 to 40 per cent of the households in the surveyed communities of the three ecological



Photos: CPED Project Staff Observing farmland destroyed by flooding during interview with women

zones in Delta State have access to safe drinking water almost the same proportion goes for safe bathing water. In effect, most communities in the three ecological zones in Delta State are extremely vulnerable to climate change in terms of access to water because whenever rains fail to come at the right time and the quality of water in the rivers within the state declines, the people become susceptible to diseases due to the poor quality of water which they drink. A detailed report of the findings of the survey can be accessed online [here](#).

In the second year period of project implementation a thorough investigation into the women-led climate change adaptation and disaster risks reduction in the ten selected pilot communities was carried out using the revised survey instruments used in collecting baseline data in the three ecological zones. About 60 households were surveyed in each of the pilot communities.

Majority of those who responded to survey (over 80 per cent) acknowledged that they were aware of climate change and its associated indicators such as early onset of rain and increase in rainfall amount. The respondents lamented over the various challenges they face as they are mostly engaged in agricultural activities in the community, ranging from low yield of farm outputs, uncoordinated market prize, destruction of farmland by flood, bad weather and activities of cattle herdsman during grazing, especially those in lowland rainforest ecological zones. The use of various modern irrigation methods to boost agricultural production was very low among the farming population surveyed in the communities selected for pilot activities.

From gender perspective, the interview respondents, majority of whom were women, pointed out that women exclusion from decision making has been a social-cultural challenge in the region. This also goes with employment opportunities in the communities, especially for those situated in oil rich localities. The views expressed by female respondents were that oil companies and other multinationals operating in the region usually recruit only the male folks leaving their female counterpart to their fate even though they merit such positions.

The detailed findings of the second phase of surveys in the pilot communities can be accessed [here](#).

Organisation of Feedback Meetings to Stakeholders in the Target Project location-: Following the completion of the key aspects of the data collection, entry and preliminary analysis, feedback meetings were organised with key stakeholders in the target LGAs and the inputs of the stakeholders and beneficiaries were integrated into the final research report. Most of the participants, about 65% of those invited to take part in the feedback meetings were women. The feedback meetings provided opportunity for key



Photo: A Group Photograph of Female Participants during one of Community Feedback Meetings Lead by Professor Mrs. Ogisi

stakeholders to validate the data collected, thereby enhancing the evidence generated from the field survey.

Project Team Meeting to discuss the various findings of the knowledge generation activities

Project team members as well as the project steering and management committees met on several occasions during the first and second quarter of year two to deliberate on the various research reports and findings in order to articulate the best approaches to adopt in delivery the planned intervention component of the project. It must be pointed out that most of the activities reported in this section were already completed in the first and second year period of the project before the outbreak of Covid-19 pandemic in Nigeria, hence the practice of social distancing, use of face masks and other measures adopted to reducing the spread of Covid-19 were not seen in some of the photographs used in this section of the report. Subsequent meeting were held through other means such as group calls, video conferencing and WhatsApp calls during the Covid-19 period.



Photo: Project Team Members Reviewing Progress of Project Implementation

5.2. Intervention Activities

5.2.1. (Objective 2): Improve Climate Change Adaptation and Disaster-risk Reduction Strategies in Rural Communities that are Most Effective and Affordable, and led by Women

This entails the implementation of women-led community-based interventions on climate change adaptation and disaster risks reduction in ten pilot communities earlier selected for intervention activities. The various activities planned to achieve this objective were carried out in the last quarter of year one and the whole of the second and third years of project implementation. Some of these activities have been reported in previous interim reports, but briefly highlighted below.

Identification and selection of the ten pilot communities for intervention activities:- The identification and selection of the ten target pilot communities took place in the first and second quarter of year two. This was done after critical review of the climate change situation in Delta State based on the research report by the project team in collaboration with project steering and management committees. Please note that the project steering and management committee comprised of members of the local policy makers, community leaders and women leaders in all the 10 participating Local Government Areas.

Mobilization of selected pilot communities for intervention activities: After selecting the project communities, mobilization was followed. The mobilization of the project beneficiaries, viz and viz the pilot communities, was important to get their buy-in and prepare them for the task ahead. The project team engaged with the women, girls and community leaders in a series of consultative meetings to brief them about the climate change project and their roles in the implementation of the intervention activities in their respective communities.

Some of the communities where hesitant in agreeing to participate in the project initially, sighting many instances of committing themselves to a programme of this nature in the past only to be neglected and disappointed by those implementing the project. But through the various town hall meetings held with the community representatives, such fears were eliminated.



Photo: Project team in a briefing meeting with Ayakoromo community, Burutu LGA after selection of Communities

Setting up Community-based Project Implementation Committees (CPIC):- A participatory approach was adopted in the implementation of the intervention activities of this project. The project has been designed to allow for beneficiaries to be part of the implementation process. Hence, the project through a selection process established a community committee in each of the target pilot communities. This was done through mobilization and interaction with existing viable social groups in the selected pilot communities and thereafter, their leaders, especially women and girls were brought together to form community group refer to in this project as Community Project Implementation Committee (CPIC). The CPIC consist of 25 members and women and girls constitute 65 percent to 70 percent, depending on the community. Members of the CPICs were drawn from various interest social groups in the community. The strategies adopted to engaging with the community groups facilitated the transfer of the learnings of the project to other members of the communities in an unprecedented manner in order for them to respond to climate change adaptation and risk reduction efforts been tested in their respective communities.

Most of these activities took place in the second year of project implementation. It must be pointed out that the series of project team engagement with the community leaders, and the

leadership of the various groups from where the committee members were selected facilitated the adoption of the use of CPIC to drive the process in their respective participating communities. In the third year of the project implementation, these engagements continued as new members were admitted to the social groups and there was need for them to be inducted into the climate change program. The members of the CPICs were taken through a series of trainings and mentorship programs to build their capacity in order to become formidable groups and to lead climate change adaptation and disaster risks reduction initiatives in their various communities. The training and capacity building of the selected CPICs continued in the second and third year of project implementation. How this was achieved amid the Covid-19 pandemic is discussed in capacity building section of this report.

The list containing names of the various CPIC members in each selected pilot communities that worked to deliver the intervention activities is attached to this report can be accessed [here](#).

Design of intervention strategies and activities with participation of women leaders and other community-based stakeholders-: The second and third years of project implementation were dedicated to the delivery of the various climate change adaptation and disaster risks reduction initiatives that can be tried and implemented based on local circumstances amid the Covid-19 pandemic. However, selecting the right climate change adaptation and disaster risks reduction initiatives which are relevant, effective and scalable require a careful planning and coordination of joint efforts. It was in this context that the project team in collaboration with the established CPICs in each pilot community worked jointly to co-identify relevant climate change adaptation and disaster reduction approaches which were appropriate to the prevailing circumstances in their various communities considering the nature of the climate change and disaster challenges facing the different target communities.

Again and as earlier reported, efforts were made to ensure that most of the participants present in the meetings to discuss and identify intervention activities to be implemented were women and girls. A greater percentage of key intervention approaches identified by the various communities were geared towards agricultural practices as most of the rural inhabitants were farmers. These approaches include; capacity building on flood control strategies-Construction of gutters and flood reception pits; modern livestock rearing techniques; provision of improved seedlings; provision of drought resistant crops; training on how to respond to climate events; construction of artificial lakes; support for the fencing of ponds & fish traps; provision and support for the planting of flood tolerant crops; provision of fertilizers, etc. A chart detailing various intervention approaches identified by the community groups can be accessed [here](#).

Implementation of Intervention Activities in the Ten Pilot Communities: This entails the actual delivery of climate change adaptation and disaster risk reduction initiatives in the various communities selected for intervention. The second and third years of the project period was dedicated to working with the CPICs in the ten pilot communities to implement most of the identified climate change adaptation and disaster risk reduction initiatives. As stated earlier, most of the adaptation measures identified by the CPICs members were geared towards agricultural diversification and other agricultural practices such as the use of modern techniques. In the second year of project implementation the community groups interested in climate smart

agriculture were taken through a series of modern farming methods and thereafter provided with seedlings and other farm inputs to boost their production. In order to meet the needs and aspirations of a wider farming population among the women groups and also to integrate a sustainable adaptation and disaster risks reduction mechanism in on-farm practices, the project developed a training guide for the farming population to be used by interested members during the second year period of the project implementation. This robust guide on modern farming practices was repeatedly used in the third year of the project, not only by those directly trained by the project, but also other community members who have seen the transformation that has taken place in the last two years of the delivery these intervention activities.

Other intervention activities such as support for construction of flood control channels to prevent destruction of farmland due to excessive flooding; provision of pest resistant crops; provision of improved cassava stems; strengthening the capacity of farmers to use different irrigation methods; provision and support with early maturing crops to relevant farmers; as well as building the capacity of rural farmers, most especially women and girls on farming techniques, continued in the third year of the project implementation. The training guides used in building the capacity of the target beneficiaries can be accessed [here](#).

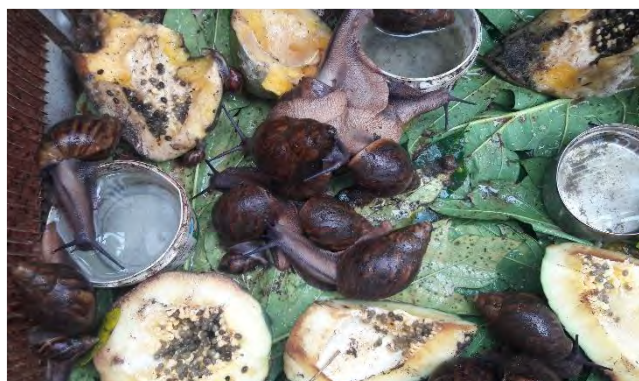


Photo: A CPIC member's local snail farm to support crop farming in Otor-Agbon community, EhtiopEastLGA



Photo: Example of sandbagging activity done by CPIC in Alifekede community led by women to prevent erosion in the community.



Photo: Project staff inspecting a CPIC member's farmland where Irrigation channel was constructed in Pumpkin leaf farm at CC project Community in Ughelli South LGA

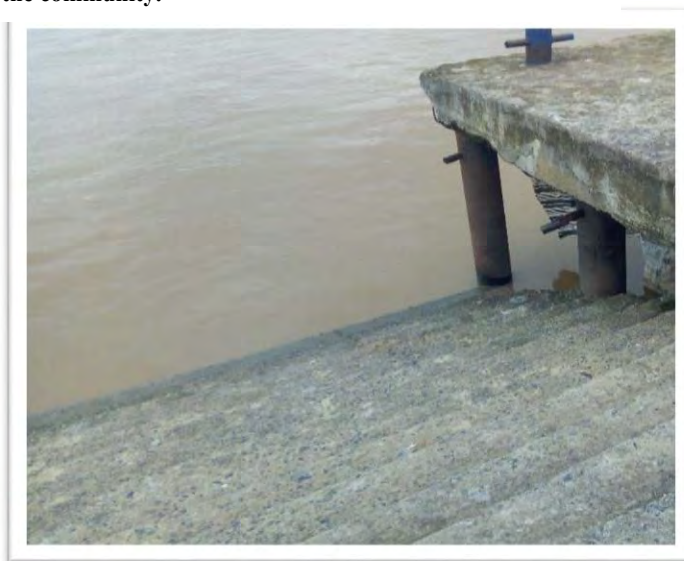


Photo:A Jetty Constructed in Ayakoromo Community in Burutu LGA, Coordinated by CPIC members & led by women

In order to boost the adaptive capacity of local farmers, especially women and girls, to respond to climate change impact, the project implementation committee members were supported with varieties of farm inputs, including fertilizers, improved groundnut seeds, Okro seed, corn seed in high quantities, and supplied to local farmers who were trained in crop production in the 10 pilot communities. This indeed enabled the local farmers to engage in large scale farming which resulted in increased farm production and family income. The photographs below show examples of some community members who received improved varieties of seedling distributed by climate change project staff in the project pilot communities.



Photo: A CPIC member showcasing package of improved seeds for planting received in Uzere community, Isoko South, LGA



Photo: CPIC members received improved seeds for planting in Onichi-Ugbo community, Aniocha North, LGA, Delta state



Photo: Dr. Dudu, a project team member visits a community waterside where community members demonstrated the use of local method to prevent intrusion of river to the community as part of CCA and DRR efforts in Burutu LGA



Photo: Some members of Otoro-Agbon Community after receiving improved variety of farms seeds, Ethiope East LGA, Delta state

NOTE: It must be pointed out that although the project was targeted at empowering women and girls in the pilot communities, men were also supported with improved varieties of seeds so that they can equally tell the story. These were members of the CPICs volunteers who were ready to join in advocacy for women inclusion, and playing their advocacy role, educating their peers on gender equality and equity in their various communities.

The implementation of these and many other intervention activities were done during the Covid-19 period- in the second and third year of project implementation.



CPIC member of Amajomata community telling her success story to a Project staff.

Planting of improved crop varieties resulted in improved crop yield

A member of the CPIC's farm in Aboh community who ventured into rice farming after receiving training on crop diversification as climate Change



5.3. Capacity Building Activities

5.3.1. *Objective 3: Scale out and Validated Community-based Initiatives by Strengthening Local Capacities to Generate the Necessary Conditions to Adapt These Climate Change Adaptation and Disaster-risk Reduction*

The various activities planned for to achieve this objective in the first, second and third years of the project were well implemented. These include strengthening the capacity of the project research team on the strategies for implementation of the project to deliver each of the specific objectives in a more effective way, building the capacity of the community groups including women, girls and other key stakeholders on climate change adaptation and disaster risk reduction initiatives in their various communities, and mentoring junior researchers on implementation research, e. t. c. These activities took place throughout the duration of the project and the detail implementation processes are further described in this section. Various strategies were adopted in the delivery of these trainings, especially those that took place during the period of the lockdown, movement restriction and ban on gathering of persons due to Covid-19.

Recruitment and training of project field staff and pilot testing of research protocol-: In the first year of project, advertisements for graduate Research Assistants were carried out mainly in the various LGAs in Delta State where field survey was carried out for the purpose of recruiting the field survey staff who were resident in those localities. The field staff were recruited and trained for over a period of five days in Benin City which is CPED head office, using different training modules. Some of the topics covered during the training include; community mapping and household mobilization, conducting household questionnaire administration and Focus Group Discussions. Field staff were properly guided on how to conduct key informant interviews and the administration of household survey questions. The roles of note takers/observers, basic ingredient in conducting FGD, common errors in moderating FGD were well discussed.



Photo: Project field staff and Project Team members including PI and Chairman, CPED BOT, in group Photograph during training of field staff in Benin City

Initial Capacity Building of the Project team on Implementation Research and Strategies for the Implementation of the Project-:

At the commencement of the project in 2018, the project team organised a three-day capacity building workshop of Project Team Members, consultants, junior researchers to be mentored and other project staff in an inception workshop. The workshop focused on building the capacity of the research team members and junior researchers on the strategies for implementation of the climate change adaptation and disaster risks reduction project in Delta state. The three-day capacity building workshop held in Precious Palm Royal Hotel, 3-4-5, December 2018, brought to bear timely, relevant and new knowledge among the project researchers and other key stakeholders in the implementation of the project with a view to increasing understanding of the varied impacts of, responses to, and adaptations to climate change in rural communities to enable identification of effective and affordable community-based approaches. It was organized to further identify and consolidate the reference points for tracking progress, validating targets and gathering more information that will inform implementation of the research project.



The project team was pleased to have in attendance the IDRC Program Specialist in charge of the project, Dr. Melanie Robertson. In her opening remarks, Dr. Melanie Robertson, spoke on the long standing relationship and collaboration between IDRC and CPED for over a decade on different projects, including capacity building of CPED, peace building, global health and climate change. She enjoined the project team to think beyond just generating data but rather to seek to close the gap that still exist in influencing policy with research evidence. A report of the inception workshop can be accessed [here](#).

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Organizing quarterly meetings of the management and steering committees to discuss the implementation strategies-: At the commencement of the project in Delta state, project management and steering committees were set up in the target LGAs, comprising policy makers, opinion leaders, women leaders, and other various interest groups. A series of meetings were

arranged in the first year of project implementation to build the capacity of the committee members to play their oversight roles in the implementation of the project. Such meetings provided opportunities for key stakeholders to make their input into the project implementation process. Such meetings were also held in the first quarter of year two before the outbreak of the Covid-19 virus. The restriction of movement and a ban on large gatherings as measures to reduce the spread of the coronal virus disrupted this activity for some time. Attempts were made to use telephone/video conferencing platform for holding meetings in the later months of the second year of the project. This was confronted with myriads of challenges such poor communication network connection, limited knowledge of participants on modern technologies, e. t. c. However, this became a learning process for most of the committee members, including members of the project team. In the third year of project, the majority of the project team members as well as members of the management and steering committees had learnt new skills to continue holding meetings such as use of zoom, whatsapp e. t. c. These methods were adopted to facilitate learning and exchanges throughout the remaining period of the project in the third year.

Strengthening the capacity of the CPICs, providing trainings on programs on climate change adaptation and disaster risks reduction in ten target communities and empowerment of women and girls through the promotion of gender equality-: The capacity strengthening of the CPICs and other local stakeholders began in the second year of the project. A combination of traditional learning methods such as presentations and discussions, along with more participatory and experiential learning approaches, e.g. group work, role play, and reflections on personal experiences were used during the training of CPICs in the ten target project communities in the second and third years of the project. In the second year, a guide for the training of CPIC was developed by project team members with support of Gender at Work (G@W) through the facilitator, Nkechi Odinukwe. How this support happened is discussed later in this report.

The training guide presents a mix of interactive activities and presentations used to improving the individual-level knowledge, skills and behaviours needed of local women and men based in these communities to foster gender-responsive agriculture adaptation activities. The training sessions provided an opportunity for participants to reflect on, discuss and challenge their own perceptions, values, beliefs and behaviours through sharing ideas with other participants. The training guide was divided into flexible modules that allow participants to review the concepts of climate change, climate change adaptation and disaster risks reduction as well as gender. To ensure that every member of the CPICs participated in all the trainings, each community group usually agree on the day and time convenient for all them and the training was scheduled as such. The trainings were made flexible because most of the participants were farmer. The trainings took about three days at a times during the period of year two and year three, and most time trainings were repeated just to reinvigorate the knowledge gained should in case some have forgotten. The guide entailing the different modules for empowering women, girls and other key stakeholders can be accessed [here](#).

The training of the CPICs did not start early as expected in year two of project implementation due to the restriction of movement and ban on gathering of persons in Delta state as a result of Covid-19. In compliance with the government restriction, the project team did not visit the

communities for the period of total lockdown but continued to support the community groups through various means such as group calls and WhatsApp group chat where applicable, as most of the communities were faced with network challenges and the approach/technology was new to them. However, the project team used this period to engage with G@W facilitator to learn new skills in handling the gender component of the training. This was done using phone calls, WhatsApp calls and other virtual channels. The project team ensured that more attention and time were devoted to capacity building when bans on gathering and restriction of movement were relaxed and when it became relatively safe to bring together members of the CPICs for training in the last quarter of the second year. During the trainings, NCDC's Covid-19 protocols were observed, such as wearing of face mask, keeping of social distance and provision of hand sanitizers for all participants.

In the third year of project, the training of the CPICs continued, especially in the areas of climate smart agriculture and diversification into other types of agriculture that were not commonly practiced in their localities as well as other livelihood training. The women and girls who ventured into some of these farming practices after receiving such trainings were very happy and narrated how the support by the climate change project has boosted their family income and have strengthened their adaptive capacity.

"....I am very happy for the training you people gave us. Before the training I plant only cassava and corn, and sometimes the corn and garri will be very cheap at the time of harvest because many people will bring their market for sale. This one normally happens when we hear that big flood will soon come and our crops or cassava will destroy. So, we usually do early harvesting and sell at a loss. Sometimes self, it is the one we eat that is our gain. We use the sales from the garri and corn to hire labour the following season. But, after the training, I started nursery of seedling for sale such as cashew and Guava seedlings. It does not cost much money to prepare, sometime I sell the one that is grown for N500 to N700 depending on the size. I want to thank CPED and IDRC and you people that came to train us and gave us money to start this trade. Thank you for this opportunity".....CPIC member, Mrs Ebu Mary @ Alifekede Community, Ika South, LGA.



Photo: CPIC Members in one of the Gender Training sessions following covid-19 guidelines



Photo: Female CPIC Members in group photograph after training session on gender and climate change

Mentoring of Junior Researchers and Senior Project Staff on Implementation Research-: A key component of the climate change project was building the capacity of junior researchers and project staff on implementation research. Junior researchers and project staff were exposed to various trainings and mentorship programs throughout the period of the project implementation. Apart from taking part in field work activities- e.g. survey and data analysis, project monitoring, supporting training of CPICs and working with them to deliver climate change adaptation and disaster risk reduction initiatives, many of them were sponsored for different capacity building workshops and to attend conferences, especially in the second and third year of project implementation.

Junior researchers benefited immensely from the various engagement events organised by IDRC through ***Gender at Work*** to strengthen the project team's capacity to implement the climate change project in a gender responsive and transformative manner. This whole process commenced on July 2, 2019 @ CPED head office in Benin City, when the CPED climate change project research team members and other junior researchers held an inception meeting with gender at work (G@W) facilitator,

Nkechi Odinukwe, to expose the team to the ***Action Learning*** and exchange program of G@W. The proceedings of that meeting and the key learning points are documented in the meeting report and can be accessed [here](#).



G@W facilitator, Nkechi taking the project team and Mentees through Taichi during inception meeting

Since the inception workshop with G@W was held, many junior researchers and project staff have attended different peer learning sessions organised by G@W. The first peer learning workshop was held in Nairobi Kenya, November 26-28, 2019, and was attended by two project team members and one project staff who is a female. The peer learning workshop provided opportunity for project team members to learn new ideas and experiences that have helped to shape the methods and strategies adopted in mobilizing the target beneficiaries and working with them during the second and third years of project implementation. On December 1-3, 2020, the second peer learning workshop was organised via zoom due to Covid-19 pandemic. The virtual peer learning workshop brought together the participating organisations from Argentina, Benin, Bangladesh, DRC, Nepal and Nigeria to share their experiences and strengthen their capacity to continue implementation of their various projects based on knowledge from the workshop. Again, the project team as well as the junior researchers and project staff took part and made presentations during the peer 2 virtual workshop. The detailed reports of both peer learning workshops can be accessed [here](#).

Support for two Post Graduate students to complete their Masters’ programmes:- In 2019, the project team advertised for two postgraduate students who were ready to work in the area of climate change and disaster risks reduction to be supported in their masters’ programme. After following the due process, **Ms. Sandra Obi** and **Ms. Faith Eguonor Odafe** were selected for support. We are happy to report that both students have completed their programme and defended their masters’ thesis.

The titles of their projects are:

1. **Ms. Sandra Obi:** *“Effects Of Disaster Risk Reduction Strategies on Levels of Cassava Output and Climate Justice Awareness among Cassava Farmers in Delta State”*
2. **Ms. Faith Eguonor Odafe:** *“Cost of Climate Change Adaptation Measures among Women Arable Crop Farmers in Ughelli-North and Sapele Local Government Areas, Delta State, Nigeria”*

The two masters’ theses are attached to this report as [ANNEX 3](#)

Other mentorship trainings for project staff:-

The mentorship of junior researchers and senior project staff continued in the third year of project. Other key trainings attended by project staff and mentees during the third year of the project are shown below.

S/N	Title of Training	Names of Staff	Date (2021)
1	Communication and Media Engagement Capacity Development Workshop	Jones Abriku; Osagie Aitokhuehi	March 16-19
2	Advocacy Action Planning and Human Rights-based Approach	Iroroturi Iyamba; Ernest Imongan	April 12-14
3	Monitoring and Evaluation Training for CSOs	Job Eromhonsele; Osagie Aitokhuehi	May 18-21
4	Resource Mobilization and Fundraising for CSOs	Ernest Imongan; Osagie Aitokhuehi	May 31-June 2
5	Gender and Social Inclusion (GSI)	Mercy Edejeghwro; Nkechi Melohe	June 16-18
6	Project Cycle Management (PCM)	Ernest Imongan; Mercy Edejeghwro	June 30-July 2

The project staff and junior researchers in this project have gained considerably from working with the project team and have applied the knowledge gained from the various capacity building

activities to the implementation of this project. Some of them have published in peer review journals while others have submitted papers which are currently undergoing the review process for publication. Some of the project staff have also published policy briefs and other policy papers.

5.4. Knowledge Translation (Influencing Policy and Scaling Up)

5.4.1. *(Objective 4): Scale Up Community-Based Initiatives by Promoting Interactions between Researchers, Policy Makers, and Women Leaders*

The activities undertaken to achieve this objective involve mobilizing policy makers, women leaders and other key stakeholders both at the state, local and community levels to collaborate with the research team in the implementation of the project and for possible scale up of the initiatives that work. The implementation of the knowledge translation activities took place throughout the three year period as documented below.

Mobilization visits to raise the awareness of the stakeholders on the project at the state, local and community levels:- At the commencement of the project, the project team members and project mobilization officers carried out the mobilization of all key actors both at state and local levels. Several visits were made to project locations to raise the awareness of the key stakeholders on the project so as to ensure their active collaboration and participation considering the sensitive nature of the Niger Delta environment. In order to sustain the cooperation of the key stakeholders in the project particularly those involved in responding to the survey instruments, project staff, team members and mentees made regular visits to the ten target LGAs to intimate them on the progress in the project.



Photo: A Group Photo taking with Staff of Department of Environment, Warri South LGA, During Mobilization Visit



Photo: A Cross-section of Women Group in Meeting with Project Staff during Mobilization Visit in Ayakoromo Community

In the second year of the project implementation attention was paid to the pilot communities selected for intervention and intensive community mobilization also took place in those communities to raise their awareness and to prepare them for the implementation of the project.

Constitution of the Project Steering Committee in the Delta State Ministry of Environment and Project Management Committee-:

To facilitate knowledge translation and uptake of policy recommendations emanating from the project, two platforms of interaction were established i. e. the Project Steering Committee and the Project Management Committee. The Steering Committee was composed of policy and decision makers in the Delta State Ministry of Environment including the Permanent Secretary and Directors as well as representatives of the research team and project management committee. The chairman of the Steering Committee was the Delta State Honourable Commissioner for Environment who was at times represented by the Permanent Secretary in charge of the administration of the Ministry of Environment. The purpose of the Steering Committee was to promote the ownership of the project by policy makers. In this way, policy makers were part of the findings and policy recommendations and were in a position to articulate and implement such recommendations. The research proposal and protocol were reviewed and approved by the Steering Committee before the commencement of the study. The Steering Committee initiative was expected to be a permanent, dedicated, professional mechanism operating in the Delta State Ministry of environment. The Steering Committee met three times during the first year period of the implementation of the project so that policy makers can be kept informed of the project activities. But in the second and third year of project implementation, most of the meetings of the steering committee were held virtually due to the Covid-19 pandemic.

The project management committee comprised members of the research team, representatives of the steering committee, and members of the department of environment at the local level as well as community leaders. Different meetings were held with the committee throughout the period of project implementation and members provided inputs into the research methodology and the project implementation process. Again, some scheduled meetings were cancelled due to Covid-19 pandemic.

Establishment of the Network of Women in Delta state on Climate Change Adaptation and Disaster Risk Reduction Initiatives-: To promote interactions between researchers, policy makers, women and girls in the Niger Delta, a coalition of women group was established. This was achieved through nomination of at least 3 persons by the executive members of the Project Implementation Committees in the various pilot communities to be part of the network. Also, one policy maker each from the 10 target local government areas was part of the network. The network members meet bi-monthly to discuss and share ideas on climate change adaptation and disaster risks reduction measures and gender transformative activities that are working well in their various communities. Members of this network also worked with policy/decision makers to support the formulation and implementation of policies on climate change adaptation and disaster risks reduction.



Photo: Cross-section of Network of Women in Delta state on Climate Change Adaptation During a meeting at Ughelli Delta state

The Covid-19 pandemic somehow adversely affected the operation of the network in the second year period, as large gatherings were not permitted and movement of persons from one locality to another was restricted by government. However, when things gradually returned to normal in the third year of the project holding physical meetings were being held following Covid-19 prevention guidelines. In addition to physical meetings, members also share ideas on the WhatsApp platform created for this purpose.

The establishment of these networks have created a voice for women in their various communities, as they engage community leaders, elders and local authority advocating for women inclusion in matters concerning climate change issues as well as improving the exchange of information among women on adaptation and quickening the pace which they learn from each other. Among other things, the network has promoted peer-learning among members of the network; for example during such meetings members of the network have shared examples of planting early maturing crops that have become effective climate change adaptation strategies for those in flood-prone areas; it has created opportunities for individual reflections on progress of CCA and how well such measures worked; it has also enabled members to collectively explore how to localize climate change adaptation measures in their respective communities, for example, members belonging to the network give feedback of meetings held to other members of the CPIC who are not part of the network. The CPIC members in turn share these ideas to other members of their community at religious gatherings, community meetings and through other avenue.

5.4.2. (Objective 5): Increase Integration of Women-led Community-based Adaptation Strategies into Policy and Planning by the Delta State Executive and Legislature

Various activities were undertaken during the three years of project implementation to achieve this objective. Some of these activities are documented below.

Regular meeting with Delta state government officials and other stakeholders to present findings of the climate change project and recommendations for scale-up-: During the first year of project several meetings were held with government officials and other key stakeholders. These include organizing policy briefing meeting with various stakeholders, having one-on-one interaction with relevant Delta state government officials on the policy implications of the research findings. Regular meetings of the Project Steering Committee were held and during such meetings policy makers who are members are briefed about the outcomes and implications for action.



Photo: Project team in a policy briefing meeting with Policy makers in Delta state including Commissioner for Environment

Organizing Policy Briefing Meetings/workshop for Key Stakeholders-Aside from the meetings held with steering committee, management committee and other smaller briefing meetings held with policy makers and other stakeholders to disseminate the findings of the research, the project team organised two policy workshops in the second and third year of project implementation. The first policy workshop was a physical meeting held on **February 18th, 2020** at Constantia Hotel in Benin City, before the general lock down and restriction of movement due to Covid-19 in Nigeria. The meeting brought together, policy actors from Delta State Ministry of Environment,

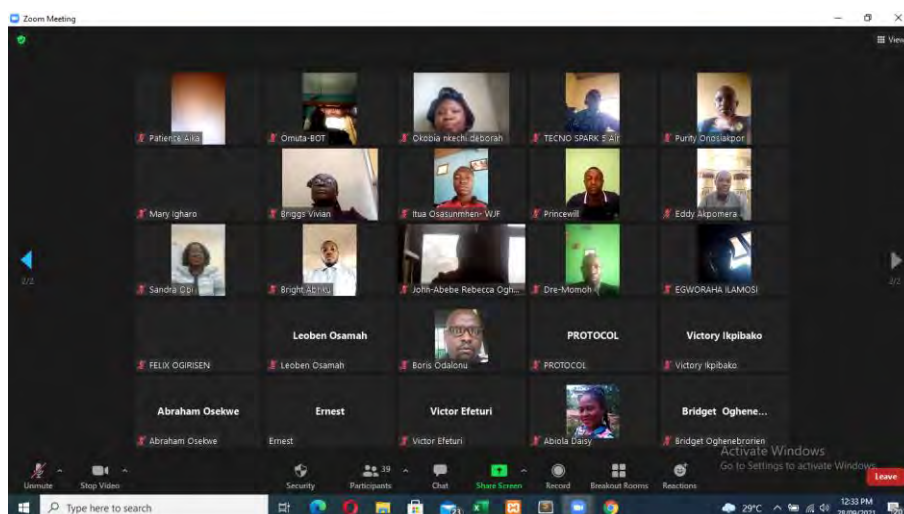
practitioners, members of the Project Steering and Project Management Committees, representatives of the various Community Project Implementation Committees, media representatives, project team members, junior researchers and students, amongst others. During the first policy workshop, the results and recommendations of the survey that was carried out



Photo: A cross section of participants during a policy workshop on the climate change project with Dr. Melanie in attendance

in all 10 LGAs of the three ecological zones were presented to participants. Other policy materials developed on the climate change project were also shared. We are happy to note that Dr. Melanie Roberts, IDRC Program Specialist in charge of the project participated in the policy workshop and made useful contributions to the discussions.

The second policy workshop was held on **September 28th, 2021**. However, this workshop was held virtually via zoom as government ban on gatherings of large numbers was still in force and also for the fact that only very few proportion of Nigerians were vaccinated with the Covid-19 vaccine at the time. This workshop was



unique as it provided opportunity for the project team to showcase the outcomes of the project to varied audiences, including Delta state policy/decision makers as well as policy makers from other states of the Niger Delta region. During the workshop project team members, junior researchers and project staff took turns to present different aspect of the project and implication for policy and planning on climate change in the Niger Delta region. The summary reports of these key policy workshops organised by the project team to disseminate the key results of the project to policy/decision makers can be accessed [here](#).

Participation and Presentation in National and International Forums:- In the first and second years of project team members attended some international conferences in-person to share their experiences of implementing the climate change project in Delta State. Examples of such conferences is the one attended by a project team member, Professor Dicta Ogisi who participated and made a presentation in the ***Women Deliver 2019 Conference*** held **3-7, June, 2019 in Vancouver, Canada**. Her presentation focused on mainstreaming gender equality in climate change adaptation- lesson from CPED project on climate change in Delta State Nigeria. Also, Engr. Job Eronmhonele, a project team member attended the Fourth Edition of the Africa Security Forum titled “The impact of climate change on security in Africa” held in **Rabat, Morocco, December 1-3, 2019**. The three-day event provided opportunity for participants to explore the key issues and to highlight the impact of climate change on ecosystems, biodiversity and human societies as well as framework for developing solutions to limit these impacts on the African continent. About 400 participants from 66 countries, including 35 Africans were present in Rabat for this conference. Participants were drawn from various professions working on policy and climate change related issues including; researchers, civil society specialists, policy makers, representatives of private sector organisations, amongst others. A brief report of the workshop can be accessed [here](#). Furthermore, Dr. Godwin Atedhor attended the 7th Edition of the Climate Change and Population Conference on Africa, held in **Accra, Ghana, November 12-14, 2019**. The title of his Paper was: “Intensifying Warming in Selected Urban Centres in Nigeria”. The report for this international conference can be accessed [here](#).

Beginning from the second quarter of year two and the whole of year three of project implementation, most of the international conferences and workshops attended by project team members and mentees were held virtually. Since virtual policy workshop became the new normal in organising policy dialogue in the wake of Covid-19, project team members quickly adjusted and learnt the technical know-how to keep up with the pace. It must be pointed out that it was not easy for some senior team members to follow up with this new ways of doing things initially, as some members never used the required software applications for such meeting before this time. Hence, project team members dedicated their time to learn the skills to use the various online video conferencing tools. With gradual process and realising that Covid-19 may take a longer time than expected to contain, they got a mastering of the required skills to keep up with the trend. Many of the team members participated in various webinars and other online video conferencing meetings in the third year of the project. This again, has further enhanced the capacity of CPED associates, especially the senior researchers, to undertake and participate in research in the event of any pandemic that may lead to restriction of movement of people and ban on gathering in person.

6. PROJECT OUTPUTS AND OUTCOMES

6.1 Summary of project outputs and outcomes

This section presents the key outputs and outcomes of the various strategies adopted in the implementation of the climate change project in Delta state as shown in the chart below.

Table 2: Project Outputs and Outcomes Based on Project Objectives

No.	Project Objectives	Project Outputs	Project Outcomes
1	Increase understanding of the varied impacts of, responses to, and adaptations to climate change in rural communities to enable identification of effective and affordable community-based approaches	<ul style="list-style-type: none"> i) Some 300 key stakeholders and beneficiaries including at least 120 women reached and agree to participate in the project in each LGA, ii) 4 survey instruments designed, tested and used in primary data collection, iii) 40 survey staff and supervisors comprising 22 Females and 18 Males were trained to carry out primary data collection, iv) About 4000 household responded to survey with 46 percent male and 54 percent female in the first survey, v) 107 key informants comprising about 49 percent male and 51 percent female were interviewed, vi) 30 FGD conducted, vii) The prevailing pattern of vulnerability to climate change in Delta State and the response by policy makers and other stakeholders documented and available to other researchers, viii) A report of the baseline survey is available for all stakeholders, ix) About 600 households comprising about 35% males and 65% females participated in community surveys and interviews on climate change situation in the ten pilot communities; x) 10 local officers were trained to work with field officers in community mobilization in the pilot communities, xi) 6 policy briefs have been produced and are in use xii) 2 peer review articles published and 2 accepted for publication, xiii) 2 monographs on impact and vulnerability to climate change published and 1 under review. 	<ul style="list-style-type: none"> (i) New knowledge on the devastating impact of climate change and vulnerability of rural communities in Niger Delta is available. (ii) Various adaptation and disaster risk reduction initiatives to mitigate the impact of climate change identified by stakeholders and applied in target Niger Delta communities.

2	<p>Improve climate-change adaptation and disaster-risk reduction strategies in rural communities by testing and validating the most effective and affordable women-led, community-based initiatives;</p>	<ul style="list-style-type: none"> i. 10 communities for pilot activities selected and participated in the implementation of the project; ii. Community Project Implementation Committees (CPIC) established in 10 target communities; iii. 250 leaders of social groups mobilized to form members of the CPICs in the 10 pilot communities; iv. A guide to assist the farming population to practice climate smart agriculture developed and distributed. 	<ul style="list-style-type: none"> i. Gender equality promoted and accepted by both male and females in rural communities of Delta State ii. Women and other stakeholders are applying the skills acquired which have led to increased farm yields. iii. Rural communities positively transformed through scalable community-based adaptation initiatives that are piloted.
3	<p>Scale out validated community-based initiatives by strengthening local capacities to generate the necessary conditions to adapt these climate-change adaptation and disaster-risk reduction strategies;</p>	<ul style="list-style-type: none"> i. 12 Senior research team members and 10 mentees were trained on project methodology to participate in the implementation of the project, ii. At least 5 project technical staff trained on implementation research; iii. 250 members of CPIC with female constituting about 65% have been trained on climate change adaptation and disaster risks reduction initiatives, iv. 10 junior researchers have been trained on policy briefs development and have commenced working them v. 10 junior researchers including project staff attended different trainings on project management and implementation of development project. vi. A guide for resource persons on the empowerment of women and community stakeholders on climate change adaptation and disaster risk reduction has been produced, vii. 250 members of CPIC with male constituting about 35% have been trained on gender equality, equity and mainstreaming. viii. A mechanism for empowering other members of social groups in the target communities on 	<ul style="list-style-type: none"> i. Senior and junior researchers and project staff have acquired skills to undertake implementation research. ii. 250 members of the CPICs especially women and girls who are also leaders of various social groups have learnt new skills to adapt to climate change challenges and to be able to make decision in issues affecting them.

		climate change adaptation and gender established.	
4	Scale up community-based initiatives by promoting interactions between researchers, policy makers, and women leaders	<p>I. About 300 policy/decision makers at state and local level reached and mobilised to work with women and girls in rural communities to scale up climate change adaptation initiatives,</p> <p>II. 2 key mechanisms to facilitate knowledge translation and uptake of scalable CCA and DRR in the Niger Delta rural communities established in Delta state namely (Project steering committee on CCA & DRR and Management Committee on CCA and DRR).</p> <p>III. A Coalition of Niger Delta Women on Climate Change Adaptation with the name (CONDWOCCA) established in Delta state,</p>	<p>I. Formalization of new collaborations and partnerships between local governments, NGOs, and community-based organizations and existing ones consolidated;</p> <p>II. Specifically, a platform for networking among key stakeholders has been established.</p>
5	Increase integration of women-led community-based adaptation strategies into policy and planning by the Delta State Executive and Legislature.	<p>I. About 10 different small meetings to share policy recommendations of the climate change project with key actors using different policy briefs were held.</p> <p>II. 7 policy briefs developed for communication activities include:</p> <p>a. <u><i>Climate Change and its Implication on Women's Health in the Niger Delta Region</i></u> by Job I. Eronmhonsele & Mercy. O. Edejeghwo</p> <p>b. <u><i>"Awareness of Climate Change by Rural Women in the Niger Delta Region: Implication for Empowering Women on Climate Change Adaptation and Disaster Risk Reduction Initiatives"</i></u> by Andrew G. Onokerhoraye, Job I. Eronmhonsele & Mercy. O. Edejeghwo</p> <p>c. <u><i>"Participating in Research Surveys in Rural Communities: Challenges Women Face and Recommendations for Improvement"</i></u> by Job. I. Eronmhonsele & Mercy O. Edejeghwo</p> <p>d. <u><i>Flood Risk Mitigation in Niger Delta Region: Strategies for Protecting Buildings and Properties</i></u> By Gideon E.D. Omuta & Osagie Aitokhuehi</p> <p>e. <u><i>"Susceptibility of Women And Children To Induced Infectious Disease Incidence Due To Climate Change In The Niger Delta"</i></u></p>	<p>III. Policy and decision makers in Delta state and indeed other states in the Niger Delta region have acquired knowledge on evidence based rural community initiative on climate change led by women and girls that can be replicated in the Niger Delta communities.</p>

		<p><u>Communities”</u> By Job Imharobere Eronmhonsele & Mercy Omuro Adejehwro</p> <p>f. <u>“Climate Change Adaptation and Resilience Building By Rural Women in the Niger Delta Communities - The Case of Delta State”</u> by Andrew Godwin Onokerhoraye and Job Imharobere Eronmhonsele</p> <p>g. <u>Working with Women to Lead Climate Change Adaptation and Disaster Risk Reduction Initiatives in the Niger Delta Communities: The Case of CPED Project in Delta state</u>, by Job Eronmhonsele, Dicta Ogisi, Mercy Edejegwro and Ireroturi Iyamba</p> <p>iii. 2 Policy workshops were held to disseminate the results of the climate change project in Delta state to key stakeholders</p> <p>iv. About 8 project team members including junior researchers and project staff attended international and local workshops to share lessons of the climate change project in Delta state.</p> <p>v. 2 peer review articles have been published in Journals including:</p> <p>a). Gender Based Assessment of Climate Change Adaptation Strategies in Delta State, Nigeria by Balogun V.S. and Odjugo P.A.O., <u>Journal of Geographic Thought & Environmental Studies 2020, 15(2): 94-110 UNIVERSITY OF PORT HARCOURT, NIGERIA ISSN: 1118-00064.</u></p> <p>b). Climate Change and the Economic Vulnerability of Household in Niger Delta Region by Eronmhonsele, Job Imharobere, Erhabor Igbinosa Norris, <u>International Journal of Humanities Social Sciences and Education (IJHSSE) Volume 8, Issue 7, July 2021, PP 1-11</u></p> <p>vi. 2 other researched articles accepted for journal publication to be published by December 2021 include:</p> <p>a.) Women-Led Community-Based Climate Change Adaptation and Disaster Risks Reduction Initiatives in the Ecological Zones of Delta State, Nigeria” by Godwin O. Atedhor,</p>	
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		<p><i>Andrew G. Onokerhoraye and Verere S. Balogun</i></p> <p>b.) “Spatial Impact of climate change on community health and food security in the ecological zones of Delta State” by <i>Johnson Dudu and Andrew Onokerhoraye</i></p> <p>vii. 2 Monographs have also be published and shared with relevant stakeholders. These include:</p> <p>a.) <u><i>Adapting to Climate Change by Small Scale Farmers in Nigeria’s Niger Delta Region: Challenges and Opportunities</i></u> by <i>Andrew G. Onokerhoraye and Job I. Eronmhonsele</i></p> <p>b.) <u><i>Empowering Women for climate change adaptation in Nigeria's Niger Delta</i></u> by <i>Job I. Eronmhonsele and Andrew G. Onokerhoraye</i></p> <p>viii. Two blog posts on gender were developed by team member and junior researcher during the first year of project implementation. The gender blog posts have been published on gender at work website as follows:</p> <p>1. “A workshop to remember” by <i>Mercy Omuero Edejeghwro</i>: <u>https://genderatwork.org/news/mainstreaming/</u></p> <p>2. “My experience with gender sensitive research” by <i>Job Imharobere Eronmhonsele</i><u>https://genderatwork.org/news/my-experience-with-gender-sensitive-research/</u></p> <p>ix. A website <u>www.cped-ccp.org.ng</u> for further dissemination of research findings and for reaching wider audience was designed and launched.</p>	
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6.2 Brief analysis of the project outcomes

A key objective of the climate change project was to generate outcomes in behaviours, relationships, actions, and activities of people that positively impact on the adaptation and disaster reduction activities in the Niger Delta region led by women and girls. The project, in defining outcomes as changes in behaviour, recognized the fact that, to be effective, a development research programme must go further than information creation and dissemination by engaging actors in adaptation and development. It is in this context that the climate change project was conceived and implemented. This section provides a brief analysis of some of the outcomes of

the climate project with respect to the participating organizations, key actors/target groups, and individuals, mainly in the Niger Delta region in particular and Nigeria in general.

6.2.1 Research or Knowledge Innovations

The climate change project has generated new knowledge that builds on local insights which has the potential to contribute to the formulation of new policies and programs and the adaptation of existing ones with respect to climate change adaptation and disaster risks reduction in Niger Delta in particular and other parts of Nigeria in general. The new ideas and understanding generated by the research can eventually contribute to influencing the intellectual and policy environments in which decisions regarding climate change and disaster risks reduction strategies are made in Nigeria. Furthermore, the project exposed the senior team members, junior researchers and project staff to the theory and practice of action research, which has not been hitherto well appreciated and practiced in Nigeria. It became clear to team members, junior researchers and project staff during the course of the programme that action research is not merely research which, it is hoped, will be followed by some action. Rather it is action which is intentionally researched and modified leading to the next stage of action which is then again intentionally examined for further change as part of the search itself.

The team members, junior researchers and project staff through their participation in the implementation of the climate change project, appreciated the fact that action research is a reflective process of progressive problem solving led by individuals working with other team members or as part of a "community of practice" to improve the way they address issues and solve problems. Through proposal writing and its revision meetings, project team meetings and workshops during the implementation period, the Nigerian team members, junior researchers and project staff were exposed to the action research model. Building individual capacity to carry out action research among Nigerian research team members paved the way to possible future curriculum improvement in social and management sciences and, ultimately, a transfer of knowledge to students who will become leaders and teachers themselves, thus ensuring the sustainability of the results with respect to strategies for climate change adaptation and disaster risks reduction in Nigeria.

6.2.2 Changes in Behaviour of Key Actors

Stakeholders: Changes in behaviour of those making policy decision on promoting climate change adaptation and disaster risks reduction in rural communities of the Niger Delta as well as those affected by climate change and frequent occurrence of disasters in the region were promoted by the participatory research methodology which was adopted in the implementation of the project. Stakeholder participation was promoted at all stages of the climate change project, from development of the project proposal and its revision with guidance from IDRC reviewers and programme officers, to refinement of the research design and data collection instruments, to interpretation of research findings, translation of results into pilot action programmes and strategies and to the eventual delivery of results to a broader array of stakeholders and interested parties. The key organs used to promote this participation are the Steering Committee and the

Management Committee that are composed of the relevant stakeholders. We expect these organs to be sustainable after the completion of the project with support from CPED.

Changes in behaviour were also observed with respect to gender equality issues. The focus of the gender equality promotion in the project relates to the fact that men and women have equal opportunities and rights in private and public spaces, without unfair advantage or disadvantages due to gender. With the intensive gender equality training provided to both men and women in the target communities, most of the men and women now believe that both men and women should have equal rights, including the right to equal pay, equal opportunities to own property, vote and be represented in civil society. Men in particular openly stated that they have changed their traditional beliefs that women are inferior to men and that they now appreciate the fact that women do make major contributions to household income and community development.

Senior Team Members: Although most of the senior team members received their higher degrees from Western Universities and have considerable experience in research, the decay in the university system in the country during the last four decades has had negative effects on the research capability of Nigerian researchers. We discovered that it was not, therefore, safe to assume that every member of the research team was familiar with contemporary research methods, the action research model, approaches to developing hypotheses, quantitative and qualitative methods of research and particularly data analysis, the difference between writing for academic publication and policy papers. The climate change project influenced considerable behaviour changes of Nigerian team members and project staff primarily with respect to improved research capacities, participation in policy-oriented research and influencing policy by working with policy makers in the implementation of the research, exposure to research networks and the enhancement of the institutional research capacity of CPED.

For the senior team members, the project provided an opportunity for collaborative research amongst Nigerian researchers who belong to four different institutions. Lack of local funding for research and the inability of Nigerian researchers to attract competitive research grants from international funding organizations has restricted the exposure of many Nigerian researchers to large scale collaborative research. This project facilitated such collaboration. Finally, the project also provided the opportunity for the senior team members to be exposed to large scale project management systems and challenges entailing regular project management meetings and the participatory resolution of any challenges experienced during the implementation process, in particular the impact of covid-19 pandemic.

Junior Team Members: Many graduate students and junior academics in Nigeria lack the opportunity for further studies, sustained mentoring and collaborative research. The climate change project provided opportunity for those participating as junior researchers and project staff to acquire skills in the field of climate change adaptation and disaster risks reduction research, research methodology, field data collection, data processing and analysis, research report writing and project management. All junior researchers and project staff improved their ability in report writing; gained knowledge in the use of survey, interviewing and community research methodologies, in data analysis and in the preparation of presentations for a variety of stakeholder

and academic audiences. Although the speed and ability of the junior research team members to acquire the skills being imparted to them was slow, there has been improvement on their part. Some of them have made presentations at international conferences while others carried out publications based on the data collected during the research program. The research interest of the junior researchers on climate change issues and disaster risks reduction has been stimulated by their participation in the implementation of the various aspects of the project.

Centre for Population and Environmental Development (CPED): The support provided by the project to CPED has greatly improved the infrastructural capacity of the Centre which has enabled the centre to carry out other small scale research projects. The institutional capacity of CPED was also enhanced in terms of the considerable experience gained in hosting the research collaboration between researchers from different academic fields, in particular interdisciplinary cooperation between different disciplines in the social sciences and between institutions. Furthermore, CPED, through its participation in this project also enhanced its skills in research administration in such areas as financial management, technology transfer, research ethics, etc. Finally, CPED enhanced its capability in outreach activities aimed at the general public through the interaction activities carried out in selected communities in the Niger Delta region.

Intervention Council for Women in Africa (ICWA): The collaboration with ICWA in the implementation of the project has enhanced the capacity of ICWA in working with women in rural communities. ICWA acquired new skills and capacities to translate the outcomes of research to policy makers by being represented in the Steering Committee and the Management Committee where interactions with policy makers took place regularly.

Delta State Government, Asaba: The Ministry of Environment which is the organ through which the **Delta** State Government participated in the implementation of the project reported that its participation was the first time ever of working directly with researchers in the conduct of nay research project. The Ministry of Environment stated that its participation on behalf of the Delta State Government has changed its attitude towards researchers because they tend to believe that researchers work on theories which are not relevant to the challenges which they face. The Ministry reported that its participation has changed that attitude. The Ministry of Environment stated that having been part of the implementation and recommendations of the project it will strive to implement the various policy recommendations.

6.2.3 Policy Influence

The climate change project appreciated the fact that in the context of Nigeria, the most effective means of disseminating research to policy users is through direct, interpersonal contact. In view of the critical issues examined in the project, policy makers must trust that the information they receive is reliable and credible. In Nigeria, policy makers will often rely on personal contacts with researchers they trust. Sustained and substantive communication engenders trust. In the context of climate change project the points of contact include locally based users and policy makers with jurisdictional responsibility in the topic area of the research these are in the Delta State Ministry of Environment and the Local Government Departments of Environment in the

ten target Local Governments. It is against this background that the Steering Committee and the Management Committees became the key organs to facilitate and promote policy adoption. These activities to influence policy will continue after the formal disengagement by IDRC.

6.2.4 Technology Adoption and adaptation

The climate change project contributed to the improved adoption and adaptation of communications technology in CPED. Facilities for the dissemination of the project outputs at CPED were enhanced by the redesigning of the CPED website and the policy brief format. The aim was mainly to a) make research content available – especially that of studies; and b) to improve navigation tools of the website to make it more dynamic. The website now includes brief summaries of the different project activities that CPED is involved in, including the climate change project. This has resulted in an increased number of visits to the website over the past two years. The website provides a location where reports, presentations, publications and summaries of the climate change project may be accessed by interested parties from anywhere in the world. The dissemination of activities through CPED website is still on-going and will continue after the formal disengagement by IDRC. One major technological change during the implementation of the project was due to the covid-19 pandemic. This has enabled CPED to improve on its facilities for holding virtual meetings and workshops.

6.2.5 Changes in Social Conditions

The climate change project in the course of its implementation reached some of the remote rural communities in the Niger Delta region that have not benefitted from any form of interaction with researchers over the years largely because of the prevalence of violence in the region. One major social outcome of the project in the remote rural communities relates to their empowerment due largely to the participation of youth, women and elders in the focus group discussions and the key informant interviews. This empowerment has enabled the inhabitants of these communities, particularly the youth of both sexes, to acquire the confidence, skills and power to shape and influence their local place and services, alongside providing support to local development agencies to promote and deliver effective engagement and empowerment opportunities. Basically the climate change project has promoted the empowerment process in the targeted rural communities that allows the youth in particular to gain the knowledge, skill-sets and attitude needed to cope up with the changing world. As pointed out earlier gender equality and its acceptance is a major outcome of the project.

6.2.6 Project Evaluation

An evaluation team comprising CPED staff and external evaluator completed the final evaluation of the project. The report focused both on the process and impact evaluation. The process evaluation identifies strengths and weaknesses of project work and progress towards identified and measurable objectives in the areas of research, interventions, knowledge translation, and capacity building. The impact evaluation examines the outcome and impact of the project on key

actors and stakeholders including participants in the implementation. ([Evaluation report can be accessed here](#)).

6.2.7 Contribution to climate change research: As pointed out in 6.2.1 above, this project has generated new knowledge and approaches to action research on climate change and women empowerment that builds on local insights which has the potential to contribute to the formulation of new policies and programs as well as the adaptation of existing ones with respect to climate change, disaster risks reduction and women empowerment in Niger Delta in particular and other parts of Nigeria and West Africa in general. The new ideas and approaches generated by the implementation of the research particularly the promotion of gender equality and empowering women to be leaders in actions focusing on climate change adaptation and disaster risks reduction are quite innovative in Nigeria. Furthermore the involvement of policymakers and other relevant stakeholders in the implementation of the action research is also quite innovative with respect to promoting women active participation in adaptations to climate change and disaster risks reduction in rural communities. This would eventually contribute to influencing the intellectual and policy environments in Nigeria in which decisions regarding climate change and disaster risks reduction strategies are made at national and sub-national levels.

6.2.8 Comparison of the intended and actual results: Examining the synergy between the anticipated outcomes/impact of the project and the actual results shows that the project has achieved the major components of its expected outcomes. In the first place and as explained in 6.2.7 above, new knowledge on the devastating impact of climate change and vulnerability of rural communities in Niger Delta to this phenomenon has been generated through the research component and a significant proportion of this knowledge has been made available to policymakers, other relevant stakeholders and indeed other researchers through publications in monographs, peer reviewed journals, policy briefs and communications with key policy makers. Second the various adaptation and disaster risk reduction initiatives to mitigate the impact of climate change identified by stakeholders were documented and applied in target Niger Delta communities. It is expected that other communities will adopt these strategies through the scaling of the experiences by state and non-state actors in the Niger Delta region in particular and other parts of Nigeria in general. Third the promotion of gender equality and the empowerment of women which were key components of the expected results of the project were considerably achieved in the target communities as both males and females accepted the need to do away with traditional practices and give women equal opportunity in social and economic affairs in rural communities of Delta State. This acceptance of gender equality and the need for women empowerment was put into practice during the implementation of the project which enhanced gender equality during the implementation of the project. We expect that this acceptance will continue not only in the target communities but across the Niger Delta region. Fourth the practice of effective and relevant climate change adaption and disaster risks reduction which was one of the expected results of the project was considerably achieved in that women and other stakeholders are applying the skills and practices acquired during the implementation of the project and this has led to increased farm yields. Furthermore the targeted communities in the implementation of this project have been positively transformed through the practice of scalable community-based adaptation and disaster risks reduction initiatives that were piloted. Fifth the

expected outcomes of the project with respect to capacity building were also achieved in that senior and junior researchers and project staff have acquired skills to undertake action research while two Masters' degree students that worked on climate change related issues completed their studies. We should add that 250 members of the community-based implementation committees, especially women and girls who are also leaders of various social groups were empowered through the acquisition of new skills to adapt to climate change and disaster risks reduction challenges in their communities. Finally, promoting interactions between policy makers, other key stakeholders and researchers was achieved to a reasonable level. The covid-19 pandemic had some negative impact on the frequency of such interactions thereby limiting the effectiveness of the interactions. Despite the covid-19 constraints the project succeeded in promoting the formalisation of new collaborations and partnerships between local governments, NGOs, and community-based organizations while the existing ones were consolidated; a platform for networking among key stakeholders has been established with policy and decision makers in Delta state and indeed other states in the Niger Delta region resulting in their improved knowledge on evidence based rural community initiatives with respect to climate change and disaster risks reduction led by women and girls that can be replicated in the Niger Delta communities.

6.2.9 The unintended outcomes of the project: The major unintended outcomes of the project as referred to in 6.2.8 above relates to the limited physical interactions between the research team and the various stakeholders as well as among the various categories of stakeholders which were essential to sharing the experiences and lessons of the project due the covid-19 pandemic. In the first place project team members and junior researchers were not able to take part physically in international and national conferences and workshops during which more fruitful knowledge exchange and learning could have taken place. Furthermore interactions with policy makers and among other stakeholders were seriously constrained by the covid-19 pandemic. Thus the optimum interactions and dissemination of knowledge through personal contacts which was essential in Nigeria because of poor communications was not achieved.

6.2.10 Project management challenges:

As noted earlier in 6.2.2, the implementation of the project enhanced the administrative capacity of CPED in terms of the considerable experiences and knowledge gained in hosting the research collaboration between researchers from different academic fields, in particular interdisciplinary cooperation between different disciplines. CPED capacity to administer a project of this nature was further enhanced in such areas as financial management, technology transfer, research ethics, etc. Finally, the administration of the project contributed to the improved adoption and adaptation of communications technology in CPED which was necessitated by the covid-19 pandemic.

However, there was the challenge of mentoring junior researchers and project staff. Many graduate students and junior academics in Nigeria lack the opportunity for further studies, sustained mentoring and collaborative research. This has affected the speed and ability of the junior research team members to acquire the skills being imparted to them. Team members had to work hard in mentoring them so that they can benefit from the project and considerable success was achieved as reflected the increased research interest of the junior researchers on climate

change issues and disaster risks reduction being stimulated by their participation in the implementation of the various aspects of the project. Finally, covid-19 brought into focus the weaknesses of CPED in terms of facilities for interactions among team members and between them and other stakeholders involved in the implementation of the project. However, CPED was able to respond to this technological challenge by improving its facilities for holding virtual meetings and workshops. Even then CPED needs to further improve its facilities for holding virtual meetings as covid-19 is likely to continue to influence the mode of interactions with researchers and other stakeholders for many years to come.

7. Overall Assessment and Recommendations

Usefulness of the institutional collaboration in achieving the Project's Objectives

It was noted elsewhere that collaboration by institutions and researchers in different institutions in carrying out research is not common in Nigeria because of lack of large scale projects and funding opportunities. This project is therefore innovative in the context of Nigeria. The collaboration has enabled the project to assemble the best researchers on the issues examined in the project. Consequently, the different institutions and personnel from those institutions involved in the implementation of the project have brought to the project various skills and experiences that contributed remarkably to the successful implementation of the project.

Contributions to Development

Nowhere is the value of research for development more striking than in its contribution to policy formulation and development. This has been a key component of the climate change project as it indeed promoted the participation of key policy makers and other stakeholders in the implementation of the project. The climate change project generated new knowledge that builds on local insights which has the potential to contribute to the formulation of new policies and development programs and the adaptation of existing ones. By empowering key stakeholders particularly women and girls in rural communities that have never benefitted from similar interactions over the years the climate change project contributed to laying the foundation to sustainable climate change adaptation and disaster risks reduction and community development. It is expected that other similar programs will adopt the strategies and lessons emanating from the climate change project so that sustainable community development, entailing the effective participation of local and community-based stakeholders in decisions on climate change adaptation and disaster risks reduction strategies in the Niger Delta region of Nigeria.

Experience for team members and junior researcher mentored

From the perspective of the team members, junior researchers and project staff the key experience of the climate change project relates to the actual implementation of an action research project of a considerably large scale entailing collaboration among Nigerian institutions, researchers and involving policy makers and other stakeholders in Nigeria. There is no doubt in the mind of all participants in this project that this experience will be put into use in the conception and implementation of other projects in Nigeria by the various participating collaborating institutions.

Views on the Value and Importance of the Project

Over the three years period of the implementation of the climate change project key stakeholders and participants in its implementation have, at various times, expressed their views on the value and importance of the project. Policy makers in the Delta State Government as well as other stakeholders including the women, girls, men and community members, at different times, expressed their appreciation to IDRC, CPED and the other participating institutions for deciding to carry out this timely project on climate change that has been impacting them negatively. They expressed the views that the results and lessons of the project will guide the government in its subsequent programmes in promoting climate change adaptation and disaster risks reduction in Delta State in particular and in the Niger Delta region in general. The different target community women and other stakeholders including elders and men also expressed their appreciation of the possible future contribution of the project to the development of their communities through the implementation of the policy recommendations. Finally, the senior and junior research team members, project staff and field research assistants that participated in the project expressed satisfaction with the opportunity which the climate change project provided in building their skills which could be very valuable in their future careers.

The challenge of the covid-19 on the implementation of the project

Of the various risks identified during the preparation of the proposal for this project none of them constituted any significant challenge in the implementation process because when any of the risks presented themselves they were adequately handled because of the mitigation strategies put in place. However, five months into the implementation of the project in the second year precisely in the month of February 2020, the Covid-19 pandemic posed a considerable health challenge to the whole world.

Nigeria, like many other countries in the world responded to the situation by putting in place strategies to contain the spread of the virus including the following: A corona-virus Preparedness Group was established at the end of January 2020 by the Nigerian government following the development of the epidemic in China. National NGOs, civil society organisations, international NGOs and UN agencies are also engaged in responding to the pandemic and the effects of COVID-19 containment measures. Since mid-March 2020, Federal and State Governments in Nigeria have put in place several measures to prevent, mitigate, and respond to the spread of COVID-19 across the country. These include lockdowns, movement restrictions, social and physical distancing measures, as well as public health measures. The distribution of cases is uneven and has resulted in a diversified response from the Federal Government. The degree of implementation and level of compliance from the population varies from state to state; this is related to perception of the government and trust in government directives, and different levels of education and sensitisation to the measures. As part of the movement restrictions, on 18 March, Nigerian authorities issued a travel ban and suspended visa on arrival for all travellers coming from countries that registered over 1,000 cases domestically. On 6th May, 2020 the travel ban was further extended till further notice until the travel restrictions were relaxed later in July 2020.

As pointed out earlier in this report the Project Team and the various committees participating in the implementation of the project made adjustments in carrying out various activities as follows: First, meetings of the project team were either virtual or physical. During physical meetings temperatures of participants were taken, water and soap for washing hands were provided, sanitizers were provided, social distancing was maintained and wearing of face masks was compulsory for all who attended the meeting. Second, during mobilisation visits to key stakeholders to pilot communities, interactions strictly observed keeping of distance and the wearing of face masks. Finally, during the training of key stakeholders in the pilot communities, covid-19 compliant measures were observed as described above with respect to all project meetings including provision for washing of hands, sanitizers, social distancing and the wearing of face masks will be compulsory. As pointed out earlier the strict observance of the precautionary measures put in place by governments at the federal and state levels contributes to the successful implementation of the various project activities.

It should be pointed out that the impact of Covid-19 has not been devastating in Nigeria particularly in the rural communities as was expected. The challenge is not over yet because many countries that have strong socio-economic connections with Nigeria are now experiencing what can be called second wave of Covid-19. Whatever the situation the selection of CPED as one of the beneficiaries of the IDRC Rapid Response Initiative on Documenting the Impact of COVID-19 on Food Systems further enhanced the capacity of the Project Team to respond appropriately to the challenges posed by Covid-19.

Recommendations to IDRC

From the perspective of the team members, project staff and other stakeholders we make some observations and suggestions for the attention of IDRC at the conclusion of this project.

In the first place, we want to take this opportunity to appreciate the support provided to the project by IDRC through mainly the Senior Program Specialist, Dr. Melanie Robertson, who is in charge of the project on behalf of IDRC. She has consistently guided the Project Team in the implementation of the various activities carried out and provided valuable information which enhanced the implementation of the project. We remember she drew our attention to the need to make sure that the focus of activities must also reflect disaster risks reduction which we accepted and responded to in the implementation of the project as pointed out in this report. She was also very concerned about how the Covid-19 is affecting the implementation of the project and we made reports to her on the adjustments we were making. We also appreciate IDRC for approving CPED's Covid-19 project titled "The Impact of COVID-19 on local food production and informal food markets in Nigeria with Niger Delta region as case study" which was successfully implemented. The implementation of the project further enhanced CPED capacity to execute field based research projects during this period of covid-19 pandemic.

Second, we appreciate the contributions of IDRC by proving funding for the implementation of climate project which is one of the major collaborative research projects embracing three main

partners and three other research institutions in Nigeria. However, while calling on policy makers in Nigeria to appreciate the value of research there is no doubt that IDRC and other donors will continue to play key roles in promoting research in Nigeria for many years to come as part of programs designed to alleviate poverty, promote socio-economic development and address the challenges of policy engagement, we strongly recommend that IDRC and its donor partners demonstrate their continued commitment to supporting a sustainable research culture in Nigeria. Often donors funding specific research projects, and attempting to measure the relative success of their programs focus, understandably, on the initial and end stages of research as reflected in the outcomes that a project delivers. Yet for long-term research capacity to be developed and sustained in a country such as Nigeria it is clear that donors need to take a much greater interest in the processes and mechanics of the research process itself, to understand why things do and do not happen, and the things that frustrate research in Nigeria.

IDRC and other donors need to undertake substantive assessments of the resource base accessible to researchers and develop a stronger understanding of the cultures and processes of research in Nigerian research institutions, particularly the universities and key research centres. This would allow funding to be deployed more effectively, and would provide a way to acknowledge those areas requiring additional support. It is essential that IDRC should make funding flexible, and ensure that it is delivered through systems which help to maintain flows of funding. Such a system of funding would allow problems to be addressed swiftly, and ought to therefore reduce the risk of projects stalling or resulting in premature termination.

In view of the unpredictability of the socio-economic environment in which research is carried out in Nigeria, IDRC should consider how additional contingency funding could be provided, to account for needs that arise during the course of a project, but which may reasonably have been unforeseen at the outset. Having said this, we note the contribution of IDRC through the recently concluded Think Tank Initiative of which CPED is a beneficiary to building the capacity of key research institutions in Nigeria as the program has enhanced the research and policy engagement capability of the benefitting institutions in Nigeria.

We thank IDRC for support to our project over the last three years.

Sincerely,



Professor Andrew G. Onokerhoraye,
Principal Investigator,
On behalf of Team Members,
October 25, 2021

ANNEX 1: TEMPLATE FOR GENDER EXERCISES USED FOR TRAINING WOMEN AND MEN IN THE TEN PROJECT COMMUNITIES

Introductory Activity - Workshop Expectations & Objectives¹

NAME OF EXERCISE/SESSION:

Workshop Expectations/Objectives using HHF mapping Tool

GOAL OF EXERCISE/SESSION:

- (1) To understand participant's expectations regarding Workshop learning
- (2) To structure Facilitator's learning Objectives in line with participants expectation
- (3) To train participants on use of HHF tool as a way for holistic learning

TIME NEEDED FOR EXERCISE: 45 minutes²

WHAT YOU NEED FOR EXERCISE:

Flipchart, coloured Markers, coloured paper stickies

“HOW TO STEPS” OF EXERCISE:

- (1) Plenary (45 minutes)

Template for Gender Exercises

NAME OF EXERCISE/SESSION: *Gender socialization and culture - (buzz group/debate, reflections)*

(1) GOAL OF EXERCISE/SESSION:

- To familiarize participants with a clear definition and differentiation of the terms of **gender** and **sex**, raise their awareness on gender socialization process and develop an analytical awareness of ways men and boys can assist break the cycle of negative gender norms

TIME NEEDED FOR EXERCISE: 1 hour 20 minutes.

WHAT YOU NEED FOR EXERCISE:

Tape, markers, flip charts, pens, jotters/writing materials, reference materials/ handouts

¹ This activity is best suited for a large group workshop of between 20- 40 and is optional as facilitator is free to use another way to run this session during training

² Activity time could be reduced especially where participants are not over 30 persons

“HOW TO STEPS” OF EXERCISE:

- (2) Present the objectives of this activity. (20 minutes)
- (3) Plenary discussions (40 minutes)
- (4) Plenary discussions (20 minutes)
- (5) Wrap up (20 minutes)

How it is done:

Participatory discussion activities -

- (i) While participants are sitting together in plenary in mixed group, ask everyone to think back to that time in their lives when they were very young as children – growing up as a boy or girl and try to remember *a story around first time they remembered knowing there was a difference between boys and girls*. Ask people who are willing to share to do so but do not force anyone to share until they are ready (20 minutes)
- (ii) As they share their stories, Facilitators should use probing questions to flesh out insights from stories by asking age, where it happened, who was there, what happened and how storyteller felt. Facilitator should make sure to write out some important points regarding conversation that will help to drive the discussions that will follow; (40 minutes)
- (iii) At the end of group presentations, Facilitator shall initiate a discussion that will lead participants to discuss how they know a baby is a boy or girl outside their physiological attributes and follow up with discussions on how society socializes boys and girls differently eg when boys and girls start learning different things.

Continue discussions to bring out the meaning of **Sex, Gender** and **Socialization** by emphasizing points already highlighted in presentations that bring up issues like *who took care of babies when participants were children? Can a man cook? Can a woman drive commercial buses/tricycles, can women provide financially for homes. How do we know what men and women can do in our society?* Ensure that you guide discussion to allow participants reflect on how society/culture determines what boys and girls do as they grow up.(20 minutes)

- (iv) In very basic language, try to explain the difference between sex and gender and how socialization process plays a role in the way society functions. Relate the discussion to issues around climate change adaptation and disaster risk management findings from CPED survey.
- (i) Conclude plenary discussions on presentations. Ask participants to reflect on exercises and discussions (especially in view of new insights gained) and think about what they might now do differently as parents if they had a fresh opportunity to raise their boy and girl children from infancy to 10 years. What did they do in the past that new knowledge from exercise has changed in their minds?. Make sure to record their reflections

QUESTIONS & TIPS FOR FACILITATOR:

- (ii) Group discussions on what it means to grow up as a boy or girl from birth to 16 years can be guided by the following questions:

- *What did our parents teach us about being girls or boys, and about being women or men?*
- *What did we learn from our peers, schools (books), church/religion, communities, media about being girls or boys, and being women or men?*
- *In our family setting, what did the society say about the roles of a woman and a man, and their relations?*
- *What traits, attitudes and roles do we have presently as women and men, which can be traced to the influences of these significant people, groups and institutions in our social environment?*

ADDITIONAL INFORMATION:

See HANDOUT on gender Socialization and Culture

Template for Gender Exercises**Introductory Activity for Small community Workshop³**

NOTE: *To get the best out of this exercise, facilitator must give participants ample notice on task, particularly how to identify a suitable symbol that speaks to how they love to learn as individuals before the workshop date.*

NAME OF EXERCISE/SESSION:

Symbol Exercise - Breaking the Ice/setting the tone for the workshop

GOAL OF EXERCISE/SESSION:

- (4) Set a gender sensitive atmosphere for the workshop
- (5) Introduce participants

TIME NEEDED FOR EXERCISE: 45 minutes

WHAT YOU NEED FOR EXERCISE:

Seats arranged in a circular arrangement, individual participant's symbols where available

³ This activity is best suited for a small workshop of between 8 – 15 persons

“HOW TO STEPS” OF EXERCISE:

- (6) Initial stretch exercises (10 minutes)
- (7) Symbol explanation by individuals (30 minutes)
- (8) Final reflections (10 minutes)

How it is done:

Head level

- (a) Once all participants are in the room or seated within the learning space, introduce yourself, offer brief remarks to welcome everyone into the workshop space while highlighting reasons for the workshop
- (b) Request participants to stand, take a walk round the room and talk to at least 2 persons they are meeting for the first time in the room or have not had an opportunity to talk to in the last few weeks if participants are from the same community. Allow participants time to interact and learn each other's names or generally move around to chat and greet. After 5 minutes, request everyone to take a sit within the circle and feel at home. (5 mins)
- (c) At this point, explain to everyone that participants will now take turns to introduce themselves to the group and their interest in participating in the workshop using a symbol that best identifies how each person loves to learn

OR

A symbol that best represents how they see themselves in the context of challenges they face while trying to adapt to effect of the climatic change in their community or environment

Symbol explanation will generally follow the format of participants mentioning their names, their role in the home (either mother, father, husband, daughter, son, head of household, community leader etc) and identification/explanation of symbol that best captures their interest in the workshop

Heart level

- (a) Conclude introductions by asking participants to take few minutes to deeply reflect on how they felt participating in the exercise and how they feel after the exercise – do they feel more relaxed with people in the space or still uncomfortable. Allow 2 minutes of deep silent thought and move to the session on workshop expectation

TIPS FOR FACILITATOR:

In concluding this activity, facilitator shall as much as possible try to create a warm and welcoming learning space where participants try to work as friends and equals. It is advisable that the concluding paragraph does not involve heavy tasks like free write or sharing reflections. The idea is to use the exercise to get participants to start relaxing.

Template for Gender Exercises

NAME OF EXERCISE/SESSION: Creating a Safe Space of confidentiality and trust

GOAL OF EXERCISE/SESSION: To create trust and confidentiality among participants. To help the facilitator foster an atmosphere of comfort and help individual participants feel that they are in a safe environment.

TIME NEEDED FOR EXERCISE: 30 minutes

TARGET AUDIENCE: Exercise could be used in training of ordinary members (first time – entry level or intermediate training), community members

WHAT YOU NEED FOR EXERCISE: Nil

QUESTIONS & TIPS FOR FACILITATOR:

HOW IT IS DONE: Plenary – (30 minutes)

STEPS

TIPS for Facilitator: It is recommended that you facilitator *be* very active and strict in following the rules. If anybody laughs or makes jokes, please remind them immediately but politely about the rules of the exercise and the risks of breaking the safety of the circle.

- (i) Facilitator should ask the group to stand and move to a free and open space within the room where they can make a circle; the facilitator must also be part of the circle. Ask everyone to hold hands in the circle to ensure that the circle is closed ; after that ask them to loosen their hands and remain standing in their positionsstill forming a circle.
- (ii) Explain that the exercise is an experiment and that the circle symbolizes a wall of protection within which participants can safely experiment with walking with their

eyes closed. Explain that walking with their eyes closed makes each person vulnerable and dependent on the trust of others. This exercise will help participants to experiment with helping others to feel safe and builds their own image of how to create trust.

- (iii) The facilitator should invite a volunteer for the experiment to walk with their eyes closed within the circle while others provide the safe place. The volunteer stands in the middle while the facilitator explains to him/her: “You will close your eyes and start to cross the circle until you reach one of the group members. That group member will receive you gently and guide you to turn and go the next person. the group will take care that you feel safe.”
- (iv) The facilitator explains that role of entire group is to ensure volunteer is safe by making sure that he/she does not work out of the circle but is gently guided by placing hands on his/her shoulders to guide them to next person. There should be no jokes or laughter from everyone as the game is on.
- (v) The facilitator asks the volunteer to close his/her eyes and start walking.
- (vi) Once one or more people have taken their turns to work within the circle, facilitator should keep participants still standing in the circle and use the following questions to find out their insights from the exercise:
 - How did you feel walking within the circle or guiding someone who was within the circle?
 - What experiences did you encounter — moments of anxiety or safety, perhaps?
 - How did it feel to be responsible for and to direct another person?”

Template for Gender Exercises

NAME OF EXERCISE/SESSION: Understanding the concept of “**Power**”

GOAL OF EXERCISE/SESSION: To Strengthen participants’ knowledge of the concept ‘*power* and enhance their awareness on how gender roles affect power relations

TIME NEEDED FOR EXERCISE: 1 hours 15 minutes

TARGET AUDIENCE: Exercise could be used in training of ordinary members (first time – entry level or intermediate training),

community members, union leaders and refresher training of any group of trade unionists (both male and female)

WHAT YOU NEED FOR EXERCISE: Tape, markers, flip charts, pens, jotters/writing materials, reference materials/ handouts.

QUESTIONS & TIPS FOR FACILITATOR: Considering how uncomfortable people get discussing this topic, Facilitator may have to decide when best to introduce topic to participants. It is however advised that topic be taken midway into workshop or towards the end of training period so that facilitators' choice of participants for role play in the **Introductory Exercise** will be stress free.

Choice of participants for role play may be made based on facilitator's assessment of individual ability or on volunteer basis by persons interested a day before introduction of topic to entire group. That way, roleplay actors will have ample time for rehearsals before topic introduction.

Questions for plenary discussions on power:

What is power?

Who has power?

What are the realms in which power operate?

What are the different forms (faces) of power

What different kinds of power exists?

How can power be used?

How does it feel to have power or not have power

Questions for plenary discussions on after listening exercise:

How does having or not having power make you feel?

How does gender roles or norms affect the power one has?

How does being young or old affect the power one has?

How can power influence one's access to rights?

How can one use power to help achieve positive change?

HOW IT IS DONE:

Introductory Activity – Role play (20 minutes)

Plenary discussions (40 minutes)

Final reflections (15 minutes)

STEPS

Activity 1

Role play

- (i) Topic is introduced by way of a role play in which selected participants dramatize a family or community scene where an informal family meeting is being held and the man and head of household is openly giving out instructions to mother, children and other members of the house. He refuses to take responsibility for any role in the house apart from eat his food, relax and chat with his friends while his family members (wife and children) struggle with farm work, cooking, taking care of children and fetching water and dealing with other issues created by climate change. Scene depicts a man who has power over a his family and chooses to use this power to intimidate everyone especially those who speak out against his use of power
- (ii) At the end of the role play, introduce topic to participants and share topic goals/objectives with them.

Activity 2

Plenary Discussions

- (i) Start by requesting participants in plenary session to take few minutes of silent reflection and think about the word ‘**power**’ and what it means to them.
- (ii) After few minutes of silent reflection, kick start discussions with participants to assess their knowledge of power concepts using questions listed under ‘*tips for facilitators*’ and chart down key highlights of plenary discussions on flipchart paper. Questions can be modified to meet literacy needs of community
- (iii) Conclude session by synthesizing ideas from plenary discussions while throwing more light on grey areas noticed during discussions. You can distribute **handouts on power** at this point (*which can be simplified and translated in pidgin English for community members*) and allow some to read it loud and and explain to participants. Request for questions from participants to assist clear any grey areas.
- (iv) At the end of the plenary session, ask participants to share how they felt discussing the concept of power or participating in the role play on power and what they feel needs to change to make climate change issues more manageable for women and girls.

NOTE:

The whole Idea is to use a role play to depict how climate change negatively impacts women and children. The scenario for role play does not have to be exactly as painted above but can be

changed to bring out more issues related to communities' context. The important is to carry out the exercise by way of a role play so memory of story can stay in the minds of community members

Template for Gender Exercises

NAME OF EXERCISE/SESSION: Introducing the concept of Gender Equality and Equity to community members

GOAL OF EXERCISE/SESSION: To enhance participants understanding of the effects of inequality and inequity between men and women

TIME NEEDED FOR EXERCISE: 1 hour

TARGET AUDIENCE: Exercise could be used in training of ordinary members (first time – entry level or intermediate training), community members

WHAT YOU NEED FOR EXERCISE: A plate of rice (or a picture or drawing)

QUESTIONS & TIPS FOR FACILITATOR:

HOW IT IS DONE: **Introductory Activity** – (10 minutes)

Plenary /Final reflections (30 minutes)

STEPS

TIPS for Facilitator: It is recommended that you share the example below with a woman in a powerful position and a man in a weak position. People are more likely to analyze the situation without their pre conceptions getting in the way. If you put the man in the powerful position, they might try to justify his position instead of analyzing it objectively.

- (i) Request two people from the group of participants to volunteer to be part of a game (a man and a woman if possible)
- (ii) Once two persons volunteer, request that they stand up and stand beside you in front of other participants (10mins)
- (iii) Once two people have been selected , facilitator should give the following illustration by bringing the male volunteer forward:

“This handsome man works very, very hard. He has too much work to do as he has to get up early in the morning and go to farm, then do his welding business, trying to work as much as possible. Nobody can help him. He does not sleep enough, has no time to practice any sport and he does not eat very well. This morning, he was in such a hurry that he did not have time to eat breakfast. Anyway,

only boiled cocoyam was available and he prefers hot indomie noodles with vegetable in the morning so he could not eat and left for work hungry. In other words, this man is tired.”

- (iv) Facilitator should at this point request that the man step back while the woman steps forward and facilitator continues their story thus:

“This beautiful woman is physically fit! She exercises her body by walking briskly every morning at least for two hours, eats well, and sleeps well. She has a fish farm where she works, but does not do too much work because other people help her. This morning she had a good breakfast: A hot plate of rice - Her favourite meal!

- (v) Facilitator will request both volunteers to stand at same point...same line while facilitator continues to speak to the larger group of learners thus:

“Now, I am going about 500m away from the man and the woman and I am going to put down a big plate of rice. It is meant for both of them - the same distance away, no discrimination.”

- (vi) Facilitator goes ahead to place the plate of rice 500m away from the two volunteers (or facilitator can say... assuming I walk 500m away and place this plate of rice...
- (vii) Facilitator should then ask the participants the following key question:

“Now that the rice is available to whoever is able to reach it first, what do you think will happen?”

Possible answers from participants:

- “The woman will arrive first: she can run fast whereas the man is tired and unfit.”
- “The woman will arrive first and probably eat most, if not all the rice. The woman likes rice very much while the man prefers noodles. If she is not aware of his disadvantaged position, she may not leave anything for him.”

- (viii) Facilitator should at this point probe further by asking these key questions:

(a) “Is the situation fair?”

(b) If it is not, Why is it not fair?”

TIP for facilitator: Remind the participants that there was no discrimination - the plate was equally accessible to both people.

- (ix) Facilitator should probe participants further to ask:

(c) “what can be done to make the situation fairer?”

Possible answers that may be given by participants or could be used to guide discussion:

- “Let the man reach the plate first or put the plate closer to the man.”
- “Divide the contents of the plate into two equal parts; one for each them.”
- “Make the woman aware that this man has not eaten breakfast this morning, so she must share and maybe leave more for him.”
- “Try and find a way of alleviating this man’s workload.”
- “Give the man free time to take exercise so that he can become fitter and more able to compete.”
- “Propose noodles and rice to address both their preferences. If that is not possible, maybe we should only propose noodles because the man seems to have a greater need of food than the woman.”

TIP for Facilitators: As participants provide solutions, write ideas down or make a note of them where all can see. Once they have exhaustively shared all solutions, facilitator can guide discussions further by highlighting that these possible solutions are what we call “positive actions;” they aim to make the situation fairer and more equitable. They take into account the fact that some people do not have the same opportunity to access resources.

- (x) Facilitator can use this scenario to explain that concept of gender equality says there can be no true equality when people do not have same opportunities. Equity as a concept can equally be explain at this point based on the handout
- (xi) Facilitator should highlight at this point that when it comes to climate change challenges, women are not vulnerable because they are “naturally weaker”, but because conditions of vulnerability faced by men and women are different because of their gender.
- (xii) Facilitator can mention at this point that just like the man appeared vulnerable as a result of some of the social issues he had to deal with around his job and daily life, women, like men, have particular socially-built vulnerabilities and capacities which have been developed through a socialization process.
- (xiii) Women if given fair opportunities are, however, also capable of bettering themselves, becoming empowered, or changed as they are not passive but are active agents with different capacities to respond to the challenges posed by climate change.
- (xiv) This may be a good place to point out to participants that when ecosystems become more fragile and natural resources are totally lost or are out of reach, poor

communities – that depend on them for their survival – are the most affected, particularly women, the elderly and children.

- (xv) Facilitator should then link this scenario to issues around climate change and why climate adaptation measures must provide options that are fair for women and girls who suffer climate change challenges in more gendered ways than men
- (xvi) Facilitator is allowed at this point to use this session to draw participants into a discussion on why it is important to have positive actions that work for all groups around climate change adaptation

Template for Gender Exercises

NAME OF EXERCISE/SESSION: Understanding the concept of “**Power Over**”

GOAL OF EXERCISE/SESSION: To Strengthen participants knowledge of the concept ‘*power over and* enhance their awareness on how gender roles affect power relations

TIME NEEDED FOR EXERCISE: **45 minutes**

TARGET AUDIENCE: Exercise could be used in training of ordinary members (first time – entry level or intermediate training), community members, union leaders and refresher training of any group of trade unionists (both male and female)

WHAT YOU NEED FOR EXERCISE: Tape, markers, flip charts, pens, jotters/writing materials, reference materials/ handouts.

QUESTIONS & TIPS FOR FACILITATOR:

ADDITIONAL INFORMATION: Handouts

HOW IT IS DONE:

Plenary discussions (40 minutes)

Final reflections (5 minutes)

STEPS

Activity 1

- (iii) Ask participants to quietly and reflect back to a time in the past of an example when they or somebody else exercising power over had a negative impact on their life, work, family or community. Allow people who are willing to share their ideas to do so. Make sure to ask question ‘how did you feel in that situation’ and why did you feel that way?*
- (iv) Once they are done sharing, repeat the process but this time, ask them to think of an example when power over had a positive impact on their life, work, family or community.*
- (v) Conclude session by allowing participants to express whether power over is the appropriate form of power that would lead to gender justice in families and communities. Where time allows, give time for participants to express what they would do going forward regarding how they handle situations where they have control or power over others in the communities. Ensure that you link session to climate change issues as appropriate.*

Template for Gender Exercises

NAME OF EXERCISE/SESSION: Introducing the role of young men in Climate Change Adaptation – Where do these ideas and stereotypes about masculinity come from?

GOAL OF EXERCISE/SESSION: To discover the differences between the ways men and women are expected to behave.

TIME NEEDED FOR EXERCISE: 45 minutes minimum

TARGET AUDIENCE: Exercise could be used in training of ordinary members (first time – entry level or intermediate training), community members

WHAT YOU NEED FOR EXERCISE: Flip-charts, markers, crayons

QUESTIONS & TIPS FOR FACILITATOR:

HOW IT IS DONE:

- Plenary** – (15 minutes)
- Group Work** (15 minutes)
- Group Report back (12 minutes)
- Private reflections (3 minutes)

TIPS for Facilitator

This activity has three steps in each step we are going to be exploring how societal norms and stereotypes are perpetuated and become 'cardinal rules' for most men. What happens to boys and men who do not conform to this rules that are social constructed. It begins to draw the parallels between private and public sphere

How to do this Activity:

1. Remind participants of the lists populated from earlier session – (*in what does it mean to be male*)
2. Allow them to share some of the insights from earlier session and draw out from the participants that these notions of masculinity can be limiting because boys and men do not get to fully explore different aspects of being human, such as being in touch with their emotions, making themselves vulnerable, being nurturing or letting others take care of them.
3. Facilitate the session in a way to allow participants discuss how we have been socialized to view boys who don't conform to traditional gender roles as weak – how the boys are sometimes teased, put down, bullied and/or become victims of violence.
4. After creating and discussing the list, ask participants: Where do these ideas and stereotypes about masculinity come from?
5. Brainstorm a list that includes the following categories.
 - Media (advertisements, video games, movies, internet sites, television, movies, social media, etc.)
 - Family (parents, caregivers, siblings, grandparents, extended family members)
 - Culture (messages from religious or cultural groups about what men should do, how they should behave and their role and stature in the family, community and society)
 - Books
 - Peers (friends, classmates, peer pressure)
6. Explain that participants will now be put in groups to discuss and dig deeper on where ideas and stereotypes about masculinity come from.
7. Divide participants into five small groups, each of which will have a different topic from the list generated above (1. Media, 2. Family, 3. Culture, 4. Books and 5. Peers). Explain to participants that they are to identify and discuss, in their groups, some of the messages about masculinity that come from their assigned source (e.g. Media, Family, etc.) Allow 20 minutes for participants to complete this task.
8. Give participants 20 minutes to work in their small groups and then have each group present what they discussed in their groups with the whole group.

9. Allow participants after plenary to deeply reflect about what they have heard back from each group and explain that individuals can draw what they are feeling in their notebooks for their own private reflections

Template for Gender Exercises

NAME OF EXERCISE/SESSION: Understanding the concept of “**Power With**”

GOAL OF EXERCISE/SESSION: To Strengthen participants knowledge of the concept ‘*power With* and enhance their awareness on how gender roles affect power relations

TIME NEEDED FOR EXERCISE: **90 minutes** (facilitator may determine what is appropriate)

TARGET AUDIENCE: Exercise could be used in training of ordinary members (first time – entry level or intermediate training), community members, union leaders and refresher training of any group of trade unionists (both male and female)

WHAT YOU NEED FOR EXERCISE: Tape, markers, flip charts, pens, jotters/writing materials, reference materials/ handouts.

ADDITIONAL INFORMATION: Handouts

HOW IT IS DONE:

STEPS

Activity 1 (Role play)

- (i) Request for 15 volunteers out of the group of participants. Divide participants into groups of 5 and share these storylines with groups. Request each group to take about 10 minutes to prepare a role play around their story line to be presented within 5 minutes.

Storyline: A community chief has been informed that a group of politicians will be visiting the village to inspect the impact of flood waters on houses, farms and schools. He has invited 2 women farmers, 1 man, 1 head teacher to discuss how they will present the problem to the visitors when they come. Ask participants to role play this scenario

Storyline: A family of five is faced with the sad situation of losing their farm to forest fire. This means that all the children may no longer be able to remain in school for the year. The family is sitting together after faced with this issue and trying to make the hard decision. Ask participants to role play this.

Storyline: A community is facing a lot of problems around climate change issues. The community leaders are presently thinking about how to manage the risks associated by the climate disaster and have called a meeting of community members to talk about what can be done. They must reach at least a decision about what they can do. Ask participants to role play this scenario

- (ii) Once each team is done with their role play use questions below to guide participants identify how well the group was able to collectively make a decision
- i. How did the group arrive at the decision?
 - ii. What types of power did you observe during the decision-making process (*power over, power with*)?
 - iii. Who held power (including less obvious, hidden forms of power?)
 - iv. Who did not have power
 - v. Was the relative power of the individuals in the group linked to aspects of their identities (such as their rank, position, experience, gender, e. t. c.)
- (iii) Conclude session by allowing participants to express how they felt watching each role play and use this session to highlight key themes and trends emerging that needs to change in order to create spaces for transformational leadership. Ensure that you link session to climate change issues as appropriate.

Additional Reading Material

- Transformative change requires fundamental shifts in power relationships. Power can be expressed in many different forms.
- The most commonly recognized expression of power is ‘**power over**’. This is a way of exercising influence over people, often negatively associated with force, repression, coercion, discrimination, abuse, or corruption. Those who have control over resources and decision-making have *power over* those without. When people are denied access to important resources like land, healthcare, education, or jobs, *power over* perpetuates inequality, injustice, and poverty.
- This expression of power is often associated with the way people interpret leadership: as a hierarchical process where someone (the visible leader) uses his or her authority to make people act and think the way they want.

- If we aim for transformational change and leadership in our communities, then power must be used and exercised in more collaborative ways.
- **‘Power with’** builds collective strength and finds common ground among different interest groups. *Power with* is based on mutual support, solidarity, and collaboration.
- It brings together the talents and knowledge of individuals to build bridges across different interests in a way that transforms or reduces conflict and promotes equitable relations
- **‘Power to’** refers to a person’s capacity to decide and carry out desired actions. It refers to the unique potential of every person to shape her or his life and world. It opens up the possibility of joint action, or *power with*.
- **‘Power within’** refers to a person’s sense of self-worth, self-knowledge, self-confidence, and their conviction of what is legitimate. It includes an ability to recognize individual differences while respecting others, and refers to the capacity to imagine and have hope.
- It is important to remember that leadership is not always linked with an appointed position or role. Leadership can occur in a moment, act, or behaviour. Anyone can be a leader, or take on leadership, in any given situation. Leadership can also be imagined as a process, where cooperation is emphasized over competition, power and influence is shared within the group, and participative decision-making takes place.
- Transformational leadership approach begins with the individual... it begins with *ourselves*. We have to work to change ourselves as individuals, to become better leaders who practice *and* fight for gender justice before we can work to change the world

Template for Gender Exercises

<https://menandboys.ids.ac.uk/men-boys-and-gender-equality/guidance/resources>

NAME OF EXERCISE/SESSION: Introducing the role of young men in Climate Change Adaptation – What does it mean to be male

GOAL OF EXERCISE/SESSION: To discover the differences between the ways men and women are expected to behave.

TIME NEEDED FOR EXERCISE: 45 minutes

TARGET AUDIENCE: Exercise could be used in training of ordinary members (first time – entry level or intermediate training), community members

WHAT YOU NEED FOR EXERCISE: Flip-charts, markers

QUESTIONS & TIPS FOR FACILITATOR:

HOW IT IS DONE:

Introductory Activity – (15 minutes)

Plenary –free writing (5 minutes)

Pair – discussions (4 minutes)

Plenary - (20 minutes)

TIPS for Facilitator

This activity has three steps in each step we are going to be exploring how societal norms and stereotypes are perpetuated and become ‘cardinal rules’ for most men. What happens to boys and men who do not conform to this rules that are social constructed. It begins to draw the parallels between private and public sphere

How to do this Activity:

Step 1

- I. Distribute a blank sheet of paper to each participant and ask participants: What does it mean to be male in our community?
- II. After asking the question aloud, have participants write all the words, thoughts, feelings and phrases that come to mind when reflecting on what it means to be male in our society. Participants can also include illustrations on their sheets.
- III. Once they are done writing, explain to participants that their concepts of what it means to be male can come from a variety of sources—their own ideas, the media, their family, friends, books and stereotypes (if necessary, define and give example of stereotype). Also, explain that just because they write the word or concept doesn’t necessarily mean they agree or believe it. Give participants five minutes to complete this task.
- IV. Once they have completed this task, have participants talk in pairs about what they wrote. Participants should take four minutes total to do this (two minutes each)—let them know when they are halfway to the mark.
- V. After sharing with a partner, as a whole group, have participants call out the words and phrases they have on their sheets. On a flipchart, capture as much as you can without interrupting the flow of their sharing.
- VI. Engage participants in a discussion by asking the following questions:
From the words we shared,

1. What patterns do you see?
2. What are the positive qualities on the list? Does everyone feel this way?
3. What are the negative qualities on the list? Does everyone feel this way?
4. What's empowering about being male?
5. What's limiting about our concepts of being male?
6. What happens to boys and men who don't conform to these concepts of masculinity?

Template for Gender Exercises

NAME OF EXERCISE/SESSION: How men can use power in a positive way in
Climate Change Adaptation

GOAL OF EXERCISE/SESSION: To explore how power can be used in positive and
negative ways, how to use power positively, and how
power is divided between men and women.

TIME NEEDED FOR EXERCISE: 45 minutes to 1 hour

TARGET AUDIENCE: Exercise could be used in training of only male participants
(first time – entry level or intermediate training),
community members

WHAT YOU NEED FOR EXERCISE: Flip-chart, marker

QUESTIONS & TIPS FOR FACILITATOR:

HOW IT IS DONE: **Introductory Activity** – (5 minutes)
Plenary (45 minutes)

Steps:

- (i) The facilitator hangs two separate flipcharts on the wall, one showing Man and one showing Woman (facilitator can prepare two pictures prior to the session).

- (ii) Both charts are divided into the following categories: sex, children/childcare, fetching firewood/water, money, access to farmland, and free time⁴.
- (iii) Ask participants to reflect on the following questions: “Where do you have power?”
- (iv) Ask men to use one color of paper or marker and women use another. They think about those areas in their lives where they – as women or men – have power, or “have the final say” about an issue in the household.
- (v) After all the stickers are used, reflect with the group on the results. Look at which areas have the most stickers; who has more power in each of the listed categories?
- (vi) In plenary encourage participants to consider a few questions:
 - Which areas are dominated by men and which by women? Why?
 - Can you think of examples of family problems caused by the way power is used?
 - How is power related to control over resources like land or money?
 - Do you have any idea how to change power inequalities?
 - How would it be to give up power?
- (vii) After few minutes of discussion using the questions above put out the question to the group “Who believes in change?”
- (viii) Based on their answer which they may show by a raise of hand, divide the entire group into two groups: (a) those who believe in equal power between men and women and (b) those who do not
- (ix) Allow the “equal power” supporters three minutes to convince the others why they believe in it. Do not worry if debate gets heated and is not resolved; the intention is to get the discussion very active.
- (x) Gradually begin to conclude by asking the **men** these questions
 - When you look at the charts, what possibilities for sharing power with your wife do you see?
 - What are the benefits of sharing power with your wife?
 - How do you see your power compared to the power of other men in the community?
 - Which men have power over you?
 - How do you feel about this?

⁴ Facilitator can add more points as it relates to his climate change work with each community

- (xi) Conclude the conversation by guiding participants (especially the men- where this is a mixed group) to examine how they see themselves relative to other men as this is critical for establishing a clear understanding, first, of the extent and impact of men's power over women (and vice versa), and second, of what equality of power between men and women means.
- (xii) If men react defensively, make clear that the aim of the exercise is to explore and learn, not to judge. Make it clear that you're not accusing anyone in the room of exerting power over women. Remind the group that you are trying to show how constructive/destructive power can be.

Note:

Both sexes can explore why and how men more often have power over women; why women have less power especially why they might give power away to men. Be aware that some men (and women) may think that men need to have power over women. If anyone expresses this opinion, remind the group that it is important for each of us to work to create a world where power can be shared and used in positive

Template for Gender Exercises

NAME OF EXERCISE/SESSION:	Introducing the concept of masculinity in climate change adaptation and resilience
GOAL OF EXERCISE/SESSION:	To discover the differences between the ways men and women are expected to behave.
TIME NEEDED FOR EXERCISE:	45 minutes
TARGET AUDIENCE:	Exercise could be used in training of only male (first time – entry level or intermediate training), community members
WHAT YOU NEED FOR EXERCISE:	
QUESTIONS & TIPS FOR FACILITATOR:	
HOW IT IS DONE:	Introductory Activity – (10 minutes) Fishbowl (15 minutes) Plenary (20 minutes)

Tips for Facilitators:

Due to the sensitive nature of these discussions about masculinity, depending on the trust and safety level in your classroom, instead of the instructions below, another option is to have participants write about their experiences prior to the fishbowl and those essays can be shared anonymously in the fishbowl for participants to discuss.

FISHBOWL ACTIVITY

1. Engage participants in a “fishbowl” activity around masculinity. Explain to participants that they are going to discuss their personal experiences with masculinity.
2. Explain to participants that they will use a “fishbowl” approach to discuss the topic. It is called a fishbowl because they will form a circle and some participants will be inside the circle (like in a fishbowl) and the rest of the participants will be observers looking and listening in.
3. Create a small circle with chairs for those sitting inside the circle. Arrange the other chairs to sit outside this smaller circle. Before discussing the specific ground rules for the fishbowl, review your classroom guidelines as strong feelings may emerge from the fishbowl.
4. Ask for 3–5 volunteers who are willing to sit inside the circle and talk about their experiences of masculinity by responding to questions read by the teacher (*ideally, it would be all males who volunteer but it is not required*)
5. Explain the ground rules for the fishbowl as follows:
 - The observers are not allowed to speak. Their job is to listen and learn from the fishbowl students. The observers will have an opportunity to discuss any issues that emerge later.
 - You (the facilitator) will guide the fishbowl discussion and make sure everyone has the opportunity to talk.
6. Facilitator should then use the following questions to guide the fish bowl discussions at the same time, allow the conversation to move in a natural direction.
 - Growing up, what messages did you receive about masculinity/being male when it comes to climate change issues?
 - Where did those messages come from?
 - How do these messages impact your relationships with other males as well as females?
 - What do you like about being male?
 - What’s challenging about being male?
7. Gradually bring the fishbowl exercise to an end, thank the people who participated in it and allow participants to settle back into their seats then in plenary, engage the participants in a discussion to conclude the session by asking the following questions:

- To the observers, was it difficult to not respond to the comments made during the fishbowl? Why?
- To the fishbowl participants: how did it feel to share your thoughts and feelings about masculinity?
- Did you hear anything from the fishbowl that surprised you?
- What did you learn from the experience?
- What came out from the discussion about how it feels to be male?
- What is the role that sexism plays in our concepts of masculinity?

Conclude the session by highlighting the key themes, trends that emerge from contributions made by everyone and link how what we are taught about sexism and masculinity affects how men view climate change adaptation issues in our communities. Guide them to discuss how important it is for men to support women take leadership initiatives in climate change adaptation committees

Optional: Once the fishbowl discussion has happened for at least 8–10 minutes and you sense that others want to speak, you can allow a time where if someone in the observer groups wants to join the fishbowl, they can tap the shoulder of someone in the fishbowl and take their place. Use this step at your discretion.

Template for Gender Exercises

NAME OF EXERCISE/SESSION: Introducing the 24 Hour Day

GOAL OF EXERCISE/SESSION: To become aware of the different tasks and roles men and women do/share in the household and discuss if and how those roles could be exchanged.

TIME NEEDED FOR EXERCISE: 1 hour

TARGET AUDIENCE: Exercise could be used in training of ordinary members (first time – entry level or intermediate training), community members (Same sex grouping)

WHAT YOU NEED FOR EXERCISE: markers, flipchart

QUESTIONS & TIPS FOR FACILITATOR:

HOW IT IS DONE: **Introductory Activity** – (10 minutes)

Plenary /Final reflections (30 minutes)

The “24-hour day” activity is a good way to understand the idea of gender roles — that women and men are expected to play different roles in the family, community, and workplace because of society’s ideas about the differences between them. But remember that class, ethnic, and other differences may affect these gender roles

Steps

- (i) Divide the participants into small SAME SEX groups of three to four persons
- (ii) Ask each group to imagine a typical day in the lives of a wife and husband in their community, and to depict the tasks in different ways (through images, drawings etc) or list the activities or tasks performed by women and men in a household over 24 hours. Ensure that each group has one person who is able to make notes.
- (iii) Guide participants to also identify each task as either paid or unpaid.
- (iv) After about 10 minutes, allow participants to share their ideas and guide the conversation to get group to talk about what they are learning about how men and women spend their days. Ask participants to briefly present what they wrote/pictures in their groups, Use the questions below to lead a discussion about women’s and men’s roles and status in society.

Discussion Questions:

- a. *What differences do you notice between the ways in which men and women spend their day?*
- b. *Who generally carries out more activities or tasks during the day? Men or women?*
- c. *Who generally has more leisure time? Men or women?*
- d. *How do you define work?*
- e. *Which of the activities or tasks are considered work?*
- f. *FOR MEN: What activities or tasks can your wife never do? What activities can you as men never do?*
- g. *FOR WOMEN: What activities or tasks can your husband never do? What activities can you as women never do?*

FOR BOTH: Think about one or two activities that could be exchanged between you and your wife or husband. If you had more time in the day, what would you use it for?

- (v) Once they are done with group work, bring them back in plenary and allow them to use the questions above to unpack the conversation further.
- (vi) At the end of the group presentations, gently remind participants that the idea that certain types of work should be done by women and others by men is based on socialization, not biology. Women’s greater participation in jobs requiring caregiving and domestic skills is directly linked to the fact that girls and young women are often raised to help with this type of work in the home. Unfortunately,

those activities predominantly carried out by girls and women, including domestic chores, fetching firewood, fetching water, caregiving, and informal market activities, continue to be undervalued or ignored by society — and sometimes, by women themselves.

- (vii) Remind them how important it is for them to recognize the immense contributions that women have always made inside and outside the home and to know that it is possible for women to assume activities traditionally carried out by men, just as it is possible for men, in turn, to assume activities traditionally carried out by women, including domestic work and child care.
- (viii) Conclude the session by helping men consider how they are affected by pressure to be the breadwinner or provider, and how sharing this role with women might reduce their stress. Request to know whether there are men in the communities that they know who support their wives to fetch water, carry firewood , cook or carries babies and what they think about them.
- (ix) At the end, the facilitator might ask men and women participants to discuss why they do not or cannot do some of the activities traditionally done by the opposite sex. Are there any men in the community who carry babies, cook, etc.? It is recommended that such men be identified. The facilitator can then stimulate additional discussion among the men by asking: What do you think about Man X? How does he perform.

Template for Gender Exercises

NAME OF EXERCISE/SESSION: Introducing the role of men in Climate Change Adaptation

GOAL OF EXERCISE/SESSION: To discover the differences between the ways men and women are expected to behave in different communities that affects climate change adaptation in our communities

TIME NEEDED FOR EXERCISE: 45 minutes to 1 hour

TARGET AUDIENCE: Exercise could be used in training of only male participants (first time – entry level or intermediate training), community members

WHAT YOU NEED FOR EXERCISE:

QUESTIONS & TIPS FOR FACILITATOR:

HOW IT IS DONE:

Introductory Activity – (5 minutes)

Breakout Groups (15 minutes)

Plenary (25 minutes)

Steps:

- (i) Explain that participants will now explore how different people in our society are expected to behave.
- (ii) Ask participants to break into mixed groups of three or four and give each group some flip-chart paper.
- (iii) Have participants discuss how men are expected to behave in their
 - families,
 - among peers,
 - in the community, and
 - in relationships.
- (iv) Assign each group a particular topic and request that each group also answer these questions as they discuss:
 - a. *How people expect men to behave in the family and their community,*
 - b. *What they are expected to say and do, or not to say and do, in partner relationships.*
 - c. *How people expect women to behave in the family and community,*
 - d. *What women are expected to say and do, or not to say and do, in homes and spousal relationships.*
- (v) After a few minutes of small group discussion, ask the participants to form a large circle and allow them to share their ideas with the larger group in plenary.
- (vi) Gently guide them discover some of the ways gender roles hinder climate change adaption due to how we have been socialized. Some questions to guide discussion include
 - What are the main differences between the ways men and women are expected to behave in your community/in your family?
 - How do these differences affect your daily lives?
 - How do these differences affect your relationships with family and partners?
 - How do these differences affect the way you do elect leaders, do business, make decisions, or spend money and loans?

- How does being a men or being a woman influence climate change adaptation activities in your community?
 - Why have CCC activities mostly focused on women?
 - Facilitators are encouraged to formulate questions related to the discussed subject, considering any particular group dynamic.
- (vii) Conclude the discussions by guiding the male participants to become more aware of how some gender stereotypes can negatively impact their lives and their collaboration with women – facilitate in a way that allows them to begin the process of thinking constructively about how to challenge the stereotypes in communities and promote more positive gender roles and relations in their lives.
- (viii) Listen carefully to participants and quickly allow some volunteers (who may be willing to share) to identify activities they presently do at home or outside in the community which traditionally (normally) have been or are done by their wives/female partners. This session may galvanize more participants to begin reflecting on things they need to do at home to support their wives.

The key idea for identifying such activities is that the men should be able to identify activities normally is done by wife because it is considered “female” work but that they as men carry out at times.

How it is done:

Head level

- (d) Allow participants to settle into their seats and inform them that session is to enable both facilitator and participants agree on needs learning must meet.
- (e) Unveil already prepared flipchart sketch of a human being clearly depicting the head, heart, hands & feet. Ensure that the heart is highlighted in Red with a love shaped emoticon
- (f) Explain to participants what HHF tool means and how it will be used during the session.
- (g) Request participants to share what they would like to learn from the training in simple sentences and while they share, make sure to always ask back at participants where they think each expectation should be placed:
Head
Heart or
feet
- (h) Once they are done sharing, introduce facilitator’s workshop objectives, clearly written down on flipchart and request participants to work with facilitators towards meeting workshop expectations /objectives.

- (i) If there is a wall, paste expectations HHF drawing and facilitators workshop objectives on the wall and inform participants that learning group shall continue to revisit the two flipcharts until the end of the training. Conclude session on workshop expectations here and move into main training session.
- (j) At the end of the entire training, revisit the learning expectations and objectives to know whether all ideas have been covered.

TIPS FOR FACILITATOR:

While carrying out the HHF tool exercise, it is usually ideal for facilitator to ensure that HHF pictorial is prepared before session in order to save time. Facilitator should also ensure that participants understand that 3 levels of HHF tool speak to the following:.

Head level:

- What participants would like most to KNOW during the training e.g concepts, theories, ideas, principles

Heart level:

- What participants would like most to FEEL during or at the end of the training e.g: feelings, emotions, attitude

Feet level

- What Participants would like most to be able to do with skills they will gain from training e.g motivation, commitment, will to put skills into practice?

ANNEX 2

Monitoring and Evaluation Framework Revised by Gender at Work

Gender Transformative Indicators describing how the project will carry out gender transformative monitoring and evaluation activities of the project.

Table: Project Monitoring Matrix

O bj	Outcomes	Initial project Indicators	Gender Responsive Indicators	Gender Transformative Indicators	Target
1.	ew knowledge generated on climate-change impacts and identification of adaptation and community-driven adaptation strategies in the Niger Delta region	<p>Number of articles on vulnerability published in peer reviewed journals</p> <p>Number of academic conference papers</p>	<p># of rural women and girls interviewed during the field survey activity</p> <p># of rural community women and girls who participated and provided inputs into final survey report</p> <p># of articles emphasizing examples of women led strategies on climate change adaptation and disaster risk reduction from target communities published</p>		

			<p># of testimonials or short stories on various impact of climate change in ten target communities shared by rural women and girls</p> <p># of academic conference papers and peer review journals published with quotes from rural women leaders and girls in target communities on the impacts and vulnerability of women and children to climate change.</p> <p># of articles and conference papers highlighting the decision making role of women in surveyed community adaptation processes published.</p> <p># focus group meetings co-facilitated by rural women and girls in target communities during the implementation of the survey activity</p>		
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2.	Rural communities positively transformed through scalable community-based adaptation initiatives that are piloted and validated	Number of women/girls empowered	<p>#of rural men and boys supporting inclusion of women/girl voices in leadership structures reported in social media.</p> <p># of trending stories promoting gender equitable relationship between men and women in target rural communities</p>	<p># of rural women and girls equipped with life skills and social support network capacity needed to participate in the adoption of various climate change adaptation strategies</p> <p># of women and girls in leadership and decision making roles within the Community based implementation Committees structures in ten target communities</p>	
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		Number of community-based adaptation initiatives tested, reinforced/implemented	<p># of rural women volunteers involved in developing simple awareness raising materials and/or production of local drama</p> <p># of women involved in community led discussions of climate change adaptation approaches from baseline research appropriate to their communities</p> <p># of civic forum and enlightenment discussions facilitated by rural women and girls</p> <p># of peer education and enlightenment meetings on activities that responded to climate change adaptation and disaster risk reduction led by women leaders from target communities</p>	<p># of awareness raising activities on climate change adaptation and disaster risk reduction led by women leaders or women led rural community groups</p> <p># of women holding leadership and decision making roles in Community based implementation committees within target communities</p>	
3.	Women leaders learn and use skills to face implementation challenges and to make informed decisions	<p>(i) Number of policy/decision makers trained</p> <p>(ii) Number of women and community leaders trained</p>	<p># of members of project steering committee, project management committee and other government officials promoting the inclusion of women in decision making around climate change adaptation</p>	<p>#of project management committees in ten target communities with women in leadership and decision making roles.</p>	

		<p>(iii) Number of research team/junior research trained</p> <p>(iv) Number of postgraduate students trained</p>	<p># of female junior researchers mentored within the period of the project</p> <p># of capacity building trainings in target communities led by trained female research team members</p> <p># of engagements⁵ facilitated by trained CPED project staff and research team members within the period of the project cycle</p> <p># of proposal or report writing activities supported by mentored female junior researchers within the period of the project.</p>	<p># of women leaders holding leadership and decision making roles on community adaptation program within target intervention community</p> <p># of post graduate research thesis produced by female masters student as a result of Project support</p>	
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⁵ Definition-Engagement as reflected in the indicator refers to policy dialogue, consultations, meetings, gender trainings, and any other activities occurring during the period of the implementation of the project or between target beneficiaries and policy makers government or other groups.

4.	Formalization of new collaborations and partnerships between local governments, NGOs, and community-based organizations and existing ones consolidated	<p>Number of sustainable interaction platforms embedded in existing decision-making organs to be used by researchers, policy/decision makers, and community-based women leaders</p> <p>Number of beneficiaries of the interventions</p>	# of Implementation program activities ⁶ with participation from women leaders, women groups within the Project steering Committee and project management Committees within the period of the implementation of the project	<p># of women –led and/or feminist organizations that are members of the Project Steering Committee and Project Management Committees during the period of the implementation of the project</p> <p># of women leaders from ten target communities added to and participating⁷ in LGA project Management Committees within the period of the implementation of the project</p> <p># of women holding decision making roles in Project steering Committee and project management Committees within</p>	
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⁶ Implementation program activities include design of survey instruments, monitoring the administration of survey instruments, contribution to the writing of research report, feedback of the findings and recommendations to the respondents

⁷ Participation here includes holding a leadership role within the structure, speaking up publicly during meetings, mobilizing other women to attend meetings, sharing information on climate change adaptation issues with policy makers, media, and bloggers e.t.c.

				the period of the implementation of the project	
5.	Community-based women-led strategies integrated and formalized in public policies and planning documents by Delta State government and local government authorities and NGOs as effective climate-change adaptation measures	Number of policy briefs for local and national policy makers and other stakeholders		<p># of women leaders from target communities involved in feedback meetings of research findings with stakeholders at State and local government level</p> <p># of government policy briefs, statements, strategies and actions at local, state and national levels that integrates gender equity considerations at all levels of policy implementation.</p> <p># of government policy briefs, statements, strategies and actions that promote broader consultation and inclusion of rural women in government's programs targeted at mitigating climate change challenges.</p>	5

ANNEX 3

EFFECTS OF DISASTER RISK REDUCTION STRATEGIES ON LEVELS OF CASSAVA OUTPUT AND CLIMATE JUSTICE AWARENESS AMONG CASSAVA FARMERS IN DELTA STATE

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**Dissertation Submitted to the Postgraduate School in Partial Fulfilment of the
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Economics of the Delta State University, Abraka.**

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ABSTRACT

In Nigeria, disaster risk and climate injustice are great challenges to farmers livelihood and remains overriding priority impetus to the promotion of food security and sustainable economic development. This study was conducted to examine Effects of Disaster Risk Reduction Strategies on Levels of Cassava Output and Climate Justice Awareness Among Cassava Farmers in Delta State, elicit the disaster risk that affect the farming activities in Delta State, establish the rank order of disaster risk, determine the effect of disaster risk on cassava output, elucidate disaster risk reduction strategies known and adopted by cassava farmers, determine effect of disaster risk reduction strategies on cassava output, determine level of awareness of climate justice by gender. Copies of semi-structured questionnaires were used to collect primary data from a sample of 240 cassava farmers across Delta state. Data were analysed using descriptive statistics, multiple regression model and T-test. The result revealed that 37.9% and 25.4% of the respondents were affected by flooding and wildfire. Also, majority of the respondents (92.9%) adopted change of planting date, 89.6% of the respondents adopted planting of early maturing varieties while (77.9%) and (82.5%) of the respondents adopted planting of pest resistance varieties and diversification. There is a significant difference in the level of awareness of climate justice among male and female cassava farmers in the study area. T-test show significant ($P0.018 < 0.05$, $P0.001 < 0.05$). Effective agricultural policies and programs should be focus on granting farmers access to early maturing cassava stem varieties, pest resistant varieties and flood resistant varieties. Farmers should be sensitized on climate justice.

**COST OF CLIMATE CHANGE ADAPTATION MEASURES AMONG WOMEN ARABLE
CROP FARMERS IN UGHELLI-NORTH AND SAPELE LOCAL GOVERNMENT AREAS,
DELTA STATE, NIGERIA**

BY

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**BEING AN M.Sc. DISSERTATION SUBMITTED TO THE SCHOOL OF
POSTGRADUATE STUDIES DELTA STATE UNIVERSITY, ABRAKA, IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER (M.Sc.)
DEGREE IN AGRICULTURAL ECONOMICS**

SUPERVISOR: PROF. P. C. IKE

JULY, 2021

ABSTRACT

The cost of climate change adaptation measures among women arable crop farmers in Ughelli North and Sapele Local Government Areas of Delta State was scrutinized during this research. The objectives were to elucidate the socio-economic characteristics of women arable Crop Farmers, ascertain the various climate change adaptation measures by women arable crop farmers, estimate the impact of socio-economic characteristics on value of adaptation to Climate change and establish the constraints of women arable crop farmers to adaptation to climate change. Information used was collected from primary source that involved the distribution of structured questionnaires. A total of 180 questionnaires were used for the study. Descriptive and inferential statistics were used as analytical tools. This study revealed that majority of the women arable crop farmers were within their active age range, majority were married and literate whereas many have family size of 7 with majority having farm sizes of less than one hectare of land with very limited extension contact. Majority of the farmers employed early planting, crop rotation and minimum tillage as strategies to combat the challenges of climate change. The result also disclosed that damage to crops due to serious rains and overflow of watercourse bank was perceived because of the highest climate-related loss of ₦926,000.00 annually. The result conjointly disclosed that age, marital status, level of education, farming expertise, access to credit and range of contact with extension agents were all statistically vital in decisive women arable crop farmers' expenditure on measures custom-made against climate connected challenges on their farms. The main constraints long-faced by the farmers were restricted accessibility of land for farming. It is recommended from the study that it is vital to equip rural women farmers with relevant and timely data and technology to enhance their production techniques, increase their income and normal living. There is conjointly the requirement for government in the least levels to create agricultural extension programme more practical through employment of additional extension agents so there'll be adequate dissemination of applicable and timely data to women arable crops farmers thus to enhance production that may successively improve their home food security, income and standard of living.