



# Report of the Mahanadi second district stakeholders workshop, 3<sup>rd</sup> March 2017



DECCMA India team



**CARIAA**  
Collaborative Adaptation Research  
Initiative in Africa and Asia



**IDRC | CRDI**

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Canada



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### **About DECCMA Working Papers**

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

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

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**DECCMA District Level Stakeholder Workshop(Mahanadi Delta) - 2<sup>nd</sup>round**  
**3rd March, 2017**  
**Puri, Odisha, India**

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The Second Round District Level Stakeholders' Workshop was held on 3rd March, 2017 at Puri. The meeting was organized by the partner organizations, Chilika Development Authority (CDA) and Sansristi. Jadavpur University and Centre for Environment and Development provided technical inputs and guided in the planning process.

**Aims and Objectives of the workshop:**

The objectives of the workshop were –

- Share DECCMA's findings with respect to the work packages and seek stakeholders' comments and observations
- Seek stakeholder feedback regarding Barriers to Policy implementation & Criteria for Successful Adaptation
- Present a gender analysis of the Odisha Climate Change Action Plan

**Key findings presented in the workshop:**

**Overview of DECCMA project :**

Mr. Susanta Nanda, IFS, Chief Executive, Chilika Development Authority, Bhubaneswar gave an overview on DECCMA project and highlighted how climate change is threatening the people in the deltaic regions and its possible implications. He stressed on the fact that stakeholder interaction will help in understanding the ground realities and would provide insights into different facets of the project.

Details about the DECCMA project – in particular about the aims and objectives; the work package structure, the areas of focus in the context of Adaptation, Migration, & Gender were explained by Prof Asha Hans of Sansristi. She also spoke about the Adaptation, Migration and Gender issues in Odisha, specifically in the Mahanadi delta. She discussed about the gendered vulnerabilities at the household and community level in the context of the climate change in the project area. She also emphasized the need to understand whether migration is an adaptation strategy in the context of climate change. She talked about the push and pull factors in migration. She highlighted that in the study area, especially Khurdha, Puri and Bhadrak, the male migration is more.

## **Key findings from the work packages of DECCMA project:**

The members of Sansristi and CDA made presentations to the participants on the work done under the DECCMA work packages. (**Presentation – Annexure 1**)

### **WP 1 findings:**

Prof. Asha Hans, Sansristi, presented on policy analysis. She talked about the state disaster management plan and state climate change action plan. She cited that policies of sectors like agriculture, water, energy do not have gender dimension but these sectors are highly associated with climate change impacts on women. Policies are very sector specific and there is a lack of convergence or linkage with other policies and schemes. Flagship schemes like National Rural Livelihood Mission (NRLM), Odisha Livelihood Mission (OLM) and Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) have a very specific women component and also climate change component but there is no cohesion among both these components in terms of activity planning, outputs, inputs and outcomes. The gender and climate change aspects in the flagship schemes are more or less stand alone approaches and there is no integration of the gender and climate change perspectives. There is a need for climate change and gender aspects to be mainstreamed in policies.

Baseline assessment of governance frameworks from perspectives of human rights, natural resource management and ecosystem protection, disaster risk management and climate change adaptation was presented to the participants. Some of the key highlights of the analysis are: Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act of 2013 is applicable only to displaced persons who have to give up their land in public interest for developmental projects. Till date this law has no provision to be applied in case of climate induced migrants. Effective basin-wide management of watercourses is yet to be implemented in India (on the Ganges, Brahmaputra or the Mahanadi, which is also a trans-boundary river, albeit through Indian states only). National water laws and policies do not provide explicit reference to climate adaptation measures, such as with respect to risk apportionment.

### **WP 2 findings :**

Dr. R.N.Samal, Scientific Officer of Chilika Development Authority, introduced the DECCMA study area of Mahanadi delta (5 m contour deltaic area comprising of 5 districts Kendrapara, Jagatsinghpur, Puri, Khordha and Bhadrak); block level risk mapping; Puri district risk hotspot and village level multi hazards mapping. The findings were shared firstly at the study area level and then concentrated on the Puri district for evoking better responses from stakeholders. From the Block Level Climate Change Risk Mapping for Puri, it emerged that Pipli is bio-physically and socio-economically at very high risk and Nimapada and Satyabadi blocks are bio-physically and socio-economically at high risk. He also elaborated on the Puri district flood hotspot; cyclone hotspot, erosion hotspot and multi hazard hotspot. He discussed about the specific areas in Puri district such Kanas which has very high risk due to floods and Brahmagiri which has a high risk. Areas such as Astaranga, parts of Kakatpur, Gop & Nimapada are subjected to very high frequency of cyclones. Brahmagiri, Astaranga have very high soil erosion.

**WP3 findings:**

Dr. Amrita Patel, Sansristi, gave a presentation on the status of migration as observed from secondary data analysis and shared some preliminary findings from the sending area household survey. She explained what positive and negative net migration meant. Net Negative Migration means more people leaving than entering i.e. Out-migration > In-migration. Net Positive Migration means more people entering than leaving i.e. Out-migration < In-migration. Net migration mapping at the district level for both male and female population for the study area were shared from which it emerged that more female out-migration is observed from Bhadrak, Kendrapara and Jagatsinghpur, more female in-migration to Khordha and Puri, more male out-migration observed only from Bhadrak, and male in-migration to the remaining four districts, i.e. Kendrapara, Jagatsinghpur, Khordha and Puri. The Block level net migration maps were shared from which it was observed that the Nimapada and Satyabadi Blocks of Puri District exhibited negative net migration. To try examine links between environmental hazards and migration, a map was shared where the trend of net migration with respect to the multi-hazard risk of the blocks were presented. From Puri district Nimapada, Satyabadi, and Astaranga blocks have low multi-hazard risk but out-migration is more than in-migration.

The participants were informed about the DECCMA household survey conducted in the sending areas of the 5 districts – 1414 households were covered in the survey in 50 locations across the 5 districts. 22% of the surveyed households were Migrant Households. Mahanadi Delta shows a positive correlation between the High Multi-Hazards and Outmigration and Puri district shows the same as well. Out of the total surveyed households, 13% were female-headed households.

**WP 6 findings:**

Mr. Sumanta Banerjee, Doctoral Fellow of Chilika Development Authority, presented on adaptation activities as identified from literature review; drivers of adaptation; major adaptation activities and adaptation providers and beneficiaries and barriers of adaptation. The adaptation activities have been categorised as Adaptation referring to adjustments that reduce vulnerability to climate variability and change; Development referring to the reduction of vulnerability which is static and does not concern about the future climate risk; Coping which does not reduce vulnerability, reacts to climate shocks and is oriented towards survival and finally Maladaptation, which has a negative impact on the adaptor and is likely to negatively affect the society. The drivers of adaptation across the sectors such as agriculture, health, energy, disaster risk reduction etc were presented.

Some of the key findings presented were that focus on crop diversification, improved package of practices, and stress tolerant high yield rice have helped the agricultural sector of the Puri district in particular and Odisha in general. 63% of the Adaptation activities are provided by Government, while 29% by International and Local NGOs. Planned adaptation is much higher than autonomous Adaptation in Mahanadi Delta. The premier adaptation activities include cyclone shelter, mangrove plantation, embankment construction, integrated rice fish culture, flood tolerant paddy, floating garden and solar fish drier.

## **Gender analysis of Odisha climate Change Action Plan:**

"Gender analysis of Odisha climate change action plan" was presented by Dr Amrita Patel of Sansristi. The National action plan introduced in the year 2008 advocates a strategy that promotes adaptation to climate change and enhances the ecological sustainability of India's development path. The Odisha climate change action plan was introduced in the year 2010-2015. It has eleven critical sectors such as Agriculture, Coasts and Disasters, Energy, Fisheries and Animal Resources, Forestry Health, Industry, Mining, Transport, Urban Planning and Water Resources. From our analysis it has been observed that the gender dimension of climate change action plan needs analysis. Climate change affects all but women are more vulnerable. She cited some examples such as increasing scarcity of water in several parts of Odisha and also the reducing yield of biomass effects on women as they are traditionally responsible for both water and biomass. Climate change has also increased risk to women's health especially during the period of pregnancy. Odisha climate change action plan for the subsequent period of 2015-2020, which is in draft stage, has not focused on gender as a cross cutting issue. All adaptation strategies have to be gender sensitive as well as gender inclusive. She focused on why gender is important in climate change and how it can be gender sensitive. She also informed that DECCMA team has given inputs to the Odisha climate change action plan 2015-2020. **(Presentation – Annexure 2)**

## **Participants profile:**

The participants in the workshop were from Government Departments, Universities, Scientific Institutions, Non Government Organisations (NGOs), Community Based Organisations (CBOs), Self Help Groups (SHGs), Network organizations, and bilateral agencies. There were a total of 40 invited participants besides the staff and members of CDA and Sansristi. The participants in the workshop comprised of 26 men and 14 women **(List of invitees and attendees- Annexure-3)**.

The participants were from a total of six Government Departments, one University and eight NGOs/CBOs/ SHGs.

The six Government Departments are

1. Department of Forest & Environment (Chilika Development Authority and Integrated Coastal Zone Management Project and Climate Change Cell),
2. Department of Planning & Convergence,
3. Department SC & ST Development,
4. Department of Fishery & Animal Resources Development,
5. Block Office, and
6. Panchayati Raj (District Rural Development Authority – DRDA).

One international organization (DFID) working with the Government of Odisha specifically with the Department of Forest & Environment also participated.

The total number of participants from the above mentioned departments and organizations were 13 constituting 32.5% of the total participants.

One representative (2.5%) from one University participated.

The representatives from the eight NGOs/ CBOs and SHGs were a total of 26 representing 65% of the total number of participants.

### Agenda

Agenda	Responsibility	Time
Registration		10:00 - 10:30
Inaugural Session		10:30-10:45
Overview and Objective of DECCMA Project	Mr. Susanta Nanda, IFS, CEO, CDA	10:45 – 11:30
Key Findings	<b>WP 1-</b> Prof. Asha Hans, Sansristi <b>WP 2-</b> Dr. R. N. Samal, CDA <b>WP 3-</b> Dr. Amrita Patel, Sansristi <b>WP 6 -</b> Mr. Sumanta Banerjee, CDA	
Tea Break		11:30 – 11:45
Feedback from Stakeholders/Policy Implementers		11:45 – 12:15
Presentation on Gender analysis of Odisha CC Action Plan	Sansristi	12.15-12.30
A brief explanation on Barriers to Implementation Questionnaire	Dr Amrita Patel, Sansristi	12.30-12.45
<b>Barriers to Implementation Survey</b>	All to help respondents	12:45 – 01:45
Lunch		01:45 – 02:30
<b>Group Discussion:</b> Examples of adaptation (also whether they are successful or unsuccessful) taking place in Puri district.		02:30 – 03:00
<b>Evaluation of criteria for Successful Adaptation: Survey</b>	All to help respondents	03:00 – 03:30
<b>Vote of Thanks</b>		03:30-03.35

### Surveys conducted in the meeting

Two questionnaire based surveys were conducted during the meeting, viz. (1) Barriers to Policy Implementation and (2) Criteria for Successful Adaptation. The questionnaires were translated into local language Odia and participants were handed out either the English version or Odia version depending on their preferences. Dr. Amrita Patel, Sansristi, explained the survey form and the guidelines on how to respond. Researchers from CDA and Sansristi facilitated this session.

## **Open house and feedback**

The floor was open for Discussions and feedback from the Stakeholders. The issues that were discussed and the stakeholder responses are as follows:

### **(i) Water Logging and Agriculture**

Water logging is a major challenge in Puri district and both the rural and urban areas are affected due to this. The people have started using climate change resilient crops to avoid losses during water logging and flooding. These varieties of crops take less time to mature. Due to adoption of such variety of crops, agricultural output is maintained and this is leading to a decrease in out migration from these areas.

Astaranga block of Puri district is affected due to saline water. Paddy type Lunashri is useful but due to scarcity of water it is not possible to cultivate that variety. There is a need to propagate the various varieties of crops which are saline water resistant that will help the farmers.

Sufala village in Puri district is facing water logging problem.

### **(ii) Vulnerability of the coastal communities and migration**

Women from the fishing communities engage in activities related to dried fish for their livelihood. But this livelihood activity is seasonal and in particular during the rainy season they are jobless.

These women are also involved in agricultural work, while the men go out for fishing. The agricultural responsibility is taken on by the women.

But the vulnerability of the fishing community is very high as they live near the sea. They are affected during cyclones and other disasters affecting the coastal regions. In such a situation they are compelled to migrate for alternative livelihood.

More people were migrating from the disaster prone areas. Both men and women are migrating. Adolescent girls of Dalit (lowest caste) communities from areas like Nimapada are also migrating to Andhra Pradesh, Delhi and Gujarat. These girls work in textile mills, tailoring units and prawn cultivation units. Generally agents / middlemen are involved who are facilitating the out migration.

### **(iii) Successful income generation by Women's Groups**

In Integrated Coastal Zone Management Project (ICZMP) area women groups are engaged in successful income generation activities such as dried fish, dairy, poultry and chandua (appliqué garden umbrella) making.

Odisha Renewable Energy Development Agency (OREDA) is providing solar lamp to the SHGs, so that the women groups are able to work at night on income generation activities like tailoring etc. This leads to more productivity and better earnings. This is a good example of providing support for economic empowerment of women.



In water logging area of Sufala, due to the intervention of UNDP, the villagers have developed a floating garden. Women SHGs are involved in this gardening. They are cultivating beans, different varieties of leafy vegetables and chillies. In a week, they cultivate almost 20 kgs of vegetables. This is a successful adaptation due to the involvement of people in decision making process. This is also contributing to the income of the women.

#### **(iv) Mitigation activities and agriculture**

Conservation of mangrove will help reduce the effect of flood and soil erosion. Due to repeated floods, people are unable to practice agriculture in the rainy season. The diversification of agriculture is the need of our time, or else people are bound to migrate in search of alternative livelihood.

Since 2011, in some specific areas like Nimapada, people are following System of Rice Intensification (SRI) for agriculture. Paddy variety such as SwarnaSub-1 and Lunashree are very effective. 40% of women are working as agricultural labor in the area.

#### **(v) Paucity of drinking water**

A significant problem is the paucity of availability of drinking water especially in the coastal areas where women have to travel more than two kilometres for collecting drinking water.

#### **(vi) Innovative actions**

Many CBOs have planted trees near the sea coast since 2014, to arrest the intrusion of saline water of the sea. Due to this plantation, people are able to cultivate Pana baraza (betel vines).





### **Summary**

The Second Round of District Stakeholder Workshop saw the participation of different stakeholders such as academics, grass root organisations, government officials, and climate change analysts. The participants were keen to know more about the risk and hazard hot spots mapping of Puri district. The government officials particularly from the Climate Change Cell expressed their interest in the gender analysis of the Odisha State Climate Change Action Plan.

Some of the key inputs from the grass root organisations were:


- Agriculture diversification is the requirement – lack of agriculture is one of the main reasons of out migration.
- Water logging, Sea water intrusion, saline water, cyclones etc in the coastal districts are reasons due to which agriculture is depleting which in turn lead to out migration.
- Out migration of young women is on the rise.
- Local adaptation activities are happening with the interest of the community.
- Women SHGs are economically active and with support of organisations, they are able to take up successful adaptation activities.

- The coastal fishing communities are particularly vulnerable to disasters and their livelihood security.

## DELtas, vulnerability and Climate Change: Migration and Adaptation (DECCMA)


PROJECT OVERVIEW  
&  
KEY FINDINGS



Mahanadi District Level Stakeholder Workshop (Puri)  
March 3, 2017

### DECCMA Objectives

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



Mahanadi District Level Stakeholder Workshop (Puri)  
March 3, 2017


### DECCMA (Deltas, Vulnerability and Climate Change: Migration and Adaptation)

Five year project funded by Canada's International Development Research Centre (IDRC) and the UK's Department for International Development (DFID)

Led by University of Southampton, UK

Jadavpur University is the lead member institution in India.

DECCMA team will consider **vulnerability, migration and adaptation to climate change** in four deltas: **GBM delta in India/Bangladesh**, the **Mahanadi delta, India** and the Volta delta, Ghana.




Mahanadi District Level Stakeholder Workshop (Puri)  
March 3, 2017

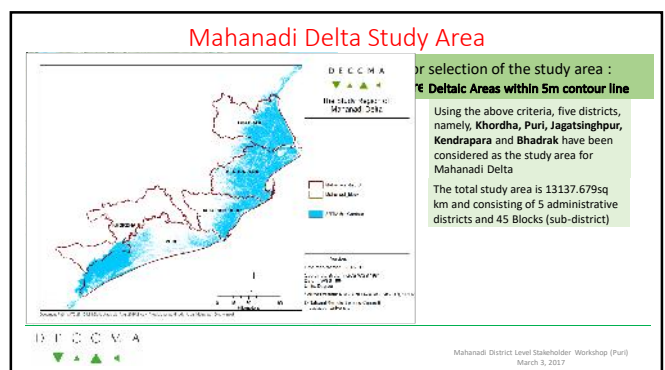
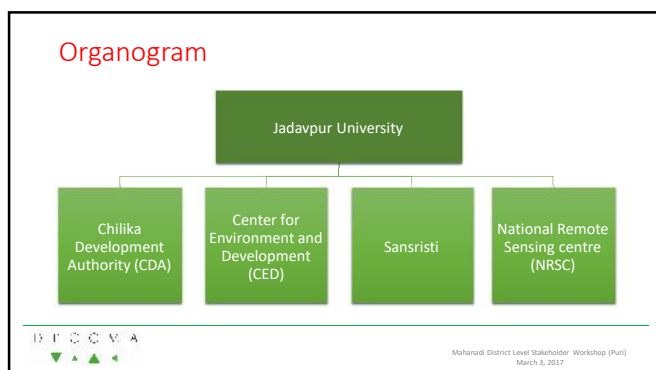
### Expected Output

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

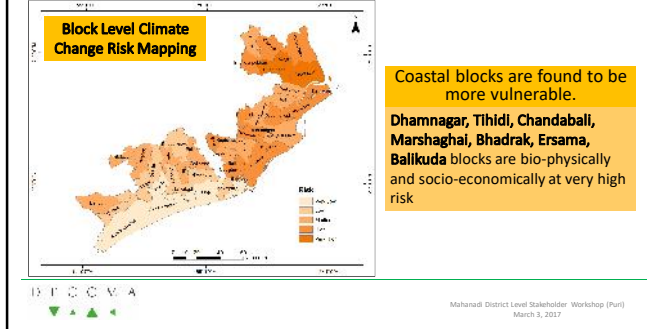
- identify gender-differentiated stakeholder-relevant scenarios of local/regional/delta level vulnerability to climate change;
- identify options for effective climate adaptation for men and women by the poorest groups in deltas; and
- lead to the development of gender-sensitive **adaptation funding proposals** in the four deltas.



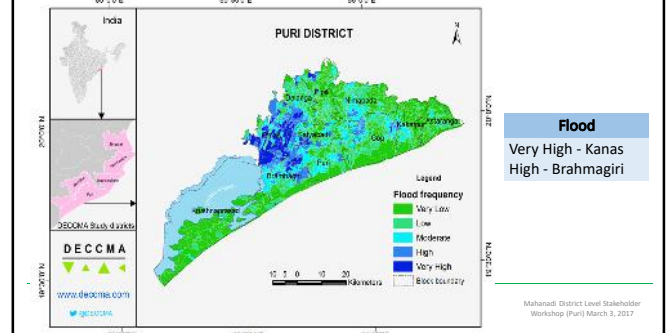
Mahanadi District Level Stakeholder Workshop (Puri)  
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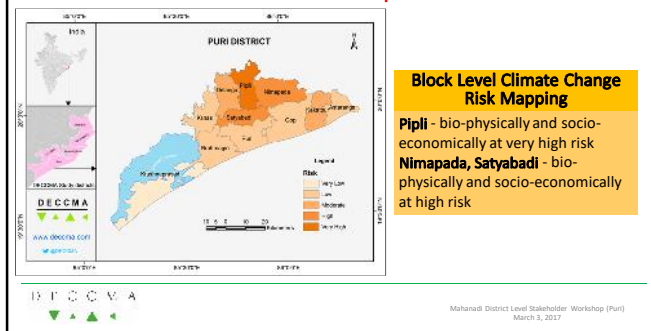
### Mahanadi Risk Hotspots



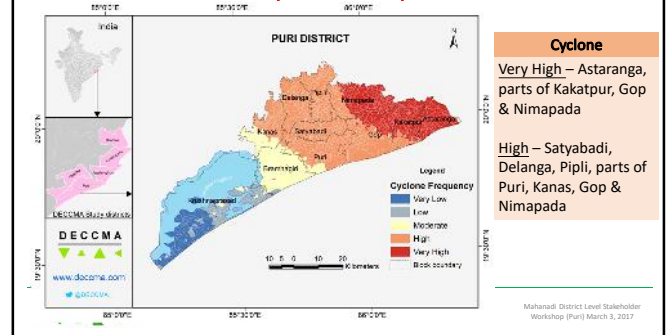
### Puri Flood Hotspots



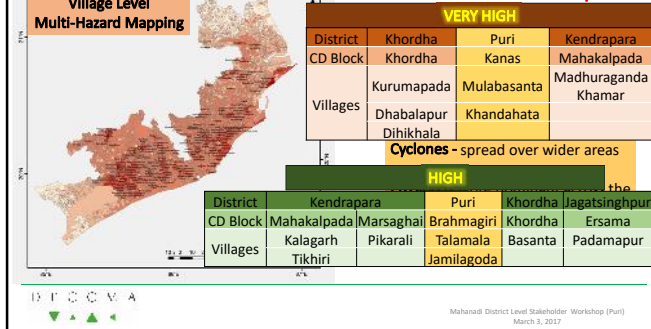
### Puri Risk Hotspots



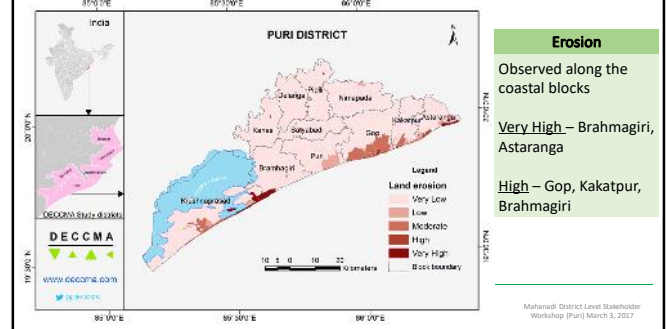
### Puri Cyclone Hotspots



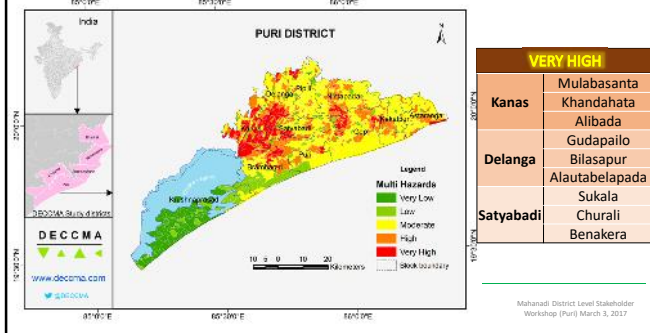
### Multi-Hazard Hotspot



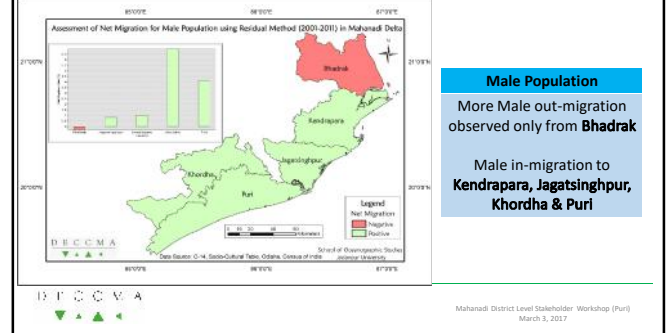
### Puri Erosion Hotspots



### Puri Multi-Hazard Hotspots



### Mahanadi Migration Maps



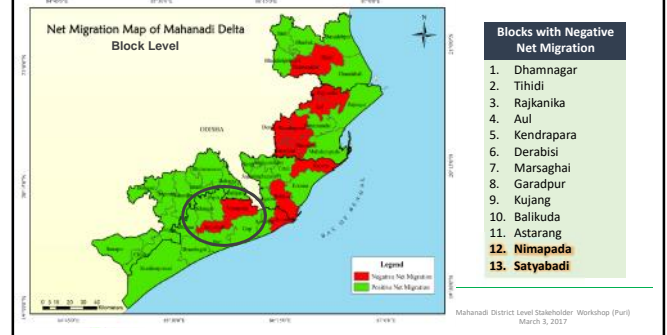
### Net Migration

- Net Negative Migration means more people leaving than entering (Out-migration > In-migration)
- Net Positive Migration means more people entering than leaving (Out-migration < In-migration)

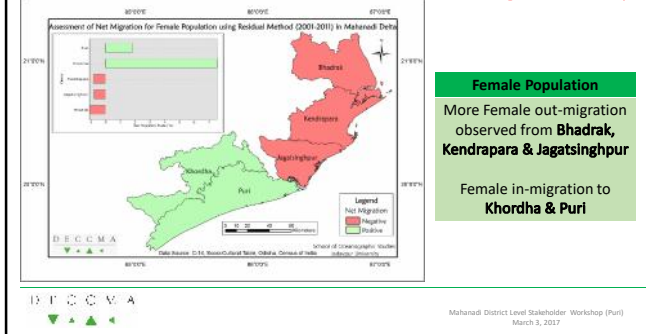
Level	Method	Data
District	Residual	Data from two censuses that are disaggregated by age and sex. Census of India (Table C-14, C-Series, Socio-Cultural Tables, Census of India (2001 & 2011))
Block	Vital Statistics	<ul style="list-style-type: none"> <li>Birth and Death data obtained from Primary Health Centres</li> <li>Total Population from Census</li> </ul>

Mahanadi District Level Stakeholder Workshop (Puri) March 3, 2017

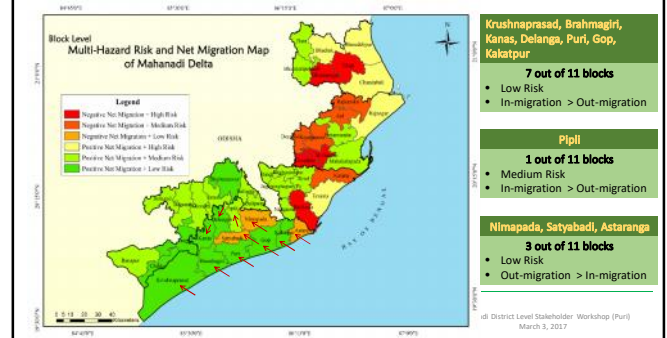
### Mahanadi Migration Maps



### Mahanadi Migration Maps



### Puri Migration & Multi-Hazard Map



### HOUSEHOLD SURVEY IN MAHANADI DELTA

- Total Survey Locations: 50; Surveyed Households : 1500; Participants: 1414 HHs (94.2%)
- Female interviewed separately: Yes- 1362 (96%), No-52

	Migrant HH	Non-Migrant HH	Total
Male Headed HH	228	997	1225 (87%)
Female Headed HH	82	107	189 (13%)
<b>Total</b>	<b>310 (22%)</b>	<b>1104 (78%)</b>	<b>1414 (100%)</b>

- Current Migrants – 506, Returned Migrants – 94 (Total 310 Migrant Households)

Multi-Hazards	Mahanadi Delta			Puri District		
	Locations	% Migrant HHs	% Non-Mig. HHs	Locations	% Migrant HHs	% Non-Mig. HHs
Very Low	13	19.01	80.99	2	12.72	87.27
Low	12	14.54	85.46	4	33.04	66.96
Moderate	10	17.13	82.87	5	26.57	73.43
High	8	34.35	65.65	6	30.64	69.36
Very High	7	32.32	67.68	4	42.98	57.02

### Adaptation Activities (from Literature Review)

Emphasis on **Capacity Building & Disaster Risk Preparedness** of the community and the government officials. Capacity building is extremely important since most of the rural population are not aware about the impacts of climate change and disaster risk reduction.

Emphasis has also been laid on **Adaptation in Water resource management**, because Mahanadi Delta is a flood prone area and water management is a major concern for drinking, domestic and agricultural uses. Thus, renovation of canals, pavements and embankment is a major step in this direction.

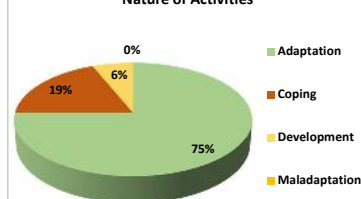
**Focus on crop diversification, improved package of practices and stress tolerant high yield rice** has helped the agricultural sector of the district in particular and Odisha in general.

13 11 10 9 8 7 6 5 4 3 2 1

Mahanadi District Level Stakeholder Workshop (Puri)  
March 3, 2017

### Adaptation Activities (from Literature Review)

Nature of Activities



**Adaptation** refers to adjustments that reduce vulnerability to climate variability and change

**Development** is the reduction of vulnerability is static and it does not concern about the future climate risk

**Coping** does not reduce vulnerability, reacts to climate shocks and is oriented towards survival

**Maladaptation** has a negative impact on the adaptor and is likely to negatively affect the society

13 11 10 9 8 7 6 5 4 3 2 1

Mahanadi District Level Stakeholder Workshop (Puri)  
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### Major Adaptation Activities in Different Sectors

Sector	Activity
Agriculture	<ul style="list-style-type: none"> <li>Crop Diversification and Improved package of practices (PoP)</li> <li>Stress tolerant high yield rice</li> </ul>
Disaster Risk Reduction (DRR)	<ul style="list-style-type: none"> <li>Multi-Purpose Cyclone Shelters</li> <li>Disaster Risk Reduction</li> </ul>
Water	<ul style="list-style-type: none"> <li>Climate Resilient Infrastructure</li> <li>Water Resource Management (renovation of canal, construction of embankments)</li> </ul>
Capacity Building	<ul style="list-style-type: none"> <li>Alternative Livelihood Promotion</li> </ul>



13 11 10 9 8 7 6 5 4 3 2 1

Mahanadi District Level Stakeholder Workshop (Puri)  
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### Drivers of Adaptation

Sectors	Drivers
Agriculture	Highly vulnerable to temperature stress, incidence of drought, flood and extreme weather events like cyclone, incidence of pests and diseases.
Fisheries	Sea level rise, Sea surface temperature rise affects the species which descend to lower layers and their catch drops, Reduce the available fishing days/ fish catch.
Water	Rapid urbanization, availability of fresh water, water quality, congestion and limited options of developing modern road and sewerage network.
Health	variability in temperature and rainfall pattern and increased humidity are likely to change disease patterns of the water and cause vector borne diseases.
Energy	Extreme climate events like flood, storm, cyclone, etc. might destroy the transmission and distribution infrastructure including damage to the power plants
Forests & Environment	Climate variability including projection of long dry spell and anthropogenic causes might exacerbate the existing stress on the forest resources
Disaster Risk reduction	Heavy precipitation in some pockets leading to flood and it is also a regular victim of tropical cyclone. Key impacts of sea level rise include land loss and population displacement, flooding of low lying coast areas .

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### Adaptation Provider & Beneficiary



63% of the Adaptation activity provided by Government, 29% by International and Local NGOs  
**Planned adaptation is much higher than autonomous Adaptation in Mahanadi Delta.**

13 11 10 9 8 7 6 5 4 3 2 1

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## Barriers of Adaptation

Adaptation Barriers are very similar to other developing countries, which can be divided into four categories **Human, Informational, Social and Natural**.

- Lack of information
- Poor economic condition of the community
- Lack of information about climate change adaptation



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## Outcome of Policy Analysis

**State Disaster Management Plan (2013)** and **State Climate Action Plan (2010)** have clear description of climate adaptation.

### Gender Dimension-

**Limited emphasis** - 7 out of 21 identified State policies/plans have discussed gender dimensions. Links between gender and adaptation are not evident.

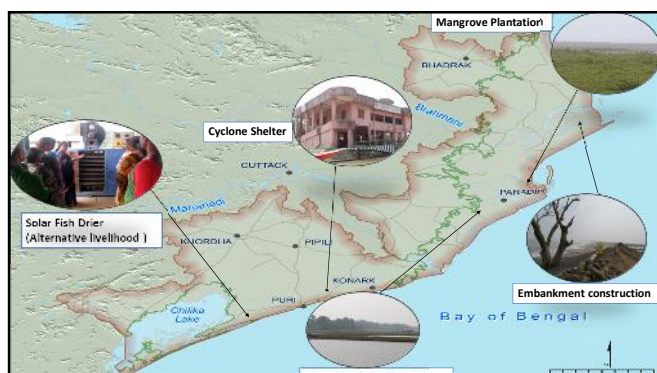
Policies of sectors like agriculture, water, energy have not incorporated gender dimension but these sectors are highly associated with climate change impacts.

Gender dimensions like decision making power, institutional power, cultural norms, and gender division of labour need to be addressed.

**State Climate Change Action Plan (2010-2015 and draft 2015-2020)**- should have gender as cross cutting aspect. District and sub district Climate change action plan have to be developed in a gender inclusive manner.



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## Gaps in Policies

**Policies are sector specific and there is a lack of convergence or linkage with other policies**

**Energy and Urban Sectors** - less involved in adaptation activity

**Forestry Sector** - barely emphasised the reduction of forest diversion or deforestation, but have emphasised on plantation

**Energy Sector** - focused on end use energy efficiency rather than all round energy efficiency

**Transport Sector** - less attention has been paid to urban transport planning and demand side management.

**Water Sector** - lack of demand side management and water use-efficiency

Flagship schemes like **NRLM (OLM)** and **MGNREGS** have a very specific women component and also climate change component but there is no cohesion among both these components.



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## Governance Analysis

Baseline assessment of governance frameworks insofar as they relate to:

- success or otherwise of migration as an adaptation option in response to change, whether caused by climate change or not; and
- factors that affect the range of adaptation options available to those in the case study areas.

Work focuses on legal frameworks only for now. Identification of around 70 questions over 4 broad categories:

Human rights related to Adaptation and Migration	Natural Resources Management and Ecosystem Protection	Disaster Risk Management / Response	Climate change adaptation
General Human rights, viz, right to life, right to work, right to food, right to information, right to forest, right to equal pay for equal work,	General (EIAs etc)	Early Warning Systems	Climate resilient Agriculture
Human rights as regards displaced persons – right to land, right to rehabilitation and resettlement, right to shelter	Ecosystems	Cyclone Shelter and Flood Shelter	Climate resilient Aquaculture
Right to safe drinking water	Land use tenure and management	Mock trials before disasters for disaster preparedness	Alternative access to safe drinking water
	Water resource management		

	Human Rights – Gen.	HR for displaced persons	Natural Resource Mgmt. Ecosystem Approach	Natural Resource Mgmt. Land tenure	Natural Resource Mgmt. Water Resource	Disaster Risk Mgmt. / response	Climate change adaptat.
Bangladesh							
Ghana							
India IBD							
India MN							

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### Governance Analysis - Disaster Risk Management / Response

- State governments have the responsibility of providing rehabilitation and reconstruction assistance to victims of disasters under s.38(2)(k) of Disaster Management Act 2005, though list is not exhaustive or prescriptive
- Odisha – State Disaster Management Plan of 2005 includes specific principle recognising vulnerability of internally displaced persons, such as children, especially unaccompanied minors, expectant mothers, mothers with young children, female heads of household, persons with disabilities and elderly persons, and need to design response and interventions accordingly
- Obligations are not specifically imposed on appropriate government authorities to provide food and medical supplies to affected areas, or for the appropriate duration but responsibilities are apportioned clearly in DMA 2005.



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### Governance Analysis - Human rights related to Adaptation and Migration

- Covered by relevant national legislation, in this case the recent **Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act of 2013**. **This is applicable only to displaced persons who have to give up their land in public interest for developmental projects. Till date the law has no provision to be applied in case of climate induced migrants**
- It demonstrates the progress that still needs to be made to ensure that those who are **displaced internally or who are internal Climate induced migrants** can successfully access their substantive human rights **irrespective of their location in the country**.
- Migrant workers may be more susceptible to **purely economic factors** than arguments based on what may be perceived to be more abstract concepts like human rights.



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### Governance Analysis - Climate change adaptation

- No specific national laws and policies related to climate change adaptation have been adopted within the national legal system.
- National Action Plan on Climate Change 2008 and 2014 is closest, but not law, **but however, some National missions can be related to the Adaptation viz, agriculture, water, health, habitat, coastal areas.**
- National forest laws and policies do not provide explicit reference to climate adaptation measures
- National water laws and policies do not provide explicit reference to climate adaptation measures, such as with respect to risk apportionment



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### Governance Analysis - Natural Resources Management and Ecosystem Protection

- Certain rights are conferred to forest dwellers under The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006.
- Wildlife Protection Act prohibits the taking or destruction of endangered species, ensures protection of their habitats, and where necessary develops and applies recovery or restoration plans for such species
- Coastal Regulation Zone Notification 2011 covers the managing of coastal systems as integrated units covering both aquatic and terrestrial components
- Orissa Pani Panchayat Act 2002 (as amended 2008) and Rules 2003 allow for participatory farmer-managed land use
- At least one third of the members of the WUA executive committees must be women (Orissa Pani Panchayat Act 2002, s.2-a
- Effective basin-wide management of watercourses is yet to be implemented in India (on the Ganges, Brahmaputra or the Mahanadi, which is also a transboundary river, albeit through Indian states only)



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This work was carried out under the Collaborative Adaptation Research Initiative in Africa and Asia (CARIAA), with financial support from the UK Government's Department for International Development (DFID) and the International Development Research Centre (IDRC), Canada. The views expressed in this work are those of the creators and do not necessarily represent those of DFID and IDRC or its Board of Governors.

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## Gender analysis of Odisha Climate Change Action Plan

Sansristi  
**Mahanadi District Level Stakeholder Workshop (2<sup>nd</sup> Round)**  
**3<sup>rd</sup> March, 2017 at Holiday Resort, Puri**


MD District workshop, 3.3.2017 (Sansristi)



## Odisha Climate Change Action Plan

- The Climate Change Action Plan (2010-2015) is first of its kind.
- Has 11 critical sectors
- This Action Plan for a period of 5 years
- The purpose of the Climate Change Action Plan is to strengthen institutional capacities of different State Agencies to integrate environment and climate change issues in development planning, policies and sectoral programmes.


MD District workshop, 3.3.2017 (Sansristi)



## National Action Plan on Climate Change (NAPCC)

- India released its National Action Plan on Climate Change (NAPCC) on 30th June 2008 to outline its strategy to meet the challenges of Climate Change.
- The National Action Plan advocates a strategy that promotes,
  - adaptation to Climate Change and
  - enhancement of the ecological sustainability of India's development path.

MD District workshop, 3.3.2017 (Sansristi)



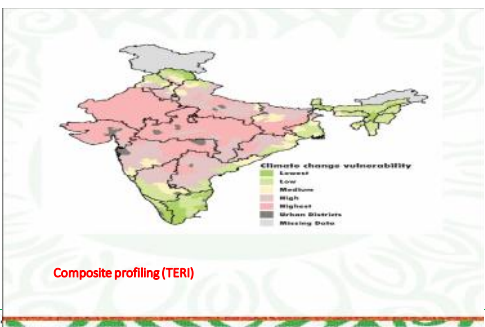
## 11 sectors

1. Agriculture
2. Coasts and Disasters
3. Energy
4. Fisheries and Animal Resources
5. Forestry
6. Health
7. Industry
8. Mining
9. Transport
10. Urban Planning
11. Water Resources


- Cross cutting issues -

MD District workshop, 3.3.2017 (Sansristi)






MD District workshop, 3.3.2017 (Sansristi)



## Gender perspective in OCCAP, 2010-15

MD District workshop, 3.3.2017 (Sansristi)



## Slide 1

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**SB2** Insert your Institute Logo here.  
Sumana Banerjee, 05/01/2016

## Vulnerability Assessment of Orissa (OCCAP, 2010-15)

### • 3.4 Socio Economic Factors: Poverty & Vulnerability

- 3.4.4 Gender dimension : Increasing scarcity of water in several parts of Odisha and also the reducing yield of biomass, affect the women, as they are traditionally responsible both for water and biomass for cooking in rural households. Additionally, with changing climate, there is increased risk to human health especially during the period of pregnancy. There is a role of women to augment social capital and make the community more resilient through the services of the Womens' Self Help Groups (SHG).



NGO District workshop, 3.3.2017 (Sanarist)

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## Key vulnerabilities in Health

- There are significant social, regional and gender disparities in accessing public health
- children under five years and pregnant women are expected to be the most vulnerable.
- Food production may be adversely affected and create pockets of hunger and malnutrition. There are significant social, regional and gender disparities in accessing public health in Odisha. Interior regions in general and tribal districts in particular have poor physical and economic access to health services.



NGO District workshop, 3.3.2017 (Sanarist)

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## Sectoral Issues & Programme of Key Priorities (OCCAP, 2010-15)

### 6.6 Health

- 6.6.2 Capacity Building to meet the challenges of climate change on both adaptation and mitigation aspects:
  - Advocacy and sensitization of policy makers, massive general awareness campaigns, sensitization of the health service providers (ANMs, ASHA, AYUSH, Doctors, AWW), strengthening the curriculum of ANMs, Health workers & Paramedic staff, recognizing gender issues, promoting health insurance for vulnerable groups
- 6.6.5 Strengthening approaches to deal with heat wave conditions exacerbated due to climate change:
  - XXX Heat waves pose risk of deaths, disease and injury. The risk to vulnerable groups such as infants, elderly, pregnant women, disabled, farm labourers and industrial & construction workers are expected to be very high.XXX



NGO District workshop, 3.3.2017 (Sanarist)

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## Case Study on Management of Phailin

- Women and Child Development dept played a key role in the planning and evacuation. Priority to pregnant and nursing women, old women while distribution of relief items.



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## Gender in the Progress Report on the implementation of OCCAP



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## Forestry

- The Vana Samrakshyana Samitis (VSS) and Eco- Development Committees (EDC) have been empowered through Joint Forest Management Resolutions to protect forests adjoining the villages. The JFM committees are made responsible for protection, conservation and regeneration activities while the control of non-timber forest produce has been transferred to Panchayats. The state has formed 12,166 numbers of VSSs and 463 Eco Development Committees to manage forest fringe areas in Joint Forest Management Mode.



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## OCCAP (2015- 20)

### • Sectors

1. Agriculture
2. Coasts and Disasters
3. Energy
4. Fisheries and Animal Resources
5. Forestry
6. Health
7. Industry
8. Mining
9. Transport
10. Urban Planning
11. Water Resources



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## Some specific examples

- Health (H/KP/1)-capacity building of health staff and personnel and integrate climate change aspects into the state health policy – **which should include addressing issues of maternal health and female infant mortality rates.**
- Agriculture (AG/KP/1)-Continuing the livelihood-focused, people-centric integrated watershed development programmes in rain-fed areas vulnerable to climatic variations **should have a component of women's participation.**



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## OCCAP (2015- 20)

- Recognises under Health, the objective to reduce maternal and infant mortality rates. The proposed activities include capacity building of health staff and personnel and integrate climate change aspects into the state health policy.
- Under the Agriculture sector, the key priorities include livelihood-focused, people-centric integrated watershed development programmes
- Under the Forestry sector, the joint forest management with people participation in conservation, management, and regeneration is a key priority.
- In the Disaster management , one of the proposed activities is to set up an integrated capacity building protocol covering shelter and a self help group under the Community-Based Disaster Risk Reduction Framework (CBDRF), including college and school volunteers.



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- Forest (FOR/KP/11)-Implement joint forest management so that people can participate in conservation, management, and regeneration. **Since the engagement of women is present in joint forest management the plan should include a mechanism whereby the participation of women is not only ensured, but institutionalised.**
- Coasts and Disasters (CD/KP/4)-Set up an integrated capacity building protocol covering shelter and a self-help group under the Community-Based Disaster Risk Reduction Framework (CBDRF), including college and school volunteers and officials at the state and district levels. **Generally self-help groups are women, and so gender parity should also be in place in all community-based activities and strategies.**



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- Gender needs to be a cross cutting issue across all sectors
- All adaptation strategies have to be gender sensitive as well as gender inclusive



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15

## Why gender is important in Climate Change

- Women are more vulnerable
- Social inequities
- economic marginalisation
- Lack of access to information, resources
- Restricted mobility, employment opportunities/ income generating activities, property rights
- Adaptive capacity is low but the disproportionate share of adaptation falls on women



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## How to be gender sensitive

- **Gender Equality:** Actions and policy aim to achieve gender equality
- **Gender Balance:** Enhance the representation of women in decision making, some with explicit goal of achieving gender balance on decision making
- **Women as vulnerable Group :** Recognize women as a vulnerable group
- **Gender mainstreaming :** Integration of gender norms, roles and relations in the development of actions and policies and implementation, which supports gender mainstreaming



19 District workshop, 3.3.2017 (Samarat)



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Name of Presenter + Meeting + Date details

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