Final Draft

GETTING CLIMATE SMART FOR DISASTERS: CLIMATE SMART DISASTER RISK MANAGEMENT APPROACH IN COMMUNITY BASED ORGANIZATION

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GETTING CLIMATE SMART FOR DISASTERS: CLIMATE SMART DISASTER RISK MANAGEMENT APPROACH IN A COMMUNITY BASED ORGANISATION

Prepared by All India Disaster Mitigation Institute

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ACRONYMS

AIDMI	All India Disaster Mitigation Institute
CC	Climate Change
CCA	Climate Change Adaptation
CDKN	Climate Development and Knowledge Network
CSDRM	Climate Smart Disaster Risk Management
CSO	Civil Society Organisation
DIPECHO	Disaster Preparedness ECHO
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
ECHO	European Commission for Humanitarian Aid
EU	European Union
ICSD	Inter-cooperation Social Development
IDS	Institute of Development Studies
IPCC	Intergovernmental Panel on Climate Change
M&E	Monitoring and Evaluation
NCCAP	National Climate Change Action Plan
NDMA	National Disaster Management Authority
NGO	Non Governmental Organisation
NIDM	National Institute of Disaster Management
OSDMA	Odisha State Disaster Management Authority
SREX	Special Report on Managing Risks of Extreme Events and Disasters to Advance Climate Change Adaptation
SWAD	Society for Women Action Development
UNISDR	United Nations International Strategy for Disaster Reduction

ABOUT THE DOCUMENT

In 2010, Climate Smart Disaster Risk Management (CSDRM) Approach developed in partnership with Institute of Development Studies, UK; Plan International; Christian Aid and UK Aid. The approach began an intense collaboration of over 1000 leading disaster risk management (DRM) practitioners and policymakers in ten at-risk countries across Asia and Africa over two years.

This development is an effort to institutionalise CSDRM approach at local level in a civil society organisation SWAD (Society for Women Action Development). SWAD is a community based humanitarian organisation based in Puri district that specialises in the field of women empowerment and disaster preparedness and development. This effort is done under the project ***'Getting Climate Smart for Disasters'*** by Inter Cooperation Social Development (ICSD), Institute of Development Studies, UK and AIDMI with support from Climate Development and Knowledge Network (CDKN).

ACKNOWLEDGEMENTS

This knowledge product is commissioned under the project ***Getting Climate Smart for Disasters***. The technical support to institutionalise Climate Smart Disaster Risk Management (CSDRM) Approach at local level was provided by All India Disaster Mitigation Institute (AIDMI), Ahmadabad, India. AIDMI has been actively involved in Climate Change Adaptation and Disaster Risk Reduction activities since a long time. The community based organisation chosen for the implementation was Society of Women Action Development (SWAD), Puri district (in Odisha) which is a non-governmental humanitarian organisation involved in disaster risk reduction activities with coastal communities of Odisha.

The production of this product would not have been possible without the valuable inputs from various partners. We would like to thank team members of Inter Cooperation Social Development, Delhi; Dr. Sumana Bhattacharya and Dr. Joy Elamon for their contributions while Ms. Shazneen Cyrus Gazdar and Mr. Nakul Sharma for sharing background knowledge and information. We are grateful to Prof. Terry Cannon for his expert and constructive recommendations on the subject of Climate Change and Disaster Risk Reduction. We would like to express our gratitude for the advice and knowledge shared by Mr. Mihir R. Bhatt. In particular gratitude goes to Ms. Paula Silva Villanueva for providing valuable inputs on monitoring and evaluation component in CSDRM approach and explaining its significance to us. A special thanks to Ms. Elizabeth Colebourn from CDKN for her time and communication. We would like to acknowledge contributions from National Institute of Disaster Management: Dr. Anil Gupta and Ms. Sreeja S. Nair for sharing their expert knowledge in climate change adaptation and disaster risk reduction.

It would also have been a rather difficult journey if it were not for the numerous inputs from the members of SWAD team and community members who are tackling the complexities of climate change. It is SWAD's commitment and interest to institutionalize CSDRM approach. The product is able to better represent the

practice, approaches and tools, and knowledge relevant to climate change and development through SWAD's support and sharing programme information and documents. We are highly thankful to Ms. Binapani Mishra, Secretary of SWAD who not only shared interest in the approach but also agreed to support this exercise from beyond to end and committing at institutional level to incorporate CSDRM approach. We are humbled to see the dedication and enthusiasm of SWAD team members to bring change at community level.

Last but not the least, we would like to thank and acknowledge coastal communities who participated actively in different exercises with SWAD.

– All India Disaster Mitigation Institute
August, 2013

EXECUTIVE SUMMARY

There are increasing amounts of evidence to show that India's coastal state of Odisha is being affected by climate change, and that its already high level of vulnerability to disasters is set to rise further. The impacts are diverse and can damage billions of people across the world, particularly those in developing countries who are the most vulnerable. Moreover, the frequency and severity of natural hazards, thus increasing people's vulnerability and exposure. In order to be equip the community to deal with the impacts of climate change, both government and community must involve in various adaptation interventions.

Odisha is considered to be the 'disaster capital of India'; it either experiences heavy floods or drought every alternate year due to the disproportionate distribution of rainfall. Its coastline is continuously battered by cyclones and tidal surges: the worst incident being the super-cyclone of 1999. Over the last few years, other lesser-known disasters such as heat waves and lightning strikes have become frequent. Reports of fluctuating weather patterns and rising sea water levels causing coastal erosion, sea water ingression, more frequent flooding, embankment failures, and the entire relocation of villages, have become more commonplace.[1]

Past experience with climate extreme contributes to understanding of effective disaster risk management and adaptation approaches to manage risks (IPCC, 2012).Various agencies at governmental and nongovernmental level are proactively involved in disaster risk reduction and are now involved in climate change concerns. . However, given the complexity and range of issues involved with disaster risk reduction, climate change adaptation, and development; it has become apparent that a lot more needs to be done to support and strengthen the government authorities' efforts especially at the ground level. Understanding the threats posed by climate change and disaster risk, Society of Women Action Development (SWAD), a local level humanitarian organization agreed the implementation of Climate Smart Disaster Risk Management

[1] Merylyn Hedger, Ashok Singha and Mohan Reddy (2010), 'Building Climate Resilience at State Level: Disaster Risk Management and Rural Livelihoods in Orissa', Strengthening Climate Resilience Discussion Paper No. 5, Strengthening Climate Resilience, Institute of Development Studies, pp. 10-11

Approach (CSDRM). CSDRM approach is one such tool that can be used by community based organisations to tackle disasters, poverty and adaptation through improved integration.

CSDRM approach provides a guide to strategic planning, programme development and policymaking that should be used to assess how 'climate smart' are the existing Disaster Risk Management policies, projects and programs. The approach will require systematic investment of people skills, partnerships with community members and flexibility to adapt to technical innovation. A favourable environment must be created for the implementation of CSDRM approach so that information sharing and decision making can be transparent and favourable. In addition, the efficiency of these interventions varies in terms of the ability of different communities and economies to address the climate change risk. Therefore, it becomes imperative to monitor and evaluate so that its efficiency, effectiveness and sustainability is guaranteed. Through the CSDRM approach a more holistic view of disaster risk reduction and development is sought to be promoted.

1

BACKGROUND: GETTING CLIMATE SMART FOR DISASTERS

Countries need a **'Climate-Smart'** revolution. Major changes are needed in the different sectors around the world if future generations are to survive and grow. Significant climate changes are taking place worldwide due to global warming and different states of India are severely affected by the same. Agrarian communities living in coastal, tropical and sub tropical regions are now dealing with extreme weather conditions: the dry lands are further drying up while the flood prone areas are over-flooded; leading to undeniable impact on agriculture. In addition, change in the time and amount of rain during the cropping season has badly hit agriculture; making it an unviable livelihood option. As a result, livelihoods and food security is threatened in parts of India and youth is forced to migrate to urban areas as labourers. Studies suggest that climate change has led to:

- 23 percent increase in annual mean rainfall in deltaic region
- Increase in annual maximum temperature by 2.4 degree Celsius to 3.7 degree Celsius.
- Substantial shift in pattern of rainfall towards the flood-prone coastal regions with dramatic increase in the incidence of flooding in Orissa.
- As a result of high concentration of rainfall during the few monsoon months, rivers in the state carry huge discharges that result in devastating floods, particularly in deltaic areas and coastal plains.
- The inadequate capacity of riverbanks to contain high flows, excessive silting in riverbeds, lack of an adequate drainage system and weak embankments leads to the surge of water in many areas.

These impacts have made Indian agriculture very vulnerable. To add to vulnerability, 60% of India's agricultural areas are rain fed; and, more than 80 percent of farmers in India are small and marginal (having less than 1 ha of land) thus having very low capacity of cope with the climate change impacts on agriculture. Therefore, it becomes necessary to make the agriculture sustainable.

The adverse effects of climate change are the severity and frequency of the disasters causing major losses both to economy and people. The impacts of climate change on disasters are

"profound, complex and somewhat uncertain" (Mitchell and Ibrahim, 2009). On one hand, climate hazards do not always cause disasters; it is a combination of an exposed, vulnerable and ill-prepared system (country, community or household) with hazard event that results into a disaster (IPCC, 2007). However on the other side, climate change is increasing the disaster risk as the frequency and intensity of hazards is increasing, therefore coping, response mechanisms and economic planning for disasters based on past vulnerabilities may not be enough. In addition, the average climate conditions and variability have been changing in the past few years due to climate change, which has generated new threats that communities have no experience of handling in the past; thus increasing the risk and vulnerabilities. Scientists are increasingly able to predict the impacts on the communities if the earth continues to warm up. However, it is impossible to forecast with certainty of what the future impacts will be. Therefore, the communities will have to be prepared for the unexpected events and recognise that the past events will not be useful to predict future events.

It is realised that disaster risk reduction and climate change are closely linked; linking these concepts with development can effectively reduce poverty by enabling the vulnerable communities to cope with the disaster. Disaster risk reduction, climate change adaptation and development are intertwined but are not same; however they have mutual benefits. All of the three components aim to reduce the impacts of disasters by anticipating risks and uncertainties and addressing vulnerabilities.

These techniques, many of which are already in practice, increases the preparedness level of the communities and also help the authorities in the response and recovery activities. For example, the development of the Rural Non-Farm Economy is necessary for the development of those communities who are perennially affected by the climate change issues. RFNE depends upon the livelihood diversification in rural India. It is thus necessary to adopt the principle of 'Include All, Exclude None' in order to build resilient communities which are better prepared for any disaster.

* The voice notes are recorded from the stakeholder training workshop conducted on the May 8-9' 2013 on 'Forensic Investigation (FORIN) and Monitoring and Evaluation (M&E) for CSDRM' in Bhubaneswar, Odisha. It was conducted by the project partners including ICSD, IDS, CDKN and AIDMI.

*"It is essential for governments to involve in disaster risk reduction programs in order to build a disaster resilient community. For example, in Bangladesh and Myanmar were hit by category 4 cyclones in 2007 and 2008 respectively. Government of Bangladesh had made serious efforts at DRR working with the communities and stakeholders thus reducing the loss."

-Elizabeth Colebourn
Project Manager, CDKN

2

INTRODUCTION

2.1 WHY ODISHA?

Odisha is a state on the eastern seaboard of India. It has a geographical area of 1, 55,707 sq km with population of 41.95 million as per 2011 census. The average density of population comes to 236 per sq km. with significantly higher density in the coastal areas compared to the interior parts. The state is broadly divided into four geographical regions: Northern Plateau, Central River Basins, Eastern Hills and Coastal Plains. Administratively, the state is divided into 30 districts, 58 sub-divisions, 314 blocks (administrative units in descending order of geographical area and population) and 103 urban local bodies.

Odisha is vulnerable to multiple disasters such as tropical cyclones, storm surges and tsunamis due to its sub-tropical littoral location and 482 km coastline. Five major rivers namely Mahanadi, Brahmani, Baitatani, Subarnarekha and Rushikulya cause high floods in their delta where flood waters intermingle causing considerable havoc. This problem becomes even more acute when floods coincide with high tide. The rivers in these areas with heavy load of silt have very little carrying capacity, resulting in frequent flooding that is compounded by breached embankments. Moreover, the floods usually occur during monsoon season due to heavy rainfall.

Besides, the 480 km coastline is prone to storm surges. The storms produce tidal surges that are usually accompanied with heavy rainfall making the coastal belt vulnerable to both floods and storm surges. People lose their houses, lives, livestock, crop and property worth millions is damaged. Additionally, these currents majorly affect the livelihood of coastal residents as they are exposed to coastal disasters. The residents are not only at the risk of losing their lives but they constantly strive to regain their normal routine post extreme events.

Gradually, the climatic pattern of Odisha is changing. The atmospheric temperature in summer is increasing along with regular low pressures causing an unpredictable rain pattern. 23 districts were affected due to the mid-summer rain and floods in 1995; 2,042 lives were lost due to heat-wave during the summer of 1998; two devastating cyclones (including the Super Cyclone) during 1999; floods in 2001; massive floods in 23 districts in 2003; 14 depressions along with flood in 27 districts in 2007; highest

flood ever in Balasore and flood in 19 districts (Mahanadi basin) in 2008; along with the occurrence of drought and cyclone at frequent intervals; probably provides much more than enough proof regarding the impact of climate change.

Natural calamities have seriously affected livelihoods in the state and the income level of households. Important fallout has been the serious setback suffered by the capital formation process in the economy. Consequently, the state's Gross Domestic Product (GDP) has been substantially depressed (State Human Development Report, 2003).

2.2 WHY SWAD?

SWAD is a women headed organisation that emerged from the disaster response and development activities initiated by a local group of women. Given the socio-economic condition of Odisha, SWAD intervened in the upliftment of the marginalised and poor communities. The thematic areas of intervention involve women empowerment, disaster risk reduction linked to sustainable livelihood and development, income generation and micro-credit support, water sanitation programme amongst others. The intervention of SWAD resulted in tangible achievements like 4000 rural women involved in the process of development through Self Help Groups (SHGs) network, federate bodies and cooperative; communities involved in 76 villages for disaster preparedness and response initiative; school students and communities of 50 villages have taken initiative locally, 1000 women engaged in production and remunerative marketing through micro credit support. Water sanitation programme conducted in 60 villages to benefit 20,000 people**.**

SWAD team developed interest in the CSDRM approach by attending the workshops organized by the project partners with support of CDKN in Bhubaneswar in March' 2013 and May' 2013 on Self Assessment through CSDRM approach and Monitoring and Evaluation respectively. SWAD is actively involved in the implementation of governmental policies and bringing change at grass root level. Their outreach and relation with the community members will make it easier to institutionalise CSDRM approach at local level.

"The priorities and needs of the both rural and urban communities, and the projects implemented by the governmental and non-governmental organizations must be aligned and that main focus should be on creating a climate smart livelihood resilient society in Odisha. This is important and we want to institutionalise the CSDRM approach at our organisation"

-Ms Binapani Mishra,
Secretary of SWAD

2.3 CSDRM Approach and its Importance

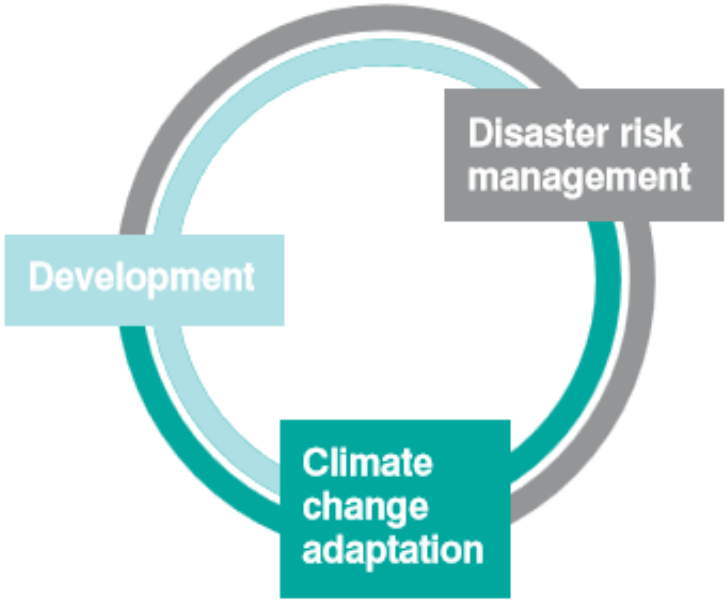
"The CSDRM approach is becoming an important tool for organisations who directly deal with local communities. It requires organizations to invest time and resources for effective results. Following simple but concrete steps based on the CSDRM approach can show fruitful results for long term."

-Ms. Sumana Bhattacharya
Head Climate Change and Sustainability, Inter cooperation Social Development

The Climate Smart Disaster Risk Management (CSDRM) approach has been developed and co-created by more than five hundred practitioners, policymakers, scientists and academics from climate change, disasters and development communities in ten 'at-risk' countries across Africa and Asia (Bangladesh, India, Nepal, Sri Lanka, Kenya, Tanzania, Sudan, Cambodia, Indonesia and the Philippines), led by Institute of Development Studies, UK. CSDRM is an integrated social development and disaster risk management approach that aims simultaneously to reduce risks, adapt to climate change and development. It builds upon what has already been done and enhances their ability to address these challenges. It tries to re-use the concepts and techniques that government and the working bodies are already familiar with such as empowerment of local community. The approach can improve the present ways of working and includes 'climate-smart' in each of its future and current activities.

CSDRM is a process-oriented approach; it provides guidance to stakeholders to systematically address climate change, disaster risk reduction and development not only at policy level, but also at the implementation level. It is designed for those who are responsible for managing disaster risks at national, state and local and organisational level; they can identify one or many entry points and eventually find a way to integrate their focus area and climate resilience. The guide draws out different routes through three central pillars that are divided into 12 action points (see figure 1).

Figure 1: CSDRM Approach Links DRR, CCA and Development
Source: Changing Climate, Changing Disasters: Pathways towards Integration, 2012



The three main silos are:

i) Tackle Disaster Risks and Uncertainties
ii) Enhance Adaptive Capacity
iii) Address Poverty, Vulnerability and Their Structural Causes.

The guide provides indicators with each of the action points that can help to assess and reflect the organisation's work and operational environment in relation to CSDRM. They help you to identify strengths and weaknesses in relation to 12 action points. In addition, it can also

be used to evaluate the effectiveness of existing initiatives as a part of monitoring and evaluation process. The CSDRM approach not only facilitates the process of analysing whether existing programs and initiatives are climate smart or not, it also follows identification of pathways for integration that can help institutions in ensuring greater resilience of their planned interventions.

Table 1: The following is the recommended process that the community based organisation should use to apply the CSDRM approach (Source: Changing Climate, Changing Disasters: Pathways towards Integration, 2012)

Step 1&2: **Where are we now?**	This stage is taken before we start implementing the approach at community level. It involves using action points and guiding questions to assess and reflect on your organisation's capacities. Indicators are then used to review existing programmes or policies to plan new ones
Step 3&4: **'Where do we want to be?' and 'What do we need to do differently?'**	This stage involves identifying potential entry points for the community based organisation to apply the CSDRM approach and map out integration pathways, develop action points and to select indicators to measure progress.
Step 5: **The CSDRM Journey – 'Are we moving towards integration?'**	This stage involves monitoring and reviewing the progress and understanding the internal and external factors that enable or constrain integration efforts. Doing so helps to identify new opportunities and /or corrective actions.
Step 6: **Looking back – 'What has changed, why and how?'**	This is an important focus of the approach and involves looking at the progress made, evaluating it and reflecting on what has worked or not, and what changes can be made in the future.

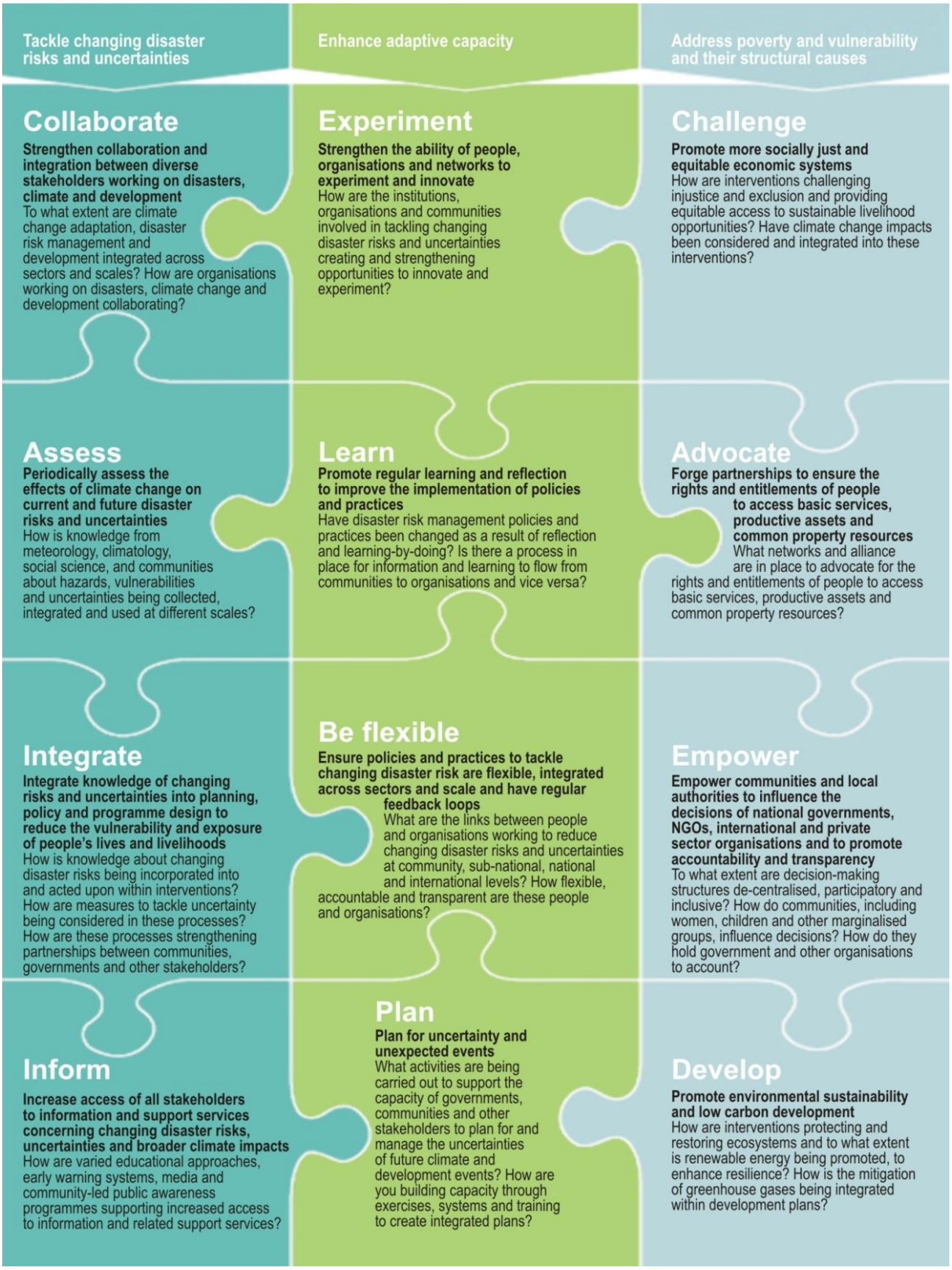


Figure 2: 12 CSDRM action points and questions that will aid in organisational self assessment
(Source: Changing Climate, Changing Disasters: Pathways towards Integration, 2012)

In 2010, using the CSDRM approach a detailed study of the OSDMA's programmes and the Western Odisha Rural Livelihood Programme were carried out to assess the extent to which they address poverty reduction and their structural causes, and climate resilience. Each programme has a complex organisational structure linked to the state government, working through multiple partnerships and supported by external donors. Together they demonstrate how it is possible to construct a CSDRM approach at the state level by integrating different programmes, thereby reflecting components across all three pillars of CSDRM. The CSDRM approach recognized the strengths and weaknesses of both the programs; the strengths included increasing public awareness and empowerment whereas the weakness included restricted geographical coverage and no systematic assessment of effects of climate change on disaster risks.

2.4 How will CSDRM Approach benefit Civil Society Organisation (CSO)?

Communities are increasingly affected by natural disasters. Losses are not only in terms of lives and economy, but post disasters, the livelihoods and health are badly hit. The ostensible causes of such conditions are due to lack of preparedness and planning due to physical, environmental, economic and social and political issues.

To date, the climate change and disaster management communities have operated largely in isolation from each other. This situation must change as a matter of urgency. Both climate change adaptation and disaster risk reduction share an objective of development and effective planning for the management of uncertainties and poverty alleviation which will help in rural development and capacity building. Therefore, mainstreaming adaptation to climate change and disaster risk reduction within development at community level is essential. This can be done using the CSDRM approach. Conceptually the approach is easy to digest, but challenging at implementation level. The unique three pillar approach provides CSOs with means to identify the processes that are needed to build disaster resilient and climate smart communities. The approach helps to evaluate the existing tools and frameworks from disaster risk management, climate change adaptation and development that are right for particular programmes or projects. Moreover, it helps to build partnerships

"Disaster risk reduction measures are in evidence across India, but not at the scale needed. AIDMI understands the importance of self assessment exercises and undertaking of such activities by community level organisations will put a greater focus on development of the poor and vulnerable."

- Mihir R. Bhatt
Managing Trustee
All India Disaster Mitigation Institute (AIDMI)

"Communities must be involved in the ongoing discussion so their needs and experiences are taken into account. Their ideas will provide a better insight since they experience the adverse effects more closely."

-Kamal Loachan Mishra
Odisha State Disaster Management Authority (OSDMA)

and evaluate progress through concrete indicators that can help implementation of policies that are disaster resilient.

Political and public awareness will always help in the post disaster relief and response. Sometimes, medium and small scale disasters are also as devastating as large disasters for local community to recover. The impacts of disasters will accumulate and result major losses. Therefore, preparedness is essential. At local level, the system should be strengthened as they help to integrate climate information and advice on the adaptive measures into local contexts. This can be fostered by development of skulls and capacity at local level, including training of trainers to interpret risk information; and by sharing new techniques such as disaster resistant crop varieties, climate forecast and early warning systems which can improve adaptation to climate change and thus make them less vulnerable.

In addition, continuous knowledge sharing with the community members helps them to know how is the changing climate going to have an impact on disasters and how can they reduce the impacts of these changes in their lives.

SOCIETY FOR WOMEN ACTION DEVELOPMENT (SWAD)

3

3.1 ORIGIN

Society for Women Action Development (SWAD) is a registered non-governmental organisation is committed to the cause of welfare and development of rural poor women and weaker section of society. It emerged from the humanitarian, social development and women empowerment activities initiated by some dedicated volunteers in the year 1989 in the rural areas of Puri district in Odisha. It was registered under the societies Regd. Act 1860 to get its separate legal entity in 1992. Since its inception, SWAD has tried its best to improve the socio-economic condition of rural poor by its vision, mission, plan and programs. SWAD has entered into organisational, technical and financial collaborations with local, national and regional institutions both governmental and nongovernmental.

3.2 VISION AND MISSION OF SWAD

The **vision** of SWAD is:

An equitable, egalitarian and harmonious society with holistic development of Women and Marginalised communities

The **mission** of SWAD is:

1. To facilitate the process of development of Marginalised and vulnerable community with focus on gender equity.
2. Reducing poverty as well as improving quality of life through capacity building, improvement of livelihood option, greater access of self-governance and basic rights, services and needs.
3. Ensuring environmental sustainability through local level initiative withstanding vulnerability and response to emergency.

3.3 OPERATIONAL AND FOCUS AREA

SWAD works with the communities in vulnerable pockets of Puri district that are prone to

natural disasters like floods and cyclones, the distress are the recurrent phenomena of the area, coupled with migration, water logging, and loss of livelihood. The strategic directions of plan comprise the themes of livelihood, reproductive child health, HIV/AIDS, gender equity, capacity building, sustainable eco-system and disaster management with expected development outcomes like increased income, increased socio-economic status, reduced vulnerability, improved food security and more sustainable use of natural resource base. Presently the activities have spread over 235 villages including Satyabadi, Delanga, Brahmagiri, Gop, Puri Sadar, Nimapara, Pipili and Kakatpur Block of Puri district and Tikabali Block of Kandhamal district of Odisha with its package of development programme.

The focus areas of intervention are women empowerment, community capacity building, community governance program, livelihood promotion focusing on sustainable agriculture and allied activities, community health program, micro finance and entrepreneurship development and community based disaster management. The target groups include rural poor, women and children, poverty stricken under privileged and marginalised community, victims of natural calamities, schedule castes and schedule tribes, small and marginal farmers, agriculture labourer, backward classes, artisans and persons with disability.

3.4 Journey So Far

SWAD has been involved in need based intervention to address the emerging issues and problems in which primary stakeholders are the prime actors. The interventions are taken up with community centred approaches, participation and realistic process leading to culminating the intervention in success. Community based organisations play a critical role in project implementation thereby community ownership and sustainability is ensured. In addition, it has been actively celebrating the days such as International Women's day (March 8), International day for PWDs (December 3), World Environment day (June 5) and National Disaster Preparedness day (October 29) amongst others.

SWAD has been involved in various activities since its inception in 1989; major themes addressed by SWAD are listed below:

Women Empowerment

Throughout history and in many societies including India, gender inequality was a part and parcel of an accepted male dominated

culture. Atrocities and discrimination are the two major problems women face. To address this problem, the main focus of SWAD is to improve the quality of life of most marginalized and vulnerable families in general and women in particular in the rural and resource poor area. Increase in the frequency and severity of natural disasters has forced many men to migrate to urban centres in search of jobs. They leave their families behind that increases the problem of women trafficking. The women and marginalised groups are involved in the SHGs where they are trained skills that will reduce their dependency on climate. Awareness is spread about their rights, existing governmental schemes and building peace and harmony. The women and the marginalised groups are given special training so that they can understand and enforce their rights. In addition, information is shared about their access to micro credit that can be used to start small businesses and therefore gain regular income. SWAD has been spreading awareness on all of these issues through workshops, small meetings and one-on-one conversations.

Strengthening Community Governance Systems

There is much activity in the community and voluntary sector regarding the governance systems. To ensure governance in rural India through self government system, we need to strengthen people's institutions like Gramsabha and Pallisabha. This will build up the capacities of local governance system to mainstream participation of poor and marginalised in consultative and decision making process through developing, practicing and disseminating innovative mechanism. Understanding the importance, SWAD undertook Community Governance in Infrastructure services project . Trainings and awareness programs have been conducted that has inspired members from marginalised groups including women to be a part of people's institutions. The community is actively involved in the construction of multipurpose pond, raising the plinth of tube-wells and building water storage tanks.

Reducing Disaster Risk

The approach to disaster management especially in the developing countries like India has been much of an ad-hoc type during the last century (Gupta and Nair, 2012). Relief was synonymous to disaster management, however, now there is a paradigm shift from 'response to relief' centric approach to 'proactive - prevention and mitigation' centric approach (Gupta and Nair, 2012). Structural and non-structural measures undertaken to limit the adverse impacts of natural hazards; for example building disaster resilient school buildings or raising awareness of natural hazards through school based education projects. Therefore, SWAD undertook a project with the support of European Commission Directorate General for Humanitarian Aid, and Concern Worldwide, India with the main objective to build disaster resilient Odisha and West Bengal. They conducted Hazard, Vulnerability and Capacity Assessment (HVCA) for a participatory analysis of past patterns of hazards and present threats at the community level (hazard assessment), combined with an understanding of the underlying causes of why hazards become disasters (vulnerability assessment) and of the available resources affected community uses to cope with the adverse effects (capacity assessment. HVCA is a very effective tool to raise awareness among community members about disaster risks and threats and how these relate to root causes of their vulnerability. It further raises the people awareness about what they can do to be prepared as it is based on people's actual experiences with disasters.

In addition, school children were included in the project through safer school campaign to make the schools safer and children less vulnerable. Moreover, awareness was spread about the benefits of micro insurance with minimal premium.

"The unique nature of adaptation to climate change calls for experience-based learning. M&E processes discover the key insights into adaptive capacity and its links to adaptation processes, risk and vulnerability reduction at large."

-Ms. Paula Silva Villanueva
Resilience Monitor

Climate Change Adaptation

There is evidence from observation gathered since 1950 of change in some extremes. A changing climate leads to changes in frequency, intensity, spatial extent, duration and timing of extreme weather and climate events and can result in unprecedented extreme climate events (IPCC, 2012) leading to an increase in the vulnerability of people. For example, for last 100 years in the state of Odisha, 49 years have experienced floods, 30 have had droughts and 11 faced cyclones (Gupta and Nair, 2012). SWAD understands that adapting to climate change is the only way to be prepared against disasters and major losses that community incur.

Prayas was a 15 month pilot project that was launched with SWAD with the support of RCDC, Bhubaneswar and UNDP, Odisha. The project attempted to reduce vulnerability, primarily arising out of flooding and climate change. They also promoted alternative livelihood methods to ensure that people can cope with adversities arising due to climate change. SWAD is now preparing for the Phase II of Prayas which will be called Prayog.

Disaster Response and Mitigation

Much of human devastation from disasters can be prevented through organised community-level measures in coordination with effective local and state institutions. Odisha is one of disaster prone states of India and every year the communities face one or more extreme events. Therefore, SWAD has been involved in making the communities disaster resilience by providing them with both short term and long term recovery support/strategies/or plan? SWAD has been making efforts in providing flood emergency response in Puri district, Odisha with the main objectives was to provide emergency support to the victims of floods by providing temporary shelter and food; ensuring safer environment by cleaning community water bodies and; providing flood livelihood support through cash for work. In addition, SWAD also initiated project **"Partners for Resilience"** with the support of Xavier's Institute of Management, Bhubaneswar (XIMB) and Wetland International with an objective to reduce the impact of natural hazards on livelihood of vulnerable communities is reduced.

Awareness campaigns

SWAD believes in spreading awareness about various issues that affects people in their daily lives. For many years SWAD is involved in spreading awareness through campaigns such as:

Heat wave awareness: As a prevention measure, SWAD has been making efforts on spreading awareness on the effects and impacts, curative and preventive measures of sun stroke.

World Environment Day: SWAD celebrates world environment on June 5 by involving school and college students, PRIs, administrators and social and environmental activists in tree plantation and encouraged people to plant more seeds throughout the year

National Disaster Preparedness day: October 29 is celebrated as national preparedness day in the state to commemorate the people who lost their lives in super cyclone 1999. SWAD

"Climate change concerns the whole planet and therefore needs a global solution. More than 80% geographical area of India is prone to one or more types of hazards. It is impossible to make the country completely free from hazards and disasters but there is every possibility to mitigate and reduce risks."

-Mr. Anil Gupta
National Institute of Disaster Management (NIDM)

organised an awareness rally, art and quiz competition among school children of Ketakipatana and Balaramgarh GP.

International Women's Day: On March 8, SWAD organises a training program to share awareness about women empowerment and rights to celebrate women's day.

Conclusion

Over years, SWAD has been involved in various activities that try to uplift the conditions of the marginalised and vulnerable communities. Now, SWAD is ready to embark upon a new journey to integrate CSDRM approach in all their activities. The team members will have to undertake major changes for the effective implementation of the approach. Only right attitude to accept change and experience will help them to drive forward and meet the challenging objectives.

PROCESS OF INTEGRATION OF CSDRM APPROACH AT INSTITUTIONAL LEVEL

4

4.1 SELF ASSESSMENT AT INSTITUTIONAL LEVEL

Situations that offer individuals self-relevant feedback often create a motivational conflict. On one hand, the feedback can provide new information that could help the organization to re-assess their skills, strengths and weaknesses and guide their future task choice and self improvement attempts. On the other hand, the feedback may uncover organization's or individuals' shortcomings. The conflict is likely to arise when the main focus is on weaknesses rather than their strengths. Hence, it is imperative to keep the goal of the assessment process in mind and ensuring that the people involved in the process are completely unbiased. The self assessment process is about taking the pulse of an organization – what is or isn't currently working well and what is hindering the progress? The process should be designed to expose the root causes of organizational problems, so that effective solutions can be implemented; or new methods can be implemented for things never done before. The self assessment will lay out the strengths that can be used and the limitations that might inhibit the implementation of project.

A critical self-assessment is important because we are sometimes too eager to accept that everything is good: "The institution is performing well. In all we have never had any complaints and our community members and stakeholders have always been

Principles of Effective Self Assessment:

Primarily, a self assessment should never be felt as threatening. A self-assessment should not be used to assess an individual, should not be used for punishment or reward or used for punishment or reward or used to blame someone. The following are the main principles:

1. It improves the enhancement of quality
2. It is essential for everyone in the organisation to support and know about the self assessment activities and contents, its advantages and disadvantages; so that everyone can contribute equally and no information is missed.
3. Not everyone has to agree with all the points in the self assessment report. For, there may be disagreement as to what are seen as weaknesses and strengths and what is considered as the cause of the weakness.

content and employees have never complained about the work. However this is not the case.

It is essential to conduct a self assessment of an organisation before the implementation of CSDRM approach to understand historical damage caused due to disasters. It helps the community based organisations to think through and identify root causes before finding a solution. Therefore, it is inevitable to involve all stakeholders in the projects and activities so that organisations truly become 'climate smart'. CSDRM approach would not only enrich policymaking, project planning and strategic steps but build long term adaptive capacity of people to evolve their own solutions.

An effective self-assessment is time-consuming. It requires some effort by all staff members; often, it requires an investment of time that has to be taken away from other activities. Such exercises will provide information that is known by a small group only. However, the long term return and the benefit of self-assessments are high.

4.2 Setting Indicators

Table 2: Following are the indicators followed by SWAD

Action Points	Guiding Question:	Indicators:
Collaborate *Strengthen collaboration and integration between diverse stakeholders working on disaster, climate change and development.*	To what extent are CCA, DRM and development integrated across CSOs? How are different at levels engaged? How is CSO working with organisations that focus on disasters, climate change and development? How is the community involved?	• Partnerships are established between CSOs and community members. • Barriers to CSDRM integration in empowering women, strengthening governance systems and reducing disaster, risk and climate change vulnerability. • Planning and implementation with national and state level organisations in disaster risk, climate change and development to improve integration for CSDRM approach.
Assess *Periodically assess the effects of climate change on current and future disasters risks and uncertainty.*	How is the knowledge from different departments including community, climatology, meteorology etc about hazards, vulnerability and risks can be used and integrated by CSOs and used by communities on their own?	• Community members and panchayat actively participate in developing and using climate information to make village resilient. • Community members must participate in the vulnerability and capacity assessments on regular basis and identify actions and ways to be build a disaster and risk resilient village.
Integrate *Integrate knowledge of changing risks and uncertainties into current projects to reduce the vulnerability and exposure of people's lives and livelihoods.*	How is the community incorporating and acting upon the knowledge about changing disasters and uncertainty? How are measures taken to tackle uncertainty from a perspective of a CSO? How are these steps and processes strengthening partnerships between different stakeholders?	• Risk management and risk reduction with climate scenarios that include the community's perspectives • Knowledge sharing on climate change across various sectors (such as women empowerment, building capacity, is reducing poverty, reducing disaster risks) and stakeholders (community members, panchayat and other partners) to reduce vulnerability through integrated planning. • Regular monitoring and updating the projects based on Climate change adaptation needs and new learning

Inform *Increase access of all stakeholders to information and support services concerning disaster risks, climate change and uncertainties*	How are varied educational approaches, early warning systems, media and community led awareness programmes supporting increased access to information about support services and rights?	• Climate information is made relevant to the needs of community and is communicated across the communities and public services no matter how remote • Communication strategies take into account perspectives of community members including marginalised groups regarding the risks and uncertainties • Community members have ready access to relevant climate information through formal and informal mechanisms and can apply the learning to reduce uncertainty and enhance their livelihoods.
Experiment *Strengthen the ability of community members and the local governmental and nongovernmental organisations to experiment and innovate*	How are the institutions, organisations, communities and government involved in tackling changing disaster risks and uncertainties creating and strengthening opportunities to innovate and experiment?	• Identification of opportunities for innovation and experimentation are encouraged, shared and undertaken through joint efforts with communities and stakeholders. • Diverse range of stakeholders share new ideas through networking and cross sectoral meetings at community, block and district level. • Programmes, polices and strategies are regularly updated based on learning and innovation
Learn *Promote regular learning and reflection to improve the implementation of policies and practices*	Have any practices been modified or changed as a result of learning by doing? Is there a process that helps information percolate from organisation to CSOs to community and vice versa?	• Motivate learning and reflective practices through different methods (for example using art to spread awareness) • Lessons learnt must be shared with the communities and local level institutions.
Be Flexible *Ensure policies and practices to tackle changing disaster risk are flexible, integrated across various sectors and have regular feedback*	What are the links between people and organisations working to reduce changing disaster risks and uncertainties at different levels?	• Community members are included in the monitoring process about the changing environment, potential risks and new opportunities. • Projects and plans implemented must be flexible in response to changing climate risks rather than a prescribed action, and these must be regularly reviewed and reassessed through continuous monitoring.

Plan *Plan for uncertainty and unexpected events*	Guiding Question: What processes are being carried out to support the capacity of the community members to plan for and manage the uncertainties of the future climate? How are you building capacity through exercises, systems and training to create integrated plans?	• Existing tools are adapted to incorporate changing disaster risks and are periodically reviewed. • Baselines and data collection reflect changing vulnerability and are periodically reviewed and updated to address risks and inform community members about the planning and action.
Challenge *Address poverty and vulnerability and their underlying causes*.	How do resilience interventions seek to secure community's rights to save lives and sustainable livelihoods? Are the impacts of climate change on community being adequately addressed?	• Socioeconomic baselines inform policy and planning. The analysis and baselines are periodically reviewed and polices and plans updated wherever necessary. • Project adopts approaches which address the impacts of climate risks on social, economic, environment and political inequality. • Projects support marginalised groups in accessing climate sensitive information and sustainable income generation and livelihood opportunities.
Advocate *Forge partnerships to ensure the rights and entitlements of communities to access basic services, productive assets and common property resources.*	Which networks and alliances are in place to advocate for the rights and entitlements of children to access basic services, productive assets and common property resources?	• Partnerships are identified and developed to address community's rights to access increasingly scarce resources, assets and common property. • Programmes support local communities to learn about rights and have continued access to support services during climate change and disaster risks • Programme design recognizes climate impacts on resource availability and adopts approaches which promote and ensure local community access and control over livelihood assets and resources.

Empower *Empower communities and local authorities to influence the decision of national governments, NGOs, international and private sector organisations and to promote accountability and transparency.*	To what extent are the community's needs are considered in the decision making structure? How do community members including women, children and other marginalised groups influence the decisions or engage in the decision making process? How do they hold government and other organisations accountable?	• Community actively contribute in public consultations and participatory decision making processes on policy and planning. • Programmes and policy information are made accessible to community members in a way that is easily accessible. • Capacity building and information sharing supports marginalised groups to engage in influencing high level decisions on disaster risk reduction and climate change adaptation that affect them.
Develop *Promote environmentally sensitive and climate smart development*	How are community based interventions protecting and restoring ecosystems and to what extent do these promote renewable energy to enhance resilience?	• Community based programme interventions contribute to protect and restore ecosystem services and natural resources with the participation of community members. • Community based programme interventions contribute to protect and restore ecosystem services and natural resources with the participation of community. • Community members and CSOs are supported to adopt appropriate renewable energy technological options.

4.3 Identifying Entry Points for Integration of CSDRM Approach

SWAD team decided to choose a strength as one of their entry point as they believe that they would be able to build on the activities better. SWAD has a lot of experience and expertise to spread awareness and information about the disaster risks, response and recovery uncertainties, government policies and climate change impacts. SWAD has been celebrating SWAD works a facilitating organisation between technical agencies from different states and local people. They have conducted many trainings for spreading awareness, sharing information, knowledge building. Disaster risk information is made available in the assessment of potential risks and for planning at community level. SWAD also aims to focus on to enhance the community resilience to climate risks. They aim to practice community based approach by encouraging discussion spaces to inform about policies and programs. Thus, the entry point chosen by SWAD is Inform.

The guiding questions and indicators are explained below:

Table 3: The guiding questions and indicators are explained below:

Action Points	Guiding Question:	Indicators:
Inform	How can varied educational approaches, early warning systems, media and community led awareness programmes promote enhanced access to information about support services and rights?	• Climate information is made relevant to the needs of community and is communicated across the communities and public services no matter how remote • Communication strategies take into account perspectives of community members including marginalised groups regarding the risks and uncertainties • Community members have ready access to relevant climate information through formal and informal mechanisms and can apply the learning to reduce uncertainty and enhance their livelihoods.

4.4 Finding a Pathway

Each of the action point integrates only with some of the action points. In theory we can integrate all the action points to all areas of our work. However, the real world the resources and expertise are limited. Thus, CSDRM approach acknowledges that priorities are needed to be made.

The following picture shows the pathway that is mapped out by DRM practitioners and policymakers to make the most relevant progress. The grey areas are the action points that are not involved in the pathway of our entry point (which in our case is Inform).

The suggested integration pathway for 'Inform' should read: 'Assess', 'Plan' and 'Empower'. Each pathway links the action points within the 3 CSDRM silos and as the actions are inter-**related, they need to be taken together.**

Silo 1 Tackle changing disaster risks and uncertainties	Silo 2 Enhance adaptive capacity	Silo 3 Address poverty and vulnerability and their structural causes
Inform	Plan	Empower

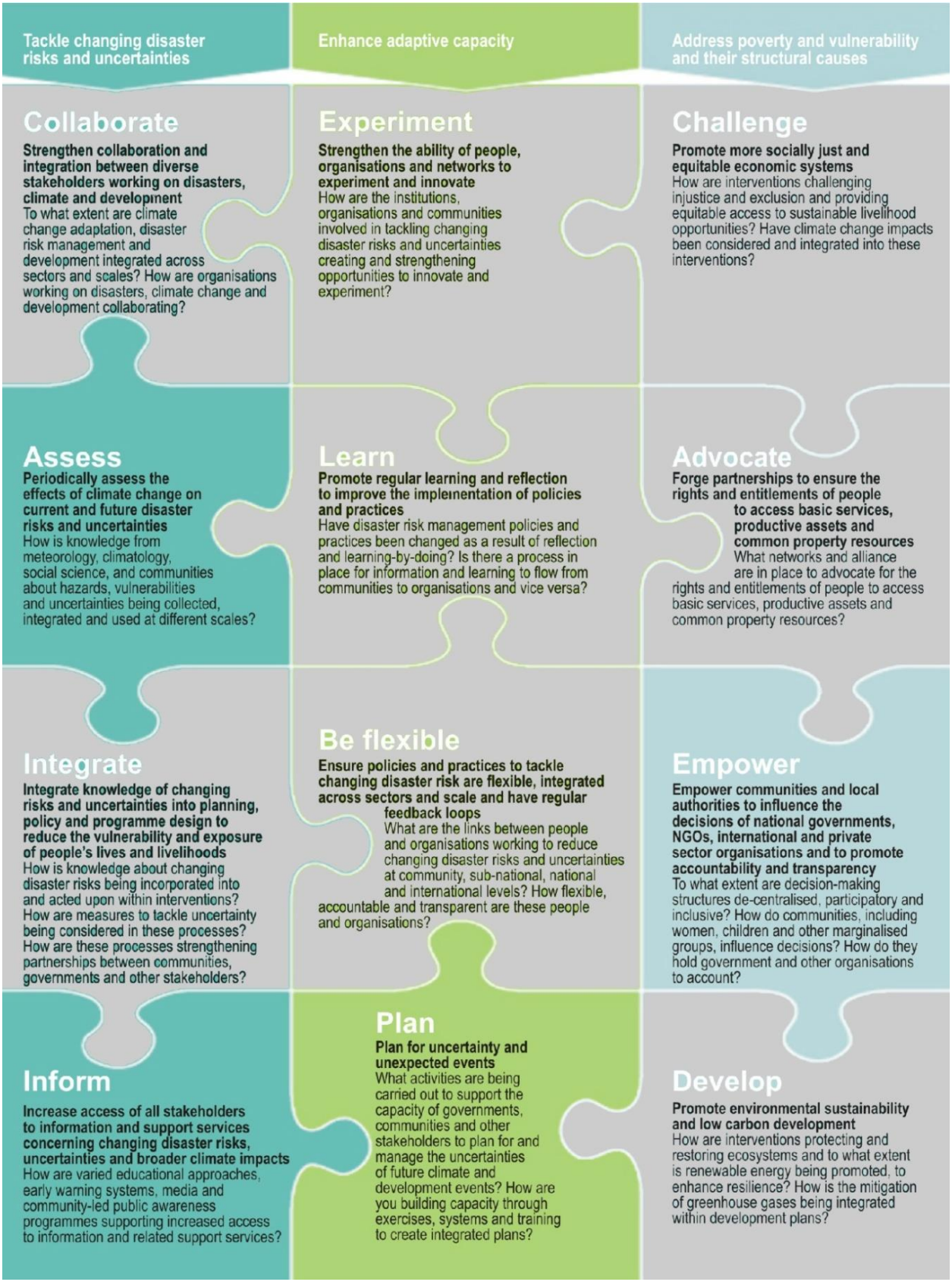


Figure 3: Integration Pathway with Inform being the starting point.

Source: Changing Climate, Changing Disasters: Pathways towards Integration, 2012

4.5 Monitoring and Evaluation (M&E)[2]

Growing threats posed by climate change has led to increasing interactions between fields of climate change adaptation and disaster risk reduction. This in turn increased the financial support received by climate change; thus making monitoring and evaluation become a 'headline issue'. However, the monitoring and evaluation frameworks are still in the very early stages of development (Van Der Berg and Spearman, 2009). In order to be equip the community to deal with the impacts of climate change, both government and community must involve in various adaptation interventions. However, the efficiency of these interventions varies in terms of the ability of different communities and economies to address the climate change risk. It is essential to monitor and evaluate these interventions to guarantee its efficiency, effectiveness and sustainability.

Different methodologies and tools such as CSDRM approach have been introduced that promote adaptation to climate change. Monitoring and evaluation frameworks supports learning and space to gather evidence that will allow for improved practice – which is the ultimate goal of M&E. Monitoring provides information on where the CSDRM approach is at a given time relative to its target; and evaluation is gives evidence of what targets have achieved and impacts of those on the CSDRM approach and implementation. Thus, M&E gives community based organization a chance to step back, reflect and appreciate what they have achieved. They are not in self-flagellation, but are opportunities for learning, growing, and shaping a better future for all. It is essential that the community based organization conducts internal reflection and learning to improve practice and recognize barriers for change.

The M&E approach by which adaptation and disaster risk management for community based organisation that needs to be evaluated involves understanding, flexibility and encouragement to understand the linkages between capacity, action and driving forces of communities and community based organisations towards change. Because of the diverse nature of adaptation, monitoring and evaluation becomes even more challenging; as it changes over time and each level has a different set of adaptive methods.

[2] http://www.cakex.org/sites/default/files/Learning-to-ADAPT.pdf

At monitoring and review stage, the community based organizations must identify the areas where change is needed.

Monitoring and evaluation needs to go beyond business as usual and climate change opens a window of opportunity to rethink current monitoring and evaluation to rethink current monitoring and evaluation process. In order to support the rethinking of M&E practices for climate change adaptation and disaster risk reduction, the ADAPT principles are proposed to guide the development of future M&E approaches, frameworks and indicators which embrace learning and contribute to evidence based understanding of the process that may enable or constrain the capacity to adapt. (Look Annexure 1 for M&E Framework for SWAD)

"Cities are lifelines of society and engines for economic growth. The challenges posed by climate change – make many urban dwellers vulnerable to natural hazards. Therefore, it is essential to focus on building disaster capacity of urban areas."

-Ambica Nanda Prasad
United Nations Development Program (UNDP), Odisha

Table 4: ADAPT Principles

ADAPT Principles[3]	
Adaptive	Indicators reflect possibility of changing conditions
Dynamic	Indicators capture the way processes are changing
Active	Indicators capture actions rather than states
Participatory	Indicators are developed by and with those affected by interventions
Thorough	Indicators include maladaptation indications and capture how, or not, the intervention addresses the underlying causes of vulnerability

[3] http://www.cakex.org/sites/default/files/Learning-to-ADAPT.pdf

5

PLAN OF ACTION WITH CSDRM APPROACH

For the CSDRM approach to be successfully implemented, it is crucial that is application is appropriate and effective. Practitioners and the communities work with often have very different understanding of disaster risks. Therefore, appropriate investment in understanding the context and tailoring the approach is vital. (Changing Climate, Changing Disasters, 2012)

It is important to remember that contextualising CSDRM approach will look different in different places, but will usually take one or two forms (Changing Climate, Changing Disasters, 2012).

It can involve tailoring the process of applying the approach or contextualising the content of the approach. The CSDRM approach is implemented in the context of four major areas:

1. Community Based Disaster Preparedness:
2. Community Governance in Infrastructure Services
3. Climate Change Adaptation and Livelihood Promotion
4. Building Disaster Resilience

SWAD used Participatory Action Research (PAR) process to review and analyse their organisational policy, strategy and projects using the CSDRM approach. This will help the organisations to move towards a climate smart approach to disaster risk programming. The implementation at the institutional level could have been a daunting task, but the team members of SWAD with support of All India Disaster Mitigation Institute (AIDMI) began with the self assessment exercise.

Theme	Community Based Disaster Preparedness
Main Components	1. Disaster Preparedness 2. Capacity Building 3. Risk Transfer 4. Women Empowerment
Key Actions	1. Structural Modification: Building Resilient Shelters 2. Livestock Management Training and vaccination details 3. Flood resilient varieties for paddy 4. Kitchen Garden 5. Seed Storage
Choosing Action Points and Indicators	**Empower:** 1. Community actively contribute in public consultations and participatory decision making processes on policy and planning. 2. Programmes and policy information are made accessible to community members in a way that is easily accessible. 3. Capacity building and information sharing supports marginalised groups to engage in influencing high level decisions on disaster risk reduction and climate change adaptation that affect them.
Integration using CSDRM approach	1. Building eco friendly resilient shelters (having bigger windows so that less electricity is needed) 2. Using the cow dung as manure and in production of biogas (renewable source of energy); also, using less fertilisers and pesticides in the grass to keep them healthy for a longer period of time. 3. Kitchen Garden: Promote using home-grown compost rather than chemical pesticides and fertilisers. 4. Seed Storage: Use recyclable bags / sacks to store seeds
Main Components	1. Governance: Convergence by implementation of policies, planning infrastructure and advocacy 2. Risk Transfer
Key Actions	1. Involve in the community planning and decision making at panchayat level 2. Solving the problems regarding drinking water, irrigation and water sanitation problem 3. Building roads (infrastructure) 4. Use of Renewable Energy such as biogas and solar energy
Choosing Action Points and Indicators	**Plan:** 1. Existing tools are adapted to incorporate changing disaster risks and are periodically reviewed. 2. Baselines and data collection reflect changing vulnerability and are periodically reviewed and updated to address risks and inform community members about the planning and action

Theme	Community Governance of Services	
Integration using CSDRM approach	1. Ensuring that the cascading effects of building infrastructure are avoided, the plinth of the roads between the villages must be higher. 2. Ensuring that the plinth level of tube wells is higher so that that during extreme events such as floods and cyclones; people have access to clean drinking water 3. Ensuring that each village follows hygienic sanitation system to reduce the outbreak of diseases in times of disasters. 4. Ensuring that women are actively involved in the decision making process so that they are aware of the situations and thus prepared. 5. Involving villagers in the micro insurance or *Afat Vimo* (disaster insurance); so that they can survive in times of disasters.	
Main Component	1. Climate Change Adaptation 2. Capacity Building 3. Livelihood Promotion 4. Women Empowerment	
Actions	1. Renovation of drainage pipes (2, 100 acres) 2. Pond Renovation; promote aquaculture for livelihood 3. Rainwater Harvesting 4. Treating saline water 5. Promoting and training people for mixed cultivation of crops; reduce use of fertilisers and pesticides 6. Farm sector related activities including livestock management 7. Involving women in the construction work and training them for livelihood techniques	
Choosing Action Points and Indicators	***Inform:*** 1. *Climate information is made relevant to the needs of community and is communicated across the communities and public services no matter how remote* 2. *Communication strategies take into account perspectives of community members including marginalised groups regarding the risks and uncertainties* 3. *Community members have ready access to relevant climate information through formal and informal mechanisms and can apply the learning to reduce uncertainty and enhance their livelihoods.*	***Plan:*** 1. *Existing tools are adapted to incorporate changing disaster risks and are periodically reviewed.* 2. *Baselines and data collection reflect changing vulnerability and are periodically reviewed and updated to address risks and inform community members about the planning and action.*
Integration using CSDRM approach	1. Rainwater Harvesting and treating saline water: Ensuring that the water is stored at a higher plinth level so that people can use in extreme times such as cyclones and floods	

Theme	Community Governance of Services
Main Components	1. School Safety 2. Hazard, Vulnerability and Capacity Assessment 3. Risk Transfer
Key Actions	1. Awareness training 2. Teachers training
Choosing Action Points and Indicators	**Inform:** 1. Climate information is made relevant to the needs of community and is communicated across the communities and public services no matter how remote 2. Communication strategies take into account perspectives of community members including marginalised groups regarding the risks and uncertainties ***3.*** Community members have ready access to relevant climate information through formal and informal mechanisms and can apply the learning to reduce uncertainty and enhance their livelihoods
Integration using CSDRM approach	1. In the disaster resilient schools buildings ensure that the windows are big so that the rooms are airy and well lit up 2. Ensure that students and school staff actively take part in planting trees, using recyclable materials, wasting less paper etc 3. Raise disaster risk awareness and knowledge among school children and other related stakeholders (teachers, parents, school management and village development committees) and help them identify and understand the components at risk (through School Safety Audits and the resulting school disaster preparedness plans) and the required measures to reduce their vulnerability.

6

CASE STUDIES

6.1 INSTITUTIONALIZING CSDRM

The CSDRM approach has been extremely useful to SWAD in helping them move ahead in their journey with local communities and institutions through the process of self assessment. The organisation's readiness to apply its learning into action has created an enabling environment among SWAD team and facilitators.

A self assessment exercise was conducted with the team of SWAD; it was revealed that the climate change actions were limited to a single campaign or action. It was seen that this was common in the most of the community based organisation as they were project based. The CSDRM approach helped the team of SWAD to understand the importance of integration activities. The main outcomes of the discussion were:

Major Challenges encountered: Since SWAD is a project based organisation its resources are limited and so are the time frames for the project. The team members are divided into small teams who work on specific projects. In addition, skills and knowledge of members are less due to limited information available on CSDRM approach as it is implemented at local level for the first time.

How to address these challenges? The team took these challenges as opportunities to learn and grow. They decided to SWAD team address the challenges by using participatory tools build their knowledge in the CSDRM approach and making their activities climate smart. They came up with short and long term plan of actions in the line of ongoing campaign and activities.

The reviewed plan now identifies CSDRM for use at the institutional level. This will help them to build strategy for better integration in a realistic manner that will lead to building capacity in integration of DRR, community participation and adaptation.

SWAD addressed M&E component in its plan of action for constructive efforts in the line of CSDRM approach. Taking the three pillars into account, it has identified series of indicators for action points through consultations process at institutional level.

SWAD understands the importance of CSDRM and shows readiness to keep an eye on ongoing basis. However, they also recognise that for local NGOs it is time consuming process and require investment of time at different level constantly for effective results. Currently they are emphasizing on integration within different actions at organisational level, once they are confident at this stage, they will build on their existing partnerships to collaborate in applying CSDRM and ready deal with scientific data of climate related services as well.

6.2 Livelihood Security and Climate Change Adaptation

To be climate smart, DRR must able to address both sudden-onset high impact shocks and slow onset disasters. In addition to this, it should also link with day-to-day risk faced by local communities especially in relation with livelihoods. SWAD, being located in coastal areas and working on making livelihood disaster resilient and women empowerment through capacity building; have shown commitment make livelihoods climate smart as well. Sustainable livelihoods programmes that seek to build long-term human securities (food, livelihood, shelter and water) are critical elements in building resilience in coastal communities that depend essentially on farm economy. SWAD with focus on inform communities decided to incorporate with climate and climate adaptation related information in its services to local communities and institutions including schools, PRIs, and SHGs.

Major challenges encountered: There is an ongoing need to develop more capacity to cope with increased variability and unpredictability in the future. However, the lack of tools to overlay knowledge about climate change and climate change adaptation makes the rural communities more vulnerable. In addition, they lack the financial ability to alleviate poverty from the community. Another major challenge was difference in understanding of the terms such as vulnerability and uncertainty between target communities and scientific definitions.

How to address these challenges? One of the root causes of disruption in livelihood was over dependency on climate. This was addressed by adapting climate smart methods such as use of disaster resilient varieties of crops; vertical or horizontal crop diversification; and diversifying into rural nonfarm activities. These methods will ensure that the communities adapt to climate

change. Incorporating climate smart activities in each sector is lengthy but much essential process.

6.3 School Safety

The children are often of the most vulnerable groups to disaster and climate risks. The school based disaster risk reduction program aims to build resilient communities where children and youth can develop a culture of safety and take an active role in disaster risk reduction. It is vital to ensure that specific attention is paid to the needs of boys and girls of different age groups.

Major Challenges Encountered: As we know that participation from everyone is crucial when conducting a self assessment exercise. It was difficult to explain children the importance of this exercise and the CSDRM approach and a lot of time was invested in ensuring that everyone understood the approach and its meaning and need. In rural India, the parents do not allow the children to attend school due to unsafe school buildings, trauma, survival hardships and lack of knowledge about disaster preparedness. Thus it is essential to explain the parents about the approach and involve them to have a successful implementation of CSDRM approach. SWAD provided the technical support to schools to facilitate workshops both for school students and children.

How to address these challenges? SWAD believes that children play a major role in CSDRM approach at school level as their activities will truly make the schools climate smart. To address the challenges, children were asked to draw pictures that illustrated the impacts they faced due to disasters, climate change and what can be done to avert the adverse effects of such risks. In addition, the schools must incorporate an element of being climate smart in all its activities. Being climate-smart at schools will not only involve educating children and school staff about energy efficiency, environment and recycling, but also allowing them to manage the implementation of green measures at school. It is proved that encouraging students to take responsibility for the climate smart activities at school will develop a sense of responsibility for the surrounding as well. Additionally, parents were involved by sharing information and experiences of reducing disaster risk through preparedness.

SWAD understands that it is a colossal task to implement CSDRM approach at schools. However, the schools must invest

time and efforts to implement the approach in schools and make them climate smart. Several mock drills, projects and extracurricular activities such as planting will help students understand different ways to be climate smart and thus reduce carbon footprints.

6.4 Risk Transfer

Under the project 'Building Disaster Resilient Vulnerable Communities' supported by DIPECHO; SWAD was the leading facilitating agency of the project with clients and insurance company. The technical support was provided from AIDMI while the insurance policies were provided by United India Insurance Company (UIIC) and Life Insurance Cooperation (LIC). Micro insurance is insurance for low income people and business in developing countries characterised by low premiums and low coverage limits. It is a group insurance policy that covers for life and non life insurance.

Despite of high level of economic growth seen in India over the past decade, the cycle of disasters and vulnerability deprives many millions of poor of the human development that might have accompanied growth. Economic recovery is one of the key requirements for successful restoration and building of systematic resilience. Relief, rehabilitation and spreading awareness of mitigation measures are useful, but not enough as it is impossible for poor communities to recover all their losses post disaster and be prepared for future. In such scenario, disaster insurance can be very helpful.

Afatvimo (Disaster Insurance) – a financial tool for risk sharing was introduced in Gujarat in 2004 during earthquake recovery. Vulnerable and marginalised communities are who are also the poorest suffer the most and such shocks push them further into poverty. It was found that it was an effective way to reduce risks of policyholders and offer financial protection post disasters. Thus it was replicated in Odisha. Micro insurance penetrated further into the communities of the poor, in order to accelerate the economic recovery of poor communities.

Major Challenges Encountered: Main challenge with disaster insurance is self sustainability. The organisation needs to make the disaster insurance financially sustainable. Since SWAD is a project based organisation, at the end of the project they did not know how to carry it forward. However, they understood that the

coastal community were in dire need of micro insurance and other techniques that build their capacity to be disaster resilient.

How to address these challenges? To address this problem, SWAD with its team members agreed to maintain the current policyholders and help them in their interventions; and started promoting the importance of micro insurance. Even after the project completion, AIDMI continues to provide them the technical support as before. . In addition, they are still scaling up to bargain for commissions from insurance companies and strengthen policy framework to put more pressure on the company.

6.5 CYCLONE *PHAILIN* AND SWAD'S RESPONSE

A severe cyclonic storm '*Phailin*' made its landfall in Gopalpur in Ganjam district in Odisha on October 12, 2013; affecting more than 9 million people and killing approximately 44 in Odisha. Several hundred thousands of homes were washed away when wind-driven tidal surges up to 3 meters destroyed the coastal belt. The storm brought additional rainfall to inland areas that have already borne the brunt of an overly active monsoon season. Many areas of the affected districts are inundated; houses, roads and embankments were damaged; and drinking water ponds are contaminated. Crops worth 2,400 crore was destroyed by the cyclone making it one of most severely affected sectors.

A visit to Balapur village, Puri district (pre cyclone) helped to understand if the early warnings had reached the communities and if the necessary preparedness actions were taken by the community. The community members said that they were cutting the tree branches (as a preventive measure to evade loss of lives or injury); stocking essential goods such as kerosene, water, keeping important documents in plastic bags and moving to closest shelters or safer locations. Mrs. Binapani Mishra, Secretary, Society for Women Action Development (SWAD) related how the Panchayat Raj members received early warnings and alerts from state government.

This efficient planning of preparedness activities in the pre-disaster state is perhaps the greatest reason behind the minimal loss of life after the cyclone. Other reasons include the constant monitoring of weather patterns and warnings, clear instructions to district authorities, positioning of relief materials and teams well in advance, coordination with the central government for defence and other agencies' assistance, and most importantly, the evacuation of a large number of vulnerable citizens to safe locations.

The rapid assessment post *Phailin* was carried out by SWAD in Ganjam and Puri district, it was found that the immediate relief did not reach the poorest and the most vulnerable. In addition it was evident that several cyclone shelters were not well maintained. Secondly, the government and the humanitarian agencies must prioritize the rapid restoration of livelihoods across the cyclone affected areas. The water inundation in thousands of acres of land had destroyed all the standing crops; which affects all agriculture allied activities. Thus, a massive alternative livelihood strategy is urgently needed.

As the frequency and scope of losses due to major natural catastrophes, especially tropical cyclones, continues to increase, there is a growing need to explore other options for managing and transferring risks associated with climate change. Market insurance and risk transfer solutions – disaster insurance - can be part of the solution in enabling disaster-prone states to successfully manage the new climate risks on the horizon.

Afatvimo (Disaster Insurance) – a financial tool for risk sharing, which was replicated in Odisha helped several post cyclone *Phailin*. Several insurance holders were able to make claims post cyclone in Puri, Odisha as they had covered themselves under the policy to protect against loss and damage to their shelter, livelihood and household items. The case is under process, and such policies that target the poor and vulnerable communities help to build their capacity against climate change.

In addition to it, SWAD has joined hands with Catholic Relief Services (CRS) and UNDP (United Nations Development Programmes) to develop and implement various recovery programmes that will make the communities sustainable.

LESSONS LEARNT AND RECOMMENDATIONS

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1. Directly involving communities by discussing about uncertain situations due to climate change not only increases the awareness but helps to gain support of the community to implement future actions to mitigate the risks. CSOs such as SWAD work at ground level and thus the support from the community plays a significant role.
2. Being climate smart will include climate adaptive strategies. Implementation of new agricultural practice such as varying the time of seed plantation or having mixed cultivation or using disaster resilient crops can reduce the agricultural losses. Using such practices will not only reduce their dependency on climate but will help the communities recuperate losses and offer opportunities to make more profits in following cropping seasons.
3. Enhancing adaptive capacity of farmers through horizontal and vertical integration such livestock management training, animal husbandry, fish farming will reduce the vulnerability of the community during the times of low productivity.
4. Due to the wide choice of action points, it takes time to choose the right one for the organisation and then create indicators that can be implemented at ground level.
5. It is essential to understand the local knowledge and their perception about the adaptation strategies. It must be a two way learning process where SWAD learns from the community and their adaptation methods while communities learn about the threats posed by climate change and new technological innovations to mitigate those risks.
6. It is vital to communicate the CSDRM approach and disaster related information in the user friendly format. Overcoming this challenge requires a lot of attention to detail and understanding of the subject. This is very important while taking CSDRM at local level.
7. Facilitating interactions between communities and other members, particularly government helps to reach a greater number of people.
8. Community members have been responding to climate change by modifying their traditional methods. Therefore,

it is important to know and understand their adaptation techniques before introducing them to new methods.

9. Institutions such as SWAD should make efforts to find ways to modify the traditional techniques to make them user friendly and climate smart. Local institutions have high interest in institutionalising CCA component, however, facilitation, availability of key tools and enabling environment are key issues.
10. Some adaptive techniques such as relocation of village is easier in theory, however very difficult to implement where the lives of people are heavily dependent on the coastline or land or river. Implementing institutions at local level can offer adaptive techniques are user friendly and plans must be flexible so that they are easier to implement. Integration in all sectors should always be a priority to avoid any cascading effects on the community.
11. Develop climate awareness at local level become first step towards becoming climate smart for institute working with local communities that prone to climatic hazards. People may aware about impact of climate change but not with the root causes of climate change and contribution actions that they could make to mitigate.
12. It is important to understand how the local community understands, perceive meaning of different climate related terms. The existing local capacities and adaptive capacities should be studied for better implementation of CSDRM with local communities.

CONCLUSION

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Population is continuously rising, and the planet can no longer afford the reckless and environmentally disastrous system. It is essential to include all the members including children in climate smart activities so that each one of us can play a critical role in tackling the issues for climate change and sustainability. No government will be completely able to handle all the challenges and threats that natural disasters pose. No matter how strong the policies on disaster risk reduction and climate change adaptation are; a multi stakeholder approach is necessary to handle multiple risks at different levels. Thus, all governmental and nongovernmental organisations at different levels must start integrate Climate Smart approach in all its activities; only then will the risks will be reduced.

Being climate smart is the first step to prepare communities and especially children to deal with problems of climate change so that they can come up with solutions in future. This can be done through the CSDRM approach which not only facilities the process of analysing whether the existing programs and initiatives are climate smart are not, it also facilitates that identification of the pathways of integration that can help institution in ensuring resilience. The CSDRM approach was developed with DRM practitioners and policymakers in mind; it is evident from the research that it has uses beyond target community (Changing Climate, Changing Disasters, 2010).

India is unique in its rich cultural heritage, diversified geographical and climatic conditions, with the snow covered mountains (Himalayas) in the northern side and rain forests in the south, the Indo-Gangetic Plains ,the Deccan Plateau, the major life-giving Rivers which make the areas fertile, deserts on the western side, drought prone areas and long stretches of coastal areas. However, in the past few years India has experienced adverse effects of climate change in form of disasters. The bottom line is we need to change our way of thinking and adapt in the face of this ever-present reality of more disasters and their devastating toll on people's lives. We can make a difference in the face of indifference.

REFERENCES

AIDMI (2011). *The Impact of Microinsurance in South-east Asia.*

AIDMI (2012). *Microinsruance for Disaster Risk Reduction: Module for Practitioners*.

AIDMI. (2011). *Towards Climate Smart Disaster Risk Redcution* .Available: http://www.preventionweb.net/english/professional/publications/v.php?id=29791. Last accessed 27 May' 13.

CDKN. 2012. *Managing Extreme Climate and Disasters in Asia: Lessons from IPCC SREX Report.* Available at: http://cdkn.org/wp-content/uploads/2012/04/Lessons-from-the-IPCC-SREX-report-for-Asia.pdf [Last Accessed: July 12, 2013].
German Academic Exchange Services. 2010. Inter-University Council for East Africa. *A Road Map to Quality:*, Vol 3: Guidelines for Self Assessment at Institutional Level.

Gupta, A and Nair, SS. (2012). *Environmental Extremes Disaster Risk Management – Addressing Climate Change*. National Institute of Disaster Management, New Delhi. P 40.

Harris, K., Seballos, F., Siva Villaneuva, P., and Curmi, P., Changing Climate, Changing Disasters: Pathway Towards Integration (2012) Strengthening Climate Resilience, Brighton, IDS.

IDS, Christian Aid, Plan UK and UK aid (2010-2012) *Strengthening Climate Resilience. Changing climate, Changing Disasters: Pathways to Integration.*
IPCC (2007), Climate Change 2007: *The Physical Science Basis, Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Solomon, S., Qin, D., Manning, M., Chen, Z., Marquis, M., Averyt, K.B., Tignor, M. and Miller, H.L. (eds.). Cambridge University Press: Cambridge, UK and New York, NY, USA, 996pp

IPCC, 2012: *Managing the risks of Extreme Events and Disasters to Advance Climate Change Adaptation – Summary for Policymakers* [Field, C.B.,V. Barros, T.F.Stocker, D.Qin, D.J Dokken, K.L.Ebi, M.D.Mastrandrea, K.J. Mach, G.K. Plattner, S.K.Allen, M.Tignor, and P.M. Midgley (eds)]. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change. World Meteorological Organisation, Geneva, Switzerland, 24pp. (in Arabic, Chinese, English, French, Russian and Spanish).

Merylyn Hedger, Ashok Singha and Mohan Reddy (2010), *'Building Climate Resilience at State Level: Disaster Risk Management and Rural*

Livelihoods in Orissa', Strengthening Climate Resilience Discussion Paper No. 5, Strengthening Climate Resilience, Institute of Development Studies, pp. 10-11

Mitchell, T. and Ibrahim, M. 2010. *Climate Smart Disaster Risk Management: In brief. Strengthening Climate Resilience*, Available at: http://community.eldis.org/.59e0d267/SCR%20DRM%20overview.pdf [Last Accessed: 8th July' 2013].

Mitchell, T., Ibrahim, M; Harris, K.; Hedger, M.; Polack, E.; Ahmed, A.; Hall, N.; Hawrylyshyn, K.; Nightngale, K.; Onyango, M.; Adow, M.; and Sajjad Mohammed, S (2010). *Climate Smart Disaster Risk Management, Strengthening Climate Resilience, Brighton: IDS*

Plan International (2011). *Strengthening Climate Resilience*: *A Child Centred Approach to Climate Smart Disaster Risk Management.* Available at: www.plan-uk.org/resources/documents/child-csdrm [Last Accessed: July 8, 2013]

SIDA. 2009. *Summary Report: Stockholm Policy Forum on Climate Smart Disaster Risk Management.* Available at: http://www.unisdr.org/files/12010_StockholmPolicyForumsummaryfinal.pdf [Accessed: 08 July, 2013].

SWAD (2007). *Strategic Plan for 2007-2012: Strategic Development for SWAD.*

SWAD (2012). *Annual Report: 2011-2012 for Society for Women Action Development*

Villanueva, P. 2013. *Learning to ADAPT: Monitoring and Evaluation Approaches in Climate Change Adaptation and Disaster Risk Reduction – Challenges, Gaps and Ways Forward. SCR Discussion Paper 9,* Available at: http://community.eldis.org/.59d49a16/Learning-to-ADAPT.pdf [Last Accessed: July 8, 2013].