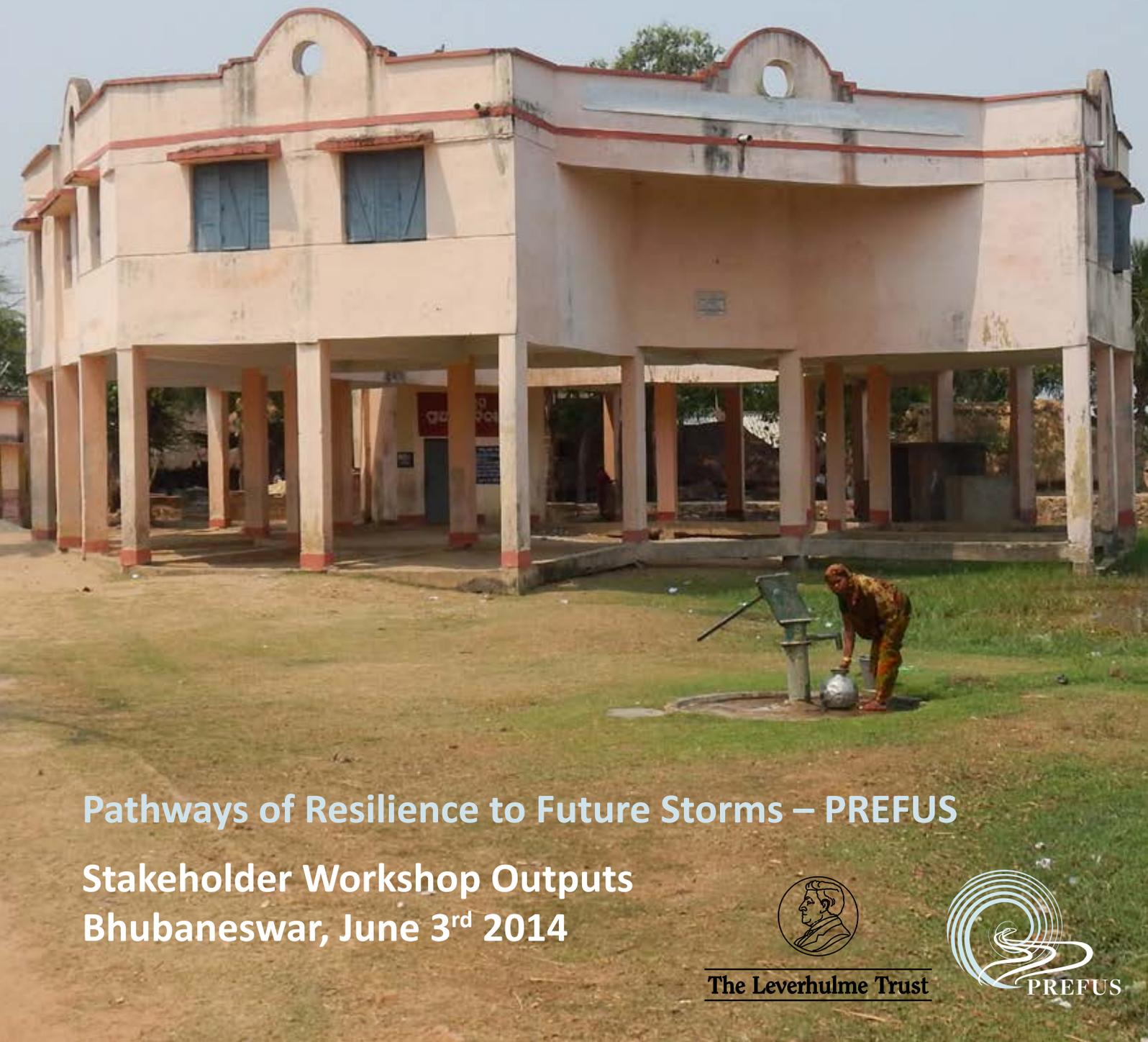


# Institutional barriers and options for building disaster resilience in the agricultural sector in Odisha



Pathways of Resilience to Future Storms – PREFUS

Stakeholder Workshop Outputs

Bhubaneswar, June 3<sup>rd</sup> 2014



The Leverhulme Trust



## The PREFUS project

The PREFUS project aims to understand what builds or erodes the resilience of rice cropping and rice farmers to natural disasters (e.g. cyclones) and other climatic shocks in coastal Odisha. A state-level workshop was held in Bhubaneswar on the 3<sup>rd</sup> June 2014 to introduce the PREFUS project to key state-level stakeholders in the disaster management and agriculture sectors (Government officials, United Nations, International and local NGOs and academics). The workshop was attended by over 30 participants. This paper presents a summary of the key discussion points of the stakeholder meeting.



## Workshop Context

Currently discussions are on-going over the composition of the new global post-2015 framework for disaster risk reduction (DRR); this framework will be finalised at the World Conference on Disaster Risk Reduction in March 2015. The pre-zero draft of the post-2015 framework for disaster risk reduction seeks to build upon the existing Hyogo Framework for Disaster Risk Reduction (2005 – 2015)<sup>1</sup>. During the implementation period of the Hyogo Framework for Disaster Risk Reduction (HFA) there was a strengthening of institutions and policy for disaster management with reduced mortality risk from floods and tropical cyclones at a global level<sup>1</sup>.

However, during the same period there has been an increase in economic and social losses due to disasters and an acknowledgment that poverty, low levels of economic development, climate change and limited capacity for local governance are drivers of disaster risk<sup>1</sup>. There has also been less progress in addressing the root causes of vulnerability to disasters during the HFA implementation period<sup>1</sup>. It is increasingly recognised in policy fora that an increasing risk of disasters will undermine socio-economic development gains and, in reverse, low levels of socio-economic development increase disaster risk<sup>2,3</sup>. The pre-zero draft for the post-2015 framework for disaster risk reduction outlines 'guiding principles' and 'priorities for action' to build upon HFA success and address its limitations.

The coastal regions of Odisha, a state in eastern India, are a typical reflection of the global situation. Since a super-cyclone in 1999 which resulted in 10,000 fatalities state and local institutions have strengthened approaches to disaster management which has reduced the mortality risk<sup>4,5</sup>. This was evidenced recently in October 2013 when cyclone Phailin caused less than 50 fatalities. However, natural disasters still cause significant losses to livelihoods; floods in 2008 affected 465,000 ha of cropland and cyclone Phailin affected 650,000 ha of cropland<sup>4,6</sup>. The disaster impacts on agriculture in Odisha are significant given the vulnerability of the rural population; rural poverty rates stand at 39% and 83% of farmers are small and marginal<sup>7,8</sup>. Options to enhance the disaster and climate resilience of agriculture in Odisha are important to reduce impacts on rural livelihoods. Strengthened disaster resilience may enhance growth and stability in the agricultural sector with positive impacts on rural communities leading to an overall reduction in underlying vulnerability drivers. The State Government's agricultural policy aims to boost economic returns for farmers<sup>8</sup>. In the context of high levels of exposure to intensive and extensive climate shocks such policy aims will be undermined without enhanced disaster resilience in the agricultural sector.

The final deliberations over the post-2015 framework for disaster risk reduction will largely be a top-down process conducted at an international level. However, it is at the local level that disaster impacts occur and where responses to, and management of disaster risk are implemented. For the negotiations to produce a framework which successfully addresses the root causes of vulnerability, reduces economic losses and builds towards disaster resilient development it must fit with local needs and capacities. Therefore, it is important to develop the post-2015 framework with consideration of local experiences such as those in the agricultural sector in Odisha.

Within this context, the Pathways of Resilience to Future Storms (PREFUS) project held a workshop in Bhubaneswar, Odisha, with various stakeholders from the agricultural and disaster management sectors to discuss barriers and opportunities for formal institutions to build resilience in the agricultural sector. This document presents a summary of the key outcomes and discussion points from the workshop.

## Key Workshop Messages

### 1. Effective and holistic resource governance at all levels

*Participants at the workshop articulated the need for effective and holistic governance of resources in the agricultural sector, and, that this does not just refer to ensuring quantity and availability of inputs. It should also encompass: the capacity, knowledge and skill to utilise resources, ownership of resources, sustainability of resource use, equitable access to resources, quality of resources and timeliness of resource availability.* It was suggested that if resource governance enabled all of these attributes it would enhance the capacity of farmers, especially the poorest and marginal, to adapt and cope with climatic stresses and shocks. Discussions at the workshop often focussed around seeds; specifically, the need for suitable seeds given current and localised climatic conditions (e.g. salt tolerant varieties in coastal areas), the need to enhance farmers' access and capacity to use high-yielding varieties and climate resilient seeds and, increasing the availability of seeds in time for planting. However, the same principles for resource governance were mentioned with reference to a range of agricultural inputs including fertiliser, irrigation and man power. For example, it was mentioned that outreach and extension in the agricultural sector would be enhanced through greater human resources and capacity building in local level agricultural institutions.

### 2. Bottom-up stakeholder engagement and would enhance policy focus

Participants suggested the effectiveness of Government policies is undermined by the nature of implementation at the local level. Government policies at the village level are not universally supporting or strengthening existing community coping mechanisms, traditional agricultural practices, ownership of resources or accounting for vulnerable groups. Thus, there was a lack of policy 'fit' to the site of implementation and the situation of the beneficiaries. This is undermining the impact government policy and schemes have in increasing the resilience of agriculture to climatic shocks and stresses. Participants felt tailoring policy which matches the capacity and skill of farmers, reflects a community voice and accounts for vulnerable and marginalised groups would enhance positive impacts. *The workshop discussions suggest strengthening institutional capacity at the local level is important, yet, not sufficient to have resilience building impacts. Policy must be formulated with engagement of primary stakeholders (the farmers) to enhance its 'fitness for purpose', its applicability to complex on-the-ground situations and ensure effectiveness of uptake and performance.*

### 3. The impact of climate change needs urgent consideration

Whilst participants acknowledged that there is a Climate Change Action Plan for Odisha, which encompasses issues of natural disasters and the agricultural sector, there is a need to better understand the impact of climate change on agriculture and develop adaptive responses. Discussions around this issue at the workshop largely focused on increasing the availability of seeds better suited to location specific climatic and environmental stresses. For example, in coastal regions there is a need for salt tolerant rice varieties yet further inland, by river channels, there is a need for submergence tolerant rice varieties. Given current sensitivities, the impacts of climate change on the agricultural sector will undermine development in rural communities, increase existing vulnerabilities and lower resilience to disasters. In rural Odisha, especially in the agricultural sector, there are blurred distinctions between climate change and natural disaster vulnerabilities and impacts. This is not well reflected at the international governance level where the two issues are addressed in separate silos (UNFCCC and UNISDR). ***Natural disasters in coastal Odisha are hydro-meteorological in nature (cyclones and floods), thus, there are overlaps between strategies which build natural disaster resilience and enhance adaptive capacity to climate change. Identifying options to address these two issues synergistically would be a more efficient use of already stretched government and institutional resources.***

### 4. Without fair and functioning markets there is perpetual vulnerability

Participants at the workshop noted that agriculture is not remunerative or generating economic growth in rural communities which exacerbates household vulnerability when disasters strike. With the current state of rural markets it is difficult for small holders to generate savings from agriculture limiting capacity to recover after disasters. It was highlighted that several different facets of vulnerability were perpetuated by the poor state of markets for agriculture. For example, with limited access to markets farmers were not generating much income or savings and, therefore, relied on loans to obtain agricultural inputs. Repeated disasters (such as cyclone Phailin) and localised climate shocks (such as small scale waterlogging) increase the rate of loan taking and undermine farmers' capacity to repay loans forcing them into 'loan traps'. Government welfare schemes designed to alleviate poverty are having, complex, negative side-effects on growth in the agricultural sector and in some situations are undermining socio-economic development and disaster resilience. For example, limited functioning of NREGS (a welfare scheme which provides employment for unskilled labour) meant that loan taking for farmers was a riskier option but also necessary to afford agricultural inputs. Also, in some instances Government schemes to subsidise food grains for the poorest households are acting as a disincentive for agricultural labourers to work, driving up the cost of labour and undermining agricultural productivity. Participants from NGOs mentioned that leakage of food grains from food welfare schemes into markets is influencing the price farmers' are getting for their crops. Whilst social protection schemes are important measures for addressing vulnerability, it is important that they are designed and implemented in a manner that complements, rather than inhibits, markets and economic growth in the agricultural sector. This should be an area for further research.

There are strong and reinforcing links between equal access to functioning markets and resilience to natural disasters in rural, agricultural locations. Repeated climatic shocks, stresses and natural disasters limit crop yield and undermine farmers' capacity to engage in markets, make it riskier for farmers to rely on markets and act as a disincentive for market development. Without access to markets as a means to accrue income and assets from agricultural produce small holders often remain poor, and therefore, more vulnerable to disasters. However, access to markets for agricultural produce can provide opportunities for growth and income for smallholder farmers. This would contribute towards lower levels of impoverishment; reducing levels of a well-recognised risk driver. Likewise, increased income from agricultural produce would enable households to accrue assets and save. This would place them in a better position to cope with shocks and also to buy higher quality inputs for cropping. The higher quality inputs would enable farmers to i) boost yield levels and stability thus facilitating greater returns from the market and ii) access inputs (e.g. seeds) better suited to climatic conditions reducing the impact of climate driven shocks and stresses.

In coastal Odisha, efforts to increase the resilience of agriculture to climate and natural disaster impacts should co-occur and co-benefit with the development of inclusive markets. ***For policies to be effective in stimulating rural markets which build disaster resilience they must address the diversity of small holder communities. Land-owning small holders, women, agricultural labourers and share-croppers will all have different policy needs, and require their capabilities to engage positively markets to be built in different ways. Discussions at the workshop highlighted that it is important that policy and institutions don't address poor farmers and small holders in a catch-all manner but specifically address these complexities.***

This document was prepared by John Duncan, Jadu Dash and Emma Tompkins from the University of Southampton. They would like to thank all participants at the workshop for their input into discussions and the Leverhulme Trust for funding the PREFUS project.

October 2014

Updates and news from the PREFUS project can be found at:

website: [http://www.southampton.ac.uk/geography/research/projects/pathways\\_of\\_resilience\\_to\\_future\\_storms.page](http://www.southampton.ac.uk/geography/research/projects/pathways_of_resilience_to_future_storms.page)

weADAPT: <https://weadapt.org/placemarks/earth/view/1203>

twitter: @PREFUS\_SOTON

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