



# Aligning social protection and climate resilience

## A case study of MGNREGA and MGNREGA-EB in Andhra Pradesh

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Climate change disproportionately affects the poorest people in the world. The Climate Change Group works with policy and research partners to redress the balance by helping the poor in low and middle-income countries achieve climate resilience and development.

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## Acronyms

CC	climate change
CR	climate resilience
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MGNREGA-EB	MGNREGA Environmental Benefits programme
MGNREGS	Mahatma Gandhi National Rural Employment Guarantee Scheme
NAPCC	National Action Plan on Climate Change
SP	social protection

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Social protection and climate change programmes are two public policy responses that governments use to address the challenges of poverty, climate vulnerability and gender inequality. Social protection programmes provide a safety net for households by providing cash/asset transfers and labour market instruments to address the immediate and underlying socio-economic risks facing the poor. Climate change programmes use a range of policy, financial, technological and capacity-strengthening measures to address climate change vulnerability. Despite the fact that most countries have comprehensive strategies for both social protection and climate change, there have been few attempts to align the two to develop more durable pathways out of poverty and climate vulnerability.

This paper is the first of two case studies that examines how aligning social protection and climate change interventions could help households manage the risks they face, and set themselves on a path out of poverty and into climate-resilient livelihoods. It presents a case study of the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and the MGNREGA-Environmental Benefits programme (MGNREGA-EB) in India, based on fieldwork in the south-eastern state of Andhra Pradesh.

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# Summary

Social protection (SP) and climate change (CC) programmes are two public policy responses that governments use to address the challenges of poverty, climate vulnerability and gender inequality. SP programmes provide a safety net for households by providing cash/asset transfers and labour market instruments to address the immediate and underlying socioeconomic risks facing the poor. CC programmes target climate-induced risks to livelihoods, such as the loss of assets and livelihoods through flooding and drought. They include an evolving range of policy, financial, technological and capacity-strengthening measures to address the underlying causes of climate-induced vulnerability and the immediate and long-term impacts of climate change.

Although most countries have comprehensive strategies for both SP and CC, few have attempted to align them. In practice, they remain in separate institutional homes, with their own intra-sector coordination groups and funding channels. This limits their potential to develop synergies for more sustained, durable efforts to reduce social, economic and environmental vulnerability.

This paper is the first of two case studies from India that examine how aligning SP and CC could help households manage risks and move out of poverty into climate-resilient (CR) livelihoods. Our research focuses on four main questions:

1. How are SP and CC policy responses aligning in the same geographical areas and target populations?
2. What underlying mechanisms and processes support SP and CC alignment?
3. Do aligned SP and CC policy responses provide opportunities for women and their households to hang in, step up and step out of poverty and climate vulnerability?
4. How could alignment be improved to support longer-term outcomes?

To understand how SP and CC are being aligned in practice, this case study analyses the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) – the world's largest state-implemented labour guarantee programme – and the MGNREGA-Environmental Benefits programme (MGNREGA-EB). The latter is an ecosystem-based adaptation intervention piloted by GIZ in six districts across three Indian states. It aims to climate-proof public assets created under

MGNREGA, providing durable assets that support livelihoods at household and community levels. We draw on field research in two districts in Andhra Pradesh – Vizianagaram and Anantapur – that have significant vulnerability to climate shocks.

## Mainstreamed alignment

Our analysis shows that MGNREGA and MGNREGA-EB have both taken a mainstreamed approach to aligning SP and CC.

MGNREGA's approach gives households more secure access to income and assets. The programme does not have an explicit climate change focus. But it has adopted climate-responsive mechanisms to provide rural households with additional income support when climate impacts occur. We refer to this as 'unplanned mainstreaming' because CR was not originally an intended outcome of the programme.

MGNREGA-EB's climate-proofing approach, on the other hand, has been deliberately mapped on to MGNREGA. It provides technical assistance to design, plan, select, build and monitor climate-resilient assets under MGNREGA and is therefore an example of planned alignment between SP and CC programming.

## Mechanisms that support alignment

Both initiatives have adopted climate-responsive mechanisms to help households respond to increasing climate vulnerability while still benefiting from MGNREGA's core safety net function.

For MGNREGA to deliver both SP and CR outcomes, households need guaranteed, predictable, timely, transparent and inclusive wages; durable assets that are responsive to livelihood needs; and wages and assets that are responsive to changing climate contexts. A number of mechanisms ensure that MGNREGA achieves both SP and CR outcomes. MGNREGA's **legal and regulatory systems** underpin the delivery of the scheme's core SP outcomes, providing guaranteed labour, formal job contracts, equal wage provisions for women, standardised procedures for wage payments, asset design specifications and usufruct rights over communal assets. Government-issue **legal circulars** in response to climate shocks guarantee more paid workdays for households, making them more resilient to climate impacts. **Seasonal variation in daily wage rates** increases pay at times of shock, such as drought,

and benchmarks wages against local commodity prices. **Access to financial services** such as bank accounts and **new technology** such as digitised payment procedures ensure that MGNREGA wages are predictable, transparent and timely.

MGNREGA-EB uses three main mechanisms to support the technical design, planning, selection and long-term maintenance of MGNREGA assets. **Training and learning manuals** make sure key functionaries understand the impacts of climate change and design more climate-resilient communal assets, while training for user groups helps maintain assets and ensure their long-term durability. **Providing access to technology** such as computer modelling and GIS helps design more durable assets that factor in local conditions such as rainfall, soil quality and landscape characteristics. Ensuring **participation** gives women a voice in meetings where public works are planned and selected, allows user groups to monitor community assets and ensures that poor and landless households receive usufruct rights over community assets.

### Opportunities to hang in, step up and step out of poverty and climate vulnerability

Evidence from focus group discussions and interviews suggests that MGNREGA can achieve its core SP aim to secure the livelihoods of rural households, allowing them to 'hang in' by protecting household incomes and assets and improving the capabilities of women. Importantly, since MGNREGA has mainstreamed climate-responsive mechanisms into its programme in Andhra Pradesh, wage-seeking households are better equipped to hang in, despite increasing climate vulnerability.

There are also indications that MGNREGA can help some wage-seekers step up and out of poverty and climate vulnerability, by accumulating individual assets in the face of declining agricultural output and climate impacts. In Vizianagaram, for example, some respondents reported that work on cascading tanks to increase groundwater had allowed them to dig boreholes, providing a reliable source of year-round water. These boreholes mitigated against recent unpredictable rainfall after changes in monsoon patterns, allowing farmers to plant crops in both planting seasons.

At the time of our field research, the MGNREGA-EB programme was just starting to build assets in Anantapur and were still in the planning stage in Vizianagaram. So it was too early to observe whether building assets under the aligned planning approach delivers additional SP and CR benefits to households. But there were signs that MGNREGA-EB's aim to strengthen assets' technical aspects may provide opportunities to hang in and even step up and out of poverty in the context of increasing climate shocks. For example, focus groups in Rasimpalli, Anantapur noted that the MGNREGA-EB interventions would help them harvest rainwater, improve groundwater and provide a future source of income for the community.

### Next steps

Consulting stakeholders who designed, delivered and participated in MGNREGA and MGNREGA-EB, we have identified a number of options to strengthen the integration of SP and CC.

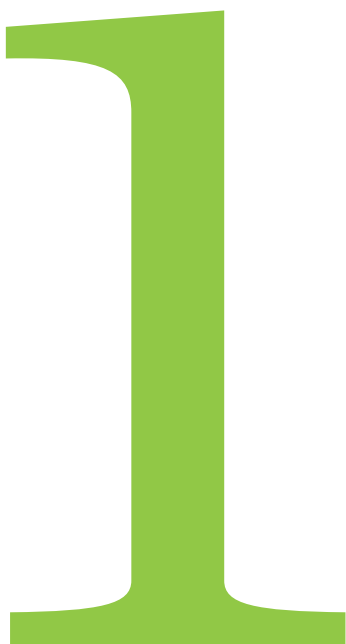
Supplementing direct wage payments with financial training and skills development would ensure women are better able to leverage capital, accumulate assets and diversify their livelihoods, ultimately helping to improve their resilience by managing and absorbing future shocks.

Skills training programmes could also target the creation of green jobs linked to MGNREGA assets – for example, building bio digesters or processing local products from communal horticultural or agroforestry sites.

MGNREGA-EB could increase awareness of the long-term benefits of climate-resilient assets by training MGNREGA overseers and local functionaries on CC impacts and planning approaches. These individuals could then act as local champions to strengthen linkages between communities and public assets.

In addition to communal assets, MGNREGA-EB planners could also climate-proof private assets. This strategy would first need to address the barriers women and the landless poor face in owning or exercising control over private assets, so that they too could benefit.

# Introduction



Poverty, vulnerability and gender inequality are key issues facing India's rural poor. Although poverty in India has fallen significantly over the past two decades, an estimated 29.5 per cent of the population continues to live below the poverty line (Government of India 2014). Meanwhile, the growing impacts of climate change pose significant new challenges to poverty reduction in India. Climate-related shocks – in the form of increased frequency and variability of extreme weather events and long term changes in weather patterns – threaten to reverse development gains made over the past decades, exacerbate existing shocks faced by poor households and reinforce the underlying drivers of poverty and inequality (IPCC 2014; Reddy *et al.* 2008). These shocks will most significantly impact women and girls, who tend to be affected first and are among the most vulnerable to climate change impacts, as the multiple inequalities they face – such as lower incomes, fewer productive assets, greater responsibility for dependants and poorer access to education and climate-resilient livelihoods – hinder their ability to manage and recover from shocks and stresses (Care International 2010; Mearns and North 2010).

Social protection (SP) and climate change (CC) programmes are two public policy responses that governments use to address the challenges of poverty, climate vulnerability and gender inequality. India is a world leader in social protection, using a variety of interventions – such as cash and asset transfers, public works programmes and skills training initiatives – to provide benefits to millions of people in rural areas. It has also launched an ambitious climate response through the National Action Plan on Climate Change (NAPCC) and corresponding plans at state level. The NAPCC has a number of planned interventions under eight thematic areas, known as national missions. These include solar energy, water, sustainable agriculture, afforestation and strategic knowledge. Yet despite India having strong SP and CC policies and interventions that often target similar beneficiaries, there has been little attempt to align them for more sustained, durable efforts to reduce social, economic and environmental vulnerability.

This paper is the first of two case studies that examine SP and CC responses in India (see also Steinbach *et al.* 2016). Both studies examine how alignment between SP and CC can help households move up and out of poverty and climate vulnerability. We aim to generate

evidence on different types of alignment between SP and CC, the underlying characteristics (which we refer to as mechanisms) that support alignment, and whether alignment can potentially improve outcomes for women and their households in terms of reduced poverty and greater climate resilience (CR).

To understand how SP and CC are being aligned in practice, this case study analyses the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and the MGNREGA-Environmental Benefits programme (MGNREGA-EB). MGNREGA is the world's largest state-implemented labour guarantee social protection scheme and MGNREGA-EB is an ecosystem-based adaptation intervention that aims to deliver environmental benefits from public assets created through MGNREGA. The case study draws on field research conducted in Vizianagaram and Anantapur districts of Andhra Pradesh, where there is significant vulnerability to climate shocks (cyclones and droughts, respectively) (Reddy *et al.* 2008).

Our report is structured as follows. Section 2 outlines the main research questions and case study methodology and introduces the analytical frameworks we use to investigate SP and CC alignment. Section 3 provides a background on the two interventions and context for their implementation in Andhra Pradesh. Section 4 analyses how SP and CR outcomes are being delivered by aligning MGNREGA with the MGNREGA-EB programme. We highlight two types of alignment: unplanned alignment where MGNREGA has adopted climate-responsive measures that lead to CR outcomes while still delivering its core SP outcomes, and planned alignment under MGNREGA-EB where the EB intervention has been designed to integrate climate adaptation at the planning stage to achieve both SP and CR outcomes. Section 4 also outlines the main contextual factors and mechanisms through which SP and CR outcomes are achieved under both types of alignment, using evidence from interviews and focus group discussions from our fieldwork in Vizianagaram and Anantapur. In Section 5 we conclude with a discussion on: how SP and CC can be aligned in practice; the mechanisms that support alignment; how alignment provides opportunities for women and their households to hang in, step up and step out of poverty and climate vulnerability; and policy suggestions that emerge from our analysis.

# Aligning social protection and climate resilience: analytical approach





## 2.1 Argument for alignment

Social protection and climate change interventions both seek to build the resilience of poor and climate-vulnerable households by strengthening their capacity to absorb and/or transfer risks.

SP policy responses have evolved from the provision of safety nets to poor and vulnerable groups as a response to shocks. They include short-term interventions to reduce the impact of shocks and longer-term mechanisms that combat chronic poverty (Davies *et al.* 2013). SP interventions include cash transfers, conditional cash and asset transfers, public works programmes and social insurance.

Climate change interventions focus on enabling households to plan and manage the challenges and opportunities associated with climate change. They have the potential to build resilience in poor and vulnerable households by protecting assets and capabilities and providing sustainable, climate-resilient opportunities for graduation out of poverty.

Despite most countries having comprehensive strategies for both social protection and climate change, there has been little attempt to align the two. In practice, SP and CC remain in separate institutional homes, with separate intra-sector coordination groups and channels of funding. This limits their potential to develop synergies for more sustained, durable efforts to reduce social, economic and environmental vulnerability.

Developing policy coherence between SP and CC has the potential to help women and their households find sustainable and resilient pathways out of poverty and climate vulnerability. For example, aligning SP and CC responses can:

- Provide households with a more holistic and sustainable approach to risk management
- Enable gender-disaggregated targeting that overcomes the barriers women face in accessing services
- Give households access to different sources of finance (public and private, domestic and international) for investment in sustainable and climate-resilient poverty eradication strategies
- Give households access to different financial instruments – cash and asset transfers, public works programmes, credit, insurance – allowing them to build longer-lasting and more diverse livelihood strategies.

## 2.2 Research questions

Although there are strong theoretical arguments for aligning SP and CC policy responses, there is little concrete evidence of the approaches to, and benefits of, doing so. This lack of evidence limits policymakers' ability of to make informed policy choices, tailor policy responses to women's needs, use scarce resources effectively and leverage additional investment. To address this evidence gap, this paper examines social protection and climate change responses in India. Our research focuses on four main questions:

1. In what ways are SP and CC policy responses aligning in the same geographical areas and target populations?
2. What are the underlying mechanisms and processes that support SP and CC alignment?
3. Do aligned SP and CC policy responses provide opportunities for women and their households to hang in, step up and step out of poverty and climate vulnerability?
4. How could alignment be improved to support longer-term outcomes?

## 2.3 Analytical framing

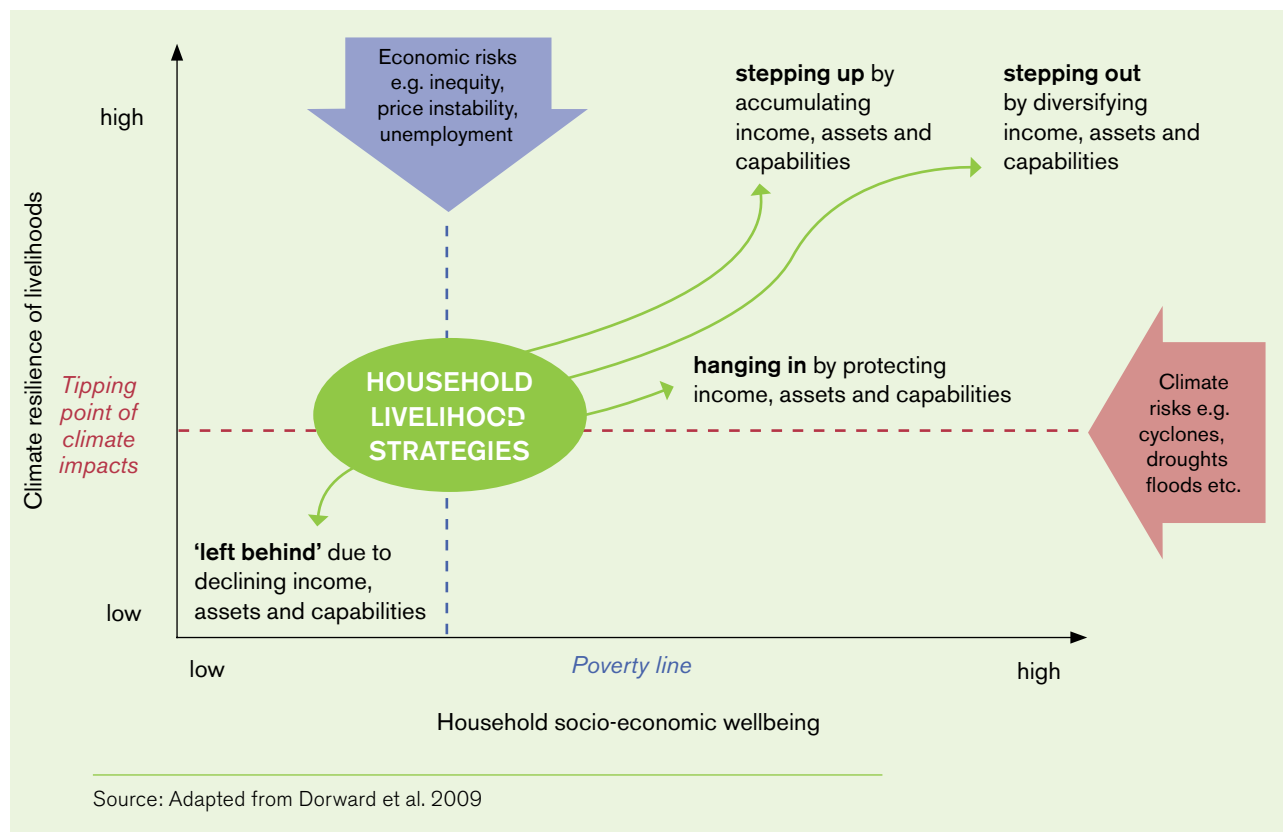
Our main research questions are guided by two analytical frameworks. First, our framing of how SP and CC policy instruments can reduce poverty and climate vulnerability is an adaptation of the hanging in, stepping up and stepping out framework (adapted from Dorward *et al.* 2009), where:

- **Hanging-in** means women and their households can protect their income, multidimensional indicators of wellbeing (referring to the multidimensional poverty index) and capabilities in the context of climate and other shocks
- **Stepping-up** and **stepping-out** means women and their households can improve their income, multidimensional indicators of wellbeing and capabilities despite climate and other livelihood shocks

Second, we use the context, mechanisms and outcomes (CMO) framework to understand how SP and CC are being aligned in practice, and whether this alignment provides opportunities for women and their households to hang in, step up and step out of poverty and climate vulnerability. We adopt a three-pronged approach to understand:

- **Context:** the policy, institutional, socioeconomic and climate contexts in which alignment has occurred and/or in which SP and CR outcomes are achieved

Figure 1: Hanging in, stepping up and stepping out framework



- **Mechanisms:** the underlying attributes that enable or hinder the delivery of SP and CR benefits to women and their households
  - **Outcomes:** whether aligning SP and CC enables women and their households to hang in, step up and step out of poverty and climate vulnerability, and the intermediate outcomes needed to achieve these overall outcomes.
1. It is one of the first states where MGNREGA-EB was trialled in 2014–2015, so participants have more experience of the programme than elsewhere.
  2. Its rural communities are exposed to multiple climate impacts – tropical cyclones in coastal areas and drought in the hinterland – allowing us to understand SP and CC alignment in different contexts.

This study seeks to uncover how aligned SP and CC policy responses lead to better outcomes for women and their households, not to quantify the impact of this alignment at the household level. The discussion of our findings therefore focuses on what we refer to as intermediate outcomes – the steps necessary to achieve long-term reductions in poverty reduction and climate vulnerability – and the mechanisms that underpin the delivery of these intermediate outcomes.

We selected Anantapur and Vizianagaram as our main survey districts to reflect the two main types of climate vulnerability: drought in central Anantapur and cyclones in coastal Vizianagaram.

## 2.4 Case study selection

To analyse the alignment of SP and CC, we examine MGNREGA and MGNREGA-EB in Andhra Pradesh. We selected Andhra Pradesh as the focus for our fieldwork for three main reasons.

Our research on SP and CC alignment in Andhra Pradesh uses primary and secondary data. We began with a desk review of policy documents and grey literature on MGNREGA, before visiting Anantapur and Vizianagaram for four weeks in November and December 2015 to interview representatives from government, development partners, civil society and programme beneficiaries. At community level, we ran ten focus group discussions with marginal and landless farmers, and interviewed 20 key informants in the Gram Panchayats of Garida and Tettangi in Vizianagaram district and Agraharam and Bukkapatanam in Anantapur district.

1. There is high MGNREGA coverage in the state, and it is frequently cited as high performing in relation to MGNREGA implementation elsewhere (Chopra 2015).

# Social protection and climate vulnerability in Andhra Pradesh

# 3

This section provides background information on MGNREGA and MGNREGA-EB, the two main social protection and climate-resilient interventions we analyse in this paper. It also outlines the socioeconomic and environmental context of Andhra Pradesh.

### 3.1 MGNREGA

Since its promulgation in 2005, MGNREGA has enjoyed strong support from government and civil society. MGNREGS provided 2.8 billion work days to people in more than 54 million households in its peak year of 2009/10 at a cost of 0.8 per cent of GDP (Ghosh 2009). It is the government of India's flagship social protection programme and, with an annual expenditure of US\$6.7 billion, the world's largest labour guarantee scheme (UNDP 2015).

MGNREGA has performed well in Andhra Pradesh, compared to other states (Chopra 2015). The scheme has provided the fourth highest number of workdays as a percentage of the rural poor population in 2010–15, pioneered information management systems to streamline wage payments and integrated real time technology and regular social audits to ensure continuous monitoring of the programme (Maiorano 2014). The rollout of MGNREGS in Andhra Pradesh was helped by the state's strong tradition of self-help groups among poor women (Deininger and Liu 2013), and Andhra Pradesh's status as one of the most gender-equitable states in India (Pellissery and Jalan 2011).

A number of studies have explored climate-related and gendered impact of MGNREGA. For example, in addition to MGNREGA's primary aim to strengthen rural livelihoods, studies show that it can also help communities build resilience to climate change by

increasing household assets during shocks and strengthening communal assets (Tiwari et al. 2011; Adam 2015). On gender, although the act provides a framework that could potentially transform gender relations (Pellissery and Jalan 2011), according to Kelkar (2011), uneven implementation of the programme across states has resulted in mixed outcomes for women. In Tamil Nadu, for example, the programme has resulted in a variety of positive outcomes for Dalit women (Carswell and Neve 2014). But in Madhya Pradesh, the programme has not adequately countered cultural models that exclude women from socioeconomic participation (Holmes and Jones 2011).

### 3.2 MGNREGA-EB

MGNREGA-EB is an ecosystem-based adaptation programme that works within the regulatory framework of MGNREGA to improve the environmental benefits of assets created under MGNREGA. The programme began in 2014–2015 as a pilot funded by the *Deutsche Gesellschaft für Internationale Zusammenarbeit* (GIZ) in 13 of the 257,707 Gram Panchayats where MGNREGA is active. MGNREGA-EB is a technical assistance programme that builds the capacity of institutions and key local functionaries to design durable assets based on local environmental conditions and the expectations of future climate-related shocks. The programme also promotes gender-equitable asset production through capacity building interventions to ensure women benefit from the act. It aims to use the experiences of pilot sites to inform climate-resilient programming through MGNREGA across India.

## BOX 1: MGNREGA FACTSHEET

- The Mahatma Gandhi National Rural Guarantee Act (MGNREGA) is a law, promulgated in 2005, that guarantees 100 days of work to every household in rural India that demands it.
- It is the state's response to the decline of agriculture in rural areas, acting as a social safety net that provides cash to India's rural poor.
- The Mahatma Gandhi National Rural Guarantee Scheme (MGNREGS) – the programme associated with the act – is the world's largest labour guarantee scheme.
- Workers earn a guaranteed wage, which is equal for men and women.
- It uses the labour generated through the scheme to produce public assets that support rural livelihoods, such as water tanks, irrigation facilities and tree plantations.
- MGNREGS also incorporates a number of capacity building projects to enhance participation in the programme and build the skills of beneficiaries.
- The act also supports private asset production for households belonging to specific vulnerable groups.

### 3.3 Livelihoods and climate vulnerability in Andhra Pradesh

Our study focused on two districts of Andhra Pradesh with contrasting climate and livelihood contexts – Anantapur and Vizianagaram. Livelihoods in our survey districts are characterised by smallholder agriculture that is vulnerable to the impacts of climate change. The major economic activity in Anantapur is groundnut cultivation and in Vizianagaram is paddy farming.

Anantapur is one of the most drought-prone areas of Andhra Pradesh. One study of historical rainfall patterns found that the majority of administrative 'blocks' in Anantapur were 'very highly vulnerable' to drought (Figure 2) (Murthy *et al.* 2015). Droughts in the district have been the result of successive failures of the northeast monsoon, combined with uneven rainfall distribution of the southwest monsoon and farmers over-exploiting groundwater resources (Reddy *et al.* 2008).

In Vizianagaram, the majority of administrative blocks were considered to be 'moderately' or 'less' vulnerable to drought (Figure 2). But the district is on the state's northeast coast, which is considered one of India's most

vulnerable areas to tropical cyclones (Figure 3). Prior to 2009, focus group participants stated that cyclones occurred every other year, but were not particularly strong and had little impact on people's livelihoods. However since 2009/2010 the intensity of cyclones in Vizianagaram has increased. There have been three strong cyclones, culminating with Cyclone Hud Hud in 2014, which was the second strongest tropical cyclone of 2014 in the North Indian Ocean and the most destructive since Cyclone Nargis in 2008 (Ramuje and Rao 2015). Focus group participants in the two survey Gram Panchayats reported that Hud Hud caused significant loss of life and property – including crops, livestock and homes – and damaged infrastructure.

The effects of the climate on livelihoods vary according to the source of vulnerability. Cyclones in Vizianagaram have resulted in short-term costs to replace or rebuild damaged assets. Declining water availability in Anantapur, on the other hand, has devastated the agricultural economy, causing frequent crop failures and lower agricultural output. The effects of climate change in Anantapur have been further exacerbated by structural changes in the agricultural market. This has led to fluctuating prices for groundnut, the district's main harvest (O'Brien *et al.* 2004). The damage to the rural economy has resulted in high distress migration and other serious social consequences.

Figure 2: Agricultural drought vulnerability in Andhra Pradesh

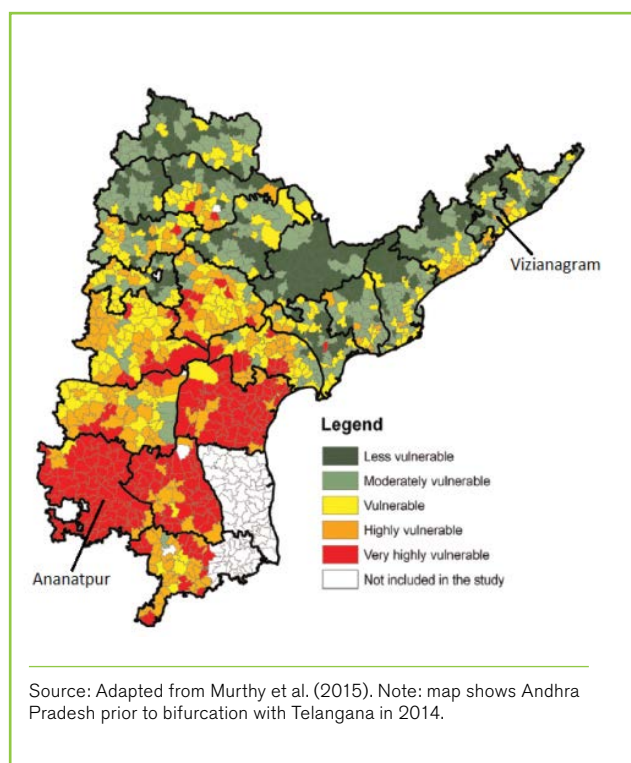
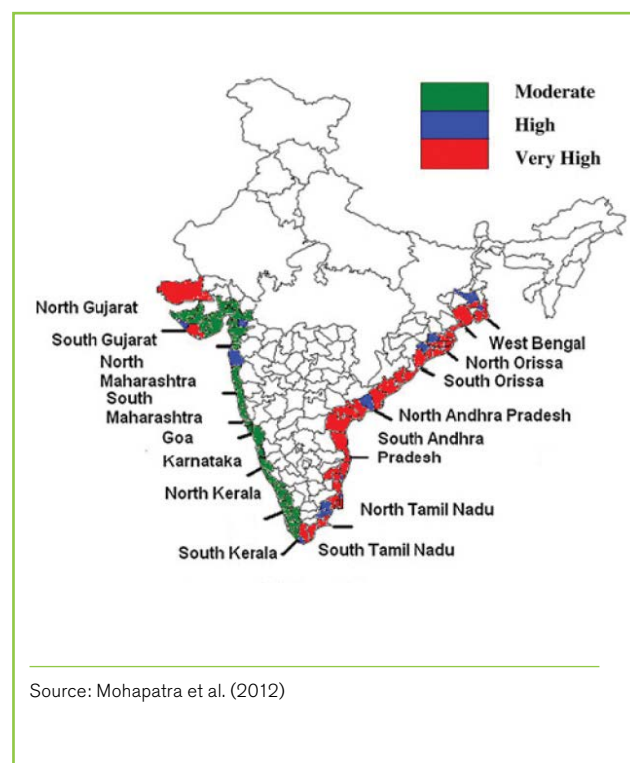


Figure 3: Cyclone vulnerability in India



# Analysis



In this section, we analyse how social protection and climate change interventions are being aligned in India. We have structured Section 4 around the two different types of alignment we observe within MGNREGA and MGNREGA-EB. Section 4.1 highlights how MGNREGA has mainstreamed climate change within some of its existing processes to achieve aligned SP and CR outcomes beyond the stated objective of the scheme. Section 4.2 examines how MGNREGA-EB uses technical assistance to mainstream an ecosystems-based adaptation approach into assets created under MGNREGA's public works scheme. Our analysis draws on evidence from our interviews and focus group discussions in Anantapur and Vizianagaram. For each case of alignment, we use the CMO framework to outline the main outcomes delivered, the mechanisms underpinning successful outcomes and the context that has shaped both the design of the programmes and their ability to achieve outcomes. Our discussion on outcomes focuses on the necessary steps – what we refer to as intermediate outcomes – to achieve the stated outcomes of MGNREGA (to improve rural livelihoods by increasing income and creating public assets) and MGNREGA-EB (to use technical assistance to design, plan, select, deliver and maintain durable, climate-resilient assets).

## 4.1 Unplanned mainstreaming of climate change into MGNREGA

MGNREGA's main objective is to reduce rural poverty by guaranteeing 100 days' paid labour a year for each household while building community assets that support local livelihoods. Workers can spread the days out over the year to suit their livelihood strategies and seasonal variations in expenditure or in response to shocks. By providing households with guaranteed labour, MGNREGA helps households to smooth their short-term consumption gaps, and by constructing community assets that support local livelihoods, the scheme helps provide longer-term benefits to support local incomes.

MGNREGA has no stated aim to respond to climate change and provide more resilient livelihoods or assets. But the fact that MGNREGS provides wages and assets to millions of rural people, most of whose livelihoods rely on climate-sensitive sectors, means that the programme has some inherent characteristics that respond to climate change vulnerability. In this section we outline how MGNREGA is an example of unplanned SP and CC alignment that uses a number of mechanisms to deliver both SP and CR outcomes. Table 1 presents the overall findings of our CMO analysis.

### 4.1.1 Outcomes

MGNREGA aims to reduce rural poverty by providing households with additional income and assets that support their livelihoods. Based on interviews with officials involved in the design and delivery of MGNREGS and beneficiaries who use the scheme, we identified the following intermediate outcomes that are necessary to achieve these two primary outcomes:

To provide households with additional income:

- Guaranteed access to wages
- Predictable, transparent and timely wage payments
- Inclusive access to wages for women and vulnerable groups.

To build assets that support rural livelihoods:

- Assets are designed based on the needs of rural households and communities
- Durable assets are built under MGNREGS.

Our consultations with stakeholders in Andhra Pradesh also highlighted that MGNREGA delivers two additional intermediate outcomes:

- Wages are responsive to changing climate factors
- The selection of assets are also climate-responsive.

This finding suggests that climate change adaptation has been mainstreamed into MGNREGA to ensure it helps reduce the long-term vulnerability of rural households to the impacts of climate change. In Section 4.1.2 we detail the mechanisms that underpin the delivery of both SP and CR outcomes. We highlight the mechanisms that deliver MGNREGA's stated aims related to raising household income and asset creation and draw out the additional mechanisms that deliver unstated, but important, CR outcomes.

### 4.1.2 Mechanisms

#### Wage payments

A number of mechanisms help deliver guaranteed, predictable, transparent, timely and gender-inclusive wage payments. First, every household in rural India is entitled to up to 100 days paid labour under the act, and can spread the days out over the year to suit their livelihood strategies, seasonal variations in expenditure or in response to shocks. Wages under MGNREGA are based on the consumer price index, which ensures the programme is sensitive to the differentiated costs associated with varied socioeconomic and climatic conditions across India. For 2015–2016, for example, daily wages ranged from 251 rupees in the wealthy state of Haryana, to 159 rupees in the poorer states of Madhya Pradesh and Chhattisgarh. In Andhra Pradesh,

Table 1: Context, mechanisms and outcomes for MGNREGA's unplanned alignment of SP and CC

PRIMARY OUTCOME	INTERMEDIATE OUTCOMES	MECHANISMS	CONTEXT
MGNREGA leads to increase in household income (stated aim)	Households have guaranteed access to wages	Legal right to 100 days' work Legal structure that facilitates spatial and temporal variations in demand for labour	Decline in agricultural sector and rural poverty rates led to policy response Strong political support for rights-based scheme
	Wages are delivered in a predictable, transparent and timely manner	Formal procedures for calculating and processing wages Digitising payment systems and promoting access to financial services (bank accounts) Formal contract between wage-seekers and the state	Potential for transaction costs in processing payments led to policy response Andhra Pradesh's good governance setting is conducive to payment reforms Political support for promoting financial inclusion
	Women and other vulnerable groups participate in economic activity	Legal provisions for equal wages Work site procedures (eg childcare) to support women's inclusion	Cultural constraints to women accessing labour markets led to policy response Strong network of self-help groups supporting women to participate in income generating activities
MGNREGA assets improve livelihoods (stated aim)	Assets responsive to needs of rural households and communities	Regulation to ensure only assets that support livelihoods are built Demand-led regulatory structure to enable wage-seekers to identify assets	Linkages between climate change, livelihoods and assets Differentiated infrastructure needs across communities Differentiated asset needs across households
	Durable assets are created under MGNREGA	Standard specifications for assets Convergence with other programmes Usufruct rights provide incentives to maintain assets	Andhra Pradesh's good governance setting is conducive to production of durable assets, compared to other states Lack of maintenance leads to deteriorating assets Poor don't have access to private assets
Climate-responsive wages and assets reduce the impact of shocks (unstated aim)	Wages are responsive to changing climate context	Sliding seasonal pay scale Circulars or amendments can increase days in response to shock	Linkages between climate change and agriculture Existence of country-wide regulatory structures able to respond to dynamics of vulnerability
	Asset selection is responsive to changing climate context	Circulars add to list of permissible assets in response to climate change	Current and future climate variability impacting livelihoods Climate impacts damaging rural infrastructure



the daily wage is 180 rupees, reflecting the costs of key commodities in the state (GOI 2015d).

To ensure predictable, transparent and timely payments, MGNREGA planners have digitised the financial administration of wage-seekers (see Box 2), which minimises opportunities for any kind of leakage. MGNREGA also provides a legal guarantee to pay wages on time, with a right to compensation for any late payments (MGNREGA 2005 Schedule 2.30). According to participants in female focus group discussions in Anantapur and Vizianagaram these legal guarantees have helped them shift from informal, unpredictable labour contracts to formal, legally-protected contracts.

A number of legal mechanisms relate to the economic participation of women. MGNREGA states that “at least one-third of the beneficiaries shall be women” and provides equal pay for male and female wage-seekers (MGNREGA 2005 Schedule 2.6 and 2.30). It also includes work site procedures that benefit women. Its guarantee of work in the local area with extra cash

payments if the work site is over 5km from a wage-seekers home (MGNREGA 2005 Schedule 2.12–14) means that women do not have to spend time travelling away from home and their domestic responsibilities. The work sites provide childcare facilities, enabling mothers to work without incurring the expense and/or inconvenience of arranging childcare (MGNREGA 2005 Schedule 2.28). In Andhra Pradesh, MGNREGA also makes provisions for special work groups that enable breastfeeding women and disabled people to participate in works: they are only required to complete 70 per cent of their work, but still receive a full day's salary.<sup>1</sup>

Within MGNREGA's wage component, four additional mechanisms ensure wages are responsive to the changing climatic context, helping to reduce household-level climate vulnerability.

As a demand-driven programme, rural households can flexibly access MGNREGA during periods of income insecurity or climate vulnerability – for example, during

## BOX 2: MGNREGA PROCEDURES FOR MAKING PAYMENTS

1. Household applies to Gram Panchayat for a job card (max six persons per card).
2. The mandal (administrative unit below the district level) generates a job card with a unique code at Mandal Computer Centre.
3. After receiving their job cards, wage seekers form work groups of 5–20 people. Each work group is administered by a 'mate' (group leader).
4. Every week, the wage seekers apply to the field assistant, detailing the days and hours they want for the working week. The request is entered into a mobile phone application, and uploaded to the mandal database.
5. A weekly muster is issued for each work group. The mate administers the muster and determines work targets (i.e. quantity of work) for the week. The muster is updated and uploaded to the mandal project officer's database on a weekly basis.
6. At the end of the week, the technical assistant verifies each group's work. For example, if the work is moving earth, they measure the volume of earth and compare this against standardised MGNREGA estimates and rates for the work.
7. The mandal office automatically calculates and generates a pay order for work completed. Each wage seeker's pay packet is the total work carried out by the group, divided by the number of people in group relative to the number of hours they worked.
8. Each wage seeker has their own bank or postal account where the money is deposited. The payment system is in the process of transitioning from being postal to bank account based.
9. After generating the pay order, the mandal project officer processes the amount and creates a digital signature. The pay then goes directly into the wage seeker's account.
10. The field assistant distributes wage slips to all workers.

<sup>1</sup> Interview with the Joint Commissioner, Rural Development, Department of Rural Development, State of Andhra Pradesh, 19/11/2015, Hyderabad.

the non-farming season in rain-fed areas or during drought – to mitigate their losses.

Wages are calculated using a sliding seasonal pay scale. This allows them to be responsive to changes in local climate context. In Anantapur, for example, a long-term decline in water availability means that in the summer months, the soil is hard and difficult to move. During these periods, wages increase by up to 40 per cent, reflecting the increased effort of moving hardened earth. Wage seekers can distribute their wage days to take advantage of these periods of increased pay according to variations in demand.

States can promulgate legal circulars in response to climate shocks, allowing households to increase the number of days they participate in the scheme. For example, in December 2015, a circular guaranteed an extra 50 days' work to residents in drought-affected areas of Andhra Pradesh (GOI 2015c). Similarly, in Vizianagaram local officials reported that those who lived in areas affected by the 2014 Hud Hud cyclone also got an extra 50 days of work.

Finally, wage rates are recalculated every year across each state to reflect changes in commodity prices, which can vary according to climate-sensitive crop yields.

### Assets

Several mechanisms ensure that assets created under MGNREGS are long-lasting and responsive to wage seekers' livelihood needs.

The main top-down mechanism that ensures assets support livelihoods is regulation that determines what can be built under the programme. The Act specifies the types of assets prioritised under the programme

(see Box 3). They are intended to remove constraints to increased agricultural output, particularly water availability. Circulars enable the identification of new assets, which can be added to the list of legally permissible assets as changing livelihood contexts demand. In 2013, for example, a circular added a number of new assets to the list, including compost and bio digesters to enrich soil in drought-prone areas (GOI 2013b).

MGNREGA also facilitates some bottom-up processes to select and design assets to be built under the programme so they are responsive to local livelihood needs. At the community-level, a Gram Sabha meeting – a participatory process open to everyone from a village, where at least 30 per cent of participants must be women – is held to decide what works will be carried out in the area. But our focus groups respondents in Anantapur and Vizianagaram did not consider that the community has a decisive voice in choosing the assets selected under MGNREGA. Rather, they viewed the Gram Sabha meeting as a forum for officials to give wage seekers information about plans for the year's upcoming works.

To ensure that assets are durable, MGNREGA technical assistants are required to build to standard specifications, with a team of auditors verifying their work every six months. The national government recently announced plans to bolster the technical capacity of programme functionaries by training 'barefoot engineers' – functionaries with a good level of education who will receive training in civil engineering – to monitor the construction of assets (GOI 2015e). The government is also promoting convergence between MGNREGA and other programmes in order to improve the durability of assets and the skills of the

## BOX 3: PRIORITY MGNREGA WORKS

1. Water conservation and harvesting.
2. Drought proofing, including afforestation and tree plantation.
3. Irrigation canals, including micro and minor irrigation works.
4. Irrigation facilities on land owned by households belonging to Scheduled Castes and Scheduled Tribes, land reform beneficiaries or beneficiaries under the government's Indira Awas Yojana programme.
5. Renovation of traditional water bodies including de-silting tanks.
6. Land development.
7. Flood control and protection works, including drainage in water logged areas.
8. Rural connectivity to provide all-weather access.
9. Any other work which may be notified by central government in consultation with the state government.

designers and wage-seekers. For example, efforts are being made to align MGNREGA and the Integrated Water Management Programme in the production of water management assets (GOI 2009). There is also a drive to improve the skill-base of youth between the ages of 18 and 35 (up to the age of 45 for women and vulnerable groups) under the Project for Livelihoods in Full Employment under MGNREGA (Project LIFE-MGNREGA). This project provides skills training to individuals from MGNREGS households to help them move from partial to full employment. Individuals have the option to learn new trades, receive training to launch entrepreneurial activities or learn skills to improve existing agricultural livelihoods (GOI 2015f). Since the project was only launched in 2015 it is still too early to understand its results. However there are likely to be opportunities in the future to link skills training with improved technical design and building of MGNREGA assets. MGNREGA also offers usufruct rights to certain community members (often landless households) in an effort to promote the long-term maintenance of public assets. For example, in Vizianagaram, the rights to the fruits of coconut plantations were given to landless families as an incentive to maintain the trees.

As well as improving rural livelihoods, public assets built under MGNREGA can help reduce climate vulnerability and lead to more climate-resilient outcomes. Most of these public assets – such as community ponds for irrigation and grazing – are linked to agriculture, horticulture and other climate-sensitive sectors. They can therefore help mitigate against climate impacts. In Vizianagaram, for example, cascading water tanks built under MGNREGS help increase the availability of surface water. These tanks provide a year-round supply of water, which means that despite the threats of unpredictable rainfall associated with changes in monsoonal patterns, farmers have access to water to irrigate their fields.

The government uses circulars to add new assets to the scheduled list of MGNREGA works to include more climate-resilient infrastructure as it is needed. In 2013, for example, the government issued a circular that permitted new types of MGNREGA assets such as composting facilities and liquid bio manures to improve agricultural production (GOI 2013b).

### 4.1.3 Context

In this section we examine the contextual factors that have shaped both the design of MGNREGA, and its ability to deliver outcomes of reduced poverty and climate vulnerability.

Several factors have shaped the design of MGNREGA. For example, the policy drive for a universal, rights-based scheme to improve livelihoods for the rural poor – 31 per cent of whom live below the poverty line – laid the groundwork for MGNREGA (Government of India 2014). MGNREGA has also been shaped by the context of pervasive gender inequality in rural India, where access to the agricultural labour market is profoundly gender-inequitable. Although Andhra Pradesh fares well in measures of gender equity compared to other states, there is still evidence of cultural models that limit women's labour market participation in both Anantapur and Vizianagaram. Based on discussions with female focus groups and gender experts, we found that prior to MGNREGA, many women suffered wage discrimination, earning up to ten times less than men for completing the same job. MGNREGA attempts to reverse this gender inequality by offering equal wages for men and women.

Although many factors shape SP and CR outcomes under MGNREGA, our interviewees highlighted two important contextual factors that have underpinned MGNREGA outcomes in Andhra Pradesh: the capacity of implementing institutions and favourable institutional conditions for gender-inclusive programming. Andhra Pradesh scores high on governance indicators within India, which can be witnessed through reforms to MGNREGA payment systems that ensure timely, transparent and predictable payment of wages; implement regulations that create durable assets; and promote financial inclusiveness (Saigal 2014). In AP there are also favourable institutional conditions for gender-inclusive programming. Self-help groups for women have a long history in the state and were active in all survey areas. These groups were effective in mobilising women and provided a variety of functions – such as savings infrastructure, loans and training – to support women. These government-supported networks provide a solid foundation on which to build gender-inclusive programming.

Linkages between local livelihoods and climate change have also helped to shape the design of policy responses and promote climate-resilient outcomes under MGNREGA. Since most rural livelihoods in Anantapur and Vizianagaram rely on climate-sensitive natural systems, asset selection was based on both their long-term ability to withstand climate-related shocks and to reduce vulnerability to extreme events such as cyclones and drought. The decision for MGNREGA to promote cyclone-proofing of cascading water tanks in Vizianagaram and the introduction of drought-resistant horticulture assets in Anantapur are just two examples of how asset creation is linked to climate-sensitive livelihoods.

## 4.2 Planned mainstreaming of climate change through MGNREGA-EB

In Section 4.1, we outlined how climate change adaptation has been mainstreamed into MGNREGA in Andhra Pradesh in an example of unplanned alignment. In this section we focus on how MGNREGA and MGNREGA-EB have achieved alignment between social protection and climate change adaptation through a planned approach that uses technical assistance to introduce climate-resilient design, planning, selection and maintenance of the assets created under MGNREGA. Table 2 presents the overall analysis of MGNREGA-EB's aligned approach.

### 4.2.1 Outcomes

MGNREGA-EB uses MGNREGA's public works component as an entry point to climate proof assets so they are durable in the context of future climate impacts. MGNREGA-EB is therefore mainstreaming climate change adaptation into MGNREGA to deliver SP and CR outcomes.<sup>2</sup> These are underpinned by three intermediate outcomes:

1. The technical design of MGNREGA assets are strengthened to achieve environmental benefits and improve the durability of assets.
2. There is increased knowledge, participation and local ownership in asset planning and selection.
3. Public assets are monitored by user groups to improve long-term durability.

### 4.2.2 Mechanisms

In this section, we examine the mechanisms that MGNREGA-EB uses to support the technical design, planning, selection and long-term maintenance of MGNREGA assets.

MGNREGA-EB's approach to improve the durability of MGNREGA assets, uses technical assistance to build human and institutional capacity. To improve the technical design of assets, MGNREGA-EB engages technical experts to strengthen planning processes in a way that creates climate-resilient assets based on local environmental conditions. For example, unlike

MGNREGA, which uses standardised processes to design public assets, MGNREGA-EB uses computer modelling and Geographic Information Systems to ensure local conditions such as soil quality and water availability are taken into account when designing assets and generating estimates on the materials, labour costs and timing of scheduled works.<sup>3</sup> In the medium term, MGNREGA-EB also aims to include environmental indicators within the key performance indicators that are used to audit the durability of assets created under MGNREGA.

MGNREGA-EB has introduced three mechanisms to improve local participation in the planning and selection of MGNREGA assets. First, it provides work group leaders with training modules and learning materials on climate change, to instil environmental principles in wages-seekers. Second, it is creating linkage with the government's Intensive Participatory Planning Exercise 2 to increase community participation in asset planning, using a number of tools such as participatory mapping and ranking public works in order of usefulness. Third, it is putting an increased emphasis on mobilising community members – particularly women – and encouraging them to participate in the important Gram Sabha meeting, where public works schedules are decided.<sup>4</sup> In the Gran Panchayats of Tetangi and Garida in Vizianagaram, within a single year the EB programme has increased women's participation from 35 to 41 per cent and 42.4 to 47.2 per cent of total participants, respectively (Government of Andhra Pradesh 2016).

To ensure the long-term durability of assets created under MGNREGA, MGNREGA-EB is training key functionaries in engineering principles and techniques that enable them to carry out necessary maintenance to keep assets at high standards. Training manuals will be translated into regional dialects, with a view to rolling out this training across India in the future. MGNREGA-EB also helps user groups get involved in public asset maintenance. In these cases, user groups are assigned responsibility for maintaining certain assets in return for wages and user rights to the asset. For example, MGNREGA-EB's 'Greening Hillocks' project in Anantapur supports landless families by paying them to 'watch and ward' community custard apple plantations. These plantations are intended to increase soil nutrients in the long-term, while in the short-term usufruct rights for landless households ensure the plantations are maintained and that poor households benefit from selling the fruit.

<sup>2</sup> MGNREGA-EB was launched as a pilot in 2015. Since it is too early to determine whether long-term climate resilience has been achieved, we refer here to the intended outcomes and intermediate outcomes of the programme.

<sup>3</sup> MGNREGA assets are standardised based on guidelines from the Ministry of Rural Development (GOI 2013a). They include standard calculations of labour and material input for each permissible asset under the Act.

<sup>4</sup> To ensure that participation goals are met, MGNREGA-EB also proposes digitised monitoring of gender participation in Gram Sabha meetings.

Table 2: Context, mechanisms and outcomes for MGNREGA-EB’s planned alignment of SP and CC

PRIMARY OUTCOME	INTERMEDIATE OUTCOMES	MECHANISMS	CONTEXT
MGNREGA-EB creates climate-resilient public assets	The technical design of MGNREGA assets are strengthened to achieve environmental benefits	<p>Technical training, learning materials and support to develop capacity of key functionaries to construct more durable, climate-proofed assets</p> <p>Improved systems for designing assets (computer programmes to incorporate local conditions, GIS asset planning)</p> <p>Environmental indicators ensure quality control of assets</p>	<p>MGNREGA regulatory framework and programme channels</p> <p>Climate change impacts</p> <p>Weaknesses in technical aspects of MGNREGA assets</p>
	There is increased knowledge, participation and local ownership in planning and selection of public assets	<p>Improved participation in Gram Sabha meetings through digitised monitoring</p> <p>Awareness raising about climate change</p>	Low participation and local ownership in production of MGNREGA assets
	Public assets are monitored by user groups to improve long-term durability	<p>Formation of user groups</p> <p>Training and capacity building for local functionaries and user groups</p>	Lack of durability in assets created under MGNREGA

### 4.2.3 Context

Three main factors have shaped the design of MGNREGA-EB. The first is the increasing awareness of climate change and the direct experience of climate variability and shocks in rural India. The awareness that current and future climate impacts will affect the livelihoods of the rural poor, and an understanding of the linkages between livelihoods, climate change and assets, have helped shape MGNREGA-EB’s approach to improve the durability of low-quality assets created under MGNREGA. The second contextual factor that has influenced the design of the environmental benefits programme is the low technical capacity for asset creation in rural areas. All of MGNREGA-EB’s work

on designing, planning, selecting, constructing and maintaining assets use technical assistance as the main instrument to respond to local capacity constraints and improve the durability of assets. The third contextual factor is low participation in the selection of assets under MGNREGA. In many cases, the Gram Sabha has not fulfilled its function as a meeting for community members to articulate their need for specific assets that could be prioritised under MGNREGA. MGNREGA-EB aims to increase participation and local ownership where the limited capacity of village institutions is hindering bottom-up community identification of public assets.

# Discussion of findings



Our case study of MGNREGA and MGNREGA-EB has yielded a number of important findings on aligning social protection and climate change. In this section, we use our analysis of the context, mechanisms and outcomes of MGNREGA and MGNREGA-EB to discuss important findings related to our four main research questions.

## 5.1 Pathways for aligning SP and CC in practice

This report has highlighted two ways in which climate change has been mainstreamed into social protection programmes to deliver dual SP and CR outcomes.

### 5.1.1 Unplanned mainstreaming within MGNREGA

MGNREGA is a social protection policy response designed to support rural livelihoods through a labour guarantee scheme that builds public assets. It is not explicitly linked to climate change. But because of the programme's objectives and target beneficiaries – in particular, its association with improving rural livelihoods for people who rely on natural systems – it has adopted climate-responsive mechanisms.

### 5.1.2 Planned mainstreaming between MGNREGA and MGNREGA-EB

MGNREGA and MGNREGA-EB is an example of a planned alignment between social protection and climate change programming. MGNREGA-EB, an ecosystem-based adaptation intervention, has been mapped on to MGNREGA, an existing labour guarantee scheme, using technical assistance to design, plan, select, build and monitor climate-resilient assets under MGNREGA.

Given that this case study is limited in scope, we do not aim to suggest that these are the only ways that SP and CC can be aligned. A mainstreamed approach, for example, could incorporate social protection instruments into existing climate change programming. Or there may be other ways – such as a sequenced approach – in which the two could be aligned (see Steinbach *et al* 2016).

## 5.2 Mechanisms that deliver SP and CR outcomes

### 5.2.1 Unplanned mainstreaming

MGNREGA's mainstreamed approach to social protection and climate change gives households more secure access to income and assets. This helps reduce both rural poverty (its stated objective) and climate vulnerability (an unstated objective). For the programme to achieve these objectives, beneficiaries need guaranteed, predictable, timely, transparent and inclusive wages; durable assets that are responsive to livelihood needs; and wages and assets that are responsive to changing climate contexts.

Our analysis suggests that four important mechanisms underpin these outcomes:

- **Legal instruments:** these guarantee labour to households, formal contracts for wage-seekers, usufruct rights over communal assets and equal wage provisions for women. Legal circulars provide climate-responsive measures such as additional labour guarantees during climate shocks to reduce climate vulnerability.
- **Financial services:** especially the provision of bank accounts, are important to ensure predictable, transparent and timely wage payments to MGNREGA wage-seekers.
- **New technology:** such as digitised payment procedures, to reduce opportunities for corruption or manipulation.
- The **MGNREGA regulatory system:** sets standard procedures for wage payments, specifications for assets produced under the scheme and seasonal and regional variations in daily wage rates.

### 5.2.2 Planned mainstreaming

MGNREGA and MGNREGA-EB's approach to aligning SP and CC is explicitly planned. This approach uses three main mechanisms to deliver SP and CR outcomes:

- **Technical assistance:** by providing training and learning manuals for key functionaries so they can understand the impacts of climate change and design more climate-resilient communal assets; and training for user groups to maintain assets and ensure their long-term durability.

- **Technology:** such as computer modelling and GIS is used to design more durable assets that factor in local conditions such as rainfall, soil quality and landscape characteristics.
- **Participation:** encouraging community members, particularly women, to participate more actively in the Gram Sabha meetings to plan and select assets; setting up user groups and training members to monitor communal assets and granting them usufruct rights to incentivise participation.

## 5.3 Opportunities to hang in, step up and out of poverty and climate vulnerability

### 5.3.1 Unplanned mainstreaming

Evidence from focus group discussions and interviews with a selection of programme beneficiaries suggests that MGNREGA can achieve its core social protection aim to secure the livelihoods of rural households, allowing them to 'hang in' by protecting household income and assets and improving the capabilities of women. Importantly, since MGNREGA has mainstreamed climate responsive mechanisms into its programmatic structure in Andhra Pradesh, wage-seeking households are better equipped to hang in despite increasing climate vulnerability.

In Anantapur, for example, MGNREGS wages enabled farmers to hang in despite a long-term climate-related income decline and increased expenditure. One female smallholder noted that her groundnut crop had failed four or five times in the last decade because of drought. Each time, she had lost her annual income of some 10,000 rupees and had fallen into significant and increasing debt.<sup>5</sup> She and her husband used the 100 days' allocation available to them, earning an average of 1,200–1,400 rupees a week. They used these earnings to meet loan obligations and buy food for household consumption. In Vizianagaram, MGNREGS wages helped families meet large one-off expenses to rebuild their homes and replace crops and/or livestock damaged by cyclones – and to absorb shortfalls in income after cyclones.

Importantly, MGNREGA has provided a foundation to specifically support women to hang in. Although our fieldwork did not aim to explicitly unpack the complexities of intra-household gender dynamics to understand the differentiated impact of MGNREGA on men and women, there was a general perception in our survey areas that women have increased their earning power and strengthened their position both in the household and the community. An expert on gender in Andhra Pradesh noted that the equal wage component increased women's earnings, giving them more economic autonomy at household level and challenging deeply held beliefs about the differences between men and women in society.<sup>6</sup> As a result, women found they were able to save money, which helped their families hang in during climate shocks.

In Tettangi village in Vizianagaram, male focus group participants explicitly acknowledged the role of women in funding the reconstruction and consolidation of housing in the aftermath of Cyclone Hud Hud. Women have also used their MGNREGA wages to pay for loans they had taken out to pay for children's education. Although the relationship between education and a community's long-term resilience is complex, women focus group participants in Bukkapatnam noted that their primary reason for investing in education was to increase their children's earning potential, which in turn, would strengthen their household's long-term economic capacity.

Despite such achievements, women still face barriers to equal access under MGNREGA. The conditions guaranteed by MGNREGA are not always adequately followed. In Anantapur, women noted the lack of childcare facilities as a reason they could not fully participate in the scheme. In Vizianagaram, they struggle to access private assets such as mango plantations, because they need a land title, which is traditionally held in the name of the male household head. Barriers like these limit the programme's potential to help women and their households hang in and step up out of poverty and climate vulnerability.

In addition to 'hanging in', there are also some indications that MGNREGA can help some wage seekers step up and step out of poverty and climate vulnerability, by accumulating individual assets in the face of declines in agricultural output and climate impacts. In Anantapur, some participants reported that

<sup>5</sup> Interview R1, woman smallholder, Rasimpali, Anantapur

<sup>6</sup> Interview with Usha Bala, Vizianagaram



they had improved their asset base by acquiring mango plantations through MGNREGS. But not all households – particularly the landless poor – can acquire this type of assets. There was also evidence that MGNREGS participants in Vizianagaram had increased their asset base, with some respondents reporting that work on cascading tanks to increase groundwater had allowed them to dig boreholes, providing a reliable source of year-round water. These boreholes mitigated against recent unpredictable rainfall after changes in monsoon patterns, and farmers were able to plant crops in both planting seasons, rather than just a single season.

Elsewhere in Anantapur, the lack of livelihood benefits from communal assets was balanced by a perception of future benefits these assets would bring to communities. In Chilakala Gadda Palli, for example, focus group participants noted that staggered trenches, bund works and desilting would yield future benefits to agricultural production, helping households increase their incomes.

### 5.3.2 Planned mainstreaming

MGNREGA-EB began its implementation phase in Andhra Pradesh in 2014–2015. At the time of our field research, the construction of assets in Anantapur under MGNREGA-EB had only recently begun and assets in Vizianagaram were still in the planning stage.

It is therefore too early to observe whether assets built under MGNREGA-EB's aligned planning approach have improved opportunities for wage-seekers to hang in or step up and out of poverty and climate vulnerability. But there are signs that MGNREGA-EB's aim to strengthen the technical aspects of assets may also strengthen people's climate resilience. For example, in Vizianagaram, an MGNREGA-EB functionary who carried out a technical appraisal of one of the main tanks, found structural flaws in its design. If the bund were to be breached in a cyclone, such flaws could cause significant problems for the community, but it has now been identified as a priority for the next cycle of scheduled works. Similarly, focus group participants in Rasimpalli, Anantapur noted that the 'Greening Hilllocks' and tree plantation interventions introduced under MGNREGA-EB will be useful for harvesting rainwater, improving groundwater and providing the community with a source of income in the future. If these examples of delivering productive and durable assets are replicated more widely – for instance by linking up with skills training opportunities under Project LIFE-MGNREGA – rural communities may have more opportunities to hang in and even step up and out of poverty in the context of increasing climate shocks.

## BOX 4: HANGING IN AND STEPPING UP? SAPNA'S STORY

Sapna is a 31 year old marginal farmer and mother of three from Anantapur. Like many farmers, she has suffered many years of drought, and her groundnut crop has frequently failed over the past decade. Each time they lost their crop, her family also lost significant capital and built up debt. Even when her crop does not fail, worsening soil quality means lower returns on her investment. Sapna broke even on this year's groundnut crop, but because she had borrowed from the bank to make this investment, overall she lost money.

To supplement their income, Sapna and her household participate in MGNREGS. She reports that MGNREGA wages have helped keep her family afloat amid the decline in agriculture over the last decade, allowing her to meet debt repayments. Her household uses the full 100 days per year, evenly split between her and her husband. MGNREGS's flexible working hours allow her to combine work with other domestic

activities. She typically starts her MGNREGA workday at 7am and finishes at 12.30pm. After this, she collects fodder for her cattle, takes care of her children, prepares food and fetches water.

Sapna has recently been accepted for mango plantations under MGNREGS. She believes that mangoes are important because they provide a secure crop for the future. Due to declining rainfall, she believes that groundnuts will no longer prosper in Anantapur. But mangos grow well in a dry climate, and she is confident that they will provide a source of income for her family's future. While she does not expect to see a profit from the mangos for three to five years, in the interim period she will get various subsidies from MGNREGS, including work days to water her mango plants and other funds for water and fertiliser.

## 5.4 Next steps for alignment

Our case study of MGNREGA and MGNREGA-EB has outlined how social protection and climate change programming can be aligned through a mainstreaming approach. Our evidence from Vizianagaram and Anantapur underscores that alignment has important potential in helping women and their households to hang in, step up and step out of poverty and climate vulnerability. In consultation with stakeholders involved in designing, delivering and participating in MGNREGA and MGNREGA EB, we have identified a number of options to strengthen SP and CR outcomes under the two programmes:

- To improve the resilience of women under MGNREGA, direct wage payments could be supplemented with financial training and skills development, so women are better able to leverage capital, accumulate assets and diversify their livelihoods to help them absorb future shocks.
- Project LIFE-MGNREGA could provide specific skills training to create green jobs linked to MGNREGA assets – for example, building bio digesters or processing local products from communal horticultural or agroforestry sites.
- MGNREGA-EB could increase awareness of the long-term benefits of climate-resilient assets by focusing on mates and other local functionaries as key agents of change. This could also strengthen linkages between communities and public assets.
- In addition to focusing on communal assets under MGNREGA-EB, planners could develop aligned SP and CC strategies to strengthen resilience by climate-proofing private assets. This strategy would need to address barriers women and the landless poor face in owning or exercising control over private assets, so that they too could benefit.

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Social protection and climate change programmes are two public policy responses that governments use to address the challenges of poverty, climate vulnerability and gender inequality. Social protection programmes provide a safety net for households by providing cash/asset transfers and labour market instruments to address the immediate and underlying socio-economic risks facing the poor. Climate change programmes use a range of policy, financial, technological and capacity-strengthening measures to address climate change vulnerability. Despite the fact that most countries have comprehensive strategies for both social protection and climate change, there have been few attempts to align the two to develop more durable pathways out of poverty and climate vulnerability. This paper is the first of two case studies that examines how aligning social protection and climate change interventions could help households manage the risks they face, and set themselves on a path out of poverty and into climate-resilient livelihoods. It presents a case study of the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and the MGNREGA-Environmental Benefits programme (MGNREGA-EB) in India, based on fieldwork in the south-eastern state of Andhra Pradesh.

IIED is a policy and action research organisation. We promote sustainable development to improve livelihoods and protect the environments on which these livelihoods are built. We specialise in linking local priorities to global challenges. IIED is based in London and works in Africa, Asia, Latin America, the Middle East and the Pacific, with some of the world's most vulnerable people. We work with them to strengthen their voice in the decision-making arenas that affect them – from village councils to international conventions.



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