



Facing climate change: how can social protection and labour and employment measures support adaptation and mitigation?

Koen Vleminckx

Metapaper

SOCI*EU***X+**

EU expertise on social protection,
labour and employment



Co-funded by
the European Union

Published by:
SOCIEUX+ EU Expertise on Social Protection,
Labour and Employment
FPS Social Security
Blvd. du Jardin Botanique 50, Boîte 135
1000 Brussels, Belgium
contact@socieux.eu

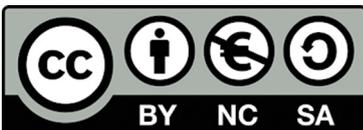
Author: Koen Vleminckx. He is Knowledge Development Coordinator at SOCIEUX+, Advisor-general for scientific development at the FPS Social Security. Ph.D. Social Policy at the Catholic University of Leuven (KU Leuven).

The SOCIEUX+ team is committed to enable peer exchanges and cooperation between public professionals and social partners.

This publication was co-funded by the European Union.
Its contents are the sole responsibility of the authors and
do not necessarily reflect the views of the European Union.

Non-commercial edition.

Cover image: Peter Burdon
Free to use under the Unsplash License.



Commercial use of the original work or any possible
derived works, the distribution of which requires a license
equivalent to that regulating the original work, is prohibited.

Acknowledgements

Hereby, I would like to thank the following people for their valuable suggestions or corrections to an earlier draft of this text: Adélio Fernandes Antunes, Sarah Carpentier, Claude Croizer, Eleni De Becker, Heather Grabbe, Sebastiano Sabato, Verhonica Zamudio Santos, Anne Van Lancker. Remaining errors are of course the sole responsibility of the author.

Disclaimer

The sole responsibility of this publication lies with the author. The European Union, the European Commission, the partner institution or the Consortium partners for the implementation of SOCIEUX+ are not responsible for any use that may be made of the information contained therein.

Table of Contents

1	Introduction	2
2	Human-induced climate change is a reality.....	4
2.1	Scientific evidence	4
2.2	Regional differences	5
2.3	Action is needed.....	7
3	Climate change is also a social crisis.	9
3.1	Differential vulnerability	9
3.2	Disproportionally exposed	9
3.3	Lack of adaptive capacity	10
3.4	Exposure to adverse effects of climate mitigation policies	10
4	Role of Social Protection, Labour and Employment	11
4.1	What kind of social protection?.....	11
4.2	A broader ambition for social protection	13
4.3	Social and civil dialogue	15
4.4	Social protection and climate change adaptation	17
4.4.1	Fostering resilience	18
4.4.2	Horizontal and vertical expansion.....	20
4.4.3	Piggybacking.....	22
4.4.4	Integrating shock-responsive elements into existing social protection schemes	23
4.4.5	Crisis-sensitive delivery mechanisms:.....	24
4.4.6	Crisis-sensitive financing mechanisms	25
4.4.7	Helping people through transitions	28
4.5	Social protection, labour and employment measures, and climate change mitigation.....	30
4.5.1	Offset the financial burden associated by the green transition.	30
4.5.2	Promotion of ‘green jobs’	32
4.5.3	Influencing ‘green’ behaviour	36
4.5.4	Investing in a green transition	38
4.6	Eco-social policies	38
5	Key Takeways	41
6	Glossary.....	43
7	References	45

1 Introduction

Globally, humanity is facing the consequences of climate change. Communities all over the world are forced to absorb the impact of extreme weather events, caused or made worse by climate change, and had to adapt to slow onset climate related changes that affect their way of life. Over the past year, 2022-23, extreme rainfall caused historic flooding in China, New Zealand, Nigeria, Mozambique, and Pakistan. Winter droughts have affected Southern Europe and the Maghreb, while East Africa saw its fifth season of failed rains. Heatwaves and other record-breaking heat-events occurred in various regions of the world, including in China, Southern Europe and the US, which had a profound effect on people's health. The consequences of climate change have a real impact on our lives.

Not only are the causes and consequences of climate-change well documented by an increasing body of scientific literature, but communities are also gaining more and more practical experience in implementing practices and policies to address the consequences of climate change and aimed at mitigating the future impact of climate change.

Climate change also represents a socio-economic challenge. The consequences of climate change have an impact on our economies, jobs, health, across the entire socio-economic spectrum. It is also increasingly clear that, worldwide, vulnerable groups are more adversely affected by the direct and indirect effects of climate change, as well as by ill-prepared decarbonisation policies aimed at reducing the pace and future impact of climate change.

As a consequence, climate change poses new challenges for social protection, labour and employment policies. The consequences of climate change have an impact on poverty and well-being. They can set-back progress made in Sustainable Development and Millennium Development Goals in the last decades. This forces policymakers to respond. Thus, climate change has become a fundamental driver of social policy and labour and employment agendas. Some regions of the world have been facing the impacts of climate change for decades and have already accumulated some policy experience. But as the effects of climate change become visible in more and more regions of the world, new ideas are being developed and alternative policy paradigms are being formulated, while valuable new insights are being produced by the implementation of new policies.

The impact of climate change, and the management of the social implications of the green transition was identified as an "emerging trend" in the Report of the High-Level Group on the future of social protection and of the welfare state in the EU¹. The EU is responding to the challenge of climate change by supporting the necessary 'green transition', but also aims to address the social implications of climate change.

In 2022 the Council of the EU has issued a Recommendation² with further guidance to Member States on how to ensure the transition towards climate neutrality occurs in a socially equitable way, on how best to address the social and labour aspects of the green transition, by promoting the right employment skills, putting in place appropriate social protection and taxation measures, and making full use of the available funding options. The European Commission has also introduced a 'Social Climate Fund' to address the social impact of measures to promote the climate transition, the EU

¹ *Report of the High-Level Group on the future of social protection and of the welfare state in the EU* (Section 1.5): <https://op.europa.eu/en/publication-detail/-/publication/842d8006-c3b3-11ed-a05c-01aa75ed71a1/language-en/format-PDF/source-283143938>

² Council of the European Union (2022), *Council Recommendation of 16 June 2022 on ensuring a fair transition towards climate neutrality* 2022/C 243/04, OJ C 243, 27 June 2022, pp. 35-51.

Emissions Trading System (EU ETS) in particular. It will start operating in 2026, and will be financed by €65 billion from the EU budget, plus 25% co-financing by Member States.

The European Union (EU) addresses global challenges through international partnerships and leads international efforts to address environmental challenges and to promote the implementation of ambitious environment, climate and energy policies, while supporting sustainable growth and jobs. The EU also established *SOCIEUX+ EU Expertise on Social Protection, Labour and Employment*, a facility for technical cooperation between public and social partner peers of which the EU is the main co-financer together with BELINCOSOC, Enabel, Expertise France, and FIIAPP. The general objective of SOCIEUX+ is to expand and improve access to better employment opportunities and inclusive social protection systems.

This metapaper aims to give a concise and up-to-date overview of relevant insights for policymakers and their advisers that are confronted with the challenge of protecting and preparing people for both the consequences of climate change as well as the implementation of just, green transition policies.

In the first section, we give an overview of the latest findings on the causes and consequences of human-induced climate change. In the second section, we make the case that climate change is also a social crisis that requires the attention of social policymakers. In a third section, we discuss the role of social protection, labour and employment within this context. Throughout this metareport we will also present good practices across the world.

2 Human-induced climate change is a reality.

2.1 Scientific evidence

Combined evidence from across the world shows that the Earth's surface and its oceans are warming, which has a continued impact on Earth's climate. While Earth's climate has varied across the millennia, multiple peer-reviewed studies³ from research groups across the world have provided evidence that observed climate-warming trends over the past century are extremely likely due to human activities, primarily the use of fossil fuels. Leading scientific organizations worldwide have issued public statements endorsing this position⁴.

According to the Intergovernmental Panel on Climate Change (IPCC), created in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP)⁵, human induced climate change is both the cause of more frequent and intense extreme events, such as precipitation events, drought and fire weather, as well as of slow onset climate events, like sea level rise and environmental degradation (IPCC, 2022:1-2). According to the IPCC, climate change has also increased adverse impacts from extreme weather events, such as tropical cyclones, due to rising sea levels and the increase in heavy precipitation (IPCC, 2022:3).

This has caused and will continue to be the cause of widespread adverse impacts and related losses and damages to nature and people, such as shifts in the distribution, or even extinction, of fauna and flora, plant diseases and pests, food and freshwater shortages, and migration of people fleeing these dangers. The effects of human-induced climate change have been visible in natural ecosystems for at least two decades (Parmesan and Yohe 2003; Root, Price et al. 2003).

"Climate change is expected to have significant impacts on natural resources, the world economy and human health. It will lead to increased temperatures, rising sea levels, altered precipitation patterns and increased frequencies of extreme weather events such as floods and droughts. Such impacts will occur even if the world achieves the United Nations Framework Convention on Climate Change (UNFCCC) objective of limiting global temperature increase to within two degrees above its pre-industrial level", European Commission's Joint Research Centre.⁶

³ K. Myers, et al, "Consensus revisited: quantifying scientific agreement on climate change and climate expertise among Earth scientists 10 years later," Environmental Research Letters Vol.16 No. 10, 104030 (20 October 2021); DOI:10.1088/1748-9326/ac2774

⁴ Statement on climate change from 18 scientific associations (2009): <https://www.aaas.org/news/aaas-reaffirms-statements-climate-change-and-integrity>

⁵ The Intergovernmental Panel on Climate Change (IPCC) provides governments at all levels with scientific information that they can use to develop climate policies. More information: <https://www.ipcc.ch/>

⁶ European Commission's Joint Research Centre, https://joint-research-centre.ec.europa.eu/scientific-activities-z/climate-change_en

As climate change is a global phenomenon, there are hardly any regions of the world that are not affected by its impact. *“Climate change is already affecting every region on Earth, in multiple ways. The changes we experience will increase with additional warming,”* (Panmao Zhai as quoted in IPCC, 2021:2)⁷.

2.2 Regional differences

However, climate change, its consequences and the vulnerability of communities are not uniform across the Earth: regional effects may be disproportionate and may differ from global trends (IPCC, 1997⁸, as referred to by ILO, 2022). Climate change is bringing different changes in different regions. The Sixth Assessment Report of the IPCC gives the following examples (2021:2-3):

- *More intense rainfall and associated flooding, as well as more intense drought in many regions, due to an intensified water cycle;*
- *Changes in rainfall patterns, which, in high latitudes, will likely increase, while it is projected to decrease over large parts of the subtropics. Changes to monsoon precipitation are expected, which will vary by region;*
- *Coastal areas will see continued sea level rise, contributing to more frequent and severe coastal flooding in low-lying areas and coastal erosion;*
- *Further warming will amplify permafrost thawing, and the loss of seasonal snow cover, melting of glaciers and ice sheets;*
- *Changes to the ocean, including warming, more frequent marine heatwaves, ocean acidification, and reduced oxygen levels have been clearly linked to human influence, which will affect both ocean ecosystems and the people that rely on them;*
- *For cities, some aspects of climate change may be amplified, including heat since urban areas are usually warmer than their surroundings, as well as flooding from heavy precipitation events and sea level rise in coastal cities.*

The WorldRiskReport 2023⁹ assesses the disaster risk from extreme natural events and negative climate change impacts for 193 countries, all the member states of the United Nations, and more than 99% of the world’s population. The WorldRiskIndex is calculated per country as the geometric mean of exposure and vulnerability. Exposure represents the extent to which populations are exposed to and burdened by the impacts of earthquakes, tsunamis, coastal and riverine floodings, cyclones, droughts, and sea level rise. Vulnerability maps the

⁷ IPCC, *Press Release: Climate change widespread, rapid, and intensifying*, August 9th 2021.

⁸ IPCC, *The Regional Impacts of Climate Change: An Assessment of Vulnerability* (Cambridge University Press, 1997).

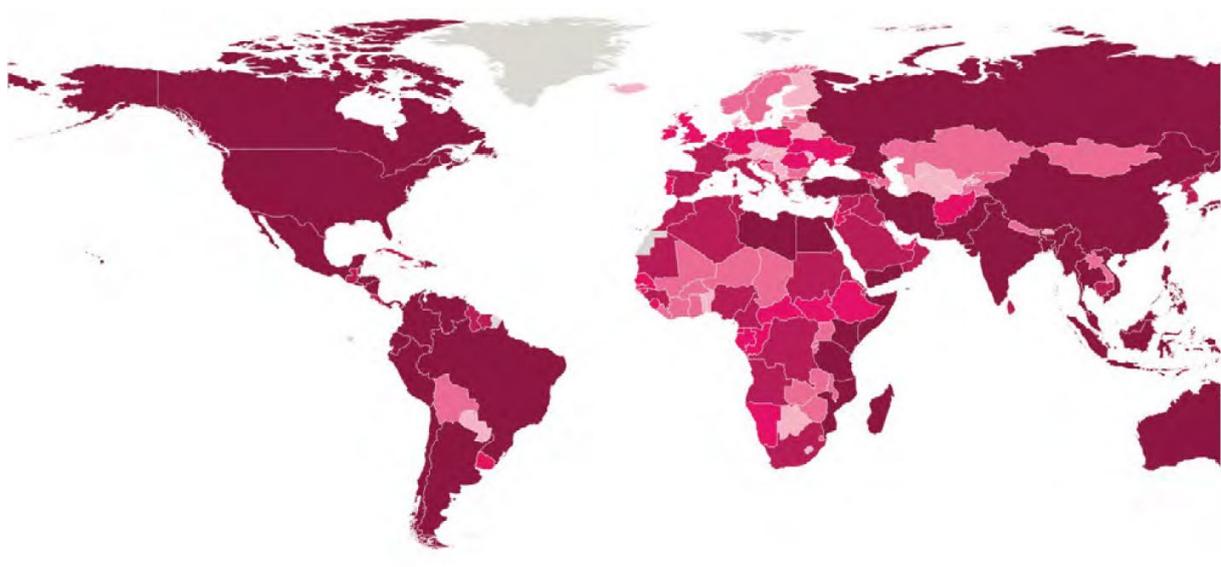
⁹ The reports and more in-depth information, methodologies, and tables are available at <https://weltrisikobericht.de/en/>

societal domain and is composed of three dimensions: susceptibility¹⁰, coping¹¹ and adaptation¹². Countries on the map below (figure 1) coloured light pink have a relatively low risk, while those coloured dark pink have a high risk.

The countries with the highest disaster risk worldwide are the Philippines (WRI 46.86), Indonesia (WRI 43.50), and India (WRI 41.52). The Americas is the continent with the highest disaster risk. It is followed by Asia, Africa, Oceania, and Europe—with scores significantly below the global average. Seven of the highest-risk countries are also among the ten countries with the highest exposure. China’s exposure is highest, followed by Mexico and Japan. Oceania’s risk profile is mainly influenced by exposure. The ten countries with the highest vulnerability are all African countries. The most vulnerable country worldwide is Somalia, followed by South Sudan and the Central African Republic. South Korea and Italy illustrate that low or very low vulnerability can decrease a country’s disaster risk even if it has high exposure.

According to the IPCC “approximately 3.3 to 3.6 billion people live in contexts that are highly vulnerable to climate change.” (IPCC, 2022:13).

Figure 1. WorldRiskIndex 2023: Geometric mean of exposure and vulnerability.



Source: WorldRiskReport 2023, p. 6.

¹⁰ Referring to structural characteristics and conditions of a society that increase the overall likelihood that populations will suffer damage from extreme natural events and enter a disaster situation.

¹¹ Capacities and actions of societies to counter negative impacts of natural hazards and climate change through direct actions and available resources in the form of formal or informal activities, and to minimize damage in the immediate aftermath of an event.

¹² Long-term processes and strategies to achieve anticipatory changes in societal structures and systems to counter, mitigate, or purposefully avoid future adverse impacts.

2.3 Action is needed.

There is hope that drastic reductions in greenhouse gas emissions can stabilise temperature rise. But, according to scientists, temperature rises must slow down, and global warming must be kept to 1.5°C by 2100 in order to avoid the worst consequences of climate change. If no action is taken, the planet could still warm by more than 2°C by then.

Climate change can only be tackled by international cooperation. In December 2015, governments adopted the first universal agreement to combat climate change during the 21st UN Climate Change Conference of the Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC) in Paris. The so-called “Paris Agreement” strives to keep the increase in global average temperature to ‘well below’ 2 °C, while trying to maintain it at 1.5 °C above pre-industrial levels. The main conclusions of the 28th UN Climate Change Conference of the Parties (COP28) held in Dubai in December 2023 are the following¹³:

- Transition Away from Fossil Fuels: Nearly every country agreed to transition away from fossil fuels, the main driver of climate change². This is the first time such an agreement has been reached in 28 years of international climate negotiations.
- Global Stocktake: The commitment is included in the first "global stocktake" of how countries can accelerate action to meet the goals of the Paris Agreement.
- Loss and Damage Fund: An early breakthrough was the launching of a fund to pay for "loss and damage" from climate change.
- Lack of New Financial Commitments: Developing countries were left disappointed by a lack of new financial commitments for transitioning away from fossil fuels and adapting to climate impacts.
- International Pledges: COP28 brought a wave of new international pledges, covering everything from oil-and-gas company emissions and tripling renewables, through to food systems and how the world can better integrate action on climate change and biodiversity loss.
- Four Pillars: The key outcomes of global climate action across the four pillars set by the COP 28 Presidency were: i) fast-tracking a just, orderly, and equitable energy transition; ii) fixing climate finance; iii) focusing on people, lives and livelihoods; and iv) underpinning everything with full inclusivity¹⁴.

Article 191 of the Treaty on the Functioning of the European Union¹⁵ makes combating climate change an explicit objective of EU environmental policy. The European Commission’s strategy for reducing the risks posed by climate change is both to mitigate, by reducing emissions of greenhouse gases, and to adapt, by reducing exposure and vulnerability to expected impacts. Climate change mitigation and adaptation will eventually be essential

¹³ https://unfccc.int/sites/default/files/resource/Summary_GCA_COP28.pdf

¹⁴ <https://www.carbonbrief.org/cop28-key-outcomes-agreed-at-the-un-climate-talks-in-dubai/>

¹⁵ Article 191(ex Article 174 TEC), §1: *Union policy on the environment shall contribute to pursuit of the following objectives: preserving, protecting and improving the quality of the environment, protecting human health, prudent and rational utilisation of natural resources, promoting measures at international level to deal with regional or worldwide environmental problems, and in particular combating climate change.*

considerations in growth and development strategies, such as the European Green Deal, and in achieving the UN's Sustainable Development Goals.¹⁶

Box 1. Adaptation & Mitigation

Climate Change Adaption: The process of adjustment to actual or expected climate and its effects. Adaptation seeks to moderate or avoid harm or exploit beneficial opportunities.

Adaptation to climate change ranges from soft and inexpensive measures (water conservation, crop rotation, drought-tolerant crops, public planning and awareness-raising) to costly protection and relocation measures (increasing the height of dykes; relocating ports, industry and people away from low-lying coastal areas and flood plains).

Climate Change Mitigation: Actions that reduce the rate of climate change. Climate change mitigation is achieved by limiting or preventing greenhouse gas emissions and by enhancing activities that remove these gases from the atmosphere.

¹⁶ <https://www.europarl.europa.eu/factsheets/en/sheet/72/combating-climate-change>

3 Climate change is also a social crisis.

Climate change is a socio-economic challenge, as its consequences have, now and in the future, significant impacts on the world economy, income distribution, labour markets, and human health. While nobody can escape the impacts of climate change, some are more vulnerable than others. Not only are some continents, countries and regions more affected than others, but some social groups are also more vulnerable to the adverse consequences of climate change.

3.1 Differential vulnerability

Vulnerability to climate change is exacerbated by inequity and marginalization linked to low income, gender, ethnicity, or combinations thereof (Craig, et al., 2022:12). The social consequences of climate changes are unequally distributed and are caused by underlying inequalities on many levels: between high- and low-income countries, between rich and poor within countries, men and women, race, etc., and the social consequences of climate change might even reinforce these inequalities.

Limited access to resources affects the ability of vulnerable groups and individuals to cope with the consequences of climate change. Vulnerable groups and individuals are also less able to reduce exposure to the adverse effects of climate change.

3.2 Disproportionally exposed

Vulnerable people are disproportionately exposed to both extreme events, as well as slow-onset events. For example, economic and racial factors combined to create the large concentration of low-income African American people in the low-lying districts of New Orleans before hurricane Katrina (Mutter, 2015). Hallegatte, et al. (2016) find that the people living in poverty are more susceptible to the diseases that many climate hazards help to spread:

“Poor people are overexposed to floods in many countries, such as in Panama and Zimbabwe, where they are greater than 50 percent more likely than the average to be flooded. Such overexposure is also true for drought and high temperatures in most countries. More important, poor people are often exposed to frequent, low-intensity events, such as the recurrent floods that affect many cities with insufficient drainage infrastructure.” (Hallegatte et al., 2017:4)

Slow onset changes, such as rising temperatures, rising sea levels, changing seasonal patterns, etc., directly impact on the livelihood of people in the affected regions. Low-income groups and minority groups are more exposed to the consequences of these slow onset changes.

According to a report of the US' Environmental Protection Agency (EPA, 2021:6):

“...minorities are most likely to currently live in areas where the analyses project the highest levels of climate change impacts with 2°C of global warming or 50 cm of global sea level rise. [...] Those with low income or no high school diploma are approximately 25% more likely than non-low income individuals and those with a high school diploma to currently live in areas with the highest projected losses of labor hours due to increases in high-temperature days with 2°C of global warming” (EPA, 2021:7). Moreover, *“individuals in these socially vulnerable groups are approximately 15%*

more likely to currently live in areas where the highest percentage of land is projected to be inundated due to sea level rise.” (EPA, 2021:7).

3.3 Lack of adaptive capacity

Vulnerability to the consequences of climate change is also associated with the lack of adaptive capacity. In Norway, a country with *“a high technical and financial capacity at the aggregate level, the ability of communities to adapt is highly differentiated [...], depending on economic wealth, social structures, and previous experience with climate variability. As systems are faced with adversity or opportunities, social and natural systems will seek to adapt to the changing circumstances. Hence, vulnerability is shaped not only by exposure, but also by underlying social and economic conditions that shape adaptive capacity. This capacity is not equally distributed in society.”* (Sygna et al., 2004:5).

3.4 Exposure to adverse effects of climate mitigation policies

Climate change mitigation policies, aimed at reducing the rate of climate change by limiting or preventing greenhouse gas emissions and enhancing activities that remove these gases from the atmosphere (decarbonization), can also adversely affect vulnerable groups and individuals. Climate change mitigation measures can unwittingly place higher financial burdens on poor households, for instance, when policymakers use pricing mechanisms to discourage the use of products or services associated with polluting energy consumption. Pollution taxes, for instance, often have regressive distributional effects as low-income households spend a higher proportion of their income on energy-intensive needs, such as heating and cooling (Büchs, et al., 2011).

Decarbonization is associated with important shifts in energy consumption and economic production. While these shifts are associated with additional investment in alternative energy and new products that can generate new jobs, the downsizing or closing down of carbon-associated activities will also result in the loss of some jobs. In order to generate support for a green transition, it is therefore also important that job creation outsets job destruction, particularly for vulnerable groups.

4 Role of Social Protection, Labour and Employment

Social Protection, labour and employment policies can protect and prepare people for climate change adaptation, decarbonization and climate mitigation in general. As such, they can “become an essential pillar of many Climate Change and Green Transition policies” (Rigolini, J., 2021).¹⁷ The question is what kind of social protection we need.

4.1 What kind of social protection?

Social protection has a long history. The right to social security was already established as a basic human right in the ILO’s Declaration of Philadelphia (1944) and its Income Security Recommendation, 1944 (No. 67). This right is upheld in the Universal Declaration of Human Rights, 1948, and the International Covenant on Economic, Social and Cultural Rights, 1966. In 1952, the ILO’s Social Security Convention No. 102 set minimum standards for the right social security. This includes life-cycle risks (childhood, parenthood, old age/longevity, widowhood and orphanhood), health risks (sickness, work-related injury and infection, pregnancy and delivery of children and invalidity/long-term work disability) and job loss/unemployment. In addition, the ILO Convention requires every ratifying country to protect at least 20% of the economically active population or 50% of all employees or 50% of all residents against at least three of the listed risks (ILO, 1952).

In 2012, the Social Protection Floors Recommendation No. 202 complemented the other ILO conventions and recommendations by providing further guidance and prioritising the establishment of national floors of social protection accessible to all in need as a fundamental element of national social security systems. National social security floors should comprise guarantees to ensure effective access to essential healthcare and basic income security throughout the life-cycle. This is part of a strategy for extending social security that progressively provides higher social security to as many people as possible.

In 2016, the World Bank and the ILO jointly initiated the *Global Partnership for Universal Social Protection to Achieve the Sustainable Development Goals* (USP2030), intending to promote the realisation of the Social Development Goals (SDG) agenda on social protection, in particular SDG 1.3: “Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable”.

According to the Global Partnership, “Universal Social Protection” refers to a nationally defined system of policies and programmes that provide equitable access to all people and protect them throughout their lives against poverty and risks to their livelihoods and well-being” (Global Partnership for Universal Social Protection, 2019). But they avoid giving a blueprint for the realisation of this ambition, by emphasising that “this protection can be provided through a range of mechanisms, including in cash or in-kind benefits, contributory or non-contributory schemes, and programmes to enhance human capital, productive assets, and access to jobs” (Global Partnership for Universal Social Protection, 2019).

Social protection has often been described as a combination of contributory social (risk) insurance, needs-based social assistance and active labour market policies. The European Commission defines

¹⁷ Rigolini, Jamele, *Social Protection and Labor: A Key Enabler for Climate Change Adaptation and Mitigation*, Discussion Paper, no. 2108, December 2021, World Bank Group, Washington DC.

social protection as “a broad range of public, and sometimes private, instruments to tackle the challenges of poverty, vulnerability and social exclusion” (European Commission, 2015). Social protection instruments include a range of both non-contributory (where the beneficiary does not have to pay directly into a scheme to receive something back) and contributory schemes (where only those who financially contribute into a scheme’s fund, or on whose behalf a payment is made, can receive something back), as well as selected instruments to strengthen skills and competencies to diversify livelihoods, increase employability and support entrepreneurial activities. Figure 2 below presents a typology of instruments of formal, public social protection.

Figure 2. Typology of social protection instruments.¹⁸



Source: European Commission, 2017.

Other international organisations also recognise these key instruments. The OECD for instance, states that “while there is variation across countries, the term social protection system usually refers to a framework whereby the three pillars of social protection – social assistance, social insurance and labour market programmes – are integrated or, at a minimum, co-ordinated” (OECD 2018, 13). The ILO also calls for a social protection floor of contributory and non-contributory schemes, expansion strategies in the form of contributory schemes, and linkages to ALMPs (ILO, 2019). Finally, in its 2019 social protection strategy, UNICEF lists social transfers, social insurance, labour and jobs, and social service workforce as critical components (UNICEF, 2019).

The *Handbook on Social Protection Systems* equally focuses on social transfers, social insurance, labour market policies (LMP), social services and micro-insurance as five areas that the authors consider cornerstones of social protection (Loewe, Markus and Esther Schüring, 2021:25). They decided to include LMPs and social services as they consider them important when pursuing the full range of social protection functions. “LMPs prevent people from losing their main source of income and help them seize new opportunities. Social services next to income security are needed to manage risks and cope with poverty which is not only monetary but also multidimensional in nature” (Loewe, Markus and Esther Schüring, 2021:25). We agree with this broad scope and would even like to add

¹⁸ European Commission, *Social Protection across the Humanitarian-Development Nexus. A Game Changer in Supporting People through Crises*. Tools and Methods Series Reference Document No 26, February 2019, building upon OPM (2017)

fiscal transfers as long as they have the aim to protect them throughout their lives against poverty and risks to their livelihoods and well-being.¹⁹

4.2 A broader ambition for social protection

At the end of the nineties, the World Bank developed a conceptual framework called *Social Risk management* (SRM), that extended the traditional framework of social protection to cover more risk categories and looked into public actions to improve market-based and non-market-based (informal) instruments of social risk management, while specifically focussing on the poor, who were deemed the most vulnerable to risk and more likely to suffer in the face of economic shocks. SRM consists of public interventions to assist individuals, households, and communities in better managing risk and supporting the critically poor (Holzmann, Jorgensen 2000; World Bank, 2001).

SRM strategies fall into three broad categories:

- Prevention strategies are public measures to reduce the probability of risk. For example, in the labour market, preventive SRM interventions are geared to improve the skills or the functioning of labour markets to reduce the risk of un- or under-employment, or low wages.
- Mitigation strategies are intended to decrease the impact of a probable risk. Typical mitigation strategies are portfolio diversification, insurance and hedging. Formal and informal reciprocity arrangements in families or communities are examples of informal insurance schemes.
- Coping strategies relieve the burden of risk once it has occurred. The government has an important role in assisting people in coping, for example where individual households have not saved enough to handle serious illness or catastrophic risks.

Particularly interesting within this context is that SRM explicitly considers the responses to different kinds of shocks, related to various sources of risks, including environmental and natural risks. For instance, SRM makes a distinction between idiosyncratic and covariant shocks. In contrast to idiosyncratic shocks that affect some individuals and their households, covariant shocks affect large communities. The latter includes both extreme events and slow onset changes caused by climate change, and other community-wide shocks such as civil strife, pandemics, etc. (Holzman and Jorgensen, 2000). See also table 1 below.

¹⁹ The term 'fiscal welfare' was first used in 1956 by Richard Titmuss in his essay "The Social Division of Welfare". See also: Sinfield, A. (2018). "Five: Fiscal welfare and its contribution to inequality". In *Social Policy Review* 30. Bristol, UK: Policy Press.

Table 1. Typical risks by their nature and degree of covariance.²⁰

	Micro-level risks (idiosyncratic)	Meso-level risks (somewhat covariate)	Macro-level risks (highly covariate)
Life-cycle	Childhood Parenthood Death (widowhood, orphanhood) Old age (longevity)		
Health	Illness Injury Employment-related injury and infection Pregnancy Delivery	Epidemia	Endemia
Employment and economy	Loss of job (unemployment) Business failure	Decrease in demand Output collapse	Financial crisis Currency crisis Hyper-inflation
Society and polity	Theft/robbery Murder	Terrorism Bomb attack Riot Resettlement	
Climate and nature	Domestic fuel Lightning strike	Drought Flood Landslide Hail	Volcanic eruption Earthquake Air pollution Climate change
Environment		Pollution of river Deforestation	Nuclear disaster

Sources: Adapted from Loewe and Schüring (2021:12); Coudouel et al. (2002, 169); Holzmann and Jørgensen (1999); Loewe (2009); World Bank (2000).

Although social protection systems were traditionally aimed at protecting individuals and households against idiosyncratic shocks faced by individuals and households, they did provide protection against the social consequences of economic crises. For instance, Matthias Dolls et al. (2010) documented the effectiveness of social protection systems in Europe and the US as automatic stabilizers during the financial crisis of 2008. But the critical role of social protection during covariant shocks was demonstrated during the Covid-19 Pandemic, which started in November 2019 and formally ended in May 2023, when the WHO declared the end to COVID-19 as a public health emergency, “stressing that it does not mean the disease is no longer a global threat”²¹.

Furthermore, SRM distinguishes between catastrophic and non-catastrophic shocks, where the former deserves more attention from policymakers than the latter as catastrophic events can severely affect household’s livelihoods and hamper their capacity for recovery. Protection against non-catastrophic events need not necessarily require long-term net transfers to the afflicted household. If

²⁰ Consensus only exists for the two first rows of the table.

²¹ Source: <https://news.un.org/en/story/2023/05/1136367>

appropriate mechanisms are available, households may use savings or loans with no net transfers from others over time.

The SRM approach was criticised, amongst others, by Devereux and Sabates-Wheeler (2004). In their view, SRM focusses too much on economic protection against short-run shocks and livelihood risks and is based on too narrow a conceptualization of vulnerability, understood only in terms of income, consumption and assets. They believe this overlooks the important structural factors that affect vulnerability and chronic poverty, such as inequality and social exclusion, which are embedded in socio-political contexts. Therefore, they add a “transformative” function for social protection, referring to “the pursuit of policies that integrate individuals equally into society, by removing barriers to higher social equality, inclusion and social mobility, and thereby achieving sustainable livelihoods and allowing everyone to take advantage of the benefits of growth (2004). Examples of such transformative social protection interventions include collective action for workers’ rights or changes to the regulatory framework to protect vulnerable groups such as ethnic minorities, people with disabilities, etc..

Thus, Devereux and Sabates-Wheeler (2004) suggest expanding the scope and purpose of social protection to actively reduce rather than perpetuate structural dimensions of vulnerability alongside economic and provide support to the chronically poor and the transitory poor.

During the last two decades, there were many new developments regarding both the theoretical framework and practice of social policy, specifically to address the challenges of climate change. As a result, many new concepts and paradigms have been introduced that provide valuable insights for policymakers that want to adapt social protection to better cope with climate change's consequences or use social protection to facilitate climate policies.

There is increasing recognition of the multiple complementarities and growing convergence in approaches between assistance provided in crisis contexts and social protection approaches adopted in more stable contexts (European Commission, 2019).

4.3 Social and civil dialogue

Social dialogue is crucial in finding balanced solutions in response to new needs, to changes in the world of work as well as to unexpected crises. Earlier this century, the global economic crisis as well as the COVID-19 crisis once more showed the importance of effective tripartite social dialogue and cooperation bringing together governments and employers’ and workers’ organizations to design effective strategies and policies to address the impact of these crises. It has helped the tripartite partners to achieve consensus on targeted measures to protect workers and enterprises particularly hard hit by the crisis and to promote recovery (ILO, 2022).

Social dialogue facilitates the fluid exchange of essential information needed to formulate, implement and evaluate policies. But social dialogue also contributes to perceived fairness of the policies that are being implemented and the creation of a supporting base for these policies. Social dialogue helps to create consensus on these policies and to manage potential conflicts.

The 2015 ILO Guidelines for a Just Transition, identify social dialogue and capacity buildings for the social partners as a priority if one wants to build strong just transition framework: “Strong social consensus on the goal and pathways to sustainability is fundamental. Social dialogue has to be an integral part of the institutional framework for policymaking and implementation at all levels.

Adequate, informed and ongoing consultation should take place with all relevant stakeholders” (ILO, 2015).

Indeed, in addition to social dialogue, it can be important to also invite other relevant stakeholders than workers’ organizations and employers’ organizations to participate in broader civic dialogue. Other interested groups, such as development councils, indigenous leadership and local residents, can provide vital information and practical knowledge, as well as their social and political capital. The inclusion of important stakeholders, including vulnerable groups, will contribute to more effective policies.

Under the Paris Agreement on Climate Change, all countries are required to submit “nationally determined contributions” (NDCs). NDCs embody national efforts to reduce greenhouse gas (GHG) emissions and adapt to the impacts of climate change. Each government is required to prepare, communicate and maintain successive NDCs that it intends to make as well as to pursue domestic measures aimed at achieving the objectives of such contributions. The NDC update entails public participation – especially with the social partners – and engagement with local communities and indigenous people in an inclusive and consultative manner, consistent with the implementation strategies for the Paris Agreement (decisions 1/CP.21 and 4/CMA.1).

In a recent policy brief, the ILO presented the updated NDCs of Costa Rica and Kenya as worth exploring for their involvement of social partners (ILO, 2020) because “they particularly illustrate the importance of the government’s commitment, that is, the existence of an enabling external environment. After all, “if planning a Just Transition does not rely on comprehensive social dialogue it is difficult to believe that the Transition itself will be carried out in consultation with the relevant stakeholders, especially with workers’ and employers’ organizations” (ILO, 2020).

In the updated NDC of Costa Rica, its government (2020), indeed, engaged itself to establish “...a "National Ambition Cycle" with which it formally officially lays the foundations for a continuous, iterative and inclusive process, incorporating diverse inclusive process, incorporating diverse worldviews and knowledge and based on the best available science, and on the best available science and making the necessary efforts to appropriately incorporate the most to appropriately incorporate the groups most vulnerable to climate change, for monitoring and updating change, for monitoring and updating its Nationally Determined Contributions and its Climate Nationally Determined Contributions and its Long Term Strategy under the Paris Agreement” (2020, p. 14; translated from Spanish).

Costa Rica also pledged to establish a Just Transition governance scheme led by the Ministry of Environment and Energy, the Ministry of Human Development and Social Inclusion and the Ministry of Labour and Social Security for the sectors contemplated in the NDC: “This scheme will include a working commission between the two ministries to achieve a common understanding of just transition and to coordinate joint actions, as well as permanent and ad hoc spaces for dialogue to foster tripartite social dialogue between government, employers' and workers' representatives, as well as a broad social dialogue that integrates women and young people from an intersectional perspective, Indigenous Peoples and Afro-descendant communities in a manner appropriate to the realities and worldviews of the different communities and territories” (2020, p. 15, translated from Spanish).

The final aim is to develop “a Just Transition Strategy for the country, accompanied by a National Green Jobs Policy and the mechanisms to monitor and evaluate them, including the development and implementation of the necessary functions in the National Climate Change Metrics System (SINAMECC) to estimate green jobs, the evolution of just transition and the impact of climate action

on employment and vulnerable groups, as well as to forecast and anticipate changes in occupational demand caused by it” (2020, p. 15, translated from Spanish).

The ILO’s Climate Action for Jobs Initiative supports countries in advancing a Just Transition and facilitates knowledge development and capacity building on delivering climate goals and decent work in an integrated manner. Here too, social dialogue is regarded as a key area of focus and the foundation for policy development and implementation, as a “strong social consensus is crucial for transformative change. The initiative will strengthen mechanisms among governments, employers’ and workers’ organizations, and other key stakeholders and avoid disruptions of the social fabric” (ILO, 2023). Several countries participating in the initiative, including Argentina, Costa Rica, Côte d’Ivoire, France, Ghana, Indonesia, Samoa, Senegal, and Spain, have highlighted the importance of social dialogue for informing Just Transition plans and relevant policy instruments.

Within this context, we should also mention the Escazu Agreement. The Escazu Agreement, which entered into force on April 22, 2021, is a regional treaty for Latin America and the Caribbean that enshrines the right of every person of present and future generations to live in a healthy environment and to sustainable development . The agreement was negotiated by governments in Latin America and the Caribbean and is the region’s first environmental treaty as well as the world’s first agreement with provisions on human rights defenders in environmental matters ¹. The negotiation process featured significant participation of civil society representatives and experts in environmental law and human rights. The Escazu Agreement is an example of how social dialogue can be used to promote environmental protection and sustainable development. The agreement recognizes that public participation is essential for effective environmental governance and that access to information, public participation, and access to justice are key elements for achieving sustainable development. By enshrining these principles in a legally binding treaty, the Escazu Agreement provides a framework for promoting social dialogue on environmental issues in Latin America and the Caribbean.

4.4 Social protection and climate change adaptation

Traditionally, social protection has been designed to provide security against lost paid employment and/or health. Social protection protects people against short-term shocks and livelihood risks by providing income transfers that allow people to continue to consume while – at least to some extent - preventing their assets from deteriorating. In addition, active labour market policies, retraining, and temporary employment programmes facilitate the reintegration into the labour market of people who have lost their paid employment due to a shock or the realisation of an idiosyncratic risk.

Even without explicitly incorporating shock-responsive strategies, social protection, labour and employment policies are already dealing with the socio-economic consequences of shocks. For example, over the last couple of years, traditional social protection policies played an important role in protecting populations against the social and economic consequences of the Covid-19 pandemic. The pandemic put pressure on our economies, labour markets, and population health through the realisation of risks such as sickness, disability, unemployment, etc., that are traditionally covered by social protection systems.

Social insurance transfers, such as unemployment, sickness and disability benefits and means-tested safety net provisions, can and do protect people from shocks and stresses and prevent households from falling into poverty due to the consequences of shocks. Access to preventive and curative healthcare is also important, as some shocks, such as a pandemic and climate change, are associated

with increased health risks. Universal access to social protection and healthcare is essential to shock-responsive social protection systems. Countries relying on a comprehensive social protection system are advantaged when a shock occurs.

A programme with good population coverage is managed through sound administrative systems for beneficiary identification, data management, disbursement/goods, and monitoring activities are easier to use in an emergency.

4.4.1 Fostering resilience

The concept of resilience broadly characterizes the capacity to resist and recover from shocks. Barrett and Constan (2014) define “development resilience” as “the capacity over time of a person, household or other aggregate units to avoid poverty in the face of various stressors and in the wake of myriad shocks”.

There is also strong evidence showing that social protection systems increase a population's resilience to climate shocks. Cash transfers provided regularly to vulnerable groups in Ethiopia, Kenya, Niger and Uganda helped these groups to cope with the negative impacts of climate-related shocks when these happened, irrespective of the programmes' explicit intention to do so (Ulrichs et al., 2019; Premand, Patrick, and Quentin Stoeffler. 2020). Poverty-targeted, conditional, cash transfers in Mexico have also been linked to better coping capacity against hurricanes and to a possible reduction in violence influenced by extreme-heat (Garg et al., 2020). In Zambia, the Child Grant Program moderated the negative effect of weather shocks on poor households by providing them with regular transfers over the long term, increasing their food security and savings (Asfaw et al., 2017; Lawlor et al., 2015). A study investigating livelihood and landscape change over a 30-year period in two communities in Southern Africa, found that social assistance interventions decreased vulnerability to long term changes in average rainfall and other environmental variables (Masunungure, C., Shackleton, S., 2018).

However, there is also evidence that social protection systems alone are insufficient to increase resilience. An analysis of the impact of Brazil's social protection program, Bolsa Família, on 476 rural households' capacity to respond to droughts in northeast Brazil confirm a positive association between income and vulnerability reduction, but they also find that Bolsa Família on its own is insufficient for managing drought-related food insecurity. The researchers recommend in this case that efforts should be complemented with interventions that specifically aim to reduce climate risks, such as improving access to irrigation (Lemos, Lo, Nelson, Eakin, and Bedran-Martins, 2016).

More generally, “experience from Niger to Nicaragua shows that resilience can be further enhanced when cash transfers are reinforced with “economic inclusion and labour services such as behavioural change interventions, savings and livelihoods support, financial inclusion, and skills training and coaching” (Rigolini, 2021).

Good practice: Bolsa Familia – Brazil

Since the beginning of this century, Brazil has implemented an encompassing social reform under the general umbrella of the Zero Hunger Program, which the primary and more encompassing component of this policy is a programme called Bolsa Família, whose main thrust is a conditional cash transfer for families below a certain income level.

Description: The programme distributes funds to households with school children and income below a certain level (R\$77, extreme poverty, and R\$154, moderate poverty) with monthly cash transfers between R\$35 and R\$77. Most families receive an average of R\$167 (US\$50 in 2015). In 2015, approximately 14 million families (56 million people) in 5000 municipalities were receiving funds from the programme all over Brazil. In many poor municipalities, Bolsa Família resources represent over 50% of their total revenue and are responsible for a large portion of these municipalities' economic activity (Rocha, Khan, & Lima, 2008).

By investing in income transfer in the short run, and access to education and health in the long run, Bolsa Família seeks to both alleviate current levels of poverty and invest in long-term transformation, especially for future generations of Brazilians (Lemos et al., 2016). For some scholars the most critical impact of the program is its significant effect on inequality since a sizable number of people at the very low end of the income distribution scale are now receiving monetary benefits (Kerstenetzky, 2008; Soares, Ribas, & Osório, 2010).

A second cash transfer based programme is the rural pension, which critically influences the capacity of poor rural households to improve their quality of life and decrease sensitivity to drought (Lemos et al., 2016). All males over 60 and females over 55 qualify for the benefit irrespective of having ever contributed to the social security system in the past, provided they can prove they have worked as a rural labourer for 15 years and are associated with a rural labour union or association.

Outcome: An analysis of 476 rural households' capacity to respond to droughts in northeast Brazil also renders similar conclusions. Although they confirm a positive association between income and vulnerability reduction, they find that on their own, poverty reduction measures such as Bolsa Família are insufficient for managing drought-related food insecurity. Such efforts should be complemented with interventions that specifically aim to reduce climate risks such as improving access to irrigation (Lemos, Lo, Nelson, Eakin, and Bedran-Martins, 2016).

Sources:

Nelson, Lemos; Eakin, and Lo (2016) The limits of poverty reduction in support of climate change adaptation

Bedran-Martins (September, 2017) Politics of drought under Bolsa Família program in Northeast Brazil,

4.4.2 Horizontal and vertical expansion

During the pandemic many countries temporarily expanded their social protection systems, both horizontally (beneficiaries) and vertically (provided support) to address the socioeconomic impact of the Covid-19 crisis. Still, many social protection schemes have responded similarly to climate extremes such as floods, storms, heat extremes, droughts, etc..

Although this is not climate-related, a good example is the Mexican government's reaction after two earthquakes struck southern and central Mexico in September 2017. They temporarily increased cash transfers to better respond to post-event socio-economic needs by using existing social protection mechanisms. The horizontal extension was aimed at both reintegrating households that had previously participated in the Prospera programme and were affected by the earthquake in the eight affected states and including households from the affected areas that had not yet participated in the programme. This horizontal extension was deemed cost-effective as Prospera already had all operational data on these households. Using an already existing framework allowed building on a familiar system that people knew and respected (Beazley et al. 2019).

The vertical expansion of Jamaica's National Insurance Scheme (NIS) and the Programme of Advancement through Health and Education (PATH) were also key elements of the response to hurricane Dean in 2007. More than 75,000 of NIS pensioners and elderly received grants of about US\$72 and about 90,000 households registered in PATH received cash grants of about US\$30 in time (Beazley and Ciardi, 2019; Rodolfo Beazley et al. 2016).

When responding to the 2017 hurricane Irma in Saint Martin and Saint Barthélemy, France implemented a series of measures, including a temporary modification to partial unemployment benefits. As a result, local companies could benefit from the system up to 1,600 hours per employee, versus 1,000 hours normally. This was followed by a new training plan for employees who retained 100% of their wages at no cost to employers. Designed to last one year and allow local businesses to keep their employees until the 2018-2019 tourist season, it stabilized employment on both islands despite the sharp drop-in economic activity (France, 2018).

Good practice: Role of social protection during the aftermath of Typhoon Haiyan in Philippines

The Department for Social Welfare and Development (WFP) introduced a change in its social welfare system based on which household conditions on cash transfer programmes would be waived for three months in case of an emergency. This meant that the Philippines' conditional cash transfer programmes (Pantawid) automatically became unconditional following shocks, such as the one caused by typhoon Haiyan in late 2013.

With the help of the WFP, Pantawid was able to vertically expand the programme in the aftermath of Typhoon Haiyan and provide an emergency cash transfer to the affected populations in selected areas by topping up payments to the beneficiaries of a conditional cash transfer programme, Pantawid Pamilyang Pilipino Programme.

Furthermore, the Department of Labour and Employment (DOLE) established the Integrated Livelihood and Emergency Employment programme (DILEEP) in 2009. As a public workfare programme, it provides short-term decent work opportunities to workers of the informal economy. During the aftermath of typhoon Haiyan DILEEP provided income security and helped to rehabilitate communities by providing short-term wage employment and facilitating entrepreneurship. The programme also stipulates that participants are given access to health insurance, orientation on occupational safety and health and access to training opportunities.

In the aftermath of Typhoon Haiyan, the Department of Social Welfare and Development partnered with community-based organizations, such as DAMPA (a federation of 245 community-based organizations in the Philippines and led by women), to revalidate beneficiary lists of the Modified Conditional Cash Transfer programme in the typhoon-affected areas. DAMPA staff helped educate beneficiary households about the programme and monitor beneficiary compliance with the conditions of receiving cash transfers.

Sources:

Bank, A. D. (2018) Strengthening resilience through social protection programs : guidance note. Manila. Philippines: Social Protection Review and Assessment, Philippines.

Alano and M. Lee. 2016. Natural Disaster Shocks and Macroeconomic Growth in Asia: Evidence for Typhoons and Droughts. ADB Economics Working Paper Series. No. 503. Manila: ADB.

4.4.3 Piggybacking

The administrative network of social protection schemes can also be 'borrowed' ('piggybacked') for allocating specific, targeted support to affected target groups. For instance, when an earthquake hit Ecuador on 16 April 2016, the government declared a state of emergency in six provinces and took several response measures, providing new cash assistance to affected households through the Bono de Acogida, Alquiler y Alimentación and Bono de Alimentación Rural programmes. This response used the capacity of the Ministry of Social and Economic Integration (MIES), which is responsible for, among other things, implementing the Bono de Desarrollo Humano. Specifically, it used human resources, an IT platform, procedures and the infrastructure of the MIES. Registration of families was organised through the Register of Affected Households²².

Good practice: National Fund for Paid Leave and Bad Weather Unemployment for the Building, Public Works and Hydraulic Sectors - (CACOBATPH) – Algeria

Description: Developed through tripartite dialogue, the National Fund for Paid Leave and Bad Weather Unemployment for the Building, Public Works and Hydraulic Sectors responds to the needs of the construction and infrastructure sector, whose workers are particularly exposed to extreme weather conditions. Workers in the construction and infrastructure sector have access to paid leave and unemployment protection in the event of bad weather conditions – defined as atmospheric events, such as rainfall, snowfall, strong winds and heatwaves, which put the health and safety of workers in outdoor construction sites at risk and render work impossible to carry out. Financing is based on the principle of solidarity, with employers and workers each contributing each 0.375% or 0.75% of the contribution base.

Outcome: In 2018, more than 195,000 workers in the sector benefited from this scheme. It not only protects the health and safety of workers but also prevents the weather conditions – defined as atmospheric events, such as rainfall, snowfall, strong winds and heatwaves, which put the health and safety of workers in outdoor construction sites at risk and render work impossible to carry out. Financing is based on the principle of solidarity, with employers and workers each contributing each 0.375% or 0.75% of the contribution base. In 2018, more than 195,000 workers in the sector benefited from this scheme. It not only protects the health and safety of workers but also prevents the income loss and vulnerability of those affected by the effects of climate change.

Source: International Labour Organisation (2021) World Social Protection Report 2021-2022, Geneva: International Labour Organisation, blz. 218.

²² However, despite the efforts to utilize already existing structures, the programme faced difficulties in the timely disbursing of the funds to those in need. It took three months before the RUD was fully operational, with most transfers made in July and August.

4.4.4 Integrating shock-responsive elements into existing social protection schemes

Some adjustments are needed to make traditional social protection effective during a multivariate shock, such as a pandemic or a climate-relevant multivariate shock. Some of these shock-responsive features are best incorporated into the design of social protection systems.

Costella et al. developed the Shock Responsive Social Protection (SRSP) concept, which aims to bridge the gap between humanitarian and development aid to respond to major covariate shocks (Costella et al., 2016; O'Brien et al., 2018). SRSP combines key elements of social protection, disaster risk management and humanitarian assistance. It aims to align or integrate emergency responses with existing social protection.

Davies et al. (2008) introduced the concept of Adaptive Social Protection (ASP) within the context of climate change adaptation. Davies et al. reviewed the concepts, policies and evidence across three communities of practice: social protection, adaptation and disaster risk reduction (DRR) and concluded that these can not only contribute to making social protection systems more robust and dynamic in the face of current and future shocks and stresses, but that social protection can help adaptation and DRR better address the structural root causes of poverty and vulnerability to weather extremes, in efforts to strengthen or transform the productive livelihoods of people in poverty.

ASP has come to generally refer to the application of social protection to climate-related shocks and stresses (Devereux, 2016; World Bank, 2018). Protective, preventive and promotive functions of social protection play an important role in addressing non-climatic, socioeconomic drivers of vulnerability to climate change and reducing risks to household livelihoods and assets in particular. The qualifier “adaptive” is used when social protection's contribution to adaptation outcomes is further strengthened, primarily through adjustments to existing systems to manage risks associated with climate change in planning and implementation.

ASP not only integrates disaster risk management components into social protection, but also adaptation measures that enhance poor households' resilience to shocks by improving their preparedness for climate-induced disasters through designs, delivery systems and needs assessments that take into consideration the climate vulnerabilities of target populations.

Both ‘shock-responsive’ or ‘adaptive’ social protection have generated insights around two interrelated approaches: one focusing on boosting the role of social protection in building household resilience before shocks occur; and the second focusing on increasing the capability of social protection systems and programmes to respond to shocks after they occur (World Bank 2018).

Scientific and policy-oriented experience with the concept of shock-responsive or adaptive social protection underline both the possibility and the need to integrate crisis-sensitive elements into social protection to substantially accelerate the response of social protection in times of crisis. This is particularly true for crisis-sensitive institutional arrangements, delivery and crisis-sensitive financing mechanisms.

4.4.5 Crisis-sensitive delivery mechanisms:

To adequately respond to climate-related covariate shocks, delivery mechanisms of social protection schemes have to become more sensitive to specific conditions and requirements. This requires social protection administrators to look into:

- Continuity of service;
- Timely provision of assistance;
- Proper targeting to those in need;
- Surge capacity.

The **continuity** of national social protection systems is of utmost importance, particularly during a crisis provoked by a shock induced by climate change. Benefits and services must be delivered, even in the most difficult of circumstances. This requires the development of contingency plans and regulations, implementing electronic registration and payment tools, and training of staff, At the most essential level, there is the need for elderly people, for example, to continue receiving their old-age pensions even if their region is temporarily hard to reach due to a natural disaster. But in order to assure continuous functioning, additional flexibility might be required.

For instance, after the massive flood in 2011 that affected over 13 million people, the Thai Social Security Office launched several relief measures to ensure that unemployment insurance continued to operate as a cushion for workers. The application period for unemployment benefits was extended from 30 to 60 days to ensure that affected persons had sufficient time to request their benefits if the flood directly impacted them. The contribution rate collected from employers and workers was reduced from 5 to 3% from 1 January to 30 June 2012 and from 5 to 4% from 1 July to 31 December 2012 (ILO, 2019; ILO-AFD, 2022).

The **timely provision** of assistance is of utmost importance during an acute crisis. Again, good registries play an important role in swiftly identifying those in need, while electronic transfers can assure timely cash payments. Within the context of climate shocks, technology can also play a role in a different way. For instance, early warning systems, such as satellite-based triggers for drought response in Uganda, help enact benefit payments well before any late-onset indicators reach emergency levels (Rigolini, 2021). In Bangladesh, data on upstream river levels was used to trigger electronic cash payments to downstream households a few days in advance of the unprecedented and protracted Jumana river flooding of July 2020 (Pople et al. 2021). Subsequent evaluations showed that the anticipatory cash transfer was mostly spent on food and water, and that treated households were 36 percent less likely to go a day without eating during the flood (Pople et al. 2021).

Targeting, i.e., identification of social protection schemes' beneficiaries, is key because there might not always be an overlap between existing beneficiaries of social protection and those affected by a shock. Targeting effectiveness could be improved by including climate risk vulnerability, as well as by targeting those 'at-risk' of poverty. For instance, better social registries improve the ability to identify vulnerable individuals more accurately. Investing in social registries that cover a large share of the population and contain geo-referenced household data can help tailor the response to people's profile and needs. Both the Dominican Republic and Niger experimented with the modelling of targeting mechanisms that include climate variables (UNDP/UN Environment, 2018; Schnitzer, P., 2016).

Surge capacity refers to the ability to swiftly and adequately react to the additional crisis demand. Public health systems are designed with this capacity to cope with additional demand. However, this is rarely the case in social protection, and if the intention is to use the social protection programme to

provide additional support to a significant number of people affected by particular shocks, then peak capacity will need to be developed.

4.4.6 Crisis-sensitive financing mechanisms

Financing needs to be scaled up to enable social protection systems to dynamically and efficiently address climate-related shocks and stresses (Costella et al., 2017; Heltberg et al., 2009; Kuriakose et al., 2013; C. O'Brien et al., 2018; Ulrichs et al., 2019).

Social protection systems should consider establishing contingency funds to allow for resources to be disbursed in a timely manner and at adequate levels during emergencies (Béné et al., 2018; Conway & Schipper, 2011; C. O'Brien et al., 2018; Slater & Bhuvanendra, 2014; Ulrichs et al., 2019; Ziegler, 2016).

Forecast-based financing (FbF) can also enhance early warning systems by facilitating planned anticipatory action using pre-defined triggers and supported by ear-marked funding (Costella et al., 2017). The effectiveness of such a mechanism depends on robust climate information systems, as well as the capacity of social protection programs to identify and pre-register beneficiaries and implement the pre-agreed actions before the anticipated shock occurs (Costella et al., 2017).

An example can be found in Bangladesh, where an FbF mechanism automatically disperses funds when threshold forecasts are reached for an extreme event (Coughlan de Perez et al., 2016). This mechanism, used prior to a 2017 flood event allowed low-income, flood-prone communities to access better quality food in the short term without accruing debt (Gros et al., 2019). Another example can be found in Kenya. The Hunger and Safety Net Programme, a shock-responsive cash-transfer scheme available for vulnerable communities affected by drought, is administered by the National Drought Management Authority, which uses early warning indicators for drought that also serve as indicators to liberate funds for households. It is a strong example of a convergence between local adaptation mechanisms to climate change and national environmental and social risks management institutions.

Good Practice: Social Cash Transfer Program (SCTP) - Malawi

Malawi has put in place a mechanism to enable its Social Cash Transfer Program (SCTP), to scale up to additional beneficiaries in the event of climate shocks, initially prioritizing drought.

Description: This scalable mechanism promotes early action using pre-agreed and transparent triggers for funding, pre-positioned financing instruments linked to those triggers, and pre-targeting of vulnerable households. It also relies on having financial systems (i.e., digital payment accounts) in place to ensure funds reach beneficiaries when needed (Choularton e.a., 2023).

The government's aim in designing the trigger mechanism was to effect an earlier response by monitoring the early indicators of shocks and early signs of food insecurity stress. The design of the mechanism therefore looked for indicators that could be tracked during the rainfall season or triggering window and that were strongly correlated with increases of food insecurity during the subsequent lean season. In other words, the goal was to identify leading indicators, such as rainfall conditions, that would be strongly correlated with trailing indicators, such as drops in agricultural production and food insecurity outcomes. Ultimately, if a scale-up was triggered earlier, assistance could reach households in need during the anticipatory early-action operational window and before the lean season commenced. Providing resources before the lean season could help poor households affected by drought avoid negative coping mechanisms. In addition, receiving additional cash before the start of the lean season would allow them to stock up when food prices are low.

The government set the rules for monitoring and implementing the trigger mechanism in the SCTP Scalable Handbook. The handbook includes pre-agreed rules for (i) when to scale up for drought (trigger thresholds), (ii) where to scale up, (iii) which households to cover, and (iv) what level of payment to provide. The government has also constructed a financing plan to fund the SCTP scale-ups that combines a risk transfer instrument and contingency financing.

Outcome: The SCTP scalable mechanism was implemented for the first time during the 2021/22 rainfall season. That rainfall season was characterized by an unprecedented late onset that resulted in failed planting in several parts of Malawi. On top of that, livelihoods were affected by three cyclones—Ana, Dumako, and Gombe—and by macroeconomic factors related to the Russia-Ukraine conflict.

The government scaled up the SCTP in the three districts— Blantyre, Ntcheu, and Thyolo. The lack of rainfall at the beginning of the season was well captured by the primary trigger. Scale-up was triggered in Ntcheu based on an agreed early-season index, and both Thyolo and Blantyre came very close to reaching the trigger threshold as well. Based on the near-miss situation in these two districts, and considering the worsening food insecurity conditions shown by a secondary trigger evidence review, the government also decided to scale up the SCTP in Blantyre and Thyolo.

As a result of the scale-up in the three districts, the government provided assistance to around 74,000 households, which helped to protect the livelihoods of the poor and vulnerable. The government has drawn down US\$6.3 million from the contingency financing window to cover the costs of scaling up the SCTP this year in the three districts.

Sources: Choularton, Richard, Agrotosh Mookerjee, Meredith Mallory, Krishna Krishnamurthy, Rahel Diro, Evie Calcutt, and Alejandra Campero (2023) Technical Analysis to Inform the Trigger Design for Adaptive Safety Nets to Respond to Climate Shocks in Malawi, World Bank, Washington D.C..

Government of Malawi (2023) Social Support for Resilient Livelihoods: Scalable Handbook: <http://www.nlgfc.gov.mw/index.php/the-star/documents/file/135-scalable-handbook-updated-january2023>

Good practice: Sahel Adaptive Social Protection Program (SASPP)

The World Bank's Sahel Adaptive Social Protection Program (SASPP) seeks to mitigate recurrent climate shocks for the extreme poor by complimenting established national cash transfer programs with adaptive measures. The SASPP focuses on both regional and country-level activities. The majority of SASPP financing is disbursed in the form of direct grants to governments for piloting innovative adaptive social protection programs. These programs are embedded in the ongoing World Bank projects supported by the International Development Association (IDA) in an effort to strengthen adaptive social safety net systems.

Description: SASPP provides technical assistance, capacity building, and finances pilot interventions. These cover a range of elements focused on increasing the adaptiveness of systems and the resilience of poor and vulnerable households, including:

- *Adaptive safety nets programs that help poor households meet basic needs and diversify their livelihoods and that can be easily scaled up to respond to shocks.*
- *Complementary “productive inclusion” interventions like community savings and loan groups or life skills and entrepreneurship training for beneficiaries to reinforce their adaptive capabilities.*
- *Delivery systems (unique IDs, social registries, digital payments) as critical foundations for social safety nets to reach affected people.*
- *Early warning and climate information systems to design effective emergency response and adaptation programs.*
- *Contingency (risk) financing mechanisms to ensure timely and efficient financing of adaptive social protection interventions.*
- *Targeting mechanisms to identify ex-ante those most vulnerable to natural hazards and climate change related risks, and quickly scale up a program in case of necessity.*

Adaptive social protection systems in the Sahel help poor and vulnerable households build resilience, reduce the impact of climate change and other shocks such as the COVID-19 pandemic, and foster access to income earning opportunities.

The effectiveness of social protection systems in quickly reaching those impacted by shocks critically depends on the underlying delivery systems. Key elements of those systems include unique personal identification systems, social registries of poor and vulnerable households or of entire populations in climate shock-prone regions, payment systems to deliver cash to people and grievance redress mechanisms to increase efficiency and address targeting errors.

Drawing on climate early warning systems backed by disaster risk financing strategies, countries can anticipate climate-related events such as droughts, and quickly scale up cash transfers via their social safety net programs, providing an overall cost-effective response to increasing needs. Adaptive social protection interventions also have the potential to improve social cohesion and reinforce relationships within and between communities as well as state presence.

Outcome: Adaptive Social Protection Systems in the Sahel Were Leveraged for the Relief Following the Onset of the COVID-19 Pandemic. While the principal focus of the SASPP is climate shocks, countries expanded coverage of shock response cash transfers to households affected by the pandemic. The SASPP supported this short-term relief effort through adaptive social protection systems—thus strengthening these systems and reinforcing their capacity to respond to future climate shocks.

More information: <https://www.worldbank.org/en/programs/sahel-adaptive-social-protection-program-trust-fund>

4.4.7 Helping people through transitions

Social protection could facilitate approaches to transform productive livelihoods in areas where climate stresses already, or are projected to, impose, severe constraints. These approaches can include building resilient livelihoods in agricultural, fisheries, and urban contexts through a combination of basic social assistance benefits and public employment schemes and complementary interventions tailored to these contexts. Social protection can also facilitate measures that build “ecological resilience”, for instance through public works approaches that combine cash transfers with measures that help reduce environmental degradation.

In Malawi, Madagascar, Niger, and Tanzania, beneficiaries of public works programs create soil bunds, terrace land, and area enclosures that progressively stabilize degraded lands and hillsides and allow for the regrowth of vegetation, restoring water tables and leading to longer periods of seasonal stream flows (Rigolini, 2021)

In India, Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) public works are directed to agriculture and associated activities, such as water and land development, and positive impacts on climate change adaptation have been documented in areas that promoted investments in water conservation (Steinbach et al. 2020).

In Nepal, around 60,000 people are expected to benefit from training in basic skills, sanitation, health practices and nutrition or from temporary employment support that will help promoting sustainable land and water management (Rigolini, 2021).

Good practice: Mahatma Gandhi National Rural Employment Guarantee MGNREGA - India

Description: The National Rural Employment Guarantee Act 2005 (NREGA) is a social security scheme that attempts to provide employment and livelihood to rural labourers in India. In an effort to make inclusive and overall development a reality, the NREGA was passed as a labour law and implemented across 200 districts in 2006. By 2008, it came to cover the entire country. It was later renamed the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA).

MGNREGA is a rights-based safety net because it guarantees 100 days of wage employment (or unemployment benefit) per year (for unskilled manual work) to all rural Indians who opt in, unconditional on the availability of funding. The scheme was designed to provide any adult who registers for rural employment a minimum job guarantee of 100 days each financial year. In case employment is not provided within 15 days of registration, the applicant becomes eligible for an unemployment allowance. The minimum wages initially determined were INR 100 a day but later revised in keeping with the state labour employment conventions. The implementation of MGNREGA was left to the Gram Panchayats.

Outcome: The MNREGA provides a safety net to households during agricultural lean seasons and/or in the aftermath of unexpected shocks, by bolstering consumption, savings, financial inclusion, health and human capital, and as such contributes to climate adaptation. It is an example of how social protection schemes can be aligned with climate change interventions and develop more durable pathways out of poverty and climate vulnerability.

Public works are directed to agriculture and associated activities, such as water and land development, water conservation, drought prevention, (re-forestation), flood control, ..., which has resulted in an increase in groundwater level, improved soil, fertility leading to improved land productivity, ... (ISSA). A positive impacts on climate change adaptation have been documented in areas that promoted investments in water conservation (Steinbach et al. 2020).

Furthermore, the Act encourages the participation of women on equal terms to men and includes provisions for preventing discrimination on the basis of gender and caste. There is evidence that these characteristics have partially shifted power relations between laborers and local elites as well as empowered women within households (Godfrey-Wood and Flower, 2017).

Results of the implementation of the scheme may vary across Indian states, depending on factors such as political commitment and government capacity.

More info:

https://nrega.nic.in/Nreqahome/MGNREGA_new/Nrega_home.aspx

<https://socialprotection.org/fr/discover/publications/aligning-social-protection-and-climate-resilience-case-study-mgnrega-and>

4.5 Social protection, labour and employment measures, and climate change mitigation

In order to reduce the rate of climate change, greenhouse gas emissions have to be drastically reduced and activities that remove these gases from the atmosphere (decarbonization) need to be enhanced. These climate-change mitigation policies amount to a green transition of our economies. Investment in green transition can create economic growth and new jobs but are also associated with direct and indirect adverse impacts. As mitigation policies favour investment in the renewable energy sector, while disinvesting in carbon-intensive forms of production, some people and regions will be adversely affected by the closure of coal mines etc.. Some people will have fewer job opportunities than before or even face job loss, even when a green transition can create a net-growth in jobs. Another concern is that low-skilled jobs might be predominantly replaced by high-skilled jobs. Furthermore, climate change mitigation measures can unwittingly place higher financial burdens on poor households, for instance when policymakers use pricing mechanisms to discourage the use of products or services associated with polluting energy consumption.

Therefore, in order to assure a just green transition, measures must be taken to actively deal with these often complex social and inequality impacts. Social protection and labour market policies can and do play an important role in this. They have a long track record of helping those adversely affected by economic transitions to cope with some of the most harmful impacts.

4.5.1 Offset the financial burden associated by the green transition.

Fiscal measures aimed at reducing emissions will have income consequences on people, especially poorer groups, and social protection can help offset them and make these reforms more socially acceptable (Feng et al., 2018; Györi et al., 2021; Schaffitzel et al., 2020). In addition, compensatory cash-transfers and subsidies can and do offset the higher energy cost or other financial burdens associated with a green transition, particularly for low-income and other vulnerable groups.

To offset the negative impacts of higher energy prices on many low-income countries are implementing compensatory cash transfers. However, some cash transfers that have been implemented to help people cope with the elimination of energy subsidies only focused on the poor, for instance in Iran, El Salvador, India or Jordan while others, were (at least initially) universal in nature or included a large share of the population (Rigolini, 2021).

About a decade ago, the Islamic Republic of Iran implemented comprehensive energy subsidy reforms as part of a broader structural reform agenda to foster inclusive growth and job creation (ILO-AFD, 2022). Previously, fossil fuel subsidies accounted for the largest portion of the US\$100 billion spent yearly on subsidies, contributing to fossil fuel consumption twice as high as of that of other Middle Eastern countries. The energy subsidy reforms aimed to reduce domestic consumption and misuse of fuel subsidies to green the environment, while reducing air and noise pollution.

However, the energy subsidy reforms also created the budgetary space for social protection measures, such as a universal cash benefit, that mitigated the price increase effect of the subsidy reform and increased the social acceptance of the reform that in itself was aimed at increasing redistribution among Iranians as energy subsidies are usually regressive in nature, benefiting the rich more than the poor.

About 80% of the savings achieved through the subsidy reform were redistributed through cash transfers. As a result of the redistributive elements of the universal cash transfer, inequality as

measured by the Gini coefficient improved from 0.41 in 2010 to 0.37 in 2011, with a particularly sharp drop in inequality in rural areas, a result probably eroded since then by inflation and sanctions.

The health sector was second domain that benefited from the additional fiscal space. The health reform in the Islamic Republic of Iran included different interventions and aimed to improve the population coverage of basic health insurance, increase the quality of care in hospitals and reduce out-of-pocket payments for inpatient services.²³

Cushion and facilitate economic restructuring.

Environmental regulations imposed on the forestry, agriculture, energy sectors and polluting industries, the enactment of conservation measures, and even measures that aim to contribute to adaptation, can limit economic opportunities and affect jobs and livelihoods.

In many countries social protection, employment services, and community support programmes, were actively used to both cushion and facilitate economic restructuring. Social transfers can provide a vital lifeline to individuals and regions that are adversely affected by a green transition. In contrast, employment services can retrain and connect laid-off workers to jobs in new, greener and climate resilient opportunities.

Active labour market policies, including re-skilling, re-training, and job placements can facilitate the transition of workers from high-emission industries to low-carbon jobs (ILO & AFD, 2019) or from livelihoods affected by adaptation measures such as those that can impact fisheries (Bladon et al., 2022).

In Brazil, the Unemployment Insurance for Artisanal Fishermen guarantees income security, equivalent to the national minimum wage, for fishermen and their families during temporary fishing bans imposed annually to preserve fish species during their reproduction period. The scheme ensures that artisanal fishermen do not fall into vulnerability, poverty, or food insecurity during these times of transition, contributing to continued income and food security for workers in the artisanal fishing sector and their families.

When the People's Republic of China introduced a ban on logging in 69% of the total natural forest area, almost 1 million state forest workers lost their jobs. In response to the socio-economic consequences, the Ministry of Human Resources and Social Security, in consultation with tripartite committees at national and local levels, including the forest worker trade union, introduced measures to mitigate the effects on affected workers. Older workers were offered early retirement, while younger ones could opt for education and training programmes through employment service centres and were supported in finding employment elsewhere. As of the end of 2010, 680,000 redundant younger workers had received one-off payments and 276,000 were reemployed or retired. In addition, approximately 100,000 redundant workers who were unable to find new jobs received unemployment support to cover minimum living expenses and medical care. A variety of social measures also targeted local farmers affected by the logging ban.

A Mines Closure and Social Mitigation project in Romania, in addition to cash-based compensation, included the support of a newly created agency with the mandate to deal with the consequences of the mine closures, employment and training incentives schemes, community-driven development projects, and a micro-credit program. The project supported the creation of more than 13,000 jobs,

²³ Due to the escalation of sanctions and other factors, this reform is currently suspended (ILO, 2019).

and in project communities almost half of those affected by mine closures found other sources of employment (World Bank, 2006).

4.5.2 Promotion of 'green jobs'

The green transition towards a green, low-carbon, resource-efficient economy that enables green growth is a challenge and an opportunity for the labour market, as additional employment will be created. At the same time, other jobs will be replaced, and others will be redefined. Jobs will be made redundant and/or working conditions worsened by the environmental degradation caused by climate change. In this context, better coordination of labour market measures and instruments is essential to create the conditions to support green employment.

"Green jobs" can be defined as any professional activity that contributes to the protection of the environment and the fight against climate change by saving energy and resources, promoting renewable energy sources, reducing waste and pollution or protecting biodiversity and ecosystems. Green jobs do not only include jobs in the eco-industry. Activities in other sectors, such as sustainable agriculture and ecotourism, depend highly on a healthy environment, while many other jobs are indirectly affected.

Promoting green jobs requires investment in associated skills through education and (re)training and climate-sensitive support to firms. Targeted and temporary support to micro- and small businesses in the form of technical assistance, micro-credit or small grants, or subsidized employment to generate green jobs, can complement investments in skills by targeting specific constraints faced by the low-skilled and the poor: micro-entrepreneurs may be well-placed to provide environmental services, for example, but require business skills training to develop a sustainable business model.

International legal frameworks, national policies and legislation can strengthen the protection of environmental rights at work. In addition, social dialogue can promote frameworks, legislation and policies that include both labour and environmental concerns. Through social dialogue, areas can be identified where the ecological impact could be mitigated without reducing or negatively affecting employment or working conditions. However, to ensure that the identification of skill needs and the implementation of training programmes meet the needs of a green labour market transition, greater awareness of environmental issues and their integration into skills policy discussions are needed.

In 2009, the ILO launched the 'Green Jobs Initiative' to promote the creation of green jobs, and in 2013, the 'Green Initiative' was launched to equip the relevant actors to understand the challenges and opportunities of the transition and to take up the active role that they must play in managing this change. In 2015, the ILO's Governing Body endorsed the Guidelines for a just transition towards environmentally sustainable economies and societies for all. These Guidelines propose a set of balanced policy measures to be developed within each country, based on social dialogue, to facilitate the transition towards environmentally sustainable economies and societies by setting the right incentives for enterprises and protecting workers. The ILO also supports the 'Green Jobs Assessment Institutions Network' (GAIN), a network of policy research institutions and experts that analyses the social and employment-related outcomes of greening policies.

The EU also leads international efforts to promote sustainable growth and jobs, as well as the implementation of ambitious environment, climate and energy policies. For example, SOCIEUX+ implemented demand-driven technical cooperation activities to promote and facilitate the creation of green jobs in EU partner countries.

In 2018, SOCIEUX+ provided technical support to the Africa Regional Conference on “Green Jobs development: what role for Public Employment Agencies”. This was upon the request of the World Association of Public Employment Agencies (WAPES), which has taken up the topic of green jobs and its relevance for its members.

SOCIEUX+ also assisted Peru’s Regional Government of Loreto (‘Gobierno Regional de Loreto’) in strengthening its capacity to design and promote formal and worthy green employment and self-employment strategies among vulnerable populations in the region. More specifically, the aim was to promote green jobs instead of jobs in the forestry sector. The action established a sustainable and tripartite mechanism for dialogue and consultation on generating green, formal and decent jobs based on the sustainable use of forests.

In Togo, SOCIEUX+ facilitated the capacity building of the National Employment Agency of Togo (ANPE) to meet the challenges and opportunities of the greening of the economy in terms of jobs and skills. First, an assessment of green jobs in Togo was drafted, focussing on the required skills. Secondly, a pilot survey of green economy actors in 4 sectors selected by the ANPE was conducted to identify the required skills and highlight gaps between the demand for new or adapted green jobs and the current supply of professional training. Thirdly, a pilot experiment was implemented to assess the current training offer related to the competencies required in the organic farming value chain, analyse the relevance and quality of this offer and formulate recommendations to reduce the gaps between the expectations of economic actors in key competencies and the current training offer. And finally, SOCIEUX+ supported the formulation of a skills development strategy for jobs in the green economy and strengthened the leadership role of the ANPE in promoting green jobs and green entrepreneurship in Togo.

Design and implementation of a strategy for the promotion of green jobs and green businesses for young people in Uruguay

Uruguay is working to encourage those most vulnerable to changes in the economy and the labour market to transition in a fair and decent way, to promote working conditions and to make those jobs environmentally friendly, particularly by making the sectors where they usually work greener and more decent. Combining green growth and development with social inclusion to reduce unemployment and informality is therefore a challenge to be addressed.

In 2016, the ILO conducted a study on existing green jobs in Uruguay. It concluded that Uruguay had 44,108 green jobs in the country (2.72% of the labour force employed in the year) and that there were still many opportunities for growth: "there is potential for the creation of green jobs for the entire workforce, from manual labourers to artisans, entrepreneurs, highly skilled technicians, engineers and managers. The creation or strengthening of enterprises under sustainability standards within all sectors, as well as the emergence of new specialisations channelled through the formal training system that provide labour and generate new skills among skilled and unskilled workers, are a strong demonstration of the capacity for impact that this environmental dimension has on the economy" (ILO, 2016, p. 90-91).

Together with other international partners, SOCIEUX+ provided support to the PAGE (Partnership for Action on Green Economy) Uruguay programme, which is the main cooperation initiative to foster the transition to a green economy. Its aim is to combine economic growth and development with social inclusion, as well as to foster the creation of green jobs, reduce inequalities and increase the well-being of the most vulnerable populations. SOCIEUX+ provided support for the organisation of a series of workshops on concepts, policies and strategies for the promotion of green jobs for young people. The main objective was to develop knowledge and skills for the promotion of green jobs for young people, identifying tools and experiences of good practices for their incorporation in the management of the services of the Ministry of Labour and Social Security, local governments, Regional Directorates/Governments and related operators or other bodies interested in the promotion of green jobs for young people.

Additional information: <https://www.un-page.org/countries/uruguay/>

Green jobs in the agroecology sector in New Caledonia

In New Caledonia, SOCIEUX+ actions assisted in the design of inclusive, effective, and sustainable employment strategies with the previous concertation with the provinces.

First, a diagnosis of governance was drafted and the potential for job creation in the green economy sector was evaluated, particularly on behalf of and with respect for the Kanak people. Secondly, good practices were identified based on a mapping of current agroecology projects. Thirdly, in addition to the production of a reference framework, a roadmap was drafted to enhance the capacity of the government for better policy design aimed at the creation of green jobs in the agroecology sector, particularly for young people. Finally, a professional training reference framework was drafted for green jobs to be developed in the agroecology sector. They focussed on vanilla cultivation and processing and agroecological practices in Kanak fields.

Agroecology favours the use of diversity, whether genetic (complementarities of varieties, search for hardiness, etc.), specific (complementarities of crops, diversity of species) or functional (agroforestry, crop-livestock association, etc.). It is based on the recycling of resources and the search for complementarities between productions.

The focus on agroecological practices in Kanak fields was in recognition of the cultural value and economic weight (12.5 billion FCPP) of Kanak agriculture on customary land. The target group are Kanak families, representing a quarter of the Caledonian population, in particular young people. A previous survey on agriculture in the tribes indicated that 77% of those aged 16 and over have an agricultural or collection activity.

Thus, the objective was to motivate young Kanak for this ancestral type of activity inherited from Kanak culture by providing certified training that respects the tribe's traditional agricultural values and practices, while being open to other agroecological practices. The diploma that would be provided to successful participants after the completion of the training, got additional value through specific territorial regulations and its holders gain access to opportunities such as access to the status of farmer (agricultural card), sources of funding for projects, to agricultural aid, to other agricultural training courses leading to a diploma (via work on the level attributed to this training), etc..

*The focus on a vanilla cultivation and processing reference tool was to foster through training the production of good quality harvests in order to satisfy global and local demand, while providing a decent remuneration for the producer. The long-term objective was to make New Caledonia within 10 years the world reference for the *Vanilla planifolia* variety, the most widely grown variety in the world.*

References:

Apity, Leila, Bouard, Séverine and Stéphane Guyard (2010) L'agriculture en tribu, Poids et fonctions des activités agricoles et de prélèvement, Institut agronomique Calédonien (IAC).

Apity, Leila, Bouard, Séverine and Stéphane Guyard (2014) L'agriculture familiale dans la société kanak contemporaine. In Diversité des agricultures familiales, Versailles.

4.5.3 Influencing 'green' behaviour

The success of many mitigation measures depends on people's behaviours and consumption choices. Social protection programs establish a direct link between people and the State by supporting beneficiaries with social care and employment services, training, cash and in-kind payments. These entry points are often used to influence people's behaviours to improve a variety of outcomes that depend on their behaviours (such as the take up of health and social services, child rearing practices, nutrition, and gender-based violence) through a mix of cash incentives, advisory services, training, communications campaigns, and use of role models (Macours and Vakis, 2014, a.o.); and the same instruments can be used to steer people's behaviours to support climate mitigation measures.

Cash transfer programmes may directly affect the beneficiaries' land use and conservation behaviours, even without an explicit environmental objective – as shown by evidence from Colombia and Indonesia where deforestation was reduced by increasing incomes (Ferraro & Simorangkir, 2020; Malerba, 2020).

Examples in Nicaragua, Ghana, and Bangladesh, show that combining social assistance with asset transfers and/or vocational training, leads to positive outcomes around climate-related adaptation behaviours (Macours et al., 2022; Yiridomoh et al., 2021; Zakir Hossain & Ashiq Ur Rahman, 2018).

Schemes that offer employment to poor households through public works approaches that specifically integrate environmental or climate objectives can increase incomes while simultaneously contributing towards nature-based adaptation, disaster risk reduction, or climate change mitigation (Györi et al., 2021; McCord & Paul, 2019; Norton et al., 2020; Solorzano & Cardenes, 2019).

Specific Instruments aimed at promoting behaviours considered positive for the environment and climate, such as the Payments for Environmental Services (PES) are increasingly used to incentivise individuals and communities to engage in climate action, mitigation, and adaptation.

Good practices: Bolsa Floresta and Bolsa Verde in Brazil

Beneficiaries: Households living in extreme poverty that conduct activities of conservation of natural resources in selected areas.

The “Bolsa Floresta” (forest conservation allowance), a program implemented for the Amazonian region in 2008, aims to reduce extreme poverty while improving ecosystem conservation in Brazil.

Description: The program has four components: income, family, association and social. The income component of the program supports sustainable income-generation activities including local processing of products to add value, ecotourism, fish farming, natural honey production and breeding of small livestock. The family component offers a monthly payment to low-income households if they commit to zero deforestation and enrol their children in school. US\$35 is provided monthly to 54,000 mothers of poor families who live in conservation units as a reward for conserving the forest. As of 2016 the program was operating in fifteen conservation units covering a total of more than 100,000 square kilometres. In 2018, Bolsa Floresta was replaced by a new program called “Programa Floresta em Pé” (standing forests). More information on Bolsa Floresta program: <https://fas-amazonia.org/publicacao/bolsa-floresta-program/>

The “Bolsa Verde” (support to environmental conservation), implemented in 2011, targets extreme poor families that live in areas and carry out activities of conservation and sustainable use. Participants were identified using the Cadastro Único social registry based on these criteria. They received R\$300 (\$100) per household every quarter on signing a contract agreement, which lasted for two years, with an option for extension. This agreement stated that forest cover must be maintained above 80%, as set out in the Forest Code. Crucially, if the coverage fell below this level, all beneficiaries in the area would lose their cash payments.

Participants could attend training sessions on alternative land uses, sustainable production and enterprise development, and marketing of eco-friendly products, if the manager of the Conservation Unit succeeded in obtaining funds to support the training. The scheme offered opportunities for employment in latex extraction, artisanal fishing and handicraft production (ILO, 2015).

Outcome: The Bolsa Floresta program encouraged the preservation and sustainable use of forest resources by providing extremely low-income Brazilians living in the Amazon Forest with cash payments and livelihoods training. Among protection, the results of a 43% drop in the rate of deforestation in the beneficiaries during the period 2008-2020 (INPE/PRODES). In addition, there was a 202% increase in the average household income (2009-2019) — proving the possibility of forest conservation and income generation in riverside communities.

The number of individuals enrolled in Bolsa Verde increased from 36,400 in 2011 to peak at 290,636 in 2015. By December 2015, 74,522 previously neglected households had received conditional cash benefits of R\$300 per month (UNRISD, 2016), or 290,636 individuals (ECLAC, 2019). Qualitative research has shown that Bolsa Verde alleviated immediate poverty by supplementing BF benefits and providing recipients with a guaranteed income (MDS, 2016). A recent study has shown that deforestation in Bolsa Verde areas was between 44% and 53% less than the counterfactual, creating carbon reduction benefits valued at around \$335m between 2011 and 2015.

These allowances clearly realised the double objectives of poverty eradication & conservation in a context where the poor people relied on (illegal) logging for their livelihood. Worldwide 1.2 billion ultra-poor depend on forest exploitation.

Sources: OXFAM (2020) Protecting people and the forest, Oxfam Case Study, November 2020.

4.5.4 Investing in a green transition

Social insurance and pension funds have the potential to become an important leverage for a green transition, by investing in renewable energy, low-carbon activities, and activities that protect and restore the environment. They can also impose sustainability standards on their suppliers and service providers.

Since 2016, the National Social Insurance Fund (CNPS) of Cameroon has required the inclusion of Corporate Social Responsibility (CSR) and Health, Quality, Safety, and Environment (HQSE) standards in their procurement process. All companies bidding to carry out work or deliver supplies must comply with the social insurance funds CSR and HQSE standards and apply the respective “Code of Conduct”. Part of the reference framework is the application of environmental and social standards. Only service providers that comply with these standards will receive approval and be awarded a contract from CNPS. Any failure to comply, results in the withdrawal of approval as a supplier to the CNPS and disqualify from future biddings (ISSA, 2020).

South Africa’ Government Employees Pension Fund (GEPF), Africa’s largest pension fund, invests in four main asset classes, including equities, fixed income, properties, and the Isibaya Fund. The Isibaya Fund targets investments in four areas: economic infrastructure, including projects in energy; social infrastructure, including projects in education, affordable housing, and health care; economic growth and transformation, including projects in alternative energy and environmental protection and restoration and environmental sustainability, with a focus on renewable energy generation and clean technology. Approximately 5% of the GEPF portfolio is invested through the Isibaya Fund (OECD, 2012).

In the United Kingdom, pension schemes are required to publicly disclose the risks posed to their contributors’ investments by climate change and the net zero transition under new rules proposed by the Department for Work and Pensions, following the reporting guidelines of the Task Force on Climate-related Financial Disclosures.

4.6 Eco-social policies

Within the context of current debates on “Green (New) Deals” and reflections on a “Just Transition”, academics, policy practitioners and activists have been calling for the ecological crisis to be integrated into social policy making. Whereas environmental policies and social policies have historically been treated as two separate fields, there is a growing academic literature focussing on the development of “climate-sensitive”, “socio-ecological” and “eco-social” policies.

Some scholars have argued that climate change is a “new all-encompassing social risk” (Gough, 2013:185) that could be referred to as a third generation of social risks (Johansson, et al., 2016). However, Hirvilammi e.a. stress that “ecosocial” risks will occur in addition to the existing social risks to form a complex multi-layered structure of old, new, and eco-social risks” (Hirvilammi, et al., 2023:4).

Several authors refer to an “eco-social-growth trilemma” (Mandelli, 2022; Mandelli et al., 2021; Schoyen et al., 2022; Sabato and Mandelli, 2018) between economic, social and environmental objectives. However, balanced and integrated approaches are required to reconcile the three objectives. The current notion of Sustainable Development promoted by the United Nations could be considered a prominent example of such a balanced approach (Koehler, 2016), but a “galaxy of other sub-approaches” is possible (Mandelli, 2022:337): *‘green growth’* fosters the idea of ‘ecological

modernisation’, seeking to sustain growth through innovation and technological progress (Dryzek, 2013), while ‘*just transition*’ builds upon green growth, yet pays particular attention to its negative social trade-offs, attempting to turn them into socially just outcomes (International Labour Organisation, 2015; Stevis et al., 2020). But ‘*post-growth*’ or ‘*beyond-growth*’ approaches fundamentally question the overall desirability of economic growth, leads to both rising inequality and severe natural disruptions (Asara et al., 2015; Büchs and Koch, 2019). In May 2023 the European Parliamentary organised a “Beyond Growth” conference, for which an interesting background report on the subject was produced²⁴.

Recently, Mandelli defined ecosocial policies as “*public policies explicitly pursuing both environmental and social goals in an integrated way*” (Mandelli, 2022:334-335). An example of eco-social policy from the literature is social energy tariffs designed to increase in line with energy use and hence incentivise needs-based consumption while at the same time lowering the level of domestic emissions by high-income households (Gough, 2019). Further ecosocial policy examples include proposals in the fields of urban planning (Khan et al., 2020) and employment (Brandl and Zielinska, 2020).

Mandelli (2022:335) suggests a two-dimensional typology, which would allow the identification of various eco-social policies. A first dimension distinguishes between reactive eco-social policies constructed by adding a social dimension to environmental policies and preventive ones aimed instead at greening the welfare state. In the former scenario, the core rationale of eco-social policies is to target the social implications of environmental issues and policies and is reactive. The latter is preventive in nature and strives to contribute to reducing environmental degradation.

The second dimension allows a distinction to be made between eco-social protection and investment policies, with the latter actively contributing to growth. *Eco-social protection policies* primarily aim at cushioning or compensating for the costs and risks shouldered by individuals in the face of green challenges and policies, or at equally (re)distributing the resources and opportunities arising from a green transition. On the other hand, *eco-social investment policies* attempt to leverage existing socio-ecological challenges by trying not only to tackle them – as protective measures do – and turn them into economic opportunities, and hence to enhance green growth (Mandelli, 2022:341-342).

Mandelli applies this eco-social policy typology to the case of decarbonisation. The reactive policies in the examples in Table 2 below have a narrower scope, addressing urgent challenges and targeting, with social benefits, those most heavily and immediately affected by the transition, such as energy-poor households, or workers made redundant through industrial restructuring. In contrast, preventive eco-social policies go beyond immediate and urgent risks, also incentivising, through the greening of the welfare state, more large-scale and forward-looking changes in societal practices and behaviours favouring environmental sustainability. Examples of eco-social protection policies in the decarbonisation case include monetary support and vouchers. In contrast, eco-social investment measures entail an active role of the state in pursuing social and green investments for a decarbonised economy (Mandelli, 2022:343).

²⁴ European Parliament, 2023, *Beyond growth: Pathways towards sustainable prosperity in the EU*, European Parliamentary Research Service (lead author: Liselotte Jensen): [https://www.europarl.europa.eu/RegData/etudes/STUD/2023/747108/EPRS_STU\(2023\)747108_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2023/747108/EPRS_STU(2023)747108_EN.pdf)

Table 2. Typology of eco-social policies applied: tackling the challenges of decarbonisation for consumers and workers through different eco-social policies.

		The link to economic growth	
		Protective function	Investment function
The direction of eco-social policy integration	Reactive function	<p><u>Consumers:</u> Income support for energy-poor households to cope with rising energy prices</p> <p><u>Workers:</u> Unemployment benefits for redundant workers from carbon-intensive sectors</p>	<p><u>Consumers:</u> Investment in domestic energy efficiency, with tax incentives for energy-poor households</p> <p><u>Workers:</u> Assistance in job search and reskilling for redundant workers from carbon-intensive sectors</p>
	Preventive function	<p><u>Consumers:</u> Social vouchers for renewable energy consumption</p> <p><u>Workers:</u> Long-term income support to allow working time reductions</p>	<p><u>Consumers:</u> Investment in energy-efficient social housing</p> <p><u>Workers:</u> Investment in green jobs creation and green education and training</p>

Source: Mandelli, 2022:344.

5 Key Takeways

- Human induced climate change is both the cause of more frequent and intense extreme events such as precipitation events, drought and fire weather, as well as of slow onset climate events, like sea level rise and environmental degradation. There is hope that drastic reductions in greenhouse gas emissions can stabilise temperature rise.
- As climate change is a global phenomenon, hardly any regions of the world are unaffected by its impact. However, climate change, its consequences and the vulnerability of communities are not uniform across the Earth: regional effects may be disproportionate and may differ from global trends.
- Climate change is a socio-economic challenge, as its consequences have, now and in the future, significant impacts on the world economy, income distribution, labour markets, and human health.
- While nobody can escape the impacts of climate change, some are more vulnerable than others. Vulnerable groups such as low-income households, minorities, women, etc., are more adversely affected by the consequences of climate change and more vulnerable to the adverse effects of decarbonisation policies.
- Limited access to resources affects the ability of vulnerable groups and individuals to cope with the consequences of climate change. As a result, vulnerable groups and individuals are also less able to reduce exposure to the adverse effects of climate change.
- Climate change poses new challenges for social protection, labour and employment policies. However, associated policies can protect and prepare people for climate change adaptation, decarbonization and climate mitigation in general.
- Although social protection systems were traditionally aimed at protecting individuals and households against idiosyncratic shocks faced by individuals and households, they did of course provide protection against the social consequences of crises. This role of social protection during covariant shocks was foremost demonstrated during the Covid-19 Pandemic.
- Even without explicitly incorporating shock-responsive strategies, social protection, labour and employment policies are already dealing with the socio-economic consequences of shocks. Evidence shows that social protection systems increase a population's resilience to climate shocks, particularly when complemented with other policies and services.
- Scientific and policy-oriented experience with the concept of shock-responsive or adaptive social protection underlines both the possibility and the need to integrate crisis-sensitive elements into social protection to substantially accelerate the response of social protection in times of crisis.
- Social protection, labour and employment policies could facilitate approaches to transform productive livelihoods in areas where climate stresses are projected to impose severe constraints.
- Social protection, labour and employment policies can and do play a fundamental role in dealing with often complex social and inequality impacts of climate mitigation. They have a long track record of helping those adversely affected by economic transitions to cope with some of the most harmful impacts.
- Compensatory cash-transfers and subsidies can offset the higher energy cost or other financial burdens associated with a green transition, particularly for low-income and other vulnerable groups.

- Active labour market policies, including re-skilling, re-training, and job placements can facilitate the transition of workers from high-emission industries to low-carbon jobs and so-called “green jobs”.
- Schemes that offer employment to poor households through public works approaches that specifically integrate environmental or climate objectives can increase incomes while simultaneously contributing towards nature-based adaptation, disaster risk reduction, or climate change mitigation.
- Social insurance and pension funds can provide an important leverage for a green transition, by investing in renewable energy, low-carbon activities, and activities that protect and restore the environment. They can also impose sustainability standards on their suppliers and service providers.
- Within the context of current debates on “Green (New) Deals” and reflections on a “Just Transition”, academics, policy practitioners and activists have been calling for the ecological crisis to be integrated into social policy-making. Whereas environmental policies and social policies have historically been treated as two separate fields, there is a growing academic literature focussing on the development of “climate-sensitive”, “socio-ecological” and “eco-social” policies.

6 Glossary

Adaptive social protection: Combining social protection, disaster risk management and climate change adaptation.

Climate change: World temperatures are rising because of human activity. The world is now about 1.1 °C warmer than it was in the 19th century. As a result, weather patterns are shifting. This is what we call climate change.

Climate change adaptation: The process of adjustment to actual or expected climate and its effects. Adaptation seeks to moderate or avoid harm or exploit beneficial opportunities.

Climate change mitigation: Actions that reduce the rate of climate change. Climate change mitigation is achieved by limiting or preventing greenhouse gas emissions and by enhancing activities that remove these gases from the atmosphere.

Covariant shocks: Affect large communities and even nations.

Coping strategies: Relieve the burden of risk once it has occurred. The government has an important role in assisting people in coping.

Decarbonization: Policies aimed at reducing the rate of climate change, by limiting or preventing greenhouse gas emissions and by enhancing activities that remove these gases from the atmosphere.

Eco-social policies: Public policies explicitly pursuing both environmental and social goals in an integrated way.

Eco-social-growth trilemma: The so-called ‘system approach to sustainable development’ (O’Connor 2007; Purvis et al. 2019) postulates the existence of three different spheres: economic, social and environmental. The three spheres are linked in such a way that it would make little sense to treat them in isolation one from the others. Indeed, while, in some cases, objectives related to the three spheres can be pursued simultaneously (i.e. there are synergies), in other cases trade-offs arise and the pursuit of objectives related to one of the three spheres is not compatible with the pursuit of objectives specific to at least one of the other spheres.

Forecast-based financing (FbF): A program that enables access to humanitarian funding for early action based on in-depth forecast information and risk analysis. The goal of FbF is to anticipate disasters, prevent their impact, if possible, and reduce human suffering and losses.

Green jobs: Any professional activity that contributes to the protection of the environment and the fight against climate change by saving energy and resources, promoting renewable energy sources, reducing waste and pollution or protecting biodiversity and ecosystems.

Green growth: According to OECD²⁵, green growth means fostering economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies.

Horizontal and vertical expansion: Temporary expansion of coverage (horizontal) and the support provided (vertical) to address the socioeconomic impact of the Covid-19 crisis.

²⁵ <https://www.oecd.org/greengrowth/whatisgreengrowthandhowcanithelpdeliversustainabledevelopment.htm>

Idiosyncratic shocks: Affect some individuals and their households.

Just transition: With regards to climate change mitigation, the IPCC²⁶ defines just transition as a “set of principles, processes and practices that aim to ensure that no people, workers, places, sectors, countries or regions are left behind in the transition from a high-carbon to a low carbon economy.” The Just Transition Mechanism (JTM)²⁷ is part of the European Green Deal and a key tool to ensure that the transition towards a climate-neutral economy happens in a fair way, leaving no one behind.

Mitigation strategies: Intended to decrease the impact of a probable risk.

Multivariate shock: A multivariate shock in the context of social risk management refers to a situation where multiple social risks occur simultaneously. For example, a natural disaster such as an earthquake can cause multiple social risks such as homelessness, loss of income, and food insecurity¹.

Piggybacking: Borrowing the administrative network of social protection schemes for allocating specific, targeted support to affected target groups.

Post-growth: In the context of climate change, "post-growth" refers to a shift away from the traditional economic model of growth and expansion towards a more sustainable model that prioritizes environmental protection and social well-being.

Prevention strategies: Public measures to reduce the probability of risk.

Resilience: Characterizes the capacity to resist and recover from shocks.

Shock-responsive social protection: Social protection systems that incorporate shock-responsive strategies with the aim bridge the gap between humanitarian and development aid to responds to major covariate shocks.

Social Protection: A broad range of public, and sometimes private, instruments to tackle the challenges of poverty, vulnerability and social exclusion.

Social Risk management (SRM): Consists of public interventions to assist individuals, households, and communities better manage risk, and to provide support to the critically poor.

Surge capacity: Refers to the need to be able to swiftly and adequately react to the additional demand during a crisis.

Transformative social protection: Pursuit of policies that integrate individuals equally into society, by removing barriers to higher social equality, inclusion and social mobility, and thereby achieving sustainable livelihoods and allowing everyone to take advantage of the benefits of growth.

Universal Social Protection: A nationally defined system of policies and programmes that provide equitable access to all people and protect them throughout their lives against poverty and risks to their livelihoods and well-being.

²⁶ IPCC, 2022: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change.

²⁷ https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/finance-and-green-deal/just-transition-mechanism_en

7 References

- Alano and M. Lee. 2016. Natural Disaster Shocks and Macroeconomic Growth in Asia: Evidence for Typhoons and Droughts. ADB Economics Working Paper Series. No. 503. Manila: ADB.
- Asara V, Otero I, Demaria F et al. (2015) Socially sustainable degrowth as a social–ecological transformation: repoliticizing sustainability. *Sustainability Science* 10(3): 375–384.
- Asfaw, S., Carraro, A., Davis, B., Handa, S., and Seidenfeld, D. (2017) *Cash transfer programmes, weather shocks and household welfare: evidence from a randomised experiment in Zambia*. *Journal of Development Effectiveness*, 9(4), 419-442.
- Asfaw, S., and B. Davis (2018) *Can Cash Transfer Programmes Promote Household Resilience? Evidence from Sub-Saharan Africa*. In: *Climate Smart Agriculture*, edited by L. Lipper, N. McCarthy, D. Zilberman, S. Asfaw, and G. Braca, 227–50. Rome: Food and Agriculture Organization of the United Nations.
- Bank, A. D. (2018) *Strengthening resilience through social protection programs : guidance note*. Manila. Philippines: Social Protection Review and Assessment, Philippines.
- Barrett, C. B., and Conostas, M. A. (2014) *Toward a theory of resilience for international development applications*. *Proceedings of the National Academy of Sciences*, 111(40), 14625-14630.
- Barrett, S., and S. Kidd (2015) *The Design and Management of Cash Transfer Programmes: An Overview*. KfW Development Bank Materials on Development Financing, no. 3. Frankfurt am Main.
- Bedran-Martins (September, 2017) *Politics of drought under Bolsa Família program in Northeast Brazil*, *World Development Perspectives* 7-8(51):15-21
- Béné, Christophe, et al. (2018) *Bridging Humanitarian Responses and Long-Term Development through Transformative Changes: Some Initial Reflections from the World Bank’s Adaptive Social Protection Program in the Sahel*. *Sustainability* 10(6): 1697.
- Beazley, Rodolfo, A. Solórzano, and K. Sossouvi (2016) *Study on Shock-Responsive Social Protection in Latin America and the Caribbean: Theoretical Framework and Literature Review*. WFP and Oxford Policy Management, Oxford, UK.
- Beazley, Rodolfo and Ciardi (2019) *Study on Shock-Responsive Social Protection in Latin America and the Caribbean: Summary of Key Findings and Policy Recommendations*. OPM and WFP.
- Bladon, A., Greig, G.T., Okamura, Y. (2022) *Connecting Social Protection and Fisheries Management for Sustainability: A Conceptual Framework*. *SOCIAL PROTECTION* 25, 28.
- Brandl J and Zielinska I (2020) *Reviewing the Smart City Vienna Framework Strategy’s potential as an ecosocial policy in the context of quality of work and socio-ecological transformation*. *Sustainability* (Basel, Switzerland) 12(3): 859.
- Büchs, M., Bardsley, N., and S. Duwe (2011) *Who bears the brunt? Distributional effects of climate change mitigation policies*, in: *Critical Social Policy*, 31(2), 285-307.
- Büchs M. and Koch M. (2019) *Challenges for the degrowth transition: The debate about wellbeing*. *Futures: The Journal of Policy, Planning and Futures Studies* 105: 155–165.
- Choularton, Richard, Agrotosh Mookerjee, Meredith Mallory, Krishna Krishnamurthy, Rahel Diro, Evie Calcutt, and Alejandra Campero (2023) *Technical Analysis to Inform the Trigger Design for*

Adaptive Safety Nets to Respond to Climate Shocks in Malawi, World Bank, Washington D.C..Conway & Schipper, 2011

Costella, Cecilia Jaime, Catalina, Arrighi, Julie, Coughlan de Perez, Erin, Suarez, Pablo, and Maarten Van Aalst (2017) *Scalable and Sustainable: How to Build Anticipatory Capacity into Social Protection Systems*, In: Eriksen, S., Naess, L.O., Haug, R., Bhonagiri, A. and L. Lenaerts (Eds) *Courting Catastrophe? Humanitarian Policy and Practice in a Changing Climate*, Institute of Development Studies.

Costella Cecilia, et al. (2018) *Resilience solutions: exploring social protection linkages to forecast-based financing*. BRACED policy brief.

Costella, Cecilia, McCord, A., van Aalst, M., Holmes, R., Ammoun, J., Barca, V. (2021) *Social protection and climate change: scaling up ambition*, Social Protection Approaches to COVID-19 Expert Advice Service (SPACE), DAI Global UK Ltd, United Kingdom.

Coughlan de Perez, E., B. van den Hurk, M.K. van Alst, et al. (2015) *Forecast-based financing: an approach for catalyzing humanitarian action based on extreme weather and climate forecasts*. Natural Hazards and Earth System Sciences Discussions. 2(5). pp. 3193–3218.

Craig, Marlies H., Mintenbeck, Katja, Möller, Vincent, Roberts, Debra C., e.a., 2022, Climate Change 2022: Impacts, Adaptation and Vulnerability Working Group II: Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change.

Davies, Mark, et al. (2009). *Climate Change Adaptation, Disaster Risk Reduction and Social Protection*. IDS.

de Neubourg, C. and C. Weigand (2000) *Social policy as social risk management*. Innovation: The European Journal of Social Sciences 13 (4), 401–12.

Devereux, S. and R. Sabates-Wheeler (2004) *Transformative social protection*. IDS Working Paper 232. Brighton: Institute of Development Studies.

www.unicef.org/socialpolicy/files/Transformative_Social_Protection_.pdf

Devereux, S.; Roelen, K. and Ulrichs, M. (2015) *Where Next for Social Protection?* IDS Evidence Report 124, Brighton: IDS.

Devereux, S. (2016) *Social protection for enhanced food security in Sub-Saharan Africa*. Food Policy 60, 52–62.

Dolls, Matthias, Fuest, C. and Andreas Peichl (2009) *Automatic stabilizers and economic crisis: US vs. Europe*, IZA Discussion Papers No 4310, Bonn: IZA.

Dryzek J (2013) *The Politics of the Earth. Environmental Discourses*. 3rd edn. Oxford: Oxford University Press.

European Commission (2017) *Social Protection across the Humanitarian-Development Nexus. A Game Changer in Supporting People through Crises*. Tools and Methods Series Reference Document No 26, February 2019.

European Commission (2019) *The European Green Deal*. Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions, COM(2019) 640 final, 11 December 2019, Brussels.

European Commission's Joint Research Centre, https://joint-research-centre.ec.europa.eu/scientific-activities-z/climate-change_en

<https://www.europarl.europa.eu/factsheets/en/sheet/72/combating-climate-change>

Ferraro, P.J., Simorangkir, R. (2020) *Conditional cash transfers to alleviate poverty also reduced deforestation in Indonesia*. Science. Advances 6 (24), eaaz1298.

<https://doi.org/10.1126/sciadv.aaz1298>. Malerba, 2020

France (2018) *IRMA, 1 an après: Bilan de l'action de l'État*. Press release.

Garg, T., McCord, G.C., Montfort, A. (2020) *Can Social Protection Reduce Environmental Damages?* SSRN Electron. J. <https://doi.org/10.2139/ssrn.3602423>.

Godfrey-Wood, Rachel and B.C.R. Flower (2018) *Does guaranteed employment promote resilience to climate change? The case of India's Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)*. Development Policy Review 36 (S1), O586–O604.

Gough, I. (2013) *Climate change, social policy, and global governance*, Journal of International and Comparative Social Policy, 29(3), 185–203, <https://doi.org/10.1080/21699763.2013.852128>

Gough I (2019) *Necessities and luxuries: How to combine redistribution with sustainable consumption*. In: Meadowcroft J, Banister D, Holden E et al (eds) *What Next for Sustainable Development? Our Common Future at Thirty*. Cheltenham: Edward Elgar, pp. 138–158.

Government of Malawi (2023) *Social Support for Resilient Livelihoods: Scalable Handbook*: <http://www.nlgfc.gov.mw/index.php/the-star/documents/file/135-scalable-handbook-updated-january2023>

Györi, M., Diekmann, K., Kühne, E. (2021) *The Importance of Social Protection for Climate Change Mitigation in LMICs: Success Stories and Opportunities for the Future*. GIZ.

Hallegatte, Stephane, Bangalore, M.; Bonzanigo, L.; Fay, M.; Kane, T.; Narloch, U.; Rozenberg, J.; Treguer, D. and Vogt-Schilb, A. (2016) *Shock Waves: Managing the Impacts of Climate Change on Poverty, Climate Change and Development Series*, Washington DC: World Bank.

Hallegatte, Stephane, Adrien Vogt-Schilb, Mook Bangalore, and Julie Rozenberg (2017) *Unbreakable: Building the Resilience of the Poor in the Face of Natural Disasters*. Climate Change and Development Series. Washington, DC: World Bank. doi:10.1596/978-1-4648-1003-9.

Heltberg, R., Siegel, P.B., Jorgensen, S.L. (2009) *Addressing human vulnerability to climate change: Toward a 'no-regrets' approach*. Glob. Environ. Chang. 19 (1), 89–99.

<https://doi.org/10.1016/j.gloenvcha.2008.11.003>.

Hirvilammi, T., Häikiö, L., Johansson, H., Koch, M., and J. Perkiö (2023) *Social Policy in a Climate Emergency Context: Towards an Ecosocial Research Agenda*, In: Journal of Social Policy, 52, 1-23.

Holzmann, R., Jorgensen, S. (2001) *Social Risk Management: A New Conceptual Framework for Social Protection, and Beyond*. International Tax & Public Finance. 8, 529–556.

International Labour Organisation (1952) *Social security (minimum standards) convention, No. 102 of 1952*. Geneva: International Labour Organization. www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C102

International Labour Organisation (2015) *Guidelines for a Just Transition Towards Environmentally*

Sustainable Economies and Societies for all. Geneva: International Labour Organisation.

International Labour Organisation (2019) *Creating fiscal space for social protection through energy subsidy reform, Islamic Republic of Iran*. Geneva: International Labour Organisation.

International Labour Organisation & AFD. (2019) *Social Protection for a Just Transition: A Global Strategy for Increasing Ambition in Climate Action*. Geneva: International Labour Organisation.

International Labour Organisation (2021) *World Social Protection Report 2021-2022*, Geneva: International Labour Organisation.

Intergovernmental Panel on Climate Change (2001) *Climate change 2001: Synthesis report*. Cambridge University Press.

Intergovernmental Panel on Climate Change (1997) *The Regional Impacts of Climate Change: An Assessment of Vulnerability*, Cambridge University Press.

Intergovernmental Panel on Climate Change (2021) *Press Release: Climate change widespread, rapid, and intensifying*, August 9th 2021.

Intergovernmental Panel on Climate Change (2022) *Climate Change 2022: Impacts, Adaptation and Vulnerability. Summary for Policymakers*.

International Social Security Association (2020) *Good Practices in Social Security: Supplier Corporate Social Responsibility/Health, Quality, Safety and Environment: Code of Conduct*.

Islam, Nazrul I. and John Winkel (2017) *Climate Change and Social Inequality*, United Nations, DESA Working Paper No. 152, October 2017.

Johansson, H., Khan, J. and R. Hildingsson (2016) *Climate change and the welfare state. Do we see a new generation of social risks emerging*. In: Koch, M. and O. Mont (eds.) *Sustainability and the Political Economy of Welfare*, London: Routledge, 94-108.

Kerstenetzky, C. L. (2008). *Development and redistribution: the case of the Bolsa Família Program in Brazil*. Texto para Discussão. Available at: http://www.uff.br/econ/download/tds/UFF_TD240.pdf . Access on August, 16 2015.

Khan J, Hildingsson R and Garting L (2020) *Sustainable welfare in Swedish cities: Challenges of eco-social integration in urban sustainability governance*. *Sustainability* (Basel, Switzerland) 12(1): 383.

Kuriakose, A.T., Heltberg, R.; Wiseman, W.; Costella, C.; Cipryk, R. and Cornelius, S. (2012) *Climate-Responsive Social Protection*, Discussion Paper 1210, Washington DC: World Bank

Kuriakose, A.T., Heltberg, R., Wiseman, W., Costella, C., Cipryk, R., Cornelius, S. (2013) *Climate-Responsive Social Protection*. *Development Policy Review* 31 (2013),19–34.

Kuriakose, A.T., R. Heltberg, W. Wiseman, C. Costella, R. Cipryk, and S. Cornelius (xxxx) *Climate-Responsive Social Protection*. *Social Protection & Labor Discussion Paper No. 1210*. World Bank, Washington, DC.

Lambeau, Jean-Louis, and Stefan Urban (2022) *Social protection and climate change: The role of social insurance*, international Labour Office, Geneva.

Lawlor, K., Handa, S., & Seidenfeld, D. (2015) *Cash Transfers and Climate-resilient Development: Evidence from Zambia's Child Grant Programme*, Working Paper No. 2015; p. 2. UNICEF.

- Macours, Karen, Schady, N., and Renous Vakis (2012). *Cash Transfers, Behavioral Changes, and the Cognitive Development of Young Children: Evidence from a Randomized Experiment*. *American Economic Journal: Applied Economics*, 4(2), 247–273. <https://doi.org/10.1596/1813-9450-4759>
- Macours, Karen, and Renos Vakis (2014) *Changing Households' Investment Behaviour through Social Interactions with Local Leaders: Evidence from a Randomised Transfer Programme*. *Economic Journal* 124 (576). <https://doi.org/10.1111/eoj.12145>.
- Macours, Karen, Premand, P., and Renos Vakis (2022) *Transfers, diversification and household risk strategies: experimental evidence with lessons for climate change adaptation*. Policy Research Working Paper Series No. 6053, World Bank: Washington DC.
- Malerba, D. (2021) *Climate Change*. In: Schuering, E., Loewe, M. (Eds.), *Handbook on Social Protection Systems*. Edward Elgar Publishing.
- Mandelli M, Sabato S and Jessoula M (2021) *EU economic governance and the socio ecological transition: Towards a more sustainable European Semester?* *Politiche Sociali* 3/2021: 619–638.
- Malerba, D., Gaentzsch, A., Ward, H. (2021) *Mitigating poverty: The patterns of multiple carbon tax and recycling regimes for Peru*. *Energy Policy* 149. <https://doi.org/10.1016/j.enpol.2020.111961>.
- Mandelli, Matteo (2022) *Understanding eco-social policies: a proposed definition and typology*, In : *Transfer*, ETUI.
- Markkanen, Sanna & Anger-Kraavi, Annela (xxxx) *Social impacts of climate change mitigation policies and their implications for inequality*, *Climate Policy*, 209, VOL. 19, NO. 7, 827–844.
- Masunungure, C., Shackleton, S. (2018) *Exploring Long-Term Livelihood and Landscape Change in Two Semi-Arid Sites in Southern Africa: Drivers and Consequences for Social-Ecological Vulnerability*. *Land* 7 (2), 50. <https://doi.org/10.3390/land7020050>.
- McCarthy, J. J., O. F. Canziani, N.A. Leary, D.J. Dokken and K.S. White. (2001). *Climate Change 2001: Impacts, Adaptation, and Vulnerability*. Cambridge, Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change: 1032.
- McCord, A., & Paul, M. H. (2019). *An Introduction to MGNREGA Innovations and their Potential for India-Africa Linkages*.pdf.
- Mutter, John C. (2015). *Disaster Profiteers: How Natural Disasters Make the Rich Richer and the Poor Even Poorer*. New York: St. Martin's Press.
- Myers, K., et al (2021), *Consensus revisited: quantifying scientific agreement on climate change and climate expertise among Earth scientists 10 years later*, *Environmental Research Letters* Vol.16 No. 10, 104030 (20 October 2021); DOI:10.1088/1748-9326/ac2774.
- Nelson, Lemos; Eakin, and Lo (2016) *The limits of poverty reduction in support of climate change adaptation*.
- Norton, A., Seddon, N., Agrawal, A., Shakya, C., Kaur, N., Porras, I. (2020) *Harnessing employment-based social assistance programmes to scale up nature-based climate action*. *Philos. Trans. R. Soc., B* 375 (1794). <https://doi.org/10.1098/rstb.2019.0127>

O'Brien, Clare, Z. Scott, G. Smith, V. Barca, A. Kardan, R. Holmes, C. Watson, and J. Congrave (2018) *Shock-Responsive Social Protection Systems Research: Synthesis Report*. Oxford Policy Management, Oxford, UK.

O'Brien, Clare, et al. (2018) *Shock-Responsive Social Protection Systems Research Case*.

O'Connor M. (2007) *The 'Four Spheres' Framework for sustainability, Ecological Complex*, 3 (4), 285-292. OECD (2011) *Towards Green Growth*, Paris, OECD Publishing.

OECD (2012) *G20/OECD Policy Note on Pension Fund Financing for Green Infrastructure and Initiatives*. OECD, Paris.

OXFAM (2020) *Protecting people and the forest*, Oxfam Case Study, November 2020.

Parmesan, Camille and Gary Yohe (2003) *A Globally Coherent Fingerprint of CLimate Change Impacts Across Natural Systems*. *Nature* 421: 37-42.

Premand, P., and Schnitzer, P. (2020) *Efficiency, legitimacy and impacts of targeting methods: Evidence from an experiment in Niger*. *The World Bank Economic Review*.

Premand, Patrick, and O. Barry. (2020). *Behavioral Change Promotion, Cash Transfers and Early Childhood Development: Experimental Evidence from a Government Program in a Low-income Setting*. Policy Research Working Paper No. 9368. World Bank: Washington DC.

Purvis B., Mao Y. and Robinson D. (2019) *Three pillars of sustainability: in search of conceptual origins*, *Sustainability Science*, 14 (3), 681-695.

Rocha, L. A., Khan, A. S., & Lima, P., (2008) *Impacto do Programa Bolsa Família sobre o bem-estar das famílias beneficiadas no Estado do Ceará*. *Econ. do Ceará em Debate*.

Rigolini, Jamele, *Social Protection and Labor: A Key Enabler for Climate Change Adaptation and Mitigation*, Discussion Paper, no. 2108, December 2021, World Bank Group, Washington DC.

Root, T. L., J. T. Price, K.R. Hall, S. Schneider, C. Rosenzweig, and J.A. Pounds. (2003) *Fingerprints of Global Warming on Wild Animals and Plants*. *Nature* 421: 57-60.

Sabates-Wheeler, R., Devereux, S. (2008) *Transformative Social Protection: The Currency of Social Justice*. In: Barrientos, A., Hulme, D. (Eds.), *Social Protection for the Poor and Poorest: Concepts, Policies and Politics*. Palgrave Macmillan UK, pp. 64–84. <https://doi.org/10.1057/978-0-230-58309-2>

Sabato S and Mandelli M (2018) *The EU's potential for promoting an eco-social agenda. Report prepared for the project 'Sustainable welfare societies: Assessing linkages between social and environmental policies'*. Oslo; Brussels: NOVA Norwegian Social Research, European Social Observatory.

Schnitzer, P. (2016) *How to Target Households in Adaptive Social Protection Systems? Relative Efficiency of Proxy Means Test and Household Economy Analysis in Niger*. World Bank.

Schnitzer, Pascale; Stoeffler, Quentin. (2021) *Targeting for Social Safety Nets: Evidence from Nine Programs in the Sahel*. Policy Research Working Paper; No. 9816. World Bank, Washington, DC.

Schoyen M, Hvinden B and Dotterud Leiren M (eds) (2022) *Towards Sustainable Welfare States in Europe*. Cheltenham, UK: Edward Elgar Publishing.

Slater, R., & Bhuvanendra, D. (2014) *Scaling up existing social safety nets to provide humanitarian response: A case study of Ethiopia's productive safety net programme and Kenya's hunger safety net programme*. Case study for King's College London's humanitarian futures program, Overseas Development Institute and the cash learning partnership.

Smit, B., I. Burton, R.J.T. Klein and J. Wandel. (2000). *An anatomy of adaptation to climate change and variability*. *Climatic Change* 45(1): 223-251

Soares, F. V., Ribas, R. F., & Osório, R. G. (2010) *Evaluating the Impact of Brazil's Bolsa Família: Cash transfer programs in comparative perspective*. *Latin American Research Review*, 45(2), 173–190.

Solorzano, A., and I. Cardenes (2019) *Social protection and climate change: WFP Regional Bureau for Latin America and the Caribbean's vision to advance climate change adaptation through social protection*, Occasional Paper No. 26. WFP.

Steinbach, Dave, Marek Soanes, Sam Barrett, Vivek Venkataramani, and Tashina Cheranda (2020) *Deepening Knowledge of MGNREGS' Contribution to Climate Resilience A Study of Rajasthan and Uttar Pradesh*.

Stevis D, Morena E and Krause D (2020) *Introduction: The genealogy and contemporary politics of just transitions*. In: Morena E, Krause D and Stevis D (eds) *Just Transitions: Social Justice in the Shift Towards a Low-Carbon World*. London: Pluto Press, pp. 1–31.

Sygna, Linda, Eriksen, Siri, O'Brien, Karen, and Lars Otto Næss (2004) *Climate change in Norway: Analysis of economic and social impacts and adaptations*, CICERO Report 2004:12.

Tenzing, Janna D. (2019) *Integrating social protection and climate change adaptation: A review*, WIREs Climate Change published by Wiley Periodicals.

Tenzing, Janna D. (2020) *Integrating social protection and climate change adaptation: A review*. WIREs. *Clim. Change* 11 (2). <https://doi.org/10.1002/wcc.626>.

Thomas, Kimberley, Hardey, Dean, Lazrus, Heather, Mendez, Michael, Orlove, Ben, Rivera-Collazo, Isabel, Timmons Roberts, Rockman, Marcy, Warner, Benjamin P., Winthrop, Robert (2018) *Explaining differential vulnerability to climate change: A social science review*, WIREs Climate Change published by Wiley Periodicals.

Ulrichs, M., and R. Slater (2016) *How Can Social Protection Build Resilience? Insights from Ethiopia, Kenya and Uganda*. Working paper, Building Resilience and Adaptation to Climate Extremes and Disasters (BRACED) Series, London.

Ulrichs, M., Slater, R., Costella, C., 2019. *Building resilience to climate risks through social protection: From individualised models to systemic transformation*. *Disasters* 43 (S3), S368–S387. <https://doi.org/10.1111/disa.12339>.

UNDP (2018) *Green Economy and Green Jobs: Challenges and Opportunities in Europe and Central Asia*

UNDP/UN Environment. (2018). *Climate Impact Vulnerability Index: Lessons learned and systematization of the IVACC design and application process in the Dominican Republic*. https://wedocs.unep.org/bitstream/handle/20.500.11822/25905/Vulnerability_Climate_Hazards.pdf?sequence=2&isAllowed=y.

UNICEF (2019) *Programme Guidance: Strengthening Shock Responsive Social Protection Systems*.

United States Environmental Protection Agency- EPA (2021) *Climate Change and Social Vulnerability in the United States: A Focus on Six Impacts*, September 2021, Washington D.C..

Vogt-Schilb, A., Walsh, B., Feng, K., Di Capua, L., Liu, Y., Zuluaga, D., Robles, M., Hubaceck, K. (2019) *Cash transfers for pro-poor carbon taxes in Latin America and the Caribbean*. *Nat. Sustainability* 2 (10), 941–948. <https://doi.org/10.1038/s41893-019-0385-0>.

WorldRiskReport 2023, <http://www.WorldRiskReport.org>

World Bank (2001) *Social Protection Sector Strategy Paper: From Safety Net to Springboard*, Washington DC: World Bank

World Bank (2013) *Building Resilience to Disaster and Climate Change through Social Protection*, Washington DC: World Bank.

World Bank (2018) *Strengthening Links between Social Protection and Disaster Risk Management for Adaptive Social Protection in Nepal*. World Bank. <https://doi.org/10.1596/31213>

World Bank: <https://www.worldbank.org/en/programs/sahel-adaptive-social-protection-program-trust-fund>

Yiridomoh, G.Y., Chireh, V.K., Bonye, S.Z., Derbile, E.K. (2021) *Enhancing the adaptive capacity of pro-poor populations for climate change adaptation: Analysis of cash transfer programs in rural Ghana*. *Local Environ.* <https://doi.org/10.1080/13549839.2020.1867839>

Zakir Hossain, M., Ashiq Ur Rahman, M. (2018) *Adaptation to climate change as resilience for urban extreme poor: Lessons learned from targeted asset transfers programmes in Dhaka city of Bangladesh*. *Environ. Dev. Sustain.* 20 (1), 407–432. <https://doi.org/10.1007/s10668-016-9888-2>.

Ziegler, S. (2016) *Adaptive Social Protection: Linking Social Protection and Climate Change Adaptation*. Discussion Papers on Social Protection. Bonn: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). <https://www.giz.de/fachexpertise/downloads/giz2015-en-adaptive-social-protection.pdf>

**Facing climate change:
how can social protection
and labour and employment
measures support
adaptation and
mitigation?**



www.socieux.eu

SOCIEUX+ is implemented by

Partnership led by



Co-financed by the European Union

