

WFP and Climate Change: a Review of Ongoing Experience and Recommendations for Action

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WFP and Climate Change: a Review of Ongoing Experience and Recommendations for Action

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The study builds on several complementary sources of information and analysis. This includes a questionnaire through which over 40 WFP Country Offices provided insights and information on their current work on climate-related hunger issues; an analysis of programmes and activities related to climate change and disaster risk reduction, conducted through SPR data and related to 2009; findings from the Senior Managers Workshop on Climate Change organized by the CCDRR Office and the Policy, Planning and Strategy Division at WFP headquarters in Rome, Italy, on 4-5 November 2009; as well as field visits to two countries in which WFP is engaged in very relevant climate-related work, Ethiopia and Kenya.

The author would like to thank all WFP headquarters, regional bureau and country office personnel for the generosity they displayed with their time, the open spirit with which they engaged in this exercise, their insights and thoughtful and frank responses, as well as the very productive discussions and contributions.

Particular thanks are due to the staff from the CCDRR office as well as all the community members, country office staff and government partners who hosted the field visit in Ethiopia; and to WFP country office staff in Kenya for a likewise hosting shorter but likewise very fruitful visit.

Every effort has been made to faithfully reflect the responses of participants in the documentation and synthesis that follows. However, as is always the case, any inferences made must remain the responsibility of the author.

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Preface

Climate change is the defining challenge of our times. It is projected to dramatically impact hard won development gains, and affect the food and nutrition security of many of the poorest and most vulnerable people and areas of the world. As a frontline actor in the fight against hunger and malnutrition, and in response to the call by the United Nations Secretary-General, like many other UN organizations the World Food Programme is working towards assessing and defining its role, comparative advantages and approaches to the new development and relief challenges posed by climate change.

This study was commissioned to provide the organization with a first systematic review of WFP's past experience and comparative advantages in areas that relate to climate change adaptation and mitigation. The review has been conducted by an independent consultant, Penny Urquhart, who in 2009 was the author of a similar analysis for another Rome-based agency. This initiative has been executed with funding support from the Government of Luxembourg.

Office for Climate Change and Disaster Risk Reduction

Rome, December 2010

Executive summary

By 2050, the number of people at risk of hunger is expected to increase by 10 to 20 percent as a result of climate change; and the number of malnourished children is expected to increase by 24 million – 21 percent more than without climate change. Sub-Saharan Africa is likely to be the worst affected region.¹

Climate change will exacerbate existing threats to livelihoods due to a combination of factors that include increasing frequency of climate hazards, diminishing agricultural yields and production in vulnerable regions, expanding health and sanitation risks, increasing water scarcity, and intensifying conflicts over scarce resources, which will likely lead to new humanitarian crises, as well as increasing urbanization, migration and displacement.² Climate change will also disrupt the balance in fragile ecosystems, acting as a stress multiplier, which will ultimately affect the livelihood means, food security and way of life of billions of people. Women and children are likely to bear a disproportionate burden of climate change.³

This report represents a first systematic review of activities related to climate change conducted by the United Nations World Food Programme, including programmes, capacity development and technical assistance efforts. The objective of the review is to help identify areas of clear comparative advantage for WFP and therefore support the development of the organization's strategies and approaches with regards to addressing the impacts of climate change on hunger and nutrition.

The findings of the review leave no doubts. As the world's largest humanitarian agency fighting hunger worldwide, WFP has a strong foundation upon which to build a coherent response to climate change. Key points of comparative advantage include the following:

 WFP's strong operational presence in areas most vulnerable to climate hazards and its partnerships

- with poor communities, non-governmental organizations (NGOs), and governments, providing a strong position on which to address the impact of climate change on hunger.
- WFP's significant emergency response capacity and humanitarian inter-agency leadership, as well as the organization's strength in emergency preparedness, contingency planning, and early warning, which will become even more important as the incidence of climate hazards increases.
- WFP's important track record and significant capacity in strengthening food security and household resilience through a combination of interventions, including community-level disaster risk reduction, natural resource management, environmental conservation, asset creation, livelihoods diversification, and infrastructure development programmes.
- WFP's strong role in the development of safety
 nets and their integration into national and local
 social protection systems, taking into account that
 safety nets and social protection will become
 increasingly important both as platforms for
 supporting community-based adaptation efforts
 and to protect populations who cannot adapt.
- WFP's unique capacity to provide an integrated approach leveraging its capacity to both respond to climate-related disasters and address the longer-term livelihoods and food security consequences of climate change.
- WFP's strong food security assessment and analysis capacity through its Vulnerability
 Assessment and Mapping (VAM) as well as other sophisticated knowledge tools and services which enhance the ability of governments and partners to predict the onset of natural hazards and respond appropriately to their impact.

¹ Parry et al (2009)

² IPCC (2007)

³ Raworth (2008)

• Finally, climate change will severely affect all aspects of food security (food availability, accessibility and utilization). As the premier agency working across all these dimensions, WFP has earned a fundamental trust by government and development partners and, as such, has a great deal of legitimacy to exercise influence in the area of climate change.

WFP country offices are acutely aware of growing impacts of increasing climate variability and climate change on their target populations. Over 50 percent of questionnaire responses indicated that changing climate trends are currently driving or intensifying vulnerability in poor sectors of the population to a significant degree. Moreover, a review of the Standard Project Reports for 2009 highlights that in 53 of the 71 countries where WFP operated in 2009 (i.e. 75 percent), WFP was implementing projects with climate change and/or disaster risk reduction-related components. In total, out of 188 projects in execution in 2009, 85 (45 percent) contained a climate change and/or disaster risk reduction-related activity.

The findings of this review therefore demonstrate that while long-term climate change risks have not yet been fully integrated into WFP operations, many of the agency's activities, programmes and operations already contribute to climate adaptation outcomes. This result has been achieved largely as a positive secondary impact - or "co-benefit" - of actions and interventions aimed at stabilising food security and strengthening household and community resilience to shocks (both climate and non-climate related). These interventions include assistance programmes that support soil and water conservation, watershed rehabilitation, sustainable agricultural practices, afforestation and reforestation, climate-proofing of infrastructure, as well as disaster management, social protection, livelihoods protection and rehabilitation. Climate change has also been a part of policy, advocacy, and knowledge-related services such as vulnerability assessments and mapping and early warning.

Much of what WFP does today is thus related to tackling climate change, especially in terms of supporting communities to adapt, increasing the resilience of their livelihoods through improved food security, and helping governments to develop capacities and frameworks to support adaptation and mitigation aspects and activities. This realization is timely and important, given that climate change's most severe impact on humanity in the near future is likely to be an increase in hunger. WFP's core activities can provide a platform for resilience building as a central objective of the organization, and there is a great opportunity to think more strategically about climate-related outcomes and co-benefits that WFP can deliver, also in association with partners.

Recognizing that WFP has a key role to play in contributing to national and global efforts to respond to climate change does not mean re-branding all activities as 'adaptation' or 'mitigation', or recasting the organization as a climate change agency. However, given the strong connection between climate change and food insecurity, it would be irresponsible of WFP not to consider climate change as a central challenge to be internalized into its policy, planning and operations dimensions.

As climate change spans both disaster and development, WFP will need to engage a broader set of partners to be effective on the climate front. Joint actions with other relevant agencies will need to become the norm. This review highlights a number of examples of strong partnerships driven or supported by WFP. On the other hand, the review seems to show that globally the examples of effective UN interagency co-ordination on climate change issues are still very limited.

To enhance its ability to effectively address the impacts of climate change on hunger, WFP will need to take a series of actions aimed at ensuring that climate change aspects are reflected in organizational and human capacity; policy, strategy and programming frameworks; partnerships; management; financial strategy; and advocacy and capacity development work. The following table summarizes some of the key recommendations provided in this report to help guide WFP in this transition.

⁴ Parry et al. (2009)

Key recommendations

- 1. Develop an integrated policy framework to guide climate change mainstreaming within WFP.
- 2. Establish a corporate capacity development initiative on climate change under the Office for Climate Change and Disaster Risk Reduction.
- 3. Enhance the climate focus of food security and vulnerability analysis, disaster risk reduction and emergency preparedness and response programmes and services.
- 4. Engage in national and regional processes in support to national planning and programming, including National Adaptation Programmes of Action (NAPAs), The Comprehensive Africa Agriculture Development Programme (CAADP), and others.

- 5. Identify and leverage successful programmes, approaches and activities, particularly those with multiple outcomes and benefits, and explore options for scaling up.
- 6. Consolidate WFP's role and leadership in areas of comparative advantage aimed at strengthening food security, building resilience, and protecting livelihoods.
- 7. Highlight and develop the linkages between food security, environmental issues and climate change.
- 8. Consolidate partnerships and alliances and expand networks for more integrated interventions and greater impact.
- Access new sources of funding in support of country based climate change and food security related programmes and initiatives.

1. Summary of the report

INTRODUCTION

This report is based on a review of WFP's experience and operations ranging from emergency interventions, to recovery and rehabilitation work, to development programmes and capacity building efforts and services.

Relevant documentation and information was drawn from a questionnaire answered by 43 WFP country offices in late 2009, combined with interviews and discussions with staff at headquarters to develop a comprehensive analysis of how WFP's efforts are contributing to address climate change and how these activities can be strengthened. The review also builds on the outcomes of a Senior Management Workshop on WFP and climate change organized in Rome in November 2009, as well as on the findings of two short field visits conducted at the beginning of 2010 (Ethiopia and Kenya).

The findings of this review show that while longterm climate change risks have not been formally integrated into WFP operations, many on going WFP activities already support adaptation to climate variability and change – normally a positive secondary impact or "co-benefit" of actions undertaken to stabilise food security, strengthen households and community resilience, and fight hunger and malnutrition in food-insecure countries and communities. These activities include food assistance programmes supporting soil and water conservation, watershed rehabilitation, sustainable agricultural practices, reforestation and climateproofing of infrastructure. Disaster management, social protection, livelihoods protection and rehabilitation also form an important part of these programmes. Climate change has also been a part of policy, advocacy, and knowledge-related services such as vulnerability assessments and mapping and early warning.

Much of what WFP does today is related to tackling climate change, both in terms of supporting communities to adapt, by increasing the resilience of their livelihoods through food security, and helping governments to develop capacities and frameworks to promote adaptation and mitigation by fighting hunger and addressing food security.

WFP's core activities can therefore provide a platform for resilience building as a central objective of the organization. There is a great opportunity to think more strategically about climate-related co-benefits that can be delivered through the organization's mandated activities.

WFP's realisation of its role in climate change is timely and important, given that climate change's most severe impact on humanity in the near future is likely to be an increase in hunger.⁵

Recognizing that WFP has a central role to play in climate change does not mean re-branding all activities as "adaptation" or "mitigation", or recasting the Programme as a climate change agency. However, given the strong connection between climate change and food insecurity, WFP must consider it as a central part of its policy, planning and operations.

WFP country offices are acutely aware of the growing impact of climate variability and change on their target populations. Over 50 percent of questionnaire responses indicated that changing climate trends are currently driving or intensifying vulnerability in poor sectors of the population to a significant degree.

Field staff expressed commitment to deal with climate change in an accelerated fashion. They made it clear that greater support is needed in the form of capacity development, clear policy and operational guidelines and enhanced resourcing for longer-term interventions designed to support and encourage vulnerable people in developing their adaptive capacity.

Global adaptation efforts are still relatively unfocused, and many organizations are grappling with how best to respond. For humanitarian organizations, there is the further question of how to balance urgent efforts to respond to climate disasters to better plan proactively for long-term adaptation needs.

A review, such as this one, is a critical early step for any organization to understand how past and current actions can support a response to climate change and identify entry points to enhance the response. WFP is now focusing attention on addressing this more systematically through the establishment of a senior management-level Climate Change Steering Committee and the Office for Climate Change and Disaster Risk Reduction. This will allow the organization to move forward in its efforts to ensure that climate change and its impact on hunger are suitably reflected in organizational, operational, as well as policy, strategy and programming aspects and frameworks.

WFP's emerging approach to climate change – the six entry points

WFP approaches climate change from the point of view of its impact – current and expected – on hunger, livelihoods and vulnerability. WFP's 2008-2013 Strategic Plan specifically identifies ways for WFP to contribute to global efforts in meeting the challenge of climate change, for instance by supporting and strengthening capacities of governments, and by promoting climate adaptation as a way to strengthen vulnerable people's resilience to shocks. The 2009 policy on disaster risk reduction also makes a clear link between risk reduction and adaptation to climate change. These are strong policy anchors. Moreover, a number of elements in WFP's general approach to hunger issues, i.e. relief, rehabilitation and development, create an underpinning framework for the organization's emerging approach to the climate challenge. A review of WFP's mandate, policies and comparative advantage conducted over the past months has identified six key entry points for supporting vulnerable people and communities, national governments, regional institutions and global partners in their efforts to foster climate related adaptation and mitigation.

The six entry points include the following:

- I. Response to climate-related hunger crises and disasters: delivering effective humanitarian relief and recovery assistance and support to countries and people impacted by increasing climate hazards floods, droughts and storms as well as man-made disasters or conflicts driven or exacerbated by climate change and increasing competition over scarce resources.
- II. Disaster risk reduction and emergency preparedness: supporting governments, regional organizations, national institutions,

partners, vulnerable people and communities through leveraging WFP's experience, capacities, tools and systems including in food security and vulnerability analysis and mapping, emergency preparedness and response, early warning, disaster risk reduction, food technology, logistics, and information and communications technology.

III. Community-based adaptation: supporting national plans and efforts to enhance food security for vulnerable people by protecting livelihoods and building resilience to climate shocks through a set of diversified and context specific interventions. These would include for example income generation, economic diversification, asset-creation activities, environmental conservation, land management and rural development initiatives. Water harvesting projects, risk management, and climate-proof infrastructure development would also be part of this.

IV. Social protection and safety nets:

reinforcing the ability of national institutions to establish effective food security social protection and resource transfer programmes in support to vulnerable and climate-affected people and communities. This would be achieved through safety nets, employment generation schemes, mother-and-child health and nutrition programmes, school feeding and weather-indexed insurance schemes.

V. Mitigation: leveraging WFP's broad experience to support reforestation and afforestation programmes in fragile ecosystems when these interventions are linked to food security objectives and aligned with national efforts to reduce emissions and mitigate climate risks; also, support the adoption of environmentally sound technologies, including through the use of innovative energy saving instruments such as fuel efficient stoves.

VI. Advocacy and public policy:

advocating on behalf of countries and people most vulnerable to the hunger and nutrition impact of climate change and supporting the development of global and national policies, programmes and initiatives that will protect, support and empower the poorest and most vulnerable segments of society in light of the new risks that the changing climate poses to their food security, lives and livelihoods.

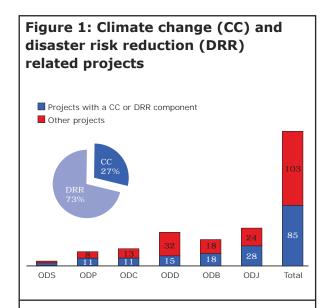
2. Review of WFP's climate change-related programmes and initiatives

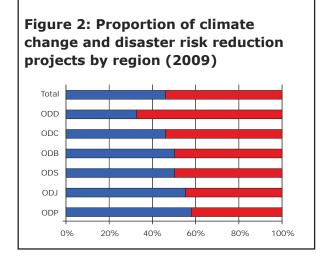
This section provides an initial summary analysis of Standard Project Reports (SPRs) data of WFP projects with a climate change and disaster risk reduction component in 2009. This leads into an overview of the review findings with regards to WFP activities in a wide range of areas, including disasters and disaster risk reduction; building resilience and enhancing livelihoods; safety nets and social protection; knowledge services; capacity development and policy advocacy; mitigation action and the carbon market; and, partnerships.

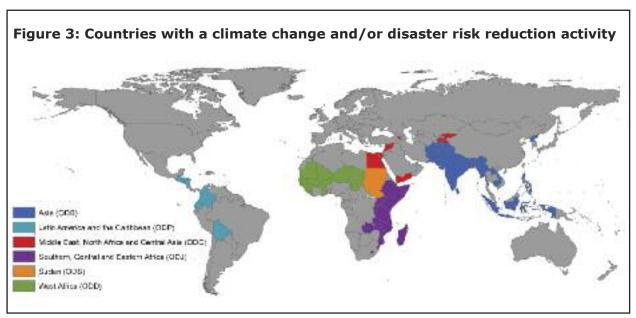
Overview of WFP projects in 2009

An initial review of 2009 SPRs and project documents conducted by the Office for Climate Change and Disaster Risk Reduction, provides a measure of climate change and disaster risk reduction elements and activities in WFP food security projects.

The data in the SPRs are limited, but the overall picture that emerges is interesting and conveys a clear message regarding the level of engagement of WFP in this area.







- Out of 188 projects in execution in 2009,
 85 (45 percent) contained a climate change and/or DRR related activity (Figure 1).
- 53 of the 71 countries (75 percent) where WFP operated in 2009 reported climate change and/or disaster risk reduction-related projects (Figure 2).
- All regions have projects that incorporate both climate change and disaster risk reduction.
- Southern, Central and Eastern Africa is the region with the largest number of related projects in absolute terms (28 projects or 33 percent of the total) (Figure 3).
- However, Latin America and the Caribbean has the highest proportion of climate change and/or disaster risk reduction related projects (58 percent) (Figure 1).
- The main types of activities in climate change and/or DRR-related projects support agriculture (26 percent) followed by water conservation (21 percent), forestry, infrastructure and capacity building. Other activities included energy efficient (SAFE) stoves, carbon credits, school garden cultivation and seed protection schemes (Figures 4 and 5).
- Of the climate change and DRR-related projects, 48 percent are protracted relief and recovery operations (PRRO), while 32 percent are either country programme (CP) or development projects (DEV). Some emergency operations also include a climate change or DRR-related activity (Figure 6).

Figure 4: Regional distribution of climate change and disaster risk reduction-related projects

ODS 2
2%

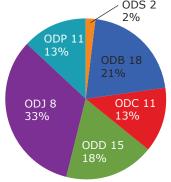


Figure 5: Proportion of project components by major area of intervention

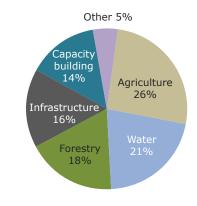
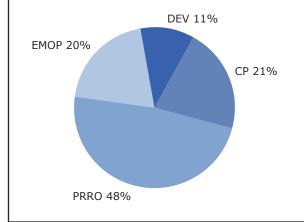


Figure 6: Distribution of climate change and disaster risk reduction-related projects by project category (CP, DEV, PRRO, EMOP, SO)



Disasters and disaster risk reduction

In 2010, the International Strategy for Disaster Reduction (ISDR) calculated that climate-related disasters account for 90 percent of all disaster losses in Least Developed Countries (LDC). Given the significant global experience in emergency preparedness and response as well as managing the Inter-Agency Standing Committee Global Clusters in logistics and emergency telecommunications, WFP is recognized as the frontline agency in the response to climate-induced disasters. While the logistics capacity is undoubtedly an area of strong competence within the agency, there will be new and additional demands placed on this role as the effects of climate change are increasingly manifested. However, climate change will have an impact across the board for WFP as the burden to respond to sudden disasters, slow-onset disasters, and complex emergencies will increase.

In terms of emergency preparedness, WFP is well developed and has strong capacity through a number of mechanisms and procedures, including a multilayered early warning system, contingency planning and Rapid Impact Analysis. All of WFP's country offices engage in some way with emergency preparedness, however different country offices are at varying stages of working with the government to improve disaster readiness. Still, it is important to note that in general the emergency preparedness process at country office/ United Nations country team level in countries does not specifically integrate projections for changing climate trends, although there are ongoing attempts to look at this in some countries - for example, in India, where the UN Climate Cluster is coordinating overall work undertaken in this area.

Many of WFP's emergency response operations have disaster risk reduction components, for example the raising of houses in flood areas, construction of water catchments, tree planting and terracing. The agency focuses on reducing those disaster risks that are likely to result in acute hunger, using its various food, cash and other instruments to help communities reinforce their resilience to disasters. Good experience has been developed for example in Bangladesh using food-for-training (FFT) activities in community-level disaster preparedness training through the "Enhancing Resilience" programme. In its customary mode of working with national governments, physical prevention activities form a frequent part of WFP's work programme. There are many examples of community-level and other WFPsupported infrastructure that assists communities to deal with climate risks, but there is no systematic process for incorporation of climate change projections into infrastructure design and construction. Apart from infrastructure under special operations (SOs) to enable food distributions, such as repairs to roads, bridges, railways, airports and ports, examples relevant to climate change include infrastructure for watershed management such as stone bunds, terraces, contours and small dams, flood management, and community granaries.

Early Warning Systems (EWS) have strong adaptation value as they allow for better preparedness and response in a situation in which extreme events may be becoming more common and more variable. WFP has played a strong role in setting up a number of regional EWS, for example the Permanent Interstate Committee for Drought Control in the Sahel (CILSS) and SATCA, the EWS for Central America developed by the WFP emergency preparedness and response team in El Salvador, in partnership with regional partners. However, questionnaire responses indicate that the existence and quality of EWS differs greatly from country to country, with many existing EWS not considered adequate to deal with climatic variables, less so to integrate longer-term climate change projections.

The agency also promotes the use of weather risk transfer tools as a way to assist smallholder farmers to move out of the poverty trap through better climate risk management. WFP and the International Fund for Agricultural Development (IFAD) are collaborating on the Weather Risk Management Facility (WRMF), and weather indexbased insurance pilots have been supported in Ethiopia, China and Malawi.

A key principle of WFP's DRR approach is that development activities and emergency interventions need to be linked to each other in countries prone to recurrent natural disasters, through targeted prevention and preparedness activities before disaster strikes. The agency is increasingly moving towards combining short and long-term responses in other words, an approach that focuses on reducing risk while combining relief with recovery/ development. This is a key point of great relevance for adaptation to climate change, which necessitates interlinked actions in the short- and longer-term. While there is some solid evaluated evidence and additional anecdotal evidence for the effectiveness and impact of WFP-supported DRR activities and climate resilient infrastructure, a key issue is the lack of readily available data on the outcomes of WFP

interventions, which hampers identification of the impact of activities that may support adaptation to climate change.

It should also be underlined that violence and armed conflict over scarce and diminishing natural resources, conflicts arising from food and water insecurity and lack of arable land may cause gradual and sudden migration and displacement. In 2008, over 20 million people were displaced by climate-related sudden-onset natural disasters, compared to 4.6 million new internally-displaced people as a consequence of conflicts during the same period.⁶

WFP's experience with conflict situations and large numbers of displaced people are relevant for climate change adaptation, particularly actions to reduce conflict over scarce natural resources, to assist large numbers of internally displaced people (IDPs) and those who may be termed 'environmental refugees', as well as means to reduce the additional risks faced by women and girls. A number of country offices noted an increase in the number of IDPs as a result of changing weather trends. Interestingly, the theme of environmental refugees was stressed by the United Nations High Commissioner for Refugees Antonio Gutierrez, as one area of required collaboration between the two agencies, during his intervention at the WFP Global Meeting in July 2010 in Madrid.

Building resilience and enhancing livelihoods

Building community resilience, strengthening the coping and adaptive capacity of food-insecure people and targeting the root causes of vulnerability to climate variability and climate change⁷ are key elements of any strategy for climate adaptation delivered from a food security perspective.

In relation to this, it is clear that WFP's longstanding practical experience and focus on strengthening vulnerable communities' resilience to natural and manmade hazards can be instrumental today in supporting governments and national institutions in promoting adaptation to climate change as part of broader food security objectives.

WFP employs a wide range of interventions to support communities to build resilience and lasting assets and to enhance livelihoods, many of which will assist people to cope better with and adapt to climate change.

This review has found that relevant WFP activities globally include the following:

- environmental resources conservation, protection and management, particularly soil and water conservation – often implemented as measures against desertification (including sand dune stabilisation) especially in the Sahel region – and including land management and rehabilitation of degraded rangeland;
- participatory forest management (such as in Honduras);
- water management, including watershed rehabilitation (using terracing and small dams), irrigation systems, water harvesting, community level water infrastructure development;
- afforestation and reforestation, for example at a large scale in China;
- agroforestry (in El Salvador, Bolivia, Niger and Indonesia, amongst others) and many examples of agricultural diversification;
- sustainable agricultural practices such as conservation agriculture (as in Lesotho and Zambia), appropriate cropping systems and drought-resistant crops (as in Malawi through supporting the promotion of early maturing crops linked to capacity building on small-scale irrigation), and organic agriculture (as in Cuba);
- grain storage infrastructure; storm and flood control mechanisms (such as cyclone/floodresisting schools, dykes, and bridges in Myanmar);
- actions to combat sea level rise and coastal erosion (including embankments, canals and elevating homes on stilts, as in Bangladesh).

These activities are usually implemented as a way to support food-insecure communities through livelihoods protection and diversification, mainly using food/cash-for-work and food/cash-for-assets approaches. Thus while in the past not specifically designed to do so, these asset building activities in many cases can be expected to assist communities to adapt to climate change as well.

⁶ Adapted from Ericksen SEH, Klein TJ, Ulusd K, Næss LO and O'Brien KL (2007) Climate Change Adaptation and Poverty Reduction: Key Interactions and Critical Measures. A Report prepared for the Norwegian Agency for Development Cooperation (NORAD), University of Oslo, Norwey

This situation is comparable to the global status quo across countries and organizations: for example, 2007 submissions on technologies for adaptation to the UNFCC highlighted that many of the activities reported on relied on existing technologies for coping with *climate variability* which may also be important as technologies for adaptation to *climate change*. UNFCCC SBSTA (2007b)

While country offices did not always recognize these asset and capacity building activities as effective adaptation strategies building resilience to longer-term projected climate change impacts, there was a strong and unified message that these actions were certainly assisting target communities to cope with climate variability.⁸

However, many country offices did make the link between increased climate variability already being experienced and climate change, and some articulated programme activities that they felt contributed to beneficial adaptation outcomes – or which indeed have been designed to do so – such as WFP Mozambique, which is part of a UN Joint Programme on Environment and Climate Change, and PRROs in Nepal and Indonesia that specifically included community consultations on climate change.

As WFP-supported livelihood diversification activities often target women, this positions the organization well to develop a gender-sensitive approach to adaptation to climate change. A number of these actions are likely to both reduce emissions of greenhouse gases like carbon dioxide and methane (mitigation), as well as to promote adaptation to a changing climate.

A cross-cutting requirement for adaptation to climate change is the creation of institutions and governance structures capable of managing evolving climate change risks and adaptation priorities over time. WFP's experience in supporting communitylevel institutions for Natural Resource Management, such as in the Managing Environmental Resources to **Enable Transitions to More Sustainable Livelihoods** (MERET) project, is pertinent. The agency also has experience that can be drawn upon to support community-based adaptation, such as the community-level experience of WFP and partners in re-energising traditional technologies by introducing appropriate technical solutions - for example, enabling communities to once again maintain and repair the works on traditional village-level dams built in wadis in Mauritania; and ensuring technical excellence and quality control in watershed rehabilitation structures such as in Ethiopia's ongoing MERET programme.

Safety nets and social protection

There is an emerging acknowledgement of the role of social protection as a response to the multiple risks and short and long-term shocks and stresses associated with climate change, leading Stern to argue that social protection could become one of the priority sectors for adaptation in developing countries.

WFP itself has been contributing to the debate on social protection in the context of climate change adaptation by emphasising the importance of approaches that consider *enhancing access* to food as a critical component of future food security, and as a crucial complement of approaches aimed at *enhancing agricultural production and food availability*. Moreover, WFP already provides examples of the use of social protection as an opportunity and a means to build resilience among vulnerable groups, through an approach that links protection and adaptation and which seems to be increasingly promoted by experts.

WFP activities relevant to climate change in this focal area are delivered through some of the most traditional and well documented programme instruments of the organization, such as cash- or food-based resource transfer and asset creation programmes, employment generation programmes, school meals programmes, and nutritional programmes and interventions, like Mother and Child Health and Nutrition (MCHN) and therapeutic and supplementary feeding.

The use of cash transfers/vouchers (especially to address rising urban food insecurity) is also an interesting new modality of intervention. While the trigger for this has been largely seen as rising food prices, a number of responses from country offices provided a strong rationale for urban operations linked to climate change - for example, in Liberia in response to frequent flooding in Monrovia due to increasingly heavy rainfalls associated with changing climate trends. Another innovative area of intervention that bridges between social protection and disaster risk reduction corresponds to the work undertaken by WFP in innovative risk transfer systems, such as the weather risk insurance initiative implemented together with IFAD and the World Bank in Ethiopia, already mentioned above.

⁸ UNDP 2008

⁹ Davies et al (2008)

¹⁰ Stern, N. (2008) Key Elements of a Global Deal on Climate Change London: London School of Economics.

¹¹ WFP et al, 2009. This with a view to balancing a debate that seemed to be uniquely focused on boosting agricultural production as the way to ensure food security.

Regarding school meals programmes, WFP currently provides meals to an average of 22 million school children, about half of whom are girls, in some 70 countries. This is often linked to supplementary social development benefits in cases where school meals become the platform for local poverty reduction and development activities. In instances where school meals are linked with environmental interventions, such as the target in Zambia to plant 1 million trees by the end of 2010, linked to the roll out of "Home Grown School Feeding", there is a good entry point for synergies with climate change response. Installing fuel efficient stoves in connection with school feeding is another example of holistic approaches that have multiple benefits, including both for adaptation to and mitigation of climate change. More than ten countries where WFP works are currently using fuel-efficient stoves, although not always on a large scale.

WFP's latest developments in nutrition are directed towards meeting the nutritional needs of specific target groups that will be particularly vulnerable to climate change. The emphasis on providing micronutrients has been strengthened which is an appropriate and timely response to malnutrition, or 'hidden hunger', given that such conditions are expected to be aggravated by reduced access to food for poor people due to the impacts of climate change.

New approaches also include development of Ready-to-Use Food (RUFs) for treating moderate and acute malnutrition, which were of great value in the response to the recent flooding in the Philippines, in which there were long periods in which people did not have access to safe water for cooking. The significance of WFP's HIV and AIDS nutritional interventions in the context of climate change becomes apparent if one considers the interactions between HIV and AIDS and climate change.

Knowledge services

WFP has the largest team of dedicated and trained vulnerability analysis officers in the humanitarian community. This represents a clear comparative advantage in analysing hunger-related issues at the field level. Vulnerability to climate change is highly socially and spatially differentiated, 12 thus identifying vulnerable populations and vulnerable ecosystems is

a critical component in an effective approach to adaptation.

In addition, other traditional WFP knowledge areas of relevance and comparative advantage in relation to climate change, include nutrition, disaster risk reduction, and emergency preparedness and response.

Vulnerability assessment and monitoring is undoubtedly one of WFP's core strengths. The VAM unit and the Office for Climate Change and Disaster Risk Reduction are currently working together to better integrate climate change-related variables and trends into the VAM process. Meanwhile, the integration of VAM with Monitoring and Evaluation (M&E) is still in progress but there are appealing examples in southern Africa, where feedback mechanisms have been developed to check targeting. The management undertaken by the Kenya country office, with frequent interaction between VAM, programming and M&E, based on good quality data from remote and field sources, provides a very good foundation for the adaptive management that will be required for climate change adaptation.

A number of country offices support food security networks at national and sub-national level and in some cases – as in Nepal – the VAM reports have contributed to the National Adaptation Programme of Action (NAPA). In other cases, for example in Bolivia, the country office has assisted the Bolivian Government in mapping the most vulnerable municipalities to climate change from the food security perspective.

WFP's experience in using traditional and local knowledge, although not previously targeted at climate change, is likely in some cases to have obvious adaptive value. Examples include the renovation of traditional irrigation systems in Sri Lanka, which have succeeded in reducing the impact of intensified dry seasons; and the rehabilitation of Inca terraces in Peru for erosion control amongst other objectives. Supporting or improving existing local strategies for adapting to climatic changes provides a basis for an enhanced role for the agency in supporting community-based adaptation.

Capacity development and policy advocacy

Capacity development has become an important cross-cutting area for WFP, particularly in the context of reducing dependency and supporting governmental and global efforts to ensure long-term solutions to the hunger challenge.

In 2007, capacity development was included in 75 percent of operations in 71 countries across all regions. It is reasonable to expect that many of the activities focusing on analysis and assessment of hunger (48 percent) and developing capacities in disaster preparedness (28 percent) already have a connection with strengthening the response to climate change, albeit not always deliberate.

WFP has solid experience in capacity building and institution strengthening through VAM, early warning systems, capacity building for food security assessment and monitoring, and emergency preparedness and disaster risk reduction. Capacity building activities to improve the resilience of communities to disasters have included among others flood and erosion control, have usually been associated with FFW and FFT and have been delivered in coordination with implementing partners from governments and NGOs.

In many countries, WFP is very engaged at the United Nations country team (UNCT) level. In the East and South Africa region, Regional Bureau Johannesburg (ODJ) alone, WFP is taking on the lead role in the development of a UN joint climate initiative (Uganda) or participating in United Nations Joint Programmes on climate change (Mozambique), or leading in DRR (Zambia, among others), while several other countries have fairly good levels of engagement in the national climate change debate.

On the policy and advocacy side, WFP's engagement for climate change varies widely across regions and countries and to a certain extent it is still in its infancy, with some notable exceptions.

In the Middle-East and North Africa region, the Regional Bureau Cairo (ODC), conducted WFP's first *Climate Change and Food Security Workshop* in November 2008; WFP Egypt office planned a national dialogue on climate change and food security and Syria's new PRRO (starting in 2010) will include awareness raising and training for counterparts on climate change.

In the ODB region, WFP has played a central role in promoting food security as a cornerstone of Bangladesh's 'Climate Change Strategy and Action Plan', and the Regional Bureau office in Bangkok sent a joint mission to Timor Leste to mobilize the government on climate change response.

In some countries, WFP has supported studies to support policy advocacy in areas related to climate change. In the Occupied Palestinian Territory, WFP is partnering with the Government and civil society to influence the thinking about climate change, water scarcity, and advocate for anticipatory adaptation measures in support of the most vulnerable communities. Most recently, the Government of Ecuador requested WFP's support to develop appropriate approaches to food security and hunger issues in this context.

General findings on the effectiveness of WFP's capacity development and policy advocacy activities, while highlighting areas for improvement, also provide a positive platform upon which to build more specific policy and capacity development activities. This can be enhanced by developing appropriate climate change-related policy advocacy and capacity development tools for country offices and regional bureaux.

At the global level, especially since the creation of the CCDRR Office at headquarters, WFP has been able to better interface with partners and to increasingly contribute to broad advocacy and policy initiatives and efforts working on the theme of climate and hunger, and engaging think tanks and academia, specialized climate centres, as well as the Romebased agencies, the Inter Agency Standing Committee (IASC) and the UN system at large. This is particularly important because WFP contributes to the debate on climate change from the unique and critical perspective of some of the most vulnerable and at risk people and communities.

Mitigation and the carbon market

Climate *mitigation* aims to reduce emissions of greenhouse gases (GHGs) and to enhance sinks for carbon sequestration. While developed countries have a responsibility to deliver on ambitious emission reduction targets (which is the basis of the global climate accord that is being pursued), there is also an increasing consensus about the fact that mitigation objectives should become an integral part of development pathways in poor countries,

especially where it also delivers strong adaptation benefits. A number of activities traditionally supported by WFP are very important for mitigation. These include:

- afforestation and reforestation:
- land management practices such as conservation tillage and agroforestry;
- rehabilitation of degraded crop and pasture land.

In some of these areas, WFP reports interesting outcomes. For example, in 2009 WFP's assistance led to the planting of about 92 million trees in a wide range of countries, and is estimated that about 43 million trees will be planted in 2010 (estimation as of Spring 2010). Earlier estimates have spoken of 5 to 6 billion trees planted over the lifespan of WFP, and an internal publication from the 1990s referred to WFP as "the Green Machine".

These activities have generally been implemented as environment-related conditional activities for foodinsecure communities, rather than as overt climate mitigation objectives and deliverables. Nevertheless, it is now understood that afforestation and reforestation, rangeland rehabilitation, land conservation and land rehabilitation practices aimed at enhancing food security and ensuring environmental benefits, can all contribute significantly to improving soil cover and reducing carbon emissions. In this respect, whenever possible, WFP should support activities that as part of food security objectives, can deliver multiple co-benefits for instance in the areas of environmental conservation, livelihoods protection, and climate mitigation.

The promotion of fuel-efficient stoves and renewable energy are more recent and innovative examples of WFP's response. The Safe Access to Firewood and Alternative Energy in Humanitarian Settings (SAFE) project was launched by the UN Secretary General and the Executive Director of WFP on the occasion of the Conference of the Parties in Copenhagen, in December 2009. The project aims to reduce the protection risks women face in displaced and refugee environments by providing fuel-efficient stoves, that can also be effectively applied to livelihood and environmental needs. To date, the SAFE project has been launched in Sudan (Darfur) and Uganda (Karamoja region), with a target of 6 million people over the next two years. In addition to the activities conducted under this initiative, it is interesting to note that - although often on a small scale - WFP is already currently promoting the use of fuel-efficient

stoves in different contexts and situations in over 10 countries.

WFP is currently defining its position on the carbon economy and developing an approach to carbon projects. Potential WFP projects that could leverage valuable sources of income for smallholders and serve as a possible exit strategy for WFP through carbon credit financing include reforestation and afforestation (FFW tree planting); use of bio energy (i.e. manure from pigs or cows) to cook and for electricity generation; micro hydro power plants; and solar power plants that provide electricity to communities.

Further mitigation possibilities with potential for WFP operations are Payments for Ecosystem Services (PES), and for Reducing Emissions for Deforestation and forest Degradation in developing countries (known as REDD); as well as addressing degradation and loss of peat lands. The linkage between forest conservation, food security and livelihood protection also warrants further investigation.

On a small scale, WFP is already developing a number of projects. In the Johannesburg Regional Bureau region, an innovative carbon credit pilot project involving four countries in Africa (Ethiopia, Kenya, Rwanda and Tanzania) is underway - in Ethiopia and Rwanda, carbon credits will be sought for reforestation and fuel-efficient stoves for school feeding will be the rationale for carbon credits in Ethiopia, Kenya, and Tanzania. Under the Tajikistan Green Initiative, 70,000 trees a year will be planted as part of a carbon credit project. In Indonesia, the 'Food for Carbon Free' pilot project is a partnership between WFP and the private sector to support community-level adaptation strategies by making use of financial opportunities linked to climate change mitigation.

As for WFPs own carbon footprint, WFP has recently completed phase one of the Climate Neutral UN Strategy, which will undertake an inventory of greenhouse gas emissions; phase two will look at emissions reductions, and phase three GHG offsets. Under phase one, WFP has begun calculating the carbon emissions produced globally by air travel with its electronic tool 'Carbon Footprint Calculator'.

Partnerships

Climate change spans both disaster and development. WFP will need to engage a broader set of partners to be effective on the climate front and joint actions with other relevant agencies will need to become the norm.

At global level, WFP is making important progress in building new partnerships and alliances. But while this review highlights a number of examples of strong UN partnerships, country offices also indicate that there is a lack of UN inter-agency coordination on climate change at UNCT level. Few cases of a more coherent UNCT approach are mentioned including through the UN Delivering as One pilot initiative, with examples from Mozambique, Lesotho, and Uganda. It is interesting to note the emerging collaboration with UNDP under the UNDP-managed, Japan-funded, Africa Adaptation Programme, in which WFP will execute project activities in Ethiopia, Kenya and Malawi. WFP is exploring further collaboration on climate change with UNDP and climate change is expected to be one of the pillars of a new strategic agreement between the two organizations.

At global level, work is underway with the Romebased agencies (FAO, IFAD) to develop common frameworks and potential joint action plans. Meanwhile, WFP and the World Meteorological Organization (WMO) have recently signed a memorandum of understanding to foster enhanced food security, disaster risk reduction, and development and adaptation opportunities among vulnerable groups to share use of climate-related knowledge.

A similar memorandum of understanding is being developed with United Nations Environmental Programme (UNEP), which is particularly important given UNEP's co-convening role for capacity building (with UNDP), REDD (with FAO and UNDP), public awareness and the Climate Neutral UN initiative. Collaboration is being intensified with ISDR, while contacts are also being established with the World Health Organization (WHO) to enhance collaboration in the area of climate impact on health and nutrition.

WFP is a very active member of the IASC Task Force on Climate Change, and co-chair with the United Nations Children's Fund (UNICEF) on the IASC Task Force on Preparedness and Contingency Planning.

Meanwhile, WFP is also exploring partnerships at the country level with the World Bank, through its Pilot Project on Climate Resiliency and Global Framework for Disaster Risk Reduction, and with the African Development Bank's Climate for Development programme.

Other important partnerships include regional institutions and actors, i.e. the African Union, the New Partnership for Africa's Development (NEPAD), research institutions and academia at international and national level (including national meteorological agencies), as well as NGOs and community-based organizations (CBOs).

Partnerships have been or are being forged with research institutions such as the Consultative Group on International Agricultural Research (CGIAR) - which recently launched a 10-year Challenge Programme on Climate Change, Agriculture and Food Security; World Agroforestry Centre (ICRAF); International Research Institute for Climate and Society (IRI); Institute of Development Studies (IDS); and International Food Policy Research Institute (IFPRI). Many of WFP's NGO partners in climate relevant fields at the national level work directly with a range of CBOs, thus extending the range of partnerships down to the grassroots level.

3. Integrating climate change aspects into planning and operations

Like most humanitarian and development agencies, WFP has begun a process of mainstreaming climate change in its planning and operations. It is raising awareness internally, and externally with partners, for example by articulating common positions on food security, hunger and disaster risk management issues as part of the global climate change negotiations. The establishment of the Office for Climate Change and Disaster Risk Reduction and strong statements from the executive level are also evidence of high-level political commitment to the issue.

While WFP has yet to achieve a more systematic mainstreaming of climate change into its operations, regional bureaux and country offices have already made progress towards climate change integration, as revealed by interviews, reports of meetings, and the questionnaire results. Already a few projects with a specific focus on climate change are being developed.

WFP country offices feel strongly that changing climatic trends are currently driving or intensifying vulnerability, but at the same time, they provided a clear indication that the programme approach has not yet adequately incorporated an analysis of the impact of climate change risks, noting that climate change issues need to be better understood at the country office level if these are to be adequately incorporated into programming.

Environmental mainstreaming

While WFP has a strong policy basis for environmental mainstreaming, it is noteworthy that most respondents questioned about the issue were not aware of, or had forgotten about, the WFP 1998 Environmental Policy, and were not sure about implementation issues arising from this.

In the current context, where the impact of climate change on the natural resource base is dramatically increasing, adoption of location-specific integrated management of natural resources for higher productivity and better resilience to erratic climatic events is becoming even more crucial. This

highlights the need for WFP to revisit its environmental policy and explore more fully whether the issues highlighted in the policy are in fact being adequately covered.

Rethinking relief, recovery and development

A key consideration for a stepped-up response to climate change is the positioning of interventions along the relief-recovery-development continuum. There are strong indications that climate change is resulting in more frequent extreme events in some regions, sometimes of a longer duration.

Concurrently, it is understood that climate change will dramatically impact poverty and environmental issues, generating more vulnerability and risk, and pushing more people into resource-scarce and marginal environments and livelihoods. This indicates a likely increase in situations of chronic food insecurity, as well as protracted crises aggravated by the increase in the number and intensity of natural disasters.

A very influential position in the current climate change debate maintains that the challenges posed, call for a profound paradigm shift in the way development is conceived, which necessitates a rethinking of how opportunities are seized, and responses provided along the relief-recovery-development continuum.

WFP has been a leader in piloting deliberate reliefto-recovery programming and could further sharpen this advantage in light of the challenges posed by climate change.

Climate change response and gender

The links between gender equality and climate change are complex and will be central to the achievement of the Millennium Development Goals. Climate change will exacerbate existing inequalities between men and women, by placing more pressure on women's roles, while at the same time depleting

the natural resources that women depend upon. Apart from bearing a large part of the burden of climate change, women can play a pivotal role in adaptation to climate change and in reducing climate impacts on hunger.

WFP has long had a dedicated focus on gender, reinforced through its Enhanced Commitments to Women, and many of its livelihood diversification activities target women. There is also a strong gender focus in WFP activities that more specifically respond to climate change – i.e. the range of DRR interventions in Bangladesh.

Additional examples of WFP programming that directly address the gender components of climate change include Food for Work (FFW) – to improve water harvesting schemes (watershed) and fuel-wood production as well as livelihood diversification activities – and Food for Training (FFT) on environmental awareness and disaster risk reduction. The gender component also addresses energy-efficient fuel stove utilization and MCHN activities that provide supplementary feeding and basic health education. Concrete suggestions for improving coverage of gender aspects and their relationship with climate change are included in the report.

Maladaptation

Maladaptation is defined as an action or process that inadvertently may increase vulnerability to climate change-related hazards. Although many of WFP's interventions appear to be generally supportive of adaptation, the general lack of a conscious integration of climate change into current activities raises the possibility that programmes could cause maladaptation. As one regional bureau technical expert asked, "Are we encouraging livelihood activities that won't be feasible in the next 30 years, due to climate change?" This could be an important consideration for WFP activities in countries such as Bangladesh that are extremely vulnerable to coastal erosion and sea level rise.

The most common issue raised by country offices was the provision of a food basket that may require a lot of firewood for cooking, thus potentially promoting more deforestation, especially around refugee camps. These types of observations raise important questions also about policy trade-offs that will need to be considered.

Considerations of maladaptation led other respondents to raise a long-standing concern that activities not properly executed due to lack of technical assistance and related to inadequate resources, could induce damage. This point resonates strongly with a key section of WFP's 1998 Environmental Policy, which stressed that natural resource and asset-creation development activities pose environmental risks if not designed and implemented according to accepted technical standards.

4. Key recommendations for action: enhancing capacities to address climate-related hunger

While this review exercise established that WFP has a strong foundation to build upon, a systematic effort is required across the agency to refine capacities and approaches to ensure that WFP's capacities and comparative advantages can effectively be leveraged in support to global efforts aimed at addressing the challenge of climate change and its impact on hunger and malnutrition.

The following recommendations are designed to help guide the development of WFP's agenda for the next phase:

Key recommendations

1. Develop a coordinated framework to guide climate change mainstreaming within WFP

Further development of the corporate response to climate change should take place within a coherent framework, in line with the corporate vision and the strategic plan. The framework should be underpinned by principles for engagement that build on the comparative advantage and the emerging challenge, encapsulated in a climate change policy, strategy, and/or action plan. This framework should be developed in a participatory manner with regional bureaux and country offices, and should guide country offices in developing their responses with sufficient flexibility to stimulate innovation and allow for country ownership and responsiveness to national priorities. This should also include tools and policy guidance on climate change that can support programme design and implementation of a range of models for country offices to enable them to identify and adapt successful climate change adaptation programmes to their own countries, as well as the development of indicators to facilitate monitoring and reporting.

Gender and HIV/AIDS should be mainstreamed into the framework, which should also highlight key synergies between environmentally-sound development, disaster risk reduction and adaptation.

The agreed climate change mainstreaming framework should be further translated into clear advocacy messages for use with donors and partners. WFP can legitimately leverage its role as a leading humanitarian agency to pursue advocacy activities on the links between climate change, food security and hunger.¹³

2. Establish a corporate capacity development initiative under the CCDRR Office

Develop a corporate capacity development initiative on climate change, tackling strategic, programme and operational aspects, and providing the support required by programme staff and country directors to gradually and selectively integrate climate aspects and objectives into planning and programming; provide systematic technical support and work towards enhancing capacities at the regional and country level;14 and facilitate the works of WFP at UNCT level and in other national-level coordination mechanisms, to increase awareness of the impact of climate change on hunger and malnutrition and to leverage WFP's comparative advantages as part of coordinated and coherent national strategies and plans working with other UN agencies and partners.

¹³ WFP has already taken some positive steps in this regard, such as commissioning think pieces on climate change and hunger and using these in the lead-up to COP-15.

¹⁴ Training needs to go beyond the success stories so that people understand the policy issues and underlying dynamics and politics of the international climate change arena, and are further able to see and feel that this issue is important for their work.

3. Enhance the climate focus of WFP's corporate food security and vulnerability analysis, disaster risk reduction, and emergency preparedness and response programmes and services

Promote the gradual integration of new climate and food security related information into corporate services to ensure their optimal use as a basis for policy and programme development at the field level; strengthen capacities in the analysis and use of seasonal climate forecasts and weather anomalies, including collaboration with specialized entities that provide such services, including national meteorological services, regional centres, specialized institutions (IRI, others), USAID's FEWS NET, FAO and others; promote a proactive approach to preparedness in anticipation of an increasing disaster load emanating from climate change; sharpen and step-up ongoing work on early warning systems; enhance overall capacities to support governments and regional actors to anticipate potential crises and disasters.

4. Engage in and support national and regional planning and programming processes and initiatives (including NAPAs, CAADP, and others)

WFP's systematic participation in National Adaptation Programmes of Action (NAPAs) and similar processes at country level provides an opportunity to strengthen NAPA coverage of the food security sector.

All NAPAs involve some vulnerability analysis – one of WFP's core skills. WFP can provide crucially relevant technical expertise in this area, and by actively participating in national exercises, it can considerably contribute to harmonizing efforts and programme targeting with a special focus on food security and hunger. This will allow WFP to leverage its comparative advantages in the most pertinent and appropriate manner in support to the national adaptation agendas.

5. Identify and leverage successful programmes, approaches and activities, particularly those with multiple outcomes and benefits, and explore options for scaling up

Identify successful relief, recovery and/or development programmes that assist communities to build resilience to shocks, provide safety nets and social protection benefits, and/or support asset creation and livelihoods protection and

diversification initiatives and efforts; identify approaches that provide integrated adaptation, food security and risk reduction benefits and outcomes; as well as those that confer other benefits such as mitigation (reducing atmospheric greenhouse gases); promote the use of fuelefficient stoves for school feeding and other activities, ideally making this a mandatory requirement; consider additional operational entry points such as school feeding, when linked to environmental, nutritional and resilience building interventions; work with partners to develop policies and programmes to address the impact of climate change on nutrition; and engage a group of priority countries (pace setting countries) that will lead efforts and promote relevant examples of effective adaptation and mitigation actions in support to government plans and priorities.

6. Consolidate WFP's role and leadership in areas of comparative advantage aimed at strengthening food security, building resilience, and protecting livelihoods

Disaster Risk Reduction is increasingly seen as a central component of efforts to support vulnerable communities' adaptation to climate change. WFP can build on its capacity and strength in this area which will allow reducing both the humanitarian consequences of climate change and scale up efforts to build reliance among food-insecure populations.

7. Highlight and develop the linkages between food security, environmental issues and climate change

Food security, hunger and environmental issues can be closely correlated and climate change is expected to dramatically affect environmental degradation trends and processes in many poor countries and regions that are already affected. It is therefore important for WFP to enhance its focus on these aspects, especially when working in marginal areas and settings, and to ensure a good integration of environmental considerations in WFP's programmes.

This should also include a broader and more strategic approach to water when it relates to food security objectives. Reduced water availability and quality in many of the most food-insecure areas of the world will be a major factor driving increases in food insecurity. Thus, water issues need to be integrated both in WFP's analysis of the drivers of food insecurity, and in operations to reduce hunger.

8. Consolidate partnerships and alliances and expand networks for more integrated interventions and greater impact

Climate change is a global challenge requiring coordinated and integrated efforts. The best way WFP can provide its contribution is by leveraging its capacities in support to national and regional plans and initiatives, and in collaboration and coordination with partners. In the field, also thanks to its network of partners, WFP provides a powerful operational platform that can be further built upon by engaging other actors working in the areas of adaptation to climate change. At global level, the Programme is already strengthening technical collaboration with a number of actors, including FAO, IFAD, UNEP, WMO, and the World Bank, and exploring joint country-level activities, as in the cases of Uganda or Mozambique. WFP is also already forging alliances and action learning initiatives with leading research institutes, at global, regional and national levels. Collaboration on well-designed action research programmes, focused particularly on the social and food security dimensions of climate change, can be instrumental in supporting national and regional programming and planning efforts.

9. Access new sources of funding in support of country-based climate change and food security-related programmes and initiatives

In line with the commitments which developed countries made at the December 2009 Climate Change conference in Copenhagen, some US\$10 billion in additional financing for climate change is expected to be made available each year for the next three years with significant additional funding in the future, up to an estimated US\$100 per annum reached by year 2020. This additional funding will be delivered through various new and existing bilateral and multilateral channels, among which the Adaptation Fund, the Global Environment Facility (GEF), the proposed "Climate Green Fund," as well as other funds such as the World Bank's Pilot Program for Climate Resilience (PPCR). WFP is already working on a becoming an implementing partner and ensuring increasing access to some of the above funds. Building on successful programmes and initiatives, WFP must also work to develop new partnerships with those bilateral donors who are expected to increase their financial contributions to climate change action by developing countries.

Much of the success of resource mobilization efforts for climate change will hinge on the capacity of WFP to engage with government and other partners at country level, where allocation decisions are increasingly determined.

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Acronyms

CAADP Comprehensive Africa Agriculture Development Programme

CBO community-based organization

CCDRR Office for Climate Change and Disaster Risk Reduction

CILSS Permanent Interstate Committee for Drought Control in the Sahel

CP country programme
DEV development project
DRR disaster risk reduction
EMOP emergency operation
EWS Early Warning System

FAO Food and Agriculture Organization of the United Nations

FEWS-NET Famine Early-Warning System Network

FFT food for training FFW food for work GHG greenhouse gas

IASC Inter-Agency Standing Committee IDP internally displaced person

IDS Institute of Development Studies (United Kingdom)
IFAD International Fund for Agricultural Development
IFPRI International Food Policy Research Institute
IPCC Intergovernmental Panel on Climate Change

IRI International Research Institute for Climate and Society

ISDR International Strategy for Disaster Reduction

LDC least-developed country

MCHN mother-and-child health and nutrition
NAPA National Adaptation Programme of Action

NGO non-governmental organization ODB Regional Bureau Bangkok (Asia)

ODC Regional Bureau Cairo (Middle East, Central Asia and Eastern Europe)

ODD Regional Bureau Dakar (West Africa)

ODJ Regional Bureau Johannesburg (Southern, Eastern and Central Africa)
ODP Regional Bureau Panama City (Latin America and the Caribbean)

ODS Regional Bureau Sudan

PPCR Pilot Programme for Climate Resilience PRRO protracted relief and recovery operation

REDD Reducing Emissions for Deforestation and Forest Degradation

SAFE Safe Access to Firewood and Alternative Energy SATCA Early Warning System for Central America

SO special operation
SPR standard project report
UNCT United Nations country team

UNDP United Nations Development Programme
UNEP United Nations Environment Programme

UNHCR Office of the United Nations High Commissioner for Refugees

UNICEF United Nations Children's Fund

USAID United States Agency for International Development

VAM vulnerability analysis and mapping

WFP World Food Programme WHO World Health Organization

WMO United Nations World Meteorological Organization

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