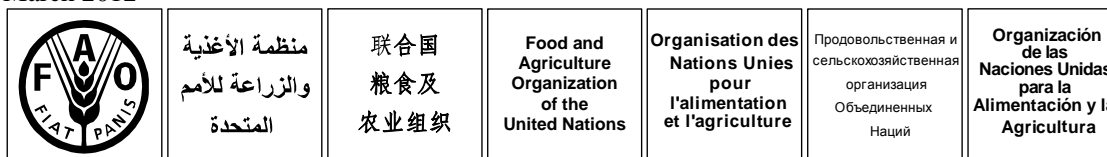


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RAF CLIMATE CHANGE FRAMEWORK

EXECUTIVE SUMMARY

Against the threat of climate change, FAO has decades of experience in promoting agricultural practices and policies that also safeguard the natural resource base for future generations. Agriculture policies are the cornerstones for achieving food security and improving livelihoods. Effective agriculture and climate change policies can also boost green growth, protect the environment and contribute to the eradication of poverty. FAO works closely with many of the world's most vulnerable populations, especially in Africa, to help them increase their agricultural productivity, while ensuring that the natural resources they depend on are not over exploited or depleted. Agriculture not only suffers the impacts of climate change, it is also responsible for 14 percent of global greenhouse gas emissions. But agriculture has the potential to be an important part of the solution, through mitigation — reducing and/or removing — a significant amount of global emissions.

According to FAO (2009) 70% of all mitigation potential could be realized in developing countries highlighting the case for successful action on mitigation in Africa. In parallel, adaptation strategies are viewed as a central to Africa's climate change response. Rising temperatures, changing patterns of precipitation significant short term impacts on crop yields have placed pressure on governments and development agencies to scale up adaptation efforts. (UNECA 2011). Furthermore, the Africa Group of Negotiators at the recent 2012 UNFCCC Climate Change Conference in Durban, prioritized adaptation as part of a wider response to protect vulnerable African communities from the worst effects of climate change.

Climate change poses many threats to agriculture, including the reduction of agricultural productivity, production stability and incomes in areas of the world that already have high levels of food insecurity and limited means of coping with adverse weather, either floods or droughts. This is true in particular for rural communities in Africa. Being able to adapt and transform agriculture to feed a growing population in the face of a changing climate without hindering the natural resource base, on which most rural communities in Africa depend for their livelihoods, will not only achieve food security goals but also help mitigate the negative effects of climate change. More productive and resilient agriculture will need better management of natural resources, such as land, water, soil, biodiversity and genetic resources through practices, such as conservation agriculture, integrated pest management, agroforestry and sustainable diets.

This transformation of agriculture is being promoted by FAO along with other partners under the term

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“Climate-smart agriculture”, agriculture that sustainably increases productivity, resilience (adaptation), reduces/removes greenhouse gases (mitigation) while enhancing the achievement of national food security and development goals.

FAO’s approach is aligned to priorities outlined within the National Adaptation Programme of Action which identifies appropriate activities necessary to respond to urgent and immediate adaptation needs. All the above is reflected in the draft strategy being developed by FAO Regional Office for Africa, in consultation with its sub regional offices and which is awaiting for its formal adoption. A condensed version is the draft strategy as summarized below.

A. Overview: Climate change and food security in Africa

1. Climate change is a major challenge to agriculture development and natural resources conservation in Africa. The increasingly unpredictable and erratic nature of weather systems on the continent have placed an extra burden on food security and rural livelihoods. Furthermore, the current rate of climate change has led some that argue that it represents the “rapid depletion of sub-Saharan Africa’s natural resources, which further threatens the sustainability of the peasant farmer” (FAO, 2010). According to the Lancet (Costello et al. 2009), climate change is the biggest global health threat of the 21st century, and is already contributing to the global burden of disease and premature death.
2. The risk of conflict induced displacement poses question regarding the preparedness of development agencies to address the impact of climate change on equitable access of natural resource and food. Climate change broadly affects all four dimensions of food security: food availability, food accessibility, the stability of the food supply and the ability of the consumers to utilize food, including food safety and nutritional value (FAO, 2008a). As progress on rural development has already been hit hard by the combined effect of the global downturn and the 2007/08 food crisis, hunger and malnutrition trends remain stubbornly high and without extensive mitigation and adaptation measures, the effects of climate change on agriculture is expected to exacerbate Africa’s deepening food crisis.
3. Due to the limited contribution of the majority of African states to carbon emission outputs (less than 10% of total carbon emission emanates from Africa), attention has focused on how best to adapt the agriculture sector to a changing climate. Recent development in voluntary carbon markets and the Clean Development Mechanism have highlighted the potential of financing tools to support adaptation frameworks.

B. FAO Climate Change Approach

4. FAO’s work on climate change focuses on providing all the technical and scientific advice and backstopping in the framework of its mandate; FAO is also placing great importance on the role of climate change in price increases following the impact of major crop failures on markets. Consequently, it was recommended that food security be used as an indicator for assessing vulnerability in the context of climate adaptation for future climate negotiations.
5. In particular, FAO climate change assistance rests onto the following key principles:
 - Strong focus on actions with potential to reduce vulnerability and ensure food and nutrition security. Through appropriate planning, climate change adaptation can be effectively integrated into sustainable development initiatives
 - Integrate food security and climate change concerns into development planning across sectors and spatio-temporal scales;
 - Seek a systems approach with synergies in mitigation, adaptation and sustainable food production;

- Work on country support driven process, location specific and participatory manner considering gender specific needs and priorities of vulnerable communities including pastoralists and indigenous peoples;
- Address adaptation and mitigation as an ongoing social learning process, integrating local and scientific knowledge;
- Promote synergies among the international conventions and agreements on climate change, desertification, biodiversity and forestry.

FAO also actively seeks for partnerships with relevant institutions, while continuing its participation in project implementation under GEF-managed funds, among others.

6. Most of FAO units already integrate adaptation in their work. FAO has an active Interdepartmental Working Group on Climate Change (IDWG on CC) which is mandated to coordinate cross-departmental, multi-disciplinary work relating to climate change. The Climate Change, Energy and Tenure division within the Natural Resources Management and Environment Department, provides overall coordination.
7. FAO commissioned a number of studies, for consideration by its Commission on Genetic Resources for Food and Agriculture, on the potential of genetic resources for food and agriculture for adaptation to and mitigation of climate change. The studies also identified options for cooperation between the Commission and other international bodies with regard to genetic resources for food and agriculture¹. The Commission in response agreed on the need for a roadmap or work programme on climate change and genetic resources for food and agriculture and requested its Secretary to advance and further develop it. It agreed that the roadmap or work programme would be implemented through an integrated approach and with consideration of sector and regional specific needs, as well as considering agricultural ecosystem characteristics. It encouraged Members of the Commission to consider available information about the importance of including the management of genetic resources for food and agriculture in planning and implementing their countries' National Adaptation Programmes of Action (NAPAs) and Nationally Appropriate Mitigation Actions (NAMAs).²
8. In addition, FAO has a long track-record in collecting, processing and applying geo-spatial information on natural resources and climate as well as data on potential and actual production of food, state of fisheries, livestock, forests and genetic and land resources. FAO activities under fisheries include capacity building assistance towards the Small Scale Fishery Sectors in East Africa addressing climate change adaptation.

C. Green Wall for the Sahara and Sahel Initiative

9. Land degradation in arid areas have put under threat the livelihood of millions of people around the world; 10 million hectares of arable land are being degraded per annum; of the 130 million hectares of land seriously affected, 50 percent is in Africa (UNECA, 2009). For the Sahel and Sahara zones of Africa, where crop production is low due principally to low rainfall

¹ See documents, *Climate Change and its Effect on Conservation and Use of Plant Genetic Resources for Food and Agriculture and Associated Biodiversity for Food Security* (Thematic Background Study); *Climate change and animal genetic resources for food and agriculture - State of knowledge, risks and opportunities* (Background Study Paper No. 53); *Climate change and invertebrate genetic resources for food and agriculture: State of knowledge, risks and opportunities* (Background Study Paper No. 54); *Climate Change and Aquatic Genetic Resources for Food and Agriculture - State of knowledge, risks and opportunities* (Background Study Paper No. 55); *Climate Change and Forest Genetic Resources - State of knowledge, risks and opportunities*. (Background Study Paper No. 56); *Climate change and micro-organism genetic resources for food and agriculture: State of knowledge, risks and opportunities* (Background Study Paper No. 57). [Economics of PGRFA Management for Adaptation to Climate Change: A Review of Selected Literature](http://www.fao.org/nr/cgrfa/cgrfa-meetings/cgrfa-com/thirteenth-reg/en/Economics_of_PGRFA_Management_for_Adaptation_to_Climate_Change:_A_Review_of_Selected_Literature) (Background Study Paper No.60). Most of the papers are available at : <http://www.fao.org/nr/cgrfa/cgrfa-meetings/cgrfa-com/thirteenth-reg/en/>

² CGRFA-13/11/Report, paragraphs 52-53.

and low soil fertility and general land degradation, the African Union Summit, in an attempt to address this situation, adopted, in January 2007, a decision approving the Great Green Wall for the Sahara and Sahel Initiative (GGWSSI). The GGWSSI seeks to slow the southwards advance of the Sahara desert and to provide an opportunity for inhabitants to create alternative sources of income, and boost their food security.

10. FAO leads a Technical Cooperation programme aimed at enhancing the capacity of the Commission of the African Union (AU-Commission) to provide assistance to 5 selected Member countries to develop sound strategies, plans and project proposals for the successful implementation of the GGWSSI. FAO is also executing a European Union-funded project of the African Union in 8 additional countries to implement similar activities as that of the TCP. The anticipated outcomes of the Projects include enhanced capacities of the African Union Commission and the beneficiary countries to develop and implement comprehensive integrated projects within the framework of the GGWSSI, for improved environmental conditions in the Sahel and Sahara zones and for reduced poverty and improved livelihoods for the inhabitants of the zone.
11. Through the implementation of the GGWSSI, Africa will be making great strides towards the regional implementation of the United Nations Convention to Combat Desertification (UNCCD). Furthermore, it would contribute to the implementation of the Sirte Declaration on Agriculture and Water, as well as contribute to attaining the Millennium Development Goals (MDGs) objectives in the Sahel and Sahara zones.

D. Some regional actions addressing climate change related to Food and Agriculture

12. FAO's work on climate change in the region is associated with the efforts of regional partners in this area. Several initiatives have been launched to address critical issues surrounding climate change including agriculture development, water security and deforestation.
13. The African Union (AU) and the United National Economic Commission for Africa (UNECA) have initiated in April 2006 the 'Climate for Development in Africa' (ClimDev-Africa), a joint initiative which rests on two pillars: the African Climate Policy Center (ACPC) and the ClimDev Trust Fund. Additionally, the Economic Commission of West African States (ECOWAS) has launched the Sub-Regional Programme of Action to Reduce Vulnerability to Climate Change in West Africa reflective of policies and major regional initiatives in sectors of environment, water, agriculture and forestry.
14. The Common Market for Eastern and Southern Africa (COMESA, the Southern African Development Community (SADC) and the East African Community (EAC) initiated discussions with FAO on the development of a Programme on Climate Change Adaptation and Mitigation in the Eastern and Southern Africa Region. FAO will be a key partner in this 5 year programme working on the coordination of stakeholders promoting Conservation Agriculture. This will be in line with the draft FAO Strategy for CA in Sub-Saharan Africa as well as facilitate the long-term vision of partnership between the Regional Economic Communities.
15. FAO partners with several institutions in Europe and Africa as part of the EC funded project on "climate change predictions in Sub-Saharan Africa: Impacts and adaptations". The objective of the FAO component in the project is to develop prototype medium term warning systems and to prioritize adaptation strategies relevant to food and agriculture.
16. Lastly, Reducing Emissions from Deforestation and Forest Degradation (REDD) is a climate change mitigation strategy, which is jointly supported by FAO, UNEP and UNDP, to create a financial value for the carbon stored in forests, offering incentives for developing countries to reduce emissions from forested lands and invest in low-carbon paths to sustainable development. FAO is currently supporting a UN Collaborative Initiative on REDD in Developing Countries, a joint FAO-WFP-UNDP initiative. Pilot activities are underway in Tanzania, Zambia and the Democratic Republic of Congo.

E. FAO Regional Office for Africa (RAF) Climate Change Framework: goals and objectives

17. In line with the corporate vision, the RAF Climate Change framework has relevance to FAO *Strategic Objective I - Improved preparedness for, and effective response to, food and agricultural threats and emergencies* based on the three pillars of disaster risk management; 1) preparedness, prevention and mitigation; 2) response; and 3) transition.
18. RAF shares the concern of regional stakeholders in the need to address the negative impact of climate change on food security, natural resources and environment in Africa and for the implications of climate change on the attainment of key MDGs. Growing demand from member states for targeted climate focused program support in the form of technical assistance, capacity building and resource mobilization in relation to agriculture and natural resources, underlines the importance of building organizational strategies to better respond to country needs.
19. Strengthening RAF's technical assistance would contribute to strengthening regional rural development responses on adaptation, a major area for Africa's response to climate change outcomes. Developing partnerships with regional institutions on climate change interventions will require planned strategy for action, outlining priority areas in accordance with the regional priorities set by the African Regional Conference (ARC) at its 26th meeting in 2010 and waiting for the deliberation of the present conference.

As part of the wider process of programme planning and result based management that form the FAO Strategic Framework, climate change responses coordinated under RAF reflect a strategic approach with clearly outlined goals and objectives.

20. RAF Climate Programme Goals

- Reduce vulnerability to hunger and malnutrition resulting from climate change in Africa
- Build technical and institutional capacity on climate change interventions focusing on food security and sustainable natural resources management in Africa
- Promote cross cutting programme partnerships on climate change

21. RAF Climate Framework Objectives

- Develop climate- smart programmes in line with regional priorities and in partnership with key stakeholders
- Strengthen resource mobilization for climate focused intervention
- Improve communication and advocacy on regional climate issue

RAF CC Objective1. Develop climate change focused activities in line with regional priorities

RAF Priority 1: Increase agricultural productivity and diversification

22. Mainstreaming adaptation

- Integrate climate resilience into agricultural strategies for rural communities (climate smart agriculture, conservation agriculture, etc.)
- Establish RAF Climate Change Officer position
- Define a strategy/ mechanism to allow transition of current agricultural production towards conservation agriculture as a means of increasing production while ensuring mitigation and adaptation

23. Income and livelihood diversification

- Studies and guidelines on vulnerability, climate change impact on local communities and rural safety-nets to form basis for pilot projects and policy formulation

24. Capacity building in food safety and nutrition, plant and animal health

- Improve preparedness of rural communities to the emergence of climate change-related pests and diseases
- Capacity development through EMPRES (Emergency Prevention System for food safety) and food chain crisis management framework
- Assess impact of climate change on food safety and quality along the food chain
- Ensure that agriculture and genetic resources issues are given adequate consideration in planning and implementing of country's national adaptation programmes of action (NAPAs) and nationally appropriate mitigation actions (NAMAs)
- Project on building capacity in Holistic Management in agriculture and land use to exploit climate change adaptation and mitigation potentials
- Design projects on improving preparedness of rural communities to climate change-related diseases

RAF Priority 2: Promote sustainable natural resources management

25. Monitoring trends

- Strengthen national capacities for biodiversity and genetic resources assessment and monitoring
- Medium term-warning systems (5-10 years), climate forecasting (seasonal) in collaboration with specialized regional institutions (including regional and international NGOs) and identify pertinent adaptation measures
- Improve water resource assessment and monitoring- focus on ground water resources
- Incorporate response to climate change impacts on biodiversity and agro-biodiversity into national strategies
- Regional agro-ecological assessment for agriculture
- Integration of indigenous knowledge in early warning systems and trends monitoring
- Develop indicators and modeling tools to map the impact of climate change on crops, livestock and agro-biodiversity
- Integrate existing FAO climate databases with those available at the RECS to provide relevant information to user groups (e.g. smallholders, extension workers, etc.) to enable pro-active decision making

26. Technology development and dissemination

- Expand project pilots on support to farmers on climate change adaptation through conservation agriculture integrated farming methods and other proven adaptation means
- Integration of LADA approaches and tools for sustainable land management
- Promote adoption of Sustainable Land Management (SLM) and Agricultural Water Productivity (water saving techniques for irrigation, rain water use, water storage and conservation)
- Promote integrated farming (including crops, livestock, wildlife, fisheries, etc) and Holistic Management to cover bare lands and restore water tables
- Promote sustainable forest management, especially in dry land areas, for enhanced adaptation to climate change

- Promote good environmental practices in nutrition interventions and emergency responses, (fuel efficient cooking, effective water management, etc.)

27. Communication for sharing of lessons learned and technology dissemination

- Develop stakeholder based communication strategies for disseminating new technologies and innovations for adaptation to climate change
- Document lessons learnt, from outside and within the region (South-South cooperation), in the field of sustainable natural resources management e.g. water management and governance

RAF Priority 3: Support market access and sanitary measures for better trade

28. Value chains and market access

- Studies on economics of adaptation, including value chains consumer preference and smallholder access to markets
- Analyze the constraints posed by climate change to the adoption of food safety practices along the value chain
- Workshops and publications on institutional innovations and policy interventions in support of smallholders market participations

RAF Priority 4: Improve knowledge management and Information and advocacy in Africa

29. Vulnerability assessment

- Analysis of vulnerability to food insecurity under climate change
- Development of vulnerability indicators for fisheries, forestry, livestock and aquaculture building on existing databases e.g. in SADC
- Mapping vulnerability and agricultural water interventions that help alleviate vulnerability in different agro ecosystems

30. Mainstreaming adaptation

- Development of guidelines for incorporating climate change issues into NMTPF and sustainable management of land, water and natural resources in context of climate change
- Mainstream the climate dimension into existing initiatives and nutrition programs dealing with under nutrition, particularly those developed in response to the food and economic crises

31. Documenting and disseminating experiences

- Develop gender-sensitive strategies for adaptation to climate change based on existing knowledge and experiences

32. Knowledge information (Communication and Advocacy)

- Support to policy consultations and actions to boost sustainable use of water and bioenergy resources (including farm-generated power/energy)in Africa in the context of climate change

33. Investment (Resource mobilization)

- Assess the availability of private partners to invest in greener economy agricultural practices country level training course on accessing climate change financing mechanisms
- Country level training course on accessing climate change financing mechanisms

34. Policy (Monitoring and evaluation)

- Routine climate change evaluation included within end of project cycles
- Regional information and early warning system on food and agriculture, including on its genetic resources

35. Access to training

- Development of internal staff capacity on Climate Change related issues of all decentralized offices in Africa
- Create a rewarding mechanism which allows committed and motivated GS staff to visits African projects dealing with climate change
- Develop climate change curriculum and training materials for various levels including Farmer/Pastoral Field Schools

RAF CC Objective 2. Strengthen resource mobilization for climate focused intervention

36. Partnerships

- Establish relationships with other actors working in climate change activities (within and outside the UN system, private sector & NGOs) through joint projects/activities
- Map the donor community (funding sources) for climate change activities in the region and maintain periodic contact with them
- Capacity building at country level to access climate change financing mechanisms

37. Information Management and knowledge promotion

- Create a database of climate funding sources – deadline, requirement and application
- Capacity building for climate project formulation with a view to expand project portfolio
- Review the climate change project portfolio, in the African continent, for the last 4 years (following the FAO evaluation) and propose improvements

RAF CC Objective 3. Improve communication and advocacy on regional climate change issues

38. Research and publications

- Develop thematic cross cutting research products on climate change and food security (what are the challenges that climate change is posing to us doing our business as usual, new ways of thinking the environment such as payment for environmental services (PEMS) in Africa, etc.)
- Strengthen partnerships with knowledge institutions (Universities, Think Thanks, research institutes outside FAO including international and regional NGOs) to promote knowledge creation, enhanced by RAF field experience (PhD thesis, Fellowships, Video-Conferences and Video-Seminars, etc.)
- Promote the use of recycled paper
- Develop a Greening RAF strategy
- Share/ disseminate best practice in climate technology for adaptation and underline synergies between adaptation and mitigation
- Assessing how possible climate changes will affect fisheries catch and aquaculture potential whilst incorporating enhanced water storage and management options to take into consideration foreseen climatic fluctuation
- Build further evidence on the links between climate and under nutrition, on projected effects and on threats that specific climate change mitigation actions pose for nutrition

39. Advocacy and visibility

- Develop advocacy products on climate change issues relating to food security in partnership with regional agencies
- Organize touristic tours to the most successful FAO and FAO partner projects to raise awareness and promote FAO and partner visibility
- Carry out periodical online discussions forum (managed by RAF) on climate change related issues in Africa, involving all the relevant actors inside and outside the continent
- Promote the creation of an inter-agency team, at regional level, working on climate change cross-cutting issues

Conclusion

40. Finding development solutions to the dilemma of climate change has emerged as one of the most pressing challenges for the Africa region in its efforts to deliver food security. As a starting point, RAF's climate change framework provides a guideline for the formulation of climate change focused projects as well as the integration of climate change aspects, as a cross-cutting issue, in the formulation of technical projects. The proposed framework is in line with RAF's strategic priorities, alongside recognition of the need for assistance in the areas of communication and resource mobilization.
41. A consultation process has recently been completed including FAO sub regional and country offices in Africa where a revision of the draft strategy was undertaken. The next stage will include a validation workshop, necessary to finalize the strategy and outline core RAF programme interventions addressing the impact of climate change on food security in the region.