

## CONTEXT ANALYSIS REPORT MALI

### Programme: Climate-Proof Disaster Risk Reduction

*The members of the Partners for Resilience in Mali (CARE Mali & Wetlands International Mali) and their national and local partner organisations have been actively involved in the development of the context analysis and have been leading the development of the programme design. During a week-long external stakeholders meeting & programme development workshop in April, representatives from various sectors: government, donors, NGOs and research institutes actively participated in the gathering of initial inputs and the identification of priority regions and intervention strategies. More than 40 representatives from national and district government, Ministries of Agriculture, Water Resources and Fisheries, research institutes, international donors and embassies, national and local NGOs participated in the first three days of the workshop. They discussed key issues related to DRR/CCA in Mali, complementarity and alignment with other ongoing programmes and initiatives in DRR/CCA, endorsed the Partners for Resilience's programme and together completed the problem analysis. The last two days of the workshop were used with a smaller group of 15 directly involved partners, community and district government representatives, to focus on the actual programme design, complete the target group analysis, make a SWOT analysis and further discuss and develop the Partners for Resilience programme, its intervention strategies and logical framework. Red Cross/Red Crescent Climate Centre, as the 3rd partner in Mali, has provided specific technical expertise and climate related information for the context analysis, the programme and logical framework. It has also liaised with the Mali Red Cross to ensure engagement of staff and volunteers in the programme. Specific technical expertise on water resource management and procedures for water infrastructure in relation to floods and droughts in Mali was provided by Wetlands International headquarters. As the Partners for Resilience already collaborate in Mali since more than 4 years in a common programme to enhance and strengthen community resilience through participatory processes, capacity building and ecosystem management and restoration, they developed a common approach in involving communities. In these previous programmes, local communities engaged strongly in the design of regional district level development plans. As the in-country partners acknowledged, the whole process strengthened their capacity, through participatory nature of the planning process, as well as through the stakeholder meeting, programme workshop and the technical expertise provided.*

### I. Introduction

Military rule in Mali came to an end in 1991 when the first democratic presidential elections were won by Alpha Oumar Konaré. Foreign investment was boosted, particularly in the cotton industry. The decentralisation process, which was in part started as a means of placating Tuareg rebels seeking autonomy, has transferred decision power and responsibilities to the regions. The present government is committed to democracy, economic reform, free market policies, regional integration, and international cooperation in peacekeeping and counter-terrorism.<sup>i</sup> The multi-party system with over 120 parties has been conducive to the participation of women and minority groups in decision making.

Contrary to trend in most African countries, Mali's population of 13.8 million (2009) has been growing at an accelerated rate: from 2.5% (1990-1995) to 2.7% (2005-2010).<sup>ii</sup> About 70% percent lives in rural areas and almost half is under 15 years of age. Women and children make up three quarters and constitute a very important part of the rural labour force and, as such, are most directly affected by rural development policies. However, their actual role in decision making does not reflect this. Agriculture contributes about 33% to GDP. Small-scale traditional subsistence farming - primarily sorghum, millet, and maize - takes place on 90% of the 1.4 million hectares under cultivation.

Mali's Human Development Index (HDI)<sup>iii</sup> ranks 178<sup>th</sup> out of 182 countries. Poverty Reduction Strategic Frameworks are the basis for the Government's development policy. The proportion of the population living under the poverty line decreased from 68.3% in 2001 to 59.2% in 2005. The MDG monitor 2009 estimates that Mali is on track to achieve the MDG goal for poverty reduction. There is a significant urban/rural divide. Urban poverty decreased from 26.2% in 2001 to 20.12% in 2005. In rural areas it was only reduced from 73.8% to 73.0% over the same period. High population growth, low economic growth, unequal distribution of wealth and limited access to basic services are the main reasons for the persistence of poverty.<sup>iv</sup> Mali has prepared many policy instruments for poverty reduction, such as a National Action Program of Adaptation to Climate Change, a National Policy for the Protection of the Environment and a corresponding action plan, a National Action Plan for Integrated Water Resources Management, a National Wetlands Policy and a corresponding action plan, a Law on Agricultural Orientation, etc. The Government depends on bilateral and multilateral donors to fund their implementation.

Droughts and floods have increased in frequency and magnitude and, therefore, pose a growing threat to Mali's economic development and to the lives and livelihoods of communities. Climate change and environmental degradation have been identified as root causes of increasing disaster risks. *Average annual temperatures* are projected to increase by 1.2 to 3.6°C by the 2060s, and by 1.8 to 5.9°C by the 2090s.<sup>v</sup> Model simulations of *precipitation changes* for the Sahelian and south Saharan regions are strongly divergent and fail to reproduce the variability observed during the 20<sup>th</sup> century. For Mali, most models project decreases in annual average rainfall. Proportionally the decreases would be largest in the north, though the largest total decreases would affect the south west corner in the wet season. Changes in the amplitude of El Niño events may have a potentially strong

effect on the West African climate as well.<sup>vi</sup> Expected impacts of climate changes include: 1) increased desertification and flooding<sup>vii</sup>; 2) increased vulnerability of agriculture, livestock and natural resources based livelihoods<sup>viii</sup>; 3) food insecurity due to lower yields in production of millet, sorghum, maize, rice and fish<sup>ix</sup>; 4) degradation of critical ecosystems; and 5) increased scarcity of surface and underground water resources.<sup>x</sup> An estimated 80% of the population depends directly on the ecosystem for their livelihoods.

The increased variability of precipitation expected due to climate change is likely to impact health negatively. After flood events, diarrhoeal and vector-borne diseases are more common due to mixing of human waste and drinking water.<sup>xi</sup> Stagnant pools of water provide extra breeding grounds for disease-carrying mosquitoes. In times of drought, water quality can decrease, causing diarrhoea. Lack of access to adequate amounts of water for personal hygiene can cause diarrhoeal disease, intestinal worms and trachoma.<sup>xii</sup> The burden of diarrhoeal disease is high at 25,400 deaths annually – a rate of 226 deaths per 100 000<sup>xiii</sup>, largely explained by inadequate water and sanitation infrastructure coverage and poor knowledge of hygiene. This makes populations vulnerable to extreme events. Only 56% of the population uses improved drinking water sources, an increase from 29% in 1990, and 36% use improved sanitation, up from 29% in 1990.<sup>xiv</sup>

## II. Target group analysis

The Partners for Resilience will target poor rural populations in the regions of Tombouctou and Mopti, situated in the seasonally inundated inner Niger Delta – part of the Sahelian zone. They are farmers, pastoralists and fishermen who are among the most vulnerable communities in Mali, mainly due to floods and droughts.

Seventy-five per cent of these populations live below the poverty line. They depend almost entirely on the ecosystem for their livelihoods: small-scale subsistence farming, fishing, fodder, fuel wood. Agricultural productivity is regularly affected by floods and droughts, the variability of which is expected to increase as a result of climate change. Unsustainable land-use practices and overexploitation have further reduced productivity in recent years. The targeted communities suffer the direct negative consequences of water diversion and alteration of water regimes as a result of upstream irrigation and hydropower schemes. This further increases vulnerability to natural hazards, where women and children are most at risk.



*Civil society organisations, local and regional government are also target groups; they are described below under “Contextual analysis” and “Multi-actor analysis”.*

## III. PROBLEM ANALYSIS

### micro-level

Potentially the most productive agricultural areas of Mali are the wetlands that lie in the target area. Production of cotton, rice, millet, corn, vegetables, tobacco, and tree crops takes place in this inner delta. Pastoralists use these lush floodplains during the dry season to herd their millions of animals. The delta is an important source of fish for riverside communities who export their surplus catch.

Climate change in the target area has led to a decrease in rainfall of about 20 to 30% and a reduction of the river flow of about 20 to 50%. Since the seventies the floodable areas continue to decrease and fish production has fallen by half. Increased use of irrigation can maintain local food production levels, but will reduce it downstream. During the dry years in the eighties, these wetlands became an area of refuge and its human and livestock population have more than doubled. Consequently, the remaining scarce natural resources are being depleted creating more threats to the area such as deforestation, destruction of flood forests for rice growing, destruction of pastures, etc. Part of the target population is affected by large-scale upstream hydropower development and water diversion schemes for irrigation which disrupt natural water regimes and destroy valuable habitats. Unsustainable water management and overexploitation of natural resources will continue to increase the vulnerability of these rural communities to floods and droughts, the frequency, variability and intensity of which

increase due to climate change. The population has limited alternative economic opportunities. Traditional mechanisms to cope with natural hazards, have become inadequate. Microcredit and insurance schemes are hardly available. Communities are not able to reach various decision makers with a clear and simple message about the vital role of ecosystems for their communities' resilience in the face of natural hazards. The increasing vulnerability of the target groups is leading to higher rates of malnutrition and a higher likelihood of famines.

#### meso-level

As a result of the decentralisation process, responsibility for natural resources management has been devolved to regional institutions, which lack the financial and human resources to match. Among local authorities capacity and skills are lacking to prepare risk reduction plans. There is little awareness about the need for integration of disaster risk reduction, climate change adaptation and ecosystem management and restoration. In their approach to natural hazards, authorities hardly take regional socio-economic, ecological and cultural factors into account. Coordination between various sectors is irregular, and expertise and basic data are insufficient to integrate various policies. There is hardly any research on disaster risk reduction and climate change adaptation that is relevant to the agro-ecological zones of the target groups.

#### macro-level

At the national level, the Poverty Reduction Strategic Framework, which guides the Government's development approach, does not point clearly to ecosystems-based approaches. Because the knowledge base on climate change is rudimentary, it hardly influences decision makers in respect of integrated policies for disaster risk reduction, climate change adaptation and ecosystem management and restoration. Collection and analysis of relevant data is hampered by a lack of expertise and specialised equipment. Some relevant information is provided by regional research institutions such as AGRHYMET (Centre Régional de Formation et d'Application Opérationnelle Agro Hydro Météorologique) and ROSELT (Réseau d'Observatoire et de Surveillance Environnementale à Long Terme). Decision makers are not aware of the importance of ecosystems for communities' resilience and no advocacy exists in this regard. The Action Plan for Sustainable Development of the Niger Basin is mostly based on engineering solutions, while it overlooks the scope for ecosystem-based solutions. In addition, the second component for the protection of natural resources and conservation of ecosystems, is vastly under-funded.

### **IV. CONTEXTUAL ANALYSIS**

Population growth and increase in livestock after years of drought have negatively contributed to degradation of the natural resources on which local communities depend for their livelihoods. Inter-community and family conflict around land and the use of the scarce natural resources have become more frequent. The traditional system of appropriation of fertile lands by founding families and a few privileged persons limits the possibility for vulnerable groups to have access to the best land - to the detriment of women and children. Additionally, mutual aid mechanisms between vulnerable communities have a tendency to disappear due to the frequency of natural hazards. In the process, in the social fabric is weakening. Due to the recurrent rebellions, an atmosphere of insecurity pervades Tombouctou region. School enrolment in this region is low because of the mobility of families in search of fish, fresh pastures and water.

Apart from agriculture and tourism, few economic opportunities exist. Years of drought, floods and the rebellion have destroyed the fragile economic fabric. Communities are now overly dependent on Government support, aid organisations and remittances. The economic potential is good thanks to fertile agricultural soil and pastoral lands, aquatic and terrestrial fauna, fish, forests, and hydrological resources, such as ponds, streams, lakes, and the Niger river and its tributaries.

A number of national policy documents recognise the reality of climate change: National Growth Framework for Poverty Reduction; National Environmental Protection Policy; National Action Program of Adaptation to Climate Change; National Environmental Action Plans; Agricultural Law; and the National Integrated Water Management Plan. Its decentralised structure will facilitate the implementation of the programme.

Civil society constitutes an important pillar of socio-economic development in Mali. It is generally recognised that it has a prominent role to play as implementer of government policies, but also as a whistle-blower that holds the government accountable. Apart from its involvement in policy dialogue and advocacy for human rights, civil society actively supports participatory development in vulnerable communities. The Mali Red Cross is currently participating in the Preparedness for Climate Change Programme, a capacity building initiative to promote better understanding of the science of climate change, its impacts and humanitarian consequences, as well as formulate concrete measures to integrate knowledge about changing climate risks into existing projects and programmes in areas such as disaster management, health and food security.



On the basis of the SWOT analysis of Malian civil society, the following strategies for strengthening civil society were formulated for inclusion in the country programme:

|               | Strengths  | Weaknesses  |
|---------------|--|---|
| Opportunities | <ul style="list-style-type: none"> <li>• Networks and other actors in civil society (PANA, CSCR, Climate Change Network) to advocate more DRR/CCA focus on national Agenda in Mali</li> <li>• Mali government decentralisation process provides opportunity for civil society to become engaged at local level</li> <li>• Enable civil society to participate in mainstreaming DRR and CCA into existing national policies</li> <li>• Increasing awareness of environmental issues to be used for successful implementation of DRR/CCA programmes</li> </ul> | <ul style="list-style-type: none"> <li>• North-South bilateral partnerships and technical inputs provides opportunity to strengthen NGOs' capacities</li> <li>• Funding availability for civil society to be used for strengthening NGO governance and support overall organisational development and management standards</li> </ul> |
| Threats       | <ul style="list-style-type: none"> <li>• Availability of funds which can be mobilized by civil society to strengthen NGO management standards and increase professional attitudes within civil society</li> <li>• Strong interest by international donors to support and strengthen civil society in Mali to be used to improve governance and management</li> </ul>   | <ul style="list-style-type: none"> <li>• Strong Alliance partners (CARE &amp; WI) to lead DRR/CCA programme and increase professional behaviour of local NGOs</li> </ul>  |

The Partners for Resilience's plans to work with the eight civil society organisations: Wetlands International Mali, AMSS, AMPRODE Sahel, APROMORS, Walia, GRAT, CCA-ONG and G-COZA. The following considerations have guided the Partners for Resilience in its selection of Southern partners: 1) they already have a well established partnership with Wetlands International or CARE International for a number of years; 2) they are familiar with the local situation, including climate change adaptation and ecosystem management and restoration; 3) they are trusted by the target communities; and they have the potential to implement integrated approaches for community resilience.

## V. MULTI-ACTOR ANALYSIS

In its relations with the **Government**, the Partners for Resilience will seek convergence between the various policies and strengthen their implementation. In addition, the Partners for Resilience will develop knowledge that is relevant to these policies, build the capacity of government partners and provide a platform for sharing experience.

The policy documents related to environmental protection and climate change are:

- National Growth Framework for Poverty Reduction (CSCR 2007, 2011);
- National Environmental Protection Policy (PNPE);
- National Environmental Action Plans (PNAE);
- National Adaptation Programme of Action (NAPA 2007);
- National Wetlands Policy and Action Plan;
- National Action Plan for Integrated Water Resource Management;
- National Environmental Protection Strategies.

The Government of Mali has different departments and structures to respond to each type of disaster:

- Inter-ministerial Committee for the Management of Floods, led by the Prime Minister;
- A technical committee comprised of ministerial departments and international organisations;
- Emergency Units in a number of ministries, each dealing with prevention, action/rehabilitation and evaluation for a certain type of disaster;
- Early Warning Units in key departments, with early warning committees at regional and communal level;
- Sectoral government structures and/or departments tasked with daily management of prevention and management of the risks and hazards, with leadership depending on the nature of the disaster (epidemic, epizootic, locust infestation, flood, drought, etc.).

The **Royal Netherlands Embassy** has spearheaded the development of the Sustainable Development of the Inner Niger Delta Programme 2011-2020. The Partners for Resilience will share the lessons learnt and good practices, so as to make sure that the Embassy uses this in its advocacy at the highest Government levels. It will seek advice from the Embassy on the strategic direction of the programme. The Swedish and Danish Embassies will be approached in a similar manner.

As for **international organisations**, the World Bank supports The Niger Basin Water Resources Development and Sustainable Ecosystems Management project. The Partners for Resilience will strengthen implementation of integrated water resources in the Niger River Basin. Furthermore, it will seek to mainstream ecosystem-based disaster risk reduction and climate change adaptation in these programmes. ADB and African Development Fund (ADF) support the Program for Fighting Sedimentation in the Niger River Basin". The Partners for Resilience will advocate with these major donors for solutions that are based on restoring and strengthening the ecosystem as opposed to large-scale infrastructure projects, which may even increase the risk of disasters.

In its cooperation with **research institutes**, the Partners for Resilience will focus on the development of a knowledge base that is relevant to integrated ecosystem based policies and will facilitate interaction between these knowledge centres and end-users, for example on how climate information can be used. The research institutes are the following: Regional Training and Agro-Hydro-Meteorological Operational Application Centre

(AGRHMET), Long Term Observatory and Environmental Monitoring Network (ROSELT), African Network for Environmental Information (RAIE) and African Centre of Meteorological Application for Development (ACMAD).

In its work with the **private sector**, the Partners for Resilience will approach the insurance sector to develop innovative risk transfer mechanisms. Natural hazards insurance is currently not available in the areas targeted by the programme.

The added value of this Alliance is the integrated manner in which interventions in the field of disaster risk reduction, climate change adaptation and ecosystem management and restoration are combined. Connecting these three fields in one overall approach offers substantial benefits in terms of effectiveness, sustainability and relevance of the interventions.

## VI. TAILOR-MADE PROGRAMME

The key issues identified in the context analysis are:

- Livelihoods of communities in the Niger river basin have come under increasing pressure from climate change through the combined effects of natural hazards and ecosystem degradation;
- Communities' traditional knowledge and coping mechanisms are not effective anymore in the changing context of climate change and accelerated ecosystem degradation;
- Local government recognises the importance of disaster risk reduction, but lacks the capacity to assist communities and is largely unaware of the vital role of ecosystems in communities' capacity to withstand natural hazards;
- The Niger river basin is host to a number of large bilateral and multilateral development agencies assisting the Government in areas that are of direct relevance to strengthening communities' resilience.

In response, the Partners for Resilience propose a programme along the following lines:

1) communities in 12 "communes" in the inner Niger Delta will be introduced to simple techniques of integrated natural resource management and food security that will strengthen their livelihoods; innovative microcredit mechanisms, such as "bio-rights" and saving groups, focusing specifically on women will consolidate their position as producers; through these processes solidarity and social cohesion in these communities will be enhanced;

2) the capacity of civil society organisations and local government to identify drought and flood prone zones and to develop effective risk reduction measures, such as early warning systems, preparedness and disaster mitigation measures at the community level will be reinforced; also the ability of these actors to integrate disaster risk reduction, climate change adaptation and ecosystem management and restoration in development plans will be strengthened; awareness raising and knowledge development at regional and community level will be an important component for that purpose;

3) dialogue regarding policy and strategy will be initiated with government and development agencies at national, regional and local level with a view to creating a more conducive regulatory environment for ecosystem-based and climate proof disaster risk reduction approaches; the development of a joint communication strategy, an advocacy and awareness campaign (translating the key messages in local languages), the documentation and publication of good practices and lessons learnt and dialogue on how to integrate DRR/CCA and EMR in PRSPs and the government's Action Plan on Water Management (Plan d'Action de Gestion des Ressources en Eau) will be key initiatives in this respect.

These activities will be enhanced by the global support component which provides good practices on DRR/CCA/EMR from other countries in West Africa (including through the Advancing Capacity to Support Climate Change Adaptation ACCCA-programme ); links to global networks of civil society organisations and knowledge centres that will provide tools and partnerships to the Southern partners; and global policy inputs that will support their engagement with national policy makers, planners and implementing agencies. Decisions regarding upstream dams and other water infrastructures will be vital for the long term success of the project. For this, the project will work on informing major players that invest in water infrastructure. The most important examples are the World Bank, Global Environment Facility and the African Development Bank and bilateral donors such as the Swedish Development Agency.

The main reasons to believe that effects of the programme can be achieved are: 1) communities, government authorities and development agencies recognise that innovative solutions are required to deal with the increasing occurrence of severe natural hazards; 2) the programme was developed in a participatory manner with the involvement not only of communities and Southern partners but of regional and national partners as well; 3) implementing partners have a proven track record in the intervention areas.

The Partners for Resilience see many opportunities that can contribute to the success of the programme. Climate change is receiving increasing attention on the national agenda, as witnessed by the adoption of the National Action Program of Adaptation to Climate Change. The decentralisation process provides an opportunity to empower local government and ensure that decisions vital to communities' livelihoods will be taken locally. Some

important sub-regional institutions are based in Mali (Niger Basin Authority, CILS) and by working with them the programme can widen its outreach and impact. Recently an inter-ministerial committee for disaster management was established. A few national programmes already combine DRR and CCA. DRR and CCA are priorities for international donors and funding in these areas promises to be relatively abundant in the years to come.

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<sup>i</sup> US Department of State, *Mali*. [internet] Available at: <http://www.state.gov/r/pa/ei/bgn/2828.htm> [Accessed in April 2010].

<sup>ii</sup> UNDP, *Human Development Reports*. [internet] Available at: <http://hdrstats.undp.org/en/indicators/139.html> [Accessed in April 2010].

<sup>iii</sup> The HDI provides a composite measure of three dimensions of human development: living a long and healthy life (measured by life expectancy), being educated (measured by adult literacy and gross enrolment in education) and having a decent standard of living (measured by purchasing power parity, PPP, income).

<sup>iv</sup> IMF, *Country Report No. 08/121, Mali, Poverty Reduction Strategy Paper*, April 2008. [online] Available at: [http://planipolis.iiep.unesco.org/upload/Mali/Mali\\_CSCR\\_P\\_2007-2011\\_eng.pdf](http://planipolis.iiep.unesco.org/upload/Mali/Mali_CSCR_P_2007-2011_eng.pdf) [Accessed in April 2010].

<sup>v</sup> *ibid*

<sup>vi</sup> *ibid*

<sup>vii</sup> UNDP, *Country fact sheet: Mali and climate change*, December 7, 2009. [Online] Available at: <http://content.undp.org/go/newsroom/2009/december/fiche-pays-le-mali-et-les-changements-climatiques.en?sessionid=axbWzt8vXD9> [Accessed in April 2010].

<sup>viii</sup> Republic of Mali, *Elements of National Policy for Adaptation to Climate Change*, May 2008. [Online] Available at: <http://www.nlcap.net/fileadmin/NCAP/Countries/Mali/O-2-11-032135.0610xx.MAL.CON-02.Output11.pdf> [Accessed in April 2010].

<sup>ix</sup> Butt, T.A., B. A. McCarl, J. Angerer, P. T. Dyke and J. W. Stuth, 2005. 'The economic and food security implications of climate change in Mali.' *Climatic Change* Vol. 68, No 3: p.355-378.

<sup>x</sup> Republic of Mali, *Elements of National Policy for Adaptation to Climate Change*, May 2008. [Online] Available at: <http://www.nlcap.net/fileadmin/NCAP/Countries/Mali/O-2-11-032135.0610xx.MAL.CON-02.Output11.pdf> [Accessed in April 2010].

<sup>xi</sup> Ahern M, Kovats RS, Wilkinson P, Few R, Matthies F, 2005. 'Global health impacts of floods: epidemiologic evidence.' *Epidemiol Rev.* No 27: p.36-46.

<sup>xii</sup> Confalonieri, U., B. Menne, R. Akhtar, K.L. Ebi, M. Hauengue, R.S. Kovats, B. Revich and A. Woodward., 2007. *Climate Change 2007: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., *Human health*. Cambridge University Press, Cambridge, UK, p.391-431

<sup>xiii</sup> WHO, 2004. *The Global Burden of Disease*. [internet] Available at: [http://www.who.int/healthinfo/global\\_burden\\_disease/GBD\\_report\\_2004update\\_full.pdf](http://www.who.int/healthinfo/global_burden_disease/GBD_report_2004update_full.pdf) [Accessed in May 2010].

<sup>xiv</sup> WHO health statistics 2010