



CHAD
MDG ACCELERATION FRAMEWORK
FOOD AND NUTRITION SECURITY





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FOOD AND NUTRITION SECURITY

December 2012

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ACRONYMS AND ABBREVIATIONS

APDI	Association for the Promotion of Sustainable and Integrated Development (Association pour la promotion du développement durable et intégral)
APRODEPIT	Association for the Promotion and Development of Integrated Fish Farming in Chad (Association pour la promotion et le développement de la pisciculture intégrée au Tchad)
BET	Borkou-Ennedi-Tibesti
CAADP	Comprehensive Africa Agriculture Development Programme
CASAGC	Committee for Action on Food Security and Crisis Management (Comité d'action pour la sécurité alimentaire et la gestion des crises)
CDA	Departmental Action Committee (Comité départemental d'action)
CDCR	Rural Credit Development Fund (Caisse de développement de crédit rural)
CDHS	Chad Demographic and Health Survey
CEN-SAD	Community of Sahel-Saharan States
CILSS	Permanent Interstate Committee for Drought Control in the Sahel (Comité inter-États de lutte contre la sécheresse au Sahel)
CLA	Local Action Committee (Comité local d'action)
CNP	National Programme Coordination Body (Coordination nationale du programme)
COOPEC	Savings and Credit Cooperative (Coopérative d'épargne et de crédit)
CRA	Regional Action Committee (Comité régional d'action)
CTS	Technical Monitoring Committee (Comité technique de suivi)
DG/DRHA	General Directorate for Rural Engineering and Agricultural Water Systems (Direction générale du génie rural et de l'hydraulique agricole)
DIAPER	Permanent Agricultural Survey System (Dispositif permanent d'enquête agricole)
DPSA	Department for the Production of Agricultural Statistics (Direction de la production et des statistiques agricoles)
DPVC	Department for the Protection of Plants and Packaging (Direction de la protection des végétaux et du conditionnement)
ECCAS	Economic Community of Central African States
EIMT	Multiple Indicator Survey in Chad (Enquête à indicateurs multiples au Tchad)
EU	European Union
EVST	Reference Survey on Food Security and Structural Vulnerability (Enquête de référence sur la sécurité alimentaire et la vulnérabilité structurelle)
FAO	Food and Agriculture Organization of the United Nations
FSIEWS	Food Security Information and Early Warning System
HCIP-PNSA	Senior Inter-Ministerial Steering Committee (Haut Comité Interministériel de Pilotage)
HDI	Human Development Index
HIPC	Heavily Indebted Poor Countries
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome

ICT	Information and Communication Technologies
IEC	Information, Education and Communication
IMF	International Monetary Fund
ITRAD	Chad Institute for Agricultural Research for Development (Institut tchadien de recherche agronomique pour le développement)
LCBC	Lake Chad Basin Commission
MAF	MDG Acceleration Framework
MAI	Ministry for Agriculture and Irrigation (Ministère de l'agriculture et de l'irrigation)
MDG	Millennium Development Goals
MDRI	Multilateral Debt Relief Initiative
MFI	Microfinance Institution
MICS	Multiple Indicator Cluster Survey
MODEL	Mobilisation for the Sustainable Development of the Logone Basin (Mobilisation pour le développement durable du bassin du Logone)
MPECI	Ministry for Planning, the Economy and International Cooperation (Ministère du plan, de l'économie et de la coopération internationale)
NBA	Niger Basin Authority
NEPAD	New Partnership for Africa's Development
NFSP	National Food Security Programme
NGO	Non-Governmental Organisation
NMS	National Microfinance Strategy
NMTIP	National Medium Term Investment Programme
NPRS	National Poverty Reduction Strategy
NTS	National Transport Strategy
OFC	Outpatient Feeding Centre
OMVSD	Sategui-Deressia Development Office (Office de mise en valeur de Sategui-Deressia)
ONASA	National Food Security Office (Office national de sécurité alimentaire)
ONDR	National Rural Development Office (Office national de développement rural)
PAFIT	Inclusive Finance Project (Projet d'appui à la finance inclusive)
PAN/LCD	National Anti-Desertification Action Plan Programme (Programme d'action national de lutte contre la désertification)
PARPIA	Food Insecurity and Poverty Reduction Project (Projet d'appui à la réduction de la pauvreté et de l'insécurité alimentaire)
PARSET	Education Sector Reform Project in Chad (Projet d'appui aux réformes du secteur éducation au Tchad)
PSAOP	Agricultural Service and Producer Organisation Support Project (Projet d'appui aux services agricoles et aux organisations des producteurs)

PCVZS	Cotton and Food Crop Production in the Sudan Area Project (Projet de production cotonnière et vivrière en zone soudanienne)
PGRN	Natural Resource Management Project (Projet de gestion des ressources naturelles)
PIDR	Rural Development Intervention Plan (Plan d'intervention pour le développement rural)
PNDE	National Livestock Farming Development Plan (Plan national de développement de l'élevage)
PNN	National Nutrition Plan (Plan national de la nutrition)
PRODEL	Local Development Priority Programmes (Programmes prioritaires portant sur le développement local)
PRODERK	Kanem Rural Development Project (Projet de développement rural du Kanem)
PROMIFIT	Chad Microfinance Project (Projet de la microfinance au Tchad)
PROSE	Sectoral Capacity Building Programme (Programme de renforcement des capacités sectorielles)
PRSA/AC	Central Africa Regional Food Security Programme (Programme régional de sécurité alimentaire de l'Afrique centrale)
PSANG	Nord Guéra Food Security Programme (Projet de sécurité alimentaire au Nord Guéra)
REPIMAT	Animal Disease Epidemiology Network in Chad (Réseau d'épidémiologie des maladies animales au Tchad)
RFSP/CEN-SAD	CEN-SAD Regional Food Security Programme
SDA	Agriculture Framework (Schéma directeur agricole)
SDDPP	Fishing and Fish Farming Development Framework (Schéma directeur de développement de la pêche et de la pisciculture)
SDEA	Water and Sanitation Framework (Schéma directeur de l'eau et de l'assainissement)
SFC	Supplementary Feeding Centre
SODELAC	Lake Chad Development Society (Société pour le développement du Lac)
SONAPA	National Animal Production Company (Société nationale des productions animales)
SP	Small Producer
TFC	Therapeutic Feeding Centre
UN	United Nations
UNDP	United Nations Development Programme
WFP	World Food Programme
WHO	World Health Organization
WTO	World Trade Organization
XAF	Central African CFA Franc



FOREWORD

Progress on the implementation of the Millennium Development Goals (MDGs) was analysed at the United Nations high-level summit in September 2010. The results of this analysis showed that, despite progress in many areas, several countries are likely to fall short of attaining one or more of these goals by 2015 unless urgent, carefully targeted measures are taken.

The government of Chad has signed up to the Millennium Development Goals and has included the MDGs in its National Poverty Reduction Strategies (NPRSs 1 and 2). In 2005, it also adopted the National Food Security Programme, which was subsequently updated in 2010. Implementation of this strategy has been hindered, however, by domestic conflicts, the collapse of global crude oil prices and falling oil revenues, poor rainfall and failures in governance.

In Chad's ten-year MDG implementation report, the outlook on the country's prospect of attaining the majority of the MDGs by 2015 remains pessimistic, despite substantial progress in education, combating HIV/AIDS and malaria, and access to drinking water.

In particular, Chad is making insufficient progress towards target 3 of MDG 1: "Halve, between 1990 and 2015, the proportion of people who suffer from hunger". A significant proportion of the population still suffers from hunger, with an estimated 30% of children underweight in 2010 (MICS, 2010). This is despite Chad's target of reducing this indicator to 21% by 2015.

Following the food crisis experienced by Chad and the Sahel in general in 2012, current estimates

suggest that 3.6 million people (or 29% of the population) are currently suffering from food insecurity. This figure is higher than the number reported during the 2010 crisis. As such, the nutritional status of the country's population is a cause for genuine concern, with very high Global Acute Malnutrition (GAM) rates across the Sahel, above the critical threshold of 15% in six regions. Acute malnutrition is therefore one of the indirect causes of the high child mortality rate in Chad.

Despite these alarming food and nutritional figures, the situation in Chad is far from terminal. The country has substantial agricultural potential and high livestock numbers, as well as significant groundwater reserves.

During his investiture speech (August 2011), the President of Chad made the following statement: "I have decided to devote the first three years of my five-year term to the rural world. I am convinced that rural development is crucial to Chad's independence. As the saying goes, a hungry man is not a free man." In January 2012, the government subsequently organised a rural development forum, chaired by the President himself.

Chad has all the resources and assets it needs to attain target 3 of MDG 1: "Halve, between 1990 and 2015, the proportion of people who suffer from hunger". In light of this situation, Chad's government has adopted the MDG Acceleration Framework (MAF), an innovative approach designed to help countries identify and overcome the obstacles hindering their attainment of the MDGs.

The government – with the support of its technical and financial partners including United Nations agencies – has prepared this MAF to form the basis of constructive dialogue on how to overcome the obstacles hindering the country's progress towards attaining the hunger-related MDGs.

This MDG Acceleration Framework will require Chad to streamline its resources and focus its efforts on removing the key obstacles to its attainment of target 3 of MDG 1.

This document has been designed as an advocacy resource. It provides public decision-makers, food security and anti-poverty programme and project managers, bi-lateral and multi-lateral development partners, NGOs and civil society with the information they need to step up their efforts to deliver substantial reductions in hunger by 2015. The government hopes that this framework will make an important contribution to this major mobilisation programme.

The green revolutions, which have resulted in better access to improved seed varieties and fertilisers and the use of irrigation techniques, water retention technologies and soil fertilisation, have helped to improve productivity in Asia and saved millions of lives. Chad's government, with the support of NGOs and other partners, has conducted a number of experiments in this vein, including small-scale irrigation (hand pumps, drip irrigation techniques), improved seed varieties ("NERICA" rice), local fertilisers (compost) and

climate change adaptation techniques (corridor crop-growing). Some of these experiments have been conducted with small, vulnerable producers. These producers have also received support and advice and benefited from improved marketing conditions. These experiments have led to substantial improvements in productivity within relatively short timescales (1 year), helping some of the households concerned to break the hunger cycle. This MAF sets out a number of acceleration solutions which, if applied to a sufficient number of vulnerable people, may help the country to attain the poverty reduction MDGs.

The MAF outlines how target 3 of MDG 1 may be attained by focusing on three critical aspects: (i) improving productivity by allocating subsidies and supplying seeds and fertilisers, and helping to develop small-scale irrigation, water retention and soil fertilisation techniques, along with the necessary support and advice, (ii) improving marketing and storage conditions for vulnerable households through microfinance institutions and the use of ICTs, and by developing rural roads and facilities, and (iii) providing more extensive nutrition services.

The ongoing food insecurity and hunger situation is an insult to human dignity, while hunger reduces children's cognitive abilities and threatens their future. With the necessary technical and financial mobilisation to implement the actions outlined in this MDG Acceleration Framework, Chad stands a chance of meeting its MDG commitment to reduce hunger by 2015.



Bedoumra Kordje
Minister for Planning, the Economy and International Cooperation



Thomas Gurtner
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Humanitarian and Resident Coordinator of the United Nations System

EXECUTIVE SUMMARY

MAF initiative: background

The government of Chad has signed up to the Millennium Development Goals (MDGs) and has included the MDGs in its National Poverty Reduction Strategies (NPRSs 1 and 2). In 2005, it also adopted the National Food Security Programme (NFSP), which was subsequently updated in 2010. Implementation of this strategy has been hindered, however, by domestic conflicts, the collapse of global crude oil prices and falling oil revenues, poor rainfall and failures in governance. This situation, and the resulting vulnerabilities, pose genuine obstacles to poverty reduction. In 2009, 45% of the country's population lived below the poverty line. This figure was as high as 87% in rural areas. Hunger is therefore a crucial challenge facing Chad, where an estimated 30% of children were underweight in 2010 (MICS, 2010) and a significant proportion of the population lives in a recurring cycle of chronic food insecurity.

MDG 1 target 3: reason for selection

Chad experiences regular famines. Since the 1970s, the combined effects of climate change (successive droughts, floods and locust or bird plagues) and domestic conflicts have aggravated food insecurity risks. These factors have been further exacerbated since 2007 by rising global food prices. Furthermore, the large average household size (5.4 people) places additional pressure on already unstable living conditions among certain social groups. Following a poor farming season in 2011-2012, the government

launched a National Post-Harvest Survey on Food Security among Rural Households in Chad (Enquête nationale post-récolte sur la sécurité alimentaire des ménages ruraux au Tchad). The results revealed that, in 18 of the country's 22 regions covered by the survey, 13.8% of the population (1.2 million people) were suffering from severe food insecurity, 27.7% (2.4 million people) from moderate food insecurity and 58.5% (5.4 million people) from food insecurity. Following the drought in 2011, an estimated 3.6 million people (almost one third of the population) were affected by food insecurity.

Chosen strategic interventions

In response to this situation, the government – with the support of its technical and financial partners including United Nations agencies – has prepared this MDG Acceleration Framework (MAF) to form the basis of constructive dialogue on how to overcome the obstacles hindering the country's progress towards attaining the hunger-related MDGs. The implementation of this MAF will help to strengthen the population's resilience, improve their access to production resources and help them to develop sustainable livelihoods. Based on lessons learned from previous food insecurity programmes, and in order to accelerate progress towards target 3 of MDG 1, three (3) priority areas have been selected:

1. Encourage the intensification and diversification of crop and livestock farming, especially among small producers.

- 
2. Give small producers better access to food products.
 3. Improve the nutritional status of children under five years of age, and pregnant and breastfeeding women, and improve food crisis management.

These three priority areas have been divided into eight (8) interventions, aimed at small producers (SPs) farming an area of land of less than 1 hectare. This category accounts for 90% of the country's farmers, the vast majority of whom suffer from food insecurity and hunger. This framework also focuses on women, as hunger is more prevalent in families where the head of the household is a woman.

Analysis of bottlenecks

The bottlenecks identified for intervention A.1., "Develop small-scale irrigation and other systems for small producers" are as follows: (i) insufficient promotion of sustainable irrigation techniques suited to SPs and the areas concerned (drip irrigation, hand pumps, water and run-off collection techniques, solar-powered pumps, etc.); (ii) insufficient capacity among SPs to manage small irrigated fields; (iii) insufficient capacity among SPs to bear the set-up and maintenance costs of small-scale irrigation infrastructures and other small-scale systems; (iv) land access problems for some SPs, especially women; (v) insufficient land conflict prevention systems.

The bottlenecks identified for intervention A.2., "Improve SPs' access to inputs and small-scale equipment" are: (i) insufficient availability of suitable inputs for food crop production and small-scale equipment; (ii) poor technical capacity of support services and insufficient technical monitoring of SPs; (iii) insufficient purchasing power among SPs to buy inputs and agro-pastoral equipment, and poor management of subsidies that penalises vulnerable groups; (iv) insufficient consideration of the production equipment needs (ploughs, carts, seed drills, plant protection equipment) of SPs in support programmes; (v) insufficient budget allocation for REPIMAT (Animal Disease Epidemiosurveillance Network in Chad).

Three bottlenecks have been identified for intervention A.3., "Conduct outreach work to improve production, agricultural diversification and climate change adaptation knowledge among small producers". These are: (i) an insufficient number of outreach workers, especially women; (ii) insufficient financial and material resources for research and outreach bodies (ITRAD, ONDR, etc.) to run teaching fields, operate multifunctional platforms and disseminate new technologies; (iii) insufficient promotion of new varieties and crops, due to a lack of suitable intervention strategies for the agro-ecological zones in question; (iv) insufficient use of ICTs (rural radio, mobile telephones, etc.) as outreach tools in vulnerable areas.

The bottlenecks identified for intervention B.1., "Facilitate physical access to food for vulnerable populations in areas of structural deficit" are: (i) insufficient food processing, storage and marketing capacities; (ii) insufficient rural roads in areas in deficit and in production areas. Two major bottlenecks have been identified for intervention B.2., "Facilitate financial access to food for vulnerable groups (social safety nets)". These are: (i) insufficient purchasing power to access food products, even at subsidised prices; (ii) social safety nets that are not suitably adapted to the needs of vulnerable populations.

The bottlenecks identified for intervention C.1., "Prevent and treat acute malnutrition among children under five years of age, and pregnant and breastfeeding women" are: (i) insufficient government budget allocation to the nutrition sector; (ii) an insufficient number of adequately qualified personnel, with poor geographical distribution and vast distances between health and feeding centres; (iii) the lack of an effective national nutrition policy.

The bottlenecks identified for intervention C.2., "Promote nutritional education" are: (i) socio-cultural pressures and a high rate of illiteracy; (ii) insufficient nutritional education capacities among trainers.

Finally, the bottlenecks identified for intervention C.3., "Secure and strengthen the food crisis management and information system (CASAGC, FSIEWS, ONASA)" are: (i) an inadequate food crisis management system and poor information circulation; (ii) insufficient stock of food aid to combat food insecurity; (iii) difficulties in getting food to recipients in remote vulnerable areas during the rainy season; (iv) insufficient public capacity to manage the prices of essential commodities.

A further three (3) cross-cutting bottlenecks have been identified. These are: (i) insufficient budget allocation to rural development and anti-food-insecurity programmes; (ii) poor management of rural development programmes and projects; (iii) persistent gender inequalities in access to, management of and control over production facilities.

Solutions to accelerate progress towards target 3 of MDG 1

A number of solutions have been identified to remove the above-mentioned bottlenecks and accelerate the impact of the interventions.

In terms of **developing small-scale irrigation and other systems for small producers**, the following solutions have been identified: (i) develop small irrigated fields, with hand-pump or solar-pump operated boreholes, inland valley systems, and easy-to-manage water retention systems; (ii) deliver training in small irrigated field management techniques to SPs in target areas and build the capacities of the bodies involved; (iii) increase budget allocations to fund water system developments. The following solutions are recommended to overcome land access difficulties: (iv) introduce community-based land conflict prevention mechanisms in these target areas; (v) develop land management plans in a participatory manner and reopen migratory livestock farming corridors and pastoral well digging programmes in the target areas.

As regards **providing small producers (SPs) with inputs and equipment**, the following solutions have been identified: (i) encourage producers to produce inputs themselves (compost, improved seed varieties) and improve the technical capacities of the relevant bodies (ITRAD, ONDR); (ii) create a national seed bank, a central procurement unit and a network of outlets selling seeds, fertilisers, small tools and agro-pastoral medicines; (iii) provide SPs with training in the use of agricultural

techniques by extending the government-run programme to distribute tools to SPs; (iv) increase the number of microfinance institutions in the target areas; (v) create SP associations to make group purchases; (vi) introduce a regular supply of veterinary medicines.

With respect to **conducting outreach work to improve agricultural diversification and climate change adaptation knowledge among producers**, the recommendations are as follows: (i) recruit and redeploy agricultural advisers (600) in vulnerable regions and increase the budget allocation to research and outreach bodies (ITRAD and ONDR); (ii) promote the use of new seed varieties by disseminating varieties that are able to cope better with climate change, as well as out-of-season crops, providing training through demonstrations, and disseminating improved seed varieties; (iii) raise awareness among SPs and provide training through exchange trips with different producers to learn about soil restoration and fertilisation techniques (compost, fertilisers, corridor crops, stone barriers and agroforestry); (iv) use ICTs to facilitate diversification and disseminate new seed varieties (introduce and use rural radios and mobile telephones) and to adapt to climate change.

In terms of **facilitating access to food crops for vulnerable populations**, the key recommendations are to: (i) strengthen the food storage, processing and preservation system; (ii) develop marketing channels to make some regions affected by food insecurity less isolated.

With respect to **facilitating financial access to food for vulnerable groups (social safety nets)**, the following solutions are recommended: (i) develop social safety nets (cash transfers, food for work, targeted food distribution through voucher schemes, subsidised purchases, etc.) for vulnerable households; (ii) develop income-

generating activities for vulnerable households through microfinance provision; (iii) improve the way in which beneficiaries are targeted by involving them in the activity design and monitoring processes, and in the programme resource tracking process in particular.

As regards **preventing and treating acute malnutrition among children under five years of age, and pregnant and breastfeeding women**, the recommended solutions are to: (i) improve the implementation of prevention activities; (ii) recruit additional nutrition specialists and deploy these in the target areas; (iii) create additional nutrition services in the most severely affected areas; (iv) design and implement a plan to ensure that the most vulnerable areas are sufficiently covered by outpatient feeding centres; (v) design and implement a national nutrition policy and an associated action plan.

As far as **promoting nutritional education** is concerned, the following solutions have been identified: (i) organise nutritional campaigns; (ii) promote the creation of allotments in vulnerable areas; (iii) improve the information provided to mothers at feeding centres and within communities about key family practices (and the importance of exclusive breastfeeding in particular); (iv) organise training sessions on nutritional treatments for the staff of healthcare centres, therapeutic feeding centres (TFCs) and supplementary feeding centres (SFCs), especially in vulnerable areas.

Finally, with respect to **securing and strengthening the food crisis management and information system**, the recommendations are to: (i) fund the creation and implementation of a food security information system action plan; (ii) train personnel working for the relevant bodies (CASAGC, FSIEWS, ONASA) and provide them with the necessary equipment and IT hardware;



(iii) develop and implement a national multi-risk contingency plan; (iv) provide a sufficient, regular budgetary allocation to fund a stock of food aid; (v) introduce a strict food stock management control system; (vi) build public food aid stores in the most vulnerable areas of the target regions.

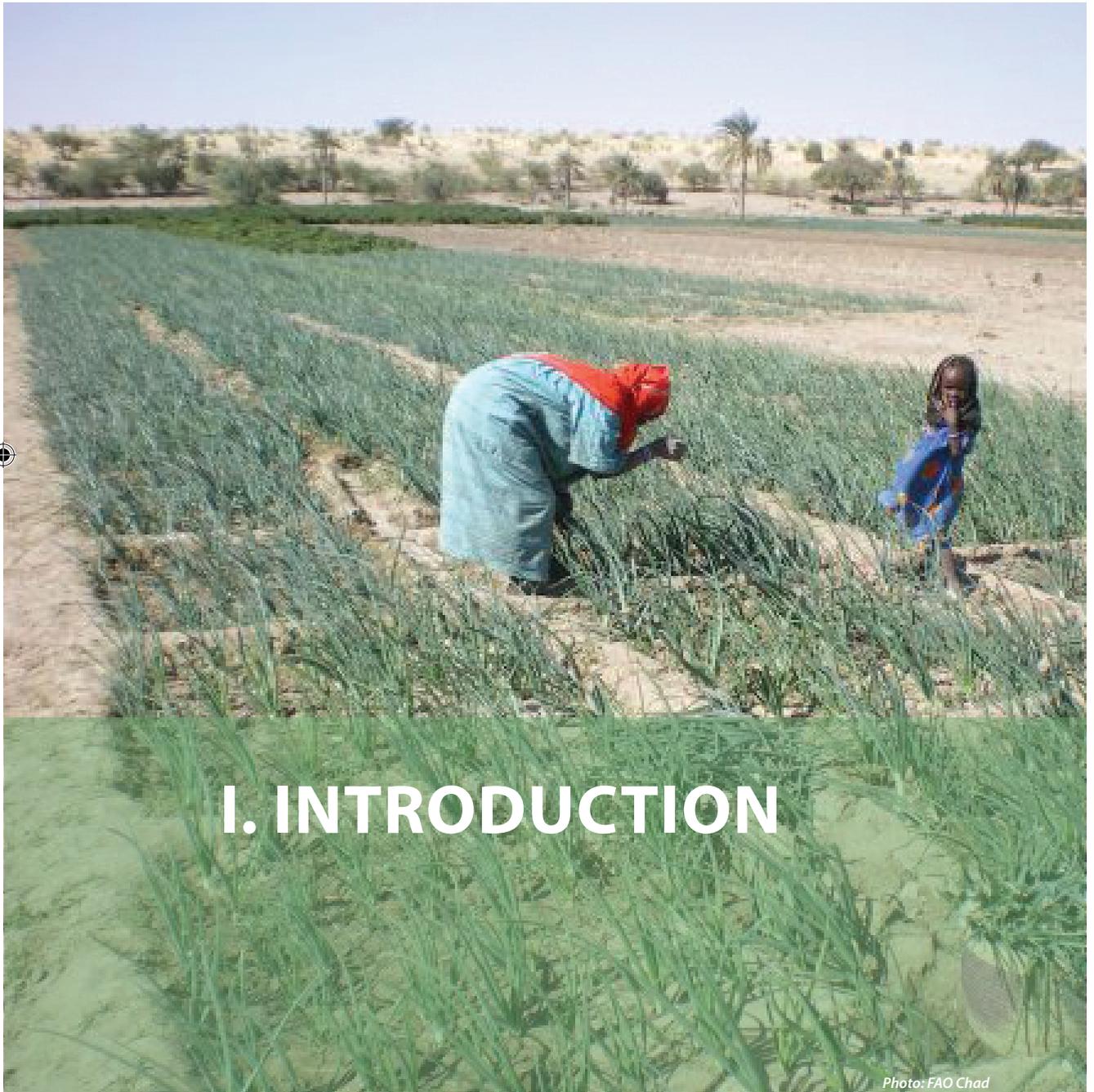
MAF implementation plan

The priorities outlined in the MAF Action Plan are fully aligned with the NFSP. The cost of these actions is estimated at 544,099.5 million XAF over 3 years (2013-2015). The funding for the actions outlined in the MAF will be mobilised jointly from the government of Chad, development partners, international non-governmental organisations (NGOs) and the private sector.

The successful implementation of this action plan will be dependent on several key factors: (i) political engagement at the very highest level of the country's government throughout the implementation process; (ii) effective coordination of the partners; (iii) an effective monitoring and evaluation system.

The interventions outlined in this MAF are designed to develop food crop farming in rural areas of the target regions and thereby reduce food insecurity by: (i) generating income for the poorest members of the population, especially women; (ii) providing these individuals with access to food and reducing their exposure to malnutrition. The main impact of these actions will be to substantially reduce the proportion of the population suffering from hunger, particularly among malnourished children and, in turn, to reduce poverty.





I. INTRODUCTION

Photo: FAO Chad

In 2000, more than 180 heads of state signed the Millennium Declaration, through which they committed to attaining the Millennium Development Goals (MDGs) by 2015 and delivering a better world for all. The signatories agreed on the following eight goals: (i) eradicate extreme poverty and hunger; (ii) achieve universal primary education; (iii) promote gender equality and empower women; (iv) reduce child mortality; (v) improve maternal health; (vi) combat HIV/AIDS, malaria and other diseases; (vii) ensure environmental sustainability; (viii) develop a global partnership for development.

Progress towards the Millennium Development Goals (MDGs) was analysed at the United Nations high-level summit in September 2010. The results of this analysis in 2010 showed that, despite progress in many areas, several countries are likely to fall short of attaining one or more of these goals by 2015 unless urgent, carefully targeted measures are taken. These measures have become even more urgent in light of the recent global economic crises, rising oil and food prices and climate change.

The Millennium Development Goals Acceleration Framework (MAF) was approved by the United Nations Development Group. Its aim is to help those countries that are falling short of attaining the MDGs by 2015. The purpose of the MAF is to identify bottlenecks hindering MDG-related interventions. It focuses on implementing rapid-impact solutions to remove these bottlenecks and develop concerted action by all stakeholders.

In Chad's ten-year MDG implementation report, the outlook on the country's prospect of attaining the majority of the MDGs by 2015 remains pessimistic, despite substantial progress in education, combating HIV/AIDS and malaria, and access to drinking water.

The government of Chad, which signed the Millennium Declaration, has included the MDGs in its National Poverty Reduction Strategies (NPRSs 1 and 2). It is currently investing in, and providing support to, those production sectors that are likely to help boost growth and reduce poverty. Implementation of this strategy has been hindered, however, by domestic conflicts, the collapse of global crude oil prices, poor rainfall and failures in governance.

This situation, and the resulting vulnerabilities, pose genuine obstacles to poverty reduction. In 2011, 46.7% of the country's population lived below the poverty line. This figure was as high as 87% in rural areas. Hunger is therefore a crucial challenge facing Chad, where an estimated 30% of children were underweight in 2010 (MICS, 2010) and a significant portion of the population lives in a recurring cycle of chronic food insecurity.

In light of this situation, the President of Chad has made rural development a key issue for his new five-year term. The National Food Security Programme (NFSP), initially developed in 2005, was updated in September 2010 to make better use of the country's substantial agricultural, livestock, fish and water resources. The government responded to this concern – with the support of its technical and financial partners including United Nations agencies – by preparing this MDG Acceleration Framework (MAF), focusing on target 3 of MDG 1: "Halve, between 1990 and 2015, the proportion of people who suffer from hunger". Chad is currently falling well short of attaining its goal in this respect, i.e. to reduce the proportion of the people suffering from hunger to 21% by 2015.

The decision to focus on this MDG, which involves interventions in rural areas, will also lead to improvements in the majority of the other MDGs. The resulting reductions in poverty (which is primarily a rural issue) and improvements in food and nutrition are likely to have a positive impact on maternal health (MDG 5), child health (MDG 4), education (MDG 2) and the environment (MDG 7).

The government of Chad – with technical support from UNDP – has prepared this MAF in a participatory manner involving producers, the private sector, representatives of various government ministries, the country's senior institutions, all United Nations agencies, technical and financial partners and NGOs. A national team, comprising executives from the Ministry for Agriculture and Irrigation, national consultants and representatives of technical and financial partners, was created to manage the MAF preparation process. The team came to a consensus on the key interventions and conducted an analysis of the associated bottlenecks. It then set the order of priority of the chosen solutions, based on: (i) their impact on accelerating progress towards the MDGs; (ii) their short- and medium-term feasibility in line with the target date of 2015. As a result, the team was able to set out a road map to improve the resilience of vulnerable populations stuck in a recurring cycle of food crises.

The report is divided into five sections:

1. Section 1 provides a general overview of progress towards the MDGs and the obstacles to this progress, focusing in particular on target 3 of MDG 1.
2. Section 2 lists the priority interventions required to deliver a rapid reduction in food insecurity and malnutrition.
3. Section 3 addresses the bottlenecks hindering effective implementation of these priority interventions.
4. Section 4 lists and prioritises the solutions to these bottlenecks.
5. Section 5 outlines the implementation action plan for the chosen solutions and the associated monitoring mechanism.





II. PROGRESS TOWARDS ATTAINMENT OF THE MDGS AND OBSTACLES TO PROGRESS

Photo: General Directorate for Communication, Office of the President of Chad.

2.1 CHAD: GENERAL OVERVIEW

Chad is located in central Africa and covers an area of 1,284,000 km². It stands on the frontier of the Saharan and Sudan zones and is sub-divided into several ecological zones, each with its own specific features, potential and limitations:

1. The Sudan zone, which covers around 10% of the country's surface area. This zone is characterised by a long rainy season (May to October) and annual precipitation exceeding 800 mm. This zone is suited to large-scale diversification and intensification (food crops, industrial crops).
2. The Sahel zone, which accounts for 43% of the country's surface area. Here, annual rainfall varies from 100 to 600 mm. This zone is characterised by migratory livestock farming, food crops and, increasingly, gum arabic production.
3. The Saharan zone, which covers 47% of the country's surface area. In this zone, precipitation is both sparse and irregular (60 mm per year) and there are significant extremes of temperature. Due to the sparse rainfall, irrigated farming is limited to oases (vegetable, wheat and date crops).

Parts of the country (Salamat, Lake Chad and the Chari-Logone Basin) are located on a flood plain; partially irrigated farming is carried out in these areas.

According to the recent population and housing census, conducted in September 2009, Chad has a total population of 11,274,106, with 75% of the population living in rural areas. Population growth stands at 3.6% per year, with a gender split of 50.7% female to 49.3% male.

Chad is a landlocked country and is one of the 10 poorest countries in the world in terms of human development. It is ranked 183rd out of 187 countries, with a Human Development Index of 0.328 (2011). It faces a range of complex, multi-faceted challenges linked to sub-regional instability (Darfour, Libya, Sahel, Nigeria, etc.), food insecurity due to environmental factors (droughts, soil degradation, floods, etc.), and the global economic situation (oil prices). The country is also affected by the consequences of high population growth (3.6% per year) and a range of associated problems related to children and young people (education, jobs, etc.). In order to manage these challenges, Chad requires short-term solutions to its food security problems, as well as longer-term peacebuilding efforts to deliver inclusive, sustainable development.

Since 2003, the country's growth has depended largely on changes in the oil market, despite efforts to diversify its economy and limit its dependency on oil. Overall macro-economic performance improved in 2010, after a slow-down in 2009, with a 13% real-terms growth in GDP. Average growth over the last few years has not been sufficient, however, to trigger a significant reduction in poverty. The situation may nevertheless improve if current governance and stabilisation efforts continue, and if there is substantial growth in the agricultural sector (and the non-oil sector in general).

2.2 PROGRESS TOWARDS MDGS

Chad has based its National Poverty Reduction Strategies (2003-2006 and 2008-2011) on the MDGs, in line with its international commitments and its ambition to reduce all aspects of poverty. However, despite substantial progress in education, combating HIV/AIDS and malaria, and access to drinking water, Chad's ten-year MDG implementation report published in 2010 indicates that there is much work still to be done in this respect. The country's progress towards attaining the MDGs has been hampered by a number of limiting factors, including poor political and economic governance, recurring conflicts, climate change and fluctuating oil prices.

The monetary poverty rate, which fell from 53% in 1990 to 46.7% in 2011¹, has undoubtedly decreased in recent years, but remains high. Furthermore, this downward trend is not sufficiently pronounced to attain the target level of 26.5% by 2015. Current figures suggest that 87% of the poor population lives in rural areas, and that poverty is mainly concentrated in the country's southern regions, where agriculture (especially cotton) is the dominant activity. In order to accelerate the reduction in poverty, the country will need to post stronger, more sustained and more inclusive GDP growth, especially among the rural population.

The target of achieving decent work for all will be more difficult to attain, given that only 1.3% of the economically active population currently works in the formal sector. The majority of jobs in Chad are created in the informal sector. However,

these jobs provide low levels of irregular income and offer no social protection. Efforts should therefore focus on improving productivity in the informal sector (including the rural sector) and providing suitable social protection mechanisms for these workers (microinsurance).

Efforts to halve the proportion of people who suffer from hunger by 2015 are hampered by the sheer scale of rural poverty and the extent to which cereal crop production is dependent on precipitation levels. According to the MICS survey², an estimated 30% of the population was underweight³ in 2010, falling well short of the 2015 goal of 21%. Between 1990 and 2010, a period of 20 years, this figure only fell by 10 percentage points. The same level of effort would therefore be required over the next four years (2011 to 2015) to attain this goal.

There have been much more satisfactory results in efforts to achieve universal primary education by 2015. The Gross Enrolment Ratio (GER) rose from 32% in 1993 to 98% in 2009. However, it is important to note that the primary completion rate, which stood at 38% in 2009, remains substantially lower than the target of 100%. Despite progress at primary level, Chad's education system remains blighted by the poor performance, quality (management and equipment) and governance of the sector.

With respect to gender equality and women's empowerment, the country has made substantial progress in achieving gender parity in primary education (0.70 girls per boy in 2009, up from 0.41 in 1990). However, the gap remains much wider at secondary level (0.32 in 2008-2009) and at university level (0.15 in 2008).

1. ECOSIT 3, 2012

2. MICS: Multiple Indicator Cluster Survey, National Institute for Economic and Demographic Statistics and Research (Institut national de la statistique et des études économiques et démographiques), December 2010

3. Chad's ten-year MDG implementation report, produced in September 2010, puts this figure at 37%.

The vast majority of women are illiterate (78% in 2008, compared with 56% of men). Given this situation, women have very little representation in either formal sector jobs or political office. This situation also means that they have limited options in the informal sector, as well as having a negative impact on their productivity.

The country's maternal and child health indicators are among the highest in the world. According to WHO figures, the infant and child mortality rate remained almost unchanged between 1990 (201‰) and 2008 (209‰), significantly higher than the target of 67‰ by 2015. A downward trend does appear to have emerged in the last few years, however, with the latest MICS survey (2010) placing the figure at 180‰. The situation is even worse when it comes to maternal mortality, where the level rose from 820 deaths per 100,000 births in 1990 to 1,500 deaths per 100,000 births in 2005. Chad is therefore highly unlikely to attain MDGs 4 and 5 by 2015.

The outlook is more optimistic, however, when it comes to the battle against HIV/AIDS and other major diseases (malaria and tuberculosis). Having experienced an upward trend until 2005, HIV prevalence among the 15-49 age bracket is beginning to stabilise. In terms of treatment, the use of ARVs to treat patients with HIV/AIDS has risen sharply, from 10% in 2006 to 49% in 2009. The gender imbalance in the prevalence of HIV/AIDS remains a major cause for concern, however, with almost twice as many women aged 15-24 suffering from the disease as men in the same age bracket.

With respect to the environment and living conditions, there have been some positive and some negative changes. The situation is favourable when it comes to drinking water, and it is entirely possible that Chad will attain its target of ensuring that 60% of the population has access to drinking water by 2015. The same cannot be

said for sanitation, however, where progress is slow and there remain substantial needs. In 2009, the waste collection rate stood at 19%. Rainwater run-off also poses major problems in towns and cities. As regards natural resource management, the tendency to use wood as an energy source has had devastating effects on vegetation cover and has led to significant erosion.

In terms of partnerships, Chad receives funding under the WTO's Integrated Framework. However, it does not receive debt relief under the Heavily Indebted Poor Countries (HIPC) Initiative or the Multilateral Debt Relief Initiative (MDRI) due to a lack of agreements with the IMF. There is, however, the possibility of a gradual return to dialogue with the IMF. In terms of communication technologies, Chad has made some progress, although ICT infrastructures covered just 20% of the country in 2010. Furthermore, the cost of ICT access (computers, charges, etc.) is prohibitive for the majority of the population and there is insufficient ICT training provision.

TABLE 1. CHAD'S PROGRESS TOWARDS THE MDGS

TARGET	Level in 1990	Recent levels	Target by 2015	Likelihood of attainment by 2015
1.1 Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day.	53%	2011: 46.7% 2003: 55%	26.5%	Unlikely
1.2 Achieve full and productive employment and decent work for all, including women and young people.	NA	2003-2004: 2%	100%	Unlikely
1.3 Target 3 - Halve, between 1990 and 2015, the proportion of people who suffer from hunger. Indicator of the prevalence of underweight children under five years of age.	42%	2010: 30% (MICS report)	21%	Likely
2. Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling.	NA	2009: 38%	100%	Unlikely
3. Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015.	Primary education: 0.41	Primary/2009: 0.7 Secondary/2008: 0.3 University/2008: 0.15	Primary education: 1	Likely for primary education Unlikely for secondary education and university
4. Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate.	201‰	2008: 209‰ (WHO) 2010: 180‰ (MICS, 2010)	67‰	Unlikely
5. Reduce by three quarters, between 1990 and 2015, the maternal mortality rate.	820 (per 100,000)	2005: 1,500 (per 100,000)	205 (per 100,000)	Unlikely
6. Combat HIV/AIDS, malaria and other diseases	NA	NA	NA	Likely
6.1. Have halted by 2015 and begun to reverse the spread of HIV/AIDS.	NA	NA	NA	Likely
6.2. Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases.	NA	NA	NA	Likely
7. Ensure environmental sustainability	NA	NA	NA	Unlikely
7.1. Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources.	NA	NA	NA	Unlikely
7.2. Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.	19% [access to drinking water]	2005: 35% 2010: 45%	60%	Likely for water Unlikely for sanitation
7.3 By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers.	NA	NA	NA	Unlikely

TARGET	Level in 1990	Recent levels	Target by 2015	Target by 2015 Likelihood of attainment by 2015
8. Develop a global partnership for development 8.1 Make significant improvement to housing in Chad by 2020.	-	-	-	Unlikely
8.2 Develop further an open, rule-based, predictable, non-discriminatory trading and financial system.	-	-	-	Unlikely
8.3 Address the special needs of the least developed countries.	-	-	-	-
8.4 Address the special needs of small island developing States.	-	-	-	-
8.5 Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term.	-	-	-	Likely
8.6 In cooperation with developing countries, develop and implement strategies for decent and productive work for youth.	-	-	-	Likely
8.7 In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries.	-	-	-	Likely
8.8 In cooperation with the private sector, make available the benefits of new technologies, especially information and communications.	-	-	-	Unlikely

Source: MDG monitoring report September 2010, MICS December 2010

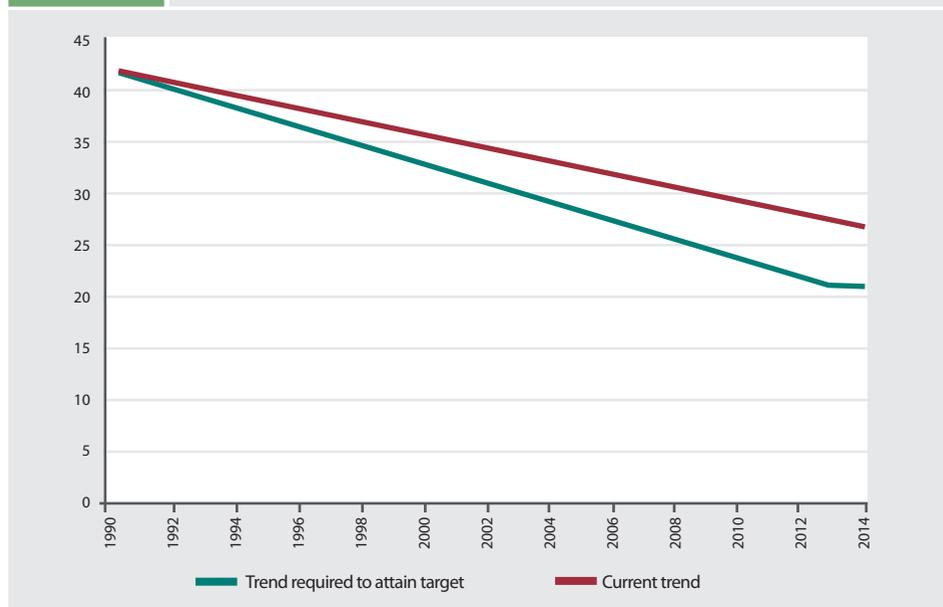
2.3 PROGRESS TOWARDS TARGET 3 OF MDG 1 – “HALVE, BETWEEN 1990 AND 2015, THE PROPORTION OF PEOPLE WHO SUFFER FROM HUNGER”

Given that the country is falling short of attaining the MDGs, the government of Chad is particularly

concerned by the cycle of recurring famines which persists in certain areas of the country and affects a substantial portion of the population. It is important to note, however, that Chad also has significant agriculture, livestock and fishing potential. This is why the government has chosen to focus on accelerating its progress towards target 3 of MDG 1: “Halve, between 1990 and 2015, the proportion of people who suffer from hunger”. The government hopes that its decision to focus on the issue of hunger, which involves interventions in rural areas, will also accelerate progress towards several other MDGs.

FIGURE 1:

PREVALENCE OF UNDERWEIGHT CHILDREN UNDER FIVE YEARS OF AGE (1990-2015)



The recommendations of the ten-year report indicate that the most effective way for Chad to attain the MDGs is to deliver a rapid reduction in poverty. The report also includes recommendations to improve governance in order to ensure that the country's public expenditure on education, healthcare, rural development, water and sanitation is used more effectively.

2.3.1 CHANGES IN THE FOOD SITUATION

Chad experiences regular famines. Since the 1970s, the combined effects of climate change (successive droughts, floods and locust or bird plagues) and domestic conflicts have caused both internal and cross-border migration which, in turn, have contributed to aggravating food insecurity risks. These factors have been further exacerbated by rising global food prices.

Furthermore, the large average household size (5.4 people) has placed additional pressure on already unstable living conditions among certain social groups.

Following a poor farming season in 2011-2012, the government – with the support of its development partners – launched a National Post-Harvest Survey on Food Security among Rural Households in Chad (Enquête nationale post-récolte sur la sécurité alimentaire des ménages ruraux au Tchad) in December 2011. The results of this survey revealed that, in 18 of the country's 22 regions covered by the survey, 13.8% of the population (1.2 million people) were suffering from severe food insecurity, 27.7% (2.4 million people) from moderate food insecurity and 58.5% (5.4 million people) from food insecurity.

TABLE 2. ESTIMATE OF THE NUMBER OF PEOPLE SUFFERING FROM SEVERE FOOD INSECURITY, MODERATE FOOD INSECURITY AND FOOD INSECURITY IN RURAL AREAS IN DECEMBER 2011.

Region	Severe food insecurity	Moderate food insecurity	Food insecurity	Total
BARH EL GAZAL	34,500	89,600	124,100	248,200
BATHA	105,000	147,000	245,000	497,000
CHARI BAGUIRMI	15,700	125,200	461,500	602,400
GUERA	122,300	179,800	215,800	517,900
HADJER LAMIS	29,200	72,800	422,200	524,200
KANEM	56,700	99,300	191,400	347,400
LAC	20,600	96,100	363,600	480,300
LOGONE OCCIDENTAL	84,900	196,200	286,300	567,400
LOGNE ORIENTAL	119,000	246,400	382,400	747,800
MANDOUL	53,800	107,600	474,900	636,300
MAYO KEBBI-EST	89,100	126,200	526,900	742,200
MAYO KEBBI-OUET	81,100	105,400	348,600	535,100
MOYEN CHARI	75,700	139,700	279,400	494,800
QUADDAI	129,400	218,300	222,400	570,10
SALAMAT	7,800	92,500	161,800	262,100
SILA	41,100	109,500	82,200	232,800
TANDJILE	57,600	172,800	426,200	656,60
WADI FIRA	56800	117,500	214,800	389,100
TOTAL	1,180,300	2,441,900	5,429,500	9,051,700

Sources: National Post-Harvest Survey on Food Security among Rural Households in Chad (Enquête nationale post-récolte sur la sécurité alimentaire des ménages ruraux au Tchad) – December 2011 data

The proportion of people suffering from hunger and facing food insecurity is extremely high. Following the drought of 2011-2012, the number of people suffering from food insecurity is estimated at 3.6 million, or 40% of the population in 18 regions. These figures reveal a situation worse than that encountered during the previous drought (2009-2010), when the number of people facing food insecurity was estimated at 1.8 million. These results reveal a worrying situation.

2.3.2 CHANGES IN THE PREVALENCE OF UNDERWEIGHT CHILDREN

The food insecurity situation in Chad is supported by the indicator for target 3 of MDG 1. The prevalence of underweight children under five years of age, which stood at 42% in 1990, has fallen by only 10 percentage points in 20 years, an average decrease of just 0.5 percentage points per year. Were this same trend to continue, the indicator would stand at 27.5% in 2015, compared with a target of 21% by 2012. Urgent effort is therefore required to accelerate this downward trend. The following regions are most severely affected by this issue: Hadjer Lamis (38.2%), Wadi-Fira (37.7%), Kanem (36%), Lac (30.1%), Ouaddaï (29.4%), Batha (27.4%), Salamat (25.4%) and Guéra (24.1%).

TABLE 3. PREVALENCE OF UNDERWEIGHT CHILDREN

Region	Total prevalence of underweight children	Prevalence of moderately underweight children	Prevalence of severely underweight children
LAC	30.1	20.8	9.3
KANEM	36.0	25.2	10.9
HADJER-LAMIS	38.2	23.9	14.3
BATHA	27.4	19.6	7.8
BAHR EL GAZAL	18.6	15.7	2.9
GUÉRA	24.1	16.7	7.4
WADI-FIRA	37.7	24.4	13.3
OUADDAÏ	29.4	20.6	8.8
SILA	21.0	14.6	6.4
SALAMAT	25.4	18.6	6.7
N'DJAMENA	23.3	15.8	7.4

Furthermore, the results of the most recent Demographic and Health Survey (DHS 2) show a clear link between the prevalence of underweight children and two other factors: the mother's level of education and monetary poverty. Where the mother has received no education, the prevalence of underweight children is 41%, compared with just 20% for mothers with secondary-level education or higher. Furthermore, the prevalence of underweight children stands at 48% in households in the lowest quintile (the poorest 20% of the population), compared with 29% in the highest quintile (the wealthiest 20% of the population). The rate is also higher among children living in rural areas (38%) than in urban areas (30%). There are, however, significant variations within rural areas, with the prevalence of underweight children standing over 15% higher than the WHO threshold in the Saharan and Sahel regions.

Severe acute malnutrition is also a leading cause of mortality in children under five years of age. In 2010, the infant and child mortality rate stood at 18%, or almost 1 child in 5. The preliminary results of the SMART nutrition survey, conducted in 11 of the country's Sahel regions in August/September 2011, reveal very high Global Acute Malnutrition (GAM) rates (over 15%) in four regions: Kanem (20.5%), Wadi-Fira (15.3%), Bahr-El-Gazal (24.3%) and Batha (16.4%). In the other regions, such as Guéra (14%), Lac (13.5%), Salamat (13.7%) and Ouaddaï (12.4%), the rates stand above the 10% threshold and are close to the critical threshold of 15%, considered severe by the WHO.

TABLE 4. MALNUTRITION RATE BY REGION

Region	Total acute malnutrition	Severe acute malnutrition
LAC	13.5	2.1
KANEM	20.5	4.0
BAHR EL GAZAL	24.3	8.3
HADJER-LAMIS	9.6	1.0
BATHA	16.4	3.1
GUÉRA	14.0	3.2
WADI-FIRA	15.3	3.5
OUADDAÏ	12.4	1.9
SILA	13.9	2.6
SALAMAT	13.7	2.5

Source: March 2012, SMART survey, UNICEF

2.4 ANALYSIS OF FOOD INSECURITY AND MALNUTRITION FACTORS

There is a strong link between food insecurity and cereal crop production. Chad's malnutrition problem has many causes, most of which are related to the structural food insecurity situation in some regions of the country, and in the Saharan and Sahel regions in particular. Malnutrition is also linked to related phenomena such as poor dietary practices and insufficient access to drinking water and sanitation.

The results of the national post-harvest survey, conducted in December 2011, may be used to target the most vulnerable geographical areas and identify the assistance (both food and non-food) required to help save lives, improve livelihoods and strengthen the resilience of the households concerned. This, in turn, will accelerate progress towards target 3 of MDG 1.

Location of the most vulnerable people

In geographical terms, the survey results show worryingly high levels of food insecurity across almost the entire country. As far as regional trends are concerned, those areas with the highest proportion of households facing food insecurity are Batha, Guéra and Ouaddaï, where over 20% of households suffer from severe food insecurity. Severe food insecurity is also a major concern in the regions of Kanem, Bahr El Ghazal, Wadi-Fira and Sila, where the rate is between 10% and 19%. The most severely affected regions are located in the Sahel and Saharan zones. In these regions, the coverage rate – i.e. the average amount of cereal crop stocks per capita – stands at just three months, compared with a figure of up to eight months in the Sudan zone.

Socio-professional categories of the most vulnerable people

Some households are particularly vulnerable to food insecurity and, therefore, to malnutrition. These include households which depend on hunting/gathering (56.6%), aid/donations and

money transfers (55.5%), daily work (46.9%), handcrafts and cottage industries (44.2%), agriculture (44.2%) and those who have no income-generating activity (50.5%). On average, around 50% of these households suffer from food insecurity. The food security situation is much more positive for other household categories, however. These include those in paid employment and those who work in the livestock farming, animal products, fishing and transport sectors.

Food insecurity is much more prevalent when the head of the household is a woman (70.1%) rather than a man (36.9%). It is also more prevalent among people over the age of 60 and those without any basic education. Livestock farming has a positive impact on household diet. Unfortunately, however, the total number of cattle per household (measured in LTU) has fallen sharply for 4 out of 10 households in the space of just one year.

Food insecurity is therefore linked primarily to the following factors: the household's ability to produce sufficient cereal crops for its own needs, the region in which the household lives (agro-ecological zone and livelihood zones), poverty, a failure to diversify income-generating activities and recurring crises.

Characteristics of Chad's agro-sylvo-pastoral sector and regional vulnerabilities

The majority of agricultural production in Chad is performed using extensive, traditional systems. These systems give poor production yields and are based primarily on family subsistence methods in small fields (2 to 5 ha for rain-fed crops, 0.1 to 1 ha for market garden crops). Alongside this extensive production system, substantial public and private investment has been made in recent years to develop agricultural water systems.

Despite this investment, only a tiny percentage of farmland is irrigated, with the majority of the areas and regions affected by hunger located in the Sahel and Saharan zones, where there is a significant rainfall deficit. These developments have also been of little benefit to the poorest households. In Chad, average water use for irrigation per capita stands at 23 m³, compared with 56.14 m³ in Burkina Faso. Fewer than 30% of farmers have access to an irrigation system. The fact that the majority of the population is uneducated – 78% of Chadians are illiterate – also has a negative impact on agricultural productivity. Average yield in Chad stands at 816 kg of cereal crops per hectare, compared with 1,032 kg in Burkina Faso.

TABLE 5. YIELD PER HECTARE IN CHAD, COMPARED WITH OTHER EQUIVALENT COUNTRIES

	Millet	Sorghum
BURKINA FASO	865	1041
MALI	723	849
CHAD	583	730

Source: AHDR, 2012

In rural areas, the majority of Chadian women work in the fields alongside their husbands. Widows work the land that belonged to their husbands. They also grow market garden crops in small fields, located close to their homes, to supplement their income. Their dependence on men and their poor levels of productivity make them particularly vulnerable to crises. The main reason for this poor productivity is the high level of illiteracy among the female population.

The impact of poor agricultural productivity on food insecurity is further exacerbated by difficulties in livestock farming. In Chad, the majority of livestock farming is migratory in nature – an activity practised by 3.5% of the population according to the GPHC⁴. Livestock farmers earn the majority of their income from the sale of dairy products and cattle (75% of total income). There are several factors that affect the vulnerability of cattle farming, linked to the variability of feed and water sources in terms of quantity and quality, with grazing land being the primary feed source and surface water being the primary water source. Very few livestock farmers and agro-pastoralists give their animals feed supplements. Where grazing land is unavailable, livestock tend to feed on straw and harvest residues. As such, livestock breeding is highly dependent on rainfall variations. This situation hampers efforts to intensify livestock production in Chad and improve yield.

As well as production-related issues, Chadians also face market access problems. Apart from the country's major roads, there are almost no roads connecting Chad's regions. Only 15% of villages have direct access to a tarmac road or improved track. Some 25% of villages are almost totally cut-off during the winter season, with some isolated for up to eight months of the year. In terms of

telecommunications networks, only 1.4% of the villages covered by the survey are less than 5 km from a fixed landline, while 95.4% of villages are more than 10 km from a telephone.

Agricultural production

The country's main crops are cereals (millet, sorghum, corn, rice and wheat), oleaginous crops (peanuts and sesame) and non-oleaginous legumes (black-eyed peas and beans). Roots and tubers (cassava and yam), cotton, sugar cane and tobacco are also grown.

According to the national post-harvest survey, conducted in December 2011, agricultural production is insufficient to cover the needs of the population (at whole-country level). Agro-pastoral activities are highly dependent on weather and climate conditions, which also affect the availability of water for irrigation and grazing land and, in turn, crop and livestock yield and output.

Cereals make up a substantial proportion of the average diet in Chad (70%). A national cereal deficit can occur during years of drought. In the agro-ecological areas of the Sahel zone, there is a structural cereal deficit, even during years of ample rainfall. These regions therefore rely on cereal imports to top up domestic production; however the most vulnerable people do not have the means or resources to access the market.

The country's extremely high population growth (3.6%), poor productivity and unstable production mean that the poorest rural producers often face food insecurity. Future cereal need projections highlight the need to stabilise and significantly boost production.

4. AHDR, Towards a Food Secure Future.

**TABLE 6. CEREAL PRODUCTION AND NEEDS, 2004-2010
(IN TONNES)**

Year	Production	Needs	Difference
2003-2004	1,618,000	1,386,000	+232,000
2004-2005	1,213,000	1,432,000	-219,000
2005-2006	1,743,000	1,479,000	+264,000
2006-2007	1,991,000	1,528,000	+463,000
2007-2008	1,886,000	1,578,000	+308,000
2008-2009	1,778,000	1,630,000	+148,000
2009-2010	1,135,000	1,683,000	-548,000

Source: DPISA.

TABLE 7. PROJECTED CEREAL, MEAT AND FISH NEEDS, 2011-2015

Year	Population	Cereals (tonnes)	Meat (tonnes)	Fish (tonnes)
2011	11,995,065	1,907,215	179,925	83,965
2012	12,426,887	1,975,875	186,403	86,988
2013	12,874,255	2,047,006	193,113	90,119
2014	13,337,728	2,120,698	200,065	93,364
2015	13,817,887	2,197,044	207,268	96,725

Sources: GPHC 2, 2009; PNE, 2010



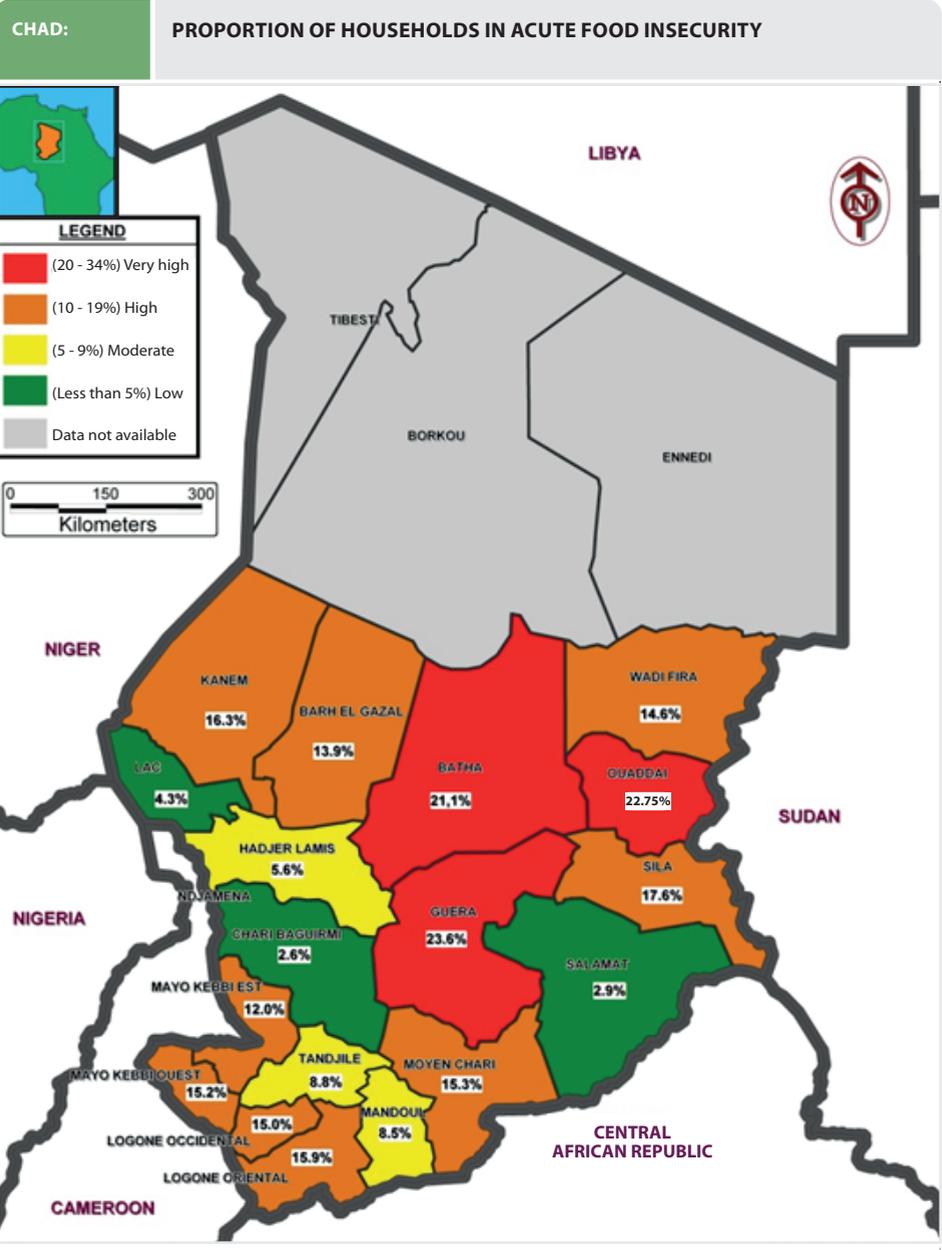
A number of key lessons may be learned from the current food insecurity situation in Chad.

1. Overall agricultural output is both low and unstable.
2. The isolation of farming areas and the lack of communication infrastructures are making households more vulnerable to food insecurity, especially during the winter months.
3. Poor crisis prevention, alert and management capacities mean that many vulnerable people are left without assistance during times of crisis.

Despite this situation, Chad is capable of attaining target 3 of MDG 1 provided that significant resources are allocated to the rural sector. With proper management of its hydro-agro-pastoral resources, and with more effective and better coordinated intervention, the country will be able to attain its goal of reducing hunger. Chad has an estimated 39 million hectares of potential farmland, yet only 6% of this land is currently farmed. Furthermore, only 7,000 of a possible 5.6 million hectares of irrigable land are actually irrigated. The country also has significant livestock resources: 6.284 million cattle, 2.563 million sheep, 5.584 million goats and 1.185 million camels. It also has the potential to produce 80,000 tonnes of fish per year.

The greatest challenge is therefore to improve productivity by providing physical capital and improving human capital, as well as boosting physical and financial access to food. Efforts must also be made to improve governance and, in turn, to make development programmes more effective and ensure that public resources are allocated in a way that genuinely helps to reduce malnutrition. Effective water management is key to improving yields and reducing dependence on rainfall. Efforts should focus not only on large-scale developments, but also on small irrigated fields, inland valleys and easy-to-manage water retention systems.







III. PRIORITY STRATEGIC INTERVENTIONS

Photo: FAO Chad

3.1 STRATEGIC AND OPERATIONAL FRAMEWORK FOR RURAL DEVELOPMENT AND FOOD SECURITY IN CHAD

The multi-sector National Food Security Programme (NFSP) was prepared in 2005 on the basis of regional, national and sectoral strategies. At regional level, the NFSP is aligned with the Central Africa Regional Food Security Programme (PRSA/AC) and the Comprehensive Africa Agriculture Development Programme (CAADP). It was also developed in line with Chad's other commitments, as a member of the Niger Basin Authority (NBA) and the Lake Chad Basin Commission (LCBC), which cover a range of different issues including food security.

At national level, the NFSP is implemented via the National Poverty Reduction Strategy (NPRS), which acts as the government's key socio-economic policy framework document. The NPRS was initially adopted in 2003 and revised in 2008 to cover the 2008-2011 period. It focuses on five key themes, the third of which is to "exploit the rural sector's growth potential". Chad is currently preparing a Strategic Development Plan (2012-2015), which also includes a section on food security.

The overall aim of the National Food Security Programme (NFSP) is to lead to the attainment of MDG 1, i.e. to eradicate extreme poverty and hunger, and to meet the pledges of the World Food Summit. In practical terms, its aims are to boost food crop production and to contribute to various aspects of food security, including: (i) to guarantee the availability of a sufficient

quantity of good quality food products; (ii) to provide universal access for all, including the most vulnerable and low-income groups; (iii) to promote the use of, and improve the quality of food products in order to ensure a healthy, balanced diet for all; and (iv) to stabilise supply through political intervention and the creation of crisis and natural disaster prevention and management mechanisms.

The first phase of the NFSP covered the years 2005-2009. The NFSP was subsequently updated in 2010 to cover a second phase, from 2011-2015⁵. It currently comprises six components:

1. Sustainable exploitation and management of water resources and natural resources.
2. Intensification and diversification of crop, animal and fish production.
3. Storage, processing and marketing.
4. Food aid and the crisis monitoring, alert and response system.
5. Nutrition.
6. Support measures.

5. The second phase is currently under review. Once adopted by the government, the new document will cover the years 2013-2020.

FIGURE 2. THE NATIONAL FOOD SECURITY PROGRAMME, 2011-2015

NFSP component	Sub-programmes
Sustainable exploitation and management of water resources and natural resources	Water management for crop irrigation Improvement of pastoral water systems Improvement of rural water systems Restoration of soil fertility Exploitation of non-wood forest products, including fauna
Intensification and diversification of crop, animal and fish production	Intensification and diversification of crop production Intensification and diversification of animal production Improvement, intensification and diversification of fish production Apiculture
Storage, processing and marketing	Preservation and storage of plant-based agricultural products Processing of plant-based, animal-based and fish-based products Marketing of plant-based, animal-based and fish-based products
Food aid and the crisis monitoring, alert and response system	Information system capacity building Food aid and emergency food stocks
Nutrition	Nutritional education School gardens
Support measures	Rural roads Rural finance and micro-projects

3.2 CHOSEN PRIORITY INTERVENTIONS

Significant financial resources have been mobilised during the implementation of these various development strategies. During the first phase of the NFSP, the government committed to cover 50% of the costs. A total of 25 billion XAF of public funds were allocated to the programme, to cover the cost of studies and to fund a number of projects and developments, including: (i) doubling the total surface area covered by rice crops; (ii) building three dams; (iii) creating a range of agricultural water systems, including 7,000 ha of rain-fed inland valleys; (iv) constructing polders; (v) supplying market garden crop inputs, distributing improved seed varieties, fertilisers, tractors and small-scale equipment; (v) funding the replenishment of cereal stocks.

Progress has been made as a result of these programmes, but substantial needs still remain. The resources allocated have not been mobilised or used as effectively as possible due to national programme governance problems (both domestic and external funding). The outcomes of these food security policies have therefore fallen well short of expectations, with food insecurity indicators remaining a real cause for concern despite the involvement of new partners and social stakeholders, and the substantial investment made. Furthermore, the investment made has still fallen well short of what is required, leaving agriculture in Chad heavily reliant on weather and climate conditions.

The primary causes of food insecurity and malnutrition remain the same: unstable agricultural output due to high dependence on rainfall, and poor productivity by rural and

government-run producers. In general terms, the limiting factors remain as follows:

1. Poor productivity caused by insufficiencies in physical and human capital.
2. The continued degradation of productive capital (land, plant resources, water and livestock).
3. Strong population growth (3.6%) and an increasingly impoverished rural population.
4. Low levels of education, training and literacy within communities.
5. Insufficient support for, and management of communities and producers.
6. Insufficient use of local technologies and technologies developed through scientific research for producers.
7. Poor governance (capacities of bodies and/or human resources responsible for the sector), leading to inappropriate resource management. This situation is exacerbated by the fragmented nature of the institutional framework, a lack of coordinated intervention, a multiplicity of approaches, and insufficient stakeholder involvement in decision-making mechanisms.
8. The lack of a sector funding system and insufficient resource mobilisation.
9. Shortcomings in laws/regulations and land management.
10. The marginalisation of families where the head of the household is a woman, and their limited involvement in production and resource access decision-making.

Chad's food insecurity vulnerability profile also indicates that the most severely affected populations live primarily in rural areas, with those living in the Sahel and Saharan regions also facing climate-related challenges. This vulnerability is caused mainly by low productivity, with harvests only providing enough food for five months in some regions. The extreme poverty and isolation

of these regions also mean that the people living there have great difficulty in accessing markets. The nutritional situation is further exacerbated by poor dietary practices. The national food crisis prevention and management system is also incapable of assisting all Chadians who suffer from structural or cyclical food insecurity.

Similarly, field observations suggest that, since the advent of drought and desertification in Chad, agro-pastoral systems have become the dominant production systems employed by livestock farmers and are used by a large number of households in rural areas. These agro-pastoral systems are also the sites of the most extreme poverty and hunger, as increasingly frequent periods of drought continue to decimate livestock and drive down productivity.

FIGURE 3. FOOD SECURITY EXPERIMENTS AND PROGRAMMES.

There are several programmes and projects currently in action in Chad as part of the country's efforts to improve food security. They are being run by various technical ministries – with the support of technical and financial development partners – and cover the entire country. Total funding contribution to these programmes and projects stands at more than 160 billion XAF.

Natural resource exploitation: two GTZ-funded projects – the Agricultural Development Project in the Léré and Kabia Departments (Projet de développement agricole dans les départements de Léré et de la Kabia – PRODALKA) in the Mayo-Kebbi Est and Mayo-Kebbi Ouest regions, and the Agricultural Development Project in the Biltine and Ouaddaï Departments (Projet de développement agricole dans les départements de Biltine et Ouaddaï – PRODABO) in the Ouaddaï and Wadi-Fira regions – have led to the creation of an integrated programme which includes participatory natural resource management. Total funding for these two projects stood at 7,200,000,000 XAF and 6,233,159,800 XAF respectively. Both projects were completed in December 2009.

The Batha Rural Development Project (Projet de développement rural du Batha – PRODER-B) and the Kanem Rural Development Project (Projet de développement rural du Kanem – PRODER-K) were funded by IFAD. These two projects concentrated on environmental management, focusing specifically on developing drainage basins, agroforestry, planting fodder shrubs, exploiting developed land and building pastoral wells and migratory livestock corridors. Total funding for these two projects was 10,342,404,000 XAF (PRODER-K) and 8,310,000,000 XAF (PRODER-B). The projects were initially scheduled to run from 2003-2008 but were finally completed in 2010 following implementation delays. PRODER-B was terminated in 2009 due to failures to honour certain commitments.

Intensification and diversification of production: as well as the two projects detailed above, the IFAD-funded Nord Guéra Food Security Project (Projet de sécurité alimentaire du Nord Guéra – PSANGII) was designed to improve organisation in rural areas of Nord Guéra in the interest of sustainable development, food security and improved nutrition (especially among women and children), and to encourage local populations to play a greater role in managing their own land. The project was launched in 2002 and was completed in 2010.

The Food Insecurity and Poverty Reduction Project (Projet d'appui à la réduction de la pauvreté et de l'insécurité alimentaire – PARPIA) received financial support from UNDP (819,508,800 XAF) and technical support from FAO. The project was located in Chari-Baguirmi, Hadjer Lamis, Moyen-Chari and Mandoul. It involved the creation of 100 units (micro-projects) which focused on crop production diversification (market gardening), short-cycle livestock farming and the marketing and processing of agricultural products to support the most vulnerable population groups. The project ran from 2007 to 2010.

The Pastoral Livestock Farming System Project (Projet d'appui au système d'élevage pastoral – PASEP), which was initially scheduled to run from 2002-2009, was extended into 2010. It covered the Sahel and Sudan zones. It received total funding of 24,969,000,000 XAF from ADF, TAF, BADEA, OPEP, the Chadian government and beneficiaries. Its aims were: (i) to encourage the emergence of local, national and inter-professional representative bodies for pastoral system producers and operators; (ii) to make the pastoral sector more competitive by modernising production, marketing, processing and certification infrastructures.

The Fishing Development Project (Projet de développement de la pêche – PRODEPECHE), received 13,068,000,000 XAF of funding from AfDB and BADEA, with a contribution from the Chadian government and beneficiaries. It covered Chad's main fishing areas, i.e. 12 regions and 29 departments. The project ran from 2007 to 2012 and was designed to increase fish production and create production, marketing and sustainable fish stock management infrastructures and, in turn, to contribute to ecosystem preservation. The project's target was to raise fish consumption from 6.5 kg per person per year to 8.5 kg per person per year by 2012.

The "DIHE" (spirulina) project, which received 840,000,000 XAF of funding from the European Union, covered the period 2007-2010 and the Lac and Kanem regions of Chad. The project was designed to support the development of the spirulina sector, which is both a food product and an income-generating crop for the population of Chad. The project's specific aim was to improve the quality of spirulina, help to market the product and build the capacities of women producers.

The Agricultural Service and Producer Organisation Support Project (Projet d'appui aux services agricoles et aux organisations de producteurs – PSAOP), which received 18,590,000,000 XAF of funding from the World Bank, was designed to boost agricultural productivity and income in rural areas by preserving basic natural resources. It covered the entire country and ran from 2004 to 2009.

The Natural Resource Management Project (Projet de gestion de ressources naturelles – PGRN) received 19 billion XAF of funding from AfDB, BADEA and IADB. Its aim was to boost agro-sylvo-pastoral production in the Tandjilé, Mayo-Kebbi, Logone Occidentale, Logone Orientale, Mandoul and Moyen-Chari regions. The project involved increasing the productivity of natural resources in a sustainable manner in the Sudan zone by renovating the old irrigation channels and building new ones. The project ran from 2006 to 2011.

Marketing and processing: these aspects have been included in a number of the projects mentioned above, most notably the DIHE and PARPIA projects.

Nutrition: this aspect has been covered by a number of projects, including SDC-funded multi-sectoral socio-economic development projects in the Nya-Pendé and Mandoul regions (1,178,852,445 XAF) and in the Wadi-Fira region (1,023,660,000 XAF). UNICEF has also provided 2,100,000,000 XAF of funding for projects in the Batha, Kanem, Guéra, Tandjilé and Mayo-Kebbi Est regions. The aims of these projects are to improve the living conditions of local populations by digging wells and constructing latrines for schools and families. These projects were launched in 2004 and are ongoing.

Food aid and the monitoring system: these aspects have received financial support from the European Union and AFD, totalling 1,381,000,000 XAF and 131,000,000 XAF respectively. These projects have helped to strengthen the country's early warning system (EWS). The project covering the period 2007-2010 led to the creation of a food security information system. The majority of these projects were implemented with the aim of supporting local development schemes by encouraging beneficiaries to take greater ownership.

Source: NFSP, 2010

Based on lessons learned from previous food insecurity programmes, and in order to accelerate progress towards target 3 of MDG 1, three priority areas have been selected in line with the NFSP priorities:

1. To intensify and diversify crop and livestock farming, especially among small producers.
2. To give small producers better access to food products.

3. To improve the nutritional status of children under five years old, and pregnant and breastfeeding women, and to improve food crisis management.

A number of interventions have been identified for each of these three priority areas, covering all types of food production (crops, livestock and forest products) and designed to meet the needs of small producers. These MAF interventions will target small farms of less than 1 hectare, belonging to small producers. This category covers 90% of all crop producers, the majority of whom are vulnerable to both food insecurity and hunger, primarily due to difficulties in accessing agricultural inputs and their exposure to climate change. This framework also focuses on women, and is intended to help them access productive resources and support their fight against hunger, a phenomenon which is more prevalent in families where the head of the household is a woman. In terms of agro-pastoralists, the framework will focus on the intensification of livestock farming by introducing new activities designed to boost productivity and reduce their vulnerability to the effects of climate change and drought. The decision to prioritise these interventions in this MAF is also based on their short-term feasibility and impact. Furthermore, these interventions will need to focus on those geographical areas containing the most people suffering from food insecurity and malnutrition, i.e. Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï. These vulnerable regions are home to a population of over 4 million people.

The MAF will help to improve the population's resilience, boost their access to production resources and help them to develop sustainable livelihoods. As such, it will help to ensure that the benefits of these interventions are sustainable and avoid a situation in which the populations that benefit from them fall back into a cycle of food insecurity at the end of the programme. The MAF also includes details of support measures such as microfinance, rural road development, the consideration of gender issues, improved governance and land management.

A - PROMOTE THE INTENSIFICATION AND DIVERSIFICATION OF CROP AND LIVESTOCK FARMING, ESPECIALLY AMONG SMALL PRODUCERS

A.1. Develop small-scale irrigation and other systems for small producers (creation of small irrigated fields, inland valleys, lakes, water retention systems and easy-to-manage channel systems)

The issue of water management remains a key hindrance to improving agricultural productivity. In Chad, average water use for irrigation per capita stands at 23 m³, only half the equivalent figure in Burkina Faso. Furthermore, fewer than 30% of farmers have access to an irrigation system.

Chad has significant inland valley potential, but this potential is largely under-exploited. An estimated 5.6 million hectares of land is suitable for irrigation. It is therefore important, as well as developing agricultural water systems, to build water retention systems to irrigate out-of-season crops and to channel water for cattle to drink.

A.2 Improve small producers' (SP) access to inputs and small-scale equipment (seeds, fertilisers, tools – ploughs, carts, seed drills, hoes – fodder and veterinary medicines)

The aim of this intervention is to substantially improve the productivity of small producers and livestock farmers by providing them with better access to inputs and equipment.

In terms of improving the ability of small producers to access seeds, reference should be made to the agreement between ITRAD and the PGRN, which focuses on (i) the production of pre-basic, basic and first-reproduction food crop seeds and (ii) the production of root and tuber cuttings and the production of fruit-bearing plants. In the last three seasons, the NFSP has

purchased improved seed varieties produced by seed multiplier consortiums, under the supervision of ITRAD. It has then supplied these seeds to ONDR, which has distributed them free of charge to producers. During the 2010-2011 season, a total of 1,975 tonnes of seeds were produced, including all types (pre-basic, basic and first-reproduction) and all species (rice, sorghum, corn, peanut and black-eyed pea). Since the end of the Grassi project in 2003, limited progress has been made in seed production in the Sahel zone, with total production standing at 389 tonnes of seeds (barely 5% of domestic needs). To put this into perspective, ITRAD's own target was to increase first-reproduction seed production by 20% during the 2011-2012 season.

With respect to fertilisers, a range of actions are currently being implemented under the auspices of the NFSP. These actions are designed to promote the use of fertilisers on food crops. There are plans to import at least 55,000 tonnes of fertiliser. Some producers in Chad are using compost to good effect, but the vast majority of the country's small producers (over 80%) do not use any form of fertiliser.

In terms of providing small producers with access to small-scale tools, it is interesting to note that cultivation using animal traction has been on the rise since 2003. The Department for Agriculture has set itself a target of increasing the number of small producers equipped with ploughs by 2% per annum. During the 2009-2010 farming season, the NFSP purchased and supplied the ONDR with 10,000 ploughs, 2,000 western-style hoes and 1,000 cattle-drawn carts for distribution to rural farmers. Producers in the Lac, Kanem and Ouaddaï regions also received a range of market gardening tools (hoes, machetes, rakes, pickaxes, carriers, treatment equipment and pump units). These tools enabled producers to work a total of 7,400 hectares of land, representing 37% of the 20,000 hectares of land officially set aside by the

head of state. In terms of mechanical cultivation, a tractor assembly factory has been created in N'Djamena. This facility produced an initial batch of 65 tractors, which were purchased by the NFSP and sold to producers on credit. A total of 1,000 tractors are currently being distributed across the country for the 2012-2013 season. These tractors will have a limited impact on food security, however, as no arrangements have been put in place to train tractor operators or conduct repair and maintenance in the event of breakdowns.

With respect to veterinary medicines and inputs, a number of laws and regulations have been introduced to improve the framework governing these inputs and promote their use. Funding has also been provided to conduct animal health prevention and monitoring activities. Animal disease monitoring, prevention, vaccination and treatment work continues. Some diseases, such as rinderpest, have been eradicated. Livestock farmers now vaccinate their animals as standard.

Milk is not produced consistently and on a constant basis as it is highly dependent on cattle feed and water conditions. Milk is abundant during the rainy season, with average production from the Sahel zebu – feeding on natural grazing land under extensive farming conditions and without feed supplements – of 600 kg of milk per animal during August. Production is much lower during the dry season, however, with this figure falling to 500 kg of milk during April. Under these conditions, average domestic production stands at 2 to 3 litres per animal per day for a period of 7 to 8 months. In the past (1983-1990), the National Animal Production Company (Société Nationale de Production Animale – SONAPA) distributed fodder and cottonseed meal to breeders within the milk collection zone to boost production during the dry season.

Between 1995 and 2000, an AFD-funded dairy

project led to the creation of a number of organisations around the city of N'Djamena. Later, during the droughts that killed vast numbers of cattle in 2007, the Department for Pastoral Organisation (Direction de l'Organisation Pastorale) conducted several cottonseed meal distribution operations. In terms of production conditions, improvements in animal feed during the dry season and in dairy cow health may be sufficient to remedy the seasonal deficit and achieve an increase in production of almost 30%, or 2 to 3 litres of milk per day.

A.3 Conduct outreach work to improve production, agricultural diversification and climate change adaptation knowledge among small producers

One of the main aims of this intervention is to bridge the existing gap in education and training: something which is crucial at all levels, for policy consultants and field agents and producers alike. The existing pool of support staff is ageing due to a moratorium on recruitment. Experiments conducted by a number of NGOs, including MODEL and APDI, have shown that a trainer can teach a producer to make natural fertilisers (compost) in three months, and that the compost will be usable after a further two months. In these experiments, the recipients of the training boosted their productivity by 30% (see the APDI activity report for the first half of 2012).

Chad's outreach system relies primarily on two institutions: the National Rural Development Office (Office national de développement rural – ONDR) and the Lake Chad Development Society (Société pour le développement du Lac – SODELAC). The former covers the entire country, with the exception of the Lac region, which falls under the responsibility of the latter. The system employs 971 agents, 717 of whom are involved in outreach work *per se*. Current outreach activities

are detailed below:

1. The ONDR launched an annual recruitment drive to hire 150 new outreach agents each year, with a target ratio of one outreach agent per eight villages. In 2011, this outreach programme covered 32% of all villages in Chad.
2. An equipment investment programme is currently being implemented to make outreach agents more mobile and give them improved tools and resources. This programme is funded by a substantial increase in the government grant to the ONDR.
3. The ONDR's pre-outreach service has been relaunched in order to boost consultation, research and outreach.

A total of 80 agricultural advisers have been recruited and assigned to the ONDR as part of the NFSP. Outreach and education work will enable producers to learn about soil fertility management and restoration techniques. Furthermore, experiments conducted by NGOs such as APDI (Association pour la promotion du développement durable et intégral – association for the promotion of sustainable and integrated development)⁶ in the private sector and civil society have shown that each trainer is capable of training more than 100 producers per year, with each group receiving three months of training. These experiments and projects have also led to the creation of versatile agro-pastoral training centres, which deliver outreach training and services in the Moyen-Chari region. The marked fall in productivity caused by climate change and soil degradation was the key factor that alerted producers to the need for training in agro-pastoral production techniques. APDI also delivers gender training, and some women have become involved in management activities as a direct result of this training. The NGO's activity report suggests that every single family that received training has increased its coverage

6. With the support of SDC

rate (food production vs. annual food needs) by 30%. The results are also promising in terms of replicability, with the 30 producers trained under this programme going on to train at least 144 other people. The NGO MODEL has also delivered training and support to both male and female producers on a range of different agro-pastoral and market gardening production issues, including processing (flour, packaging, compost), production and animal health.

As regards the diversification of production among small producers, the combination of the food crisis and cotton industry crisis led the government to search for a suitable replacement crop. Having studied various roots and tubers, it identified cassava as the ideal substitute, as both a food crop and an income-generating activity. The FAO-funded project known as the Initiative Against Rising Food Prices (Initiative contre la flambée des prix de denrées alimentaires), implemented by the Ministry for Agriculture and Irrigation in 2008, helped producers in cotton-growing regions to boost their production significantly and led to the availability of improved cuttings. A number of individual and collective initiatives have been introduced to meet the needs of other villages and ensure that producers have access to cuttings of improved, higher-yield varieties that are more resistant to mosaic disease.

Market gardening and out-of-season crop growing are also common practices across the majority of the country. These activities are mainly found along river banks and around lakes (Logone, Chari, Lake Chad, Lake Fitri, etc.), as well as on the banks of smaller lakes and ponds near major towns and cities. This type of production (especially fresh vegetables) has a significant positive impact on nutrition and provides a key source of income for producers. In order to promote this sector, the NFSP provides support

to market gardeners, focusing in particular on those operating in suburban areas. This support includes the provision of small-scale tools, seeds and plant protection products, as well as the digging of a few market garden wells.

In light of the sheer size of the country and the range of opportunities it offers, there are also plans to develop non-wood forest products in some regions, in the interest of further diversification.

B - FACILITATE ACCESS TO FOOD PRODUCTS FOR VULNERABLE POPULATIONS

B.1 Facilitate physical access to food for vulnerable populations in areas of structural deficit (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)

Some of the northern regions of Chad face a structural deficit in terms of food availability. As such, the local populations suffer from chronic food insecurity. Rural roads are needed to improve access to these highly vulnerable regions from food production areas. The government has launched a vast road-building programme (NPRS 2). Donors such as AfDB and the European Union have also provided funding for road-building projects, including the construction of access roads to isolated areas.

In order to improve physical access to food for vulnerable populations in areas of structural deficit, it is also important to organise food marketing, processing and preservation mechanisms, improve access to price and market-related information and develop rural markets. Several successful experiments have been conducted with these aims in mind, and they also form part of several ongoing projects.

One such example is the PARPIA project, which has successfully launched 100 micro-projects in the Chari-Baguirmi, Hadjer Lamis, Moyen-Chari and Mandoul regions. These micro-projects focus on issues such as the diversification of crop production (market gardening), short-cycle livestock farming, and the marketing and processing of agricultural products. These initiatives have benefited the most vulnerable population groups (oil press, etc.). The NGO AGPI has trained producers to turn shea into butter and to make preserves and concentrated syrup and these, in turn, have been made into other products. The producers organised themselves into consortiums and pooled their resources to transport the products they had made to larger towns and cities, where they would fetch higher prices.

B.2 Facilitate financial access to food for vulnerable groups (social safety nets)

The ability of households to access food also depends on their purchasing power. However, these households do not produce sufficient quantities and/or a sufficient diversity of products to have the necessary purchasing power.

In general terms, Chad experiences recurring and severe cereal deficits, particularly during years of poor rainfall. In some regions, this same problem is caused by structural deficits. In these cases, supply is low and prices are high, making food inaccessible to many households. Government interventions include free or subsidised food product distribution to vulnerable groups via ONASA. The United Nations agencies (FAO, WFP and UNICEF), other TFPs and NGOs are also involved in helping to guarantee access to food during food crises in the country. In 2011, a number of food distribution, food for work and blanket feeding projects were introduced to act as safety nets for vulnerable people.

Several other problems have also been identified, including poor targeting, which is carried out geographically rather than focusing on the most vulnerable groups. It is therefore important to improve the underlying mechanisms and concentrate more closely on risk and vulnerability assessments.

C. IMPROVE THE NUTRITIONAL STATUS OF VULNERABLE GROUPS (CHILDREN UNDER FIVE YEARS OLD, AND PREGNANT AND BREASTFEEDING WOMEN) AND MANAGE FOOD CRISES MORE EFFECTIVELY

C.1. Prevent and treat acute malnutrition among children under five years old, and pregnant and breastfeeding women

With its recurring food crises, Chad has one of the highest acute malnutrition rates in Africa. Measures to combat these crises – which have a particularly severe impact on children under five years old, and pregnant and breastfeeding women – are incorporated into the National Health Development Plan (Plan national de développement sanitaire) (2009-2012) and are implemented in line with the activities outlined in the Malnutrition Treatment Protocol Implementation Plan (Plan de mise en oeuvre du protocole de prise en charge de la malnutrition). Government-run institutions and humanitarian organisations have introduced a number of programmes to tackle this problem. These focus on: (i) treating acute malnutrition in social and healthcare centres and hospitals; (ii) preventing malnutrition and micronutrient deficiencies by distributing enriched products and dietary supplements. These government actions – carried out with the support of the United Nations and technical and financial partners – have helped to save thousands of children and women from life-threatening situations. Following a series of actions and programmes implemented over a number of

years, the government and its partners drafted and adopted the National Acute Malnutrition Treatment Protocol for Chad (Protocole national de prise en charge de la malnutrition aiguë au Tchad), which was signed in March 2011. By the end of October 2012, the number of feeding centres created by all stakeholders in the sector had risen to 425. Despite encouraging results in recent years, the treatment of malnutrition remains blighted by a number of problems. An analysis of these difficulties should be conducted in order to make these programmes more effective and extend their coverage.

C.2. Promote nutritional education

As well as treating people suffering from malnourishment, it is also important to promote nutritional education in order to prevent malnutrition. A number of nutritional education programmes have been implemented in Chad, both by the government and by its partners. One such example is the Nord Guéra Food Security Project (Projet de sécurité alimentaire dans le Nord Guéra), which has led to the creation of 64 literacy education centres covering 314 villages. These centres have so far provided regular child health and nutrition training to a total of 3,516 people, 3,344 of whom have been women. These programmes only cover a small proportion of the population of priority vulnerable areas and should therefore be extended.

C.3 Secure and strengthen the food crisis management and information system (CASAGC, FSIEWS, ONASA)

The food crisis management and prevention system is run by the Committee for Action on Food Security and Crisis Management (Comité d'action pour la sécurité alimentaire et la gestion des crises – CASAGC) and its various divisions. The

CASAGC is an umbrella body covering all food security stakeholders, including development partners.

In terms of the information system (collection, processing, analysis and dissemination), a farming season monitoring system has been introduced. This system relies mainly on the farming survey (total seeded surface areas, yields and production volumes) and market watch activities (market supply and food and livestock prices). This system receives support from a number of partners. The government has expressed a commitment to reforming the system, and to improving its performance and effectiveness via the FSIEWS (Food Security Information and Early Warning System).

With respect to food stocks, the government's aim is to maintain a minimum annual supply of 35,000 tonnes of cereals, which will be managed by ONASA. In recent years, total domestic food aid stock has stood at between 20,000 and 25,000 tonnes. In response to the food crisis, the government increased the amount of food aid for distribution to 50,000 tonnes for the 2011-2012 season.

TABLE 8. MAF PRIORITY INTERVENTIONS AND NFSP POLICY GOALS

National food security and nutrition strategies and programmes	MAF priority areas	MAF priority interventions
<p>NFSP/Sub-programme 1 Exploitation and sustainable management of basic natural resources</p> <ul style="list-style-type: none"> Water management for crop irrigation pastoral water systems <p>NFSP/Sub-programme 2</p> <ul style="list-style-type: none"> Intensification and diversification of crop and animal production and apiculture Restoration of soil fertility and exploitation of non-wood forest products 	<p>A - Promote the intensification and diversification of crop and livestock farming, especially among small producers</p>	<p>A.1. Develop small-scale irrigation and other systems for small producers (creation of small irrigated fields, inland valleys, lakes, water retention systems and easy-to-manage channel systems)</p> <p>A.2 Improve small producers' (SP) access to inputs and small-scale equipment (seeds, fertilisers, tools – ploughs, carts, seed drills, hoes – fodder and veterinary medicines)</p> <p>A.3 Conduct outreach work to improve climate change adaptation knowledge and promote the diversification of production among small producers</p>
<p>NFSP/Sub-programme 3 Storage, processing and marketing</p> <ul style="list-style-type: none"> Storage and preservation, processing and marketing Rural roads 	<p>B - Facilitate access to food products for vulnerable populations</p>	<p>B.1 Facilitate physical access to food for vulnerable populations in areas of structural deficit (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)</p> <p>B.2 Facilitate financial access to food for vulnerable groups (social safety nets)</p>
<p>NFSP/Sub-programme 4 Emergency food stocks and the crisis monitoring, alert and response system</p> <p>NFSP/Sub-programme 5 Nutrition: Nutritional education</p> <p>NHDP/Action programme VIII: Improve maternal and child health</p> <p>A4: Continue the fight against malnutrition (see malnutrition treatment protocol implementation plan)</p>	<p>C - Improve the nutritional status of children under five years old, and pregnant and breastfeeding women and manage food crises more effectively</p>	<p>C.1 Treat acute malnutrition among children under five years old, and pregnant and breastfeeding women</p> <p>C.2 Promote nutritional education</p> <p>C.3 Secure and strengthen information and food stock management systems and structures (CASAGC, FSIEWS, ONASA)</p>





IV. ANALYSIS OF BOTTLENECKS

Photo: FAO Chad

The majority of the interventions outlined above form part of ongoing or pre-approved activities under various existing food security projects and programmes. The current situation in Chad, as reflected in various food security indicators, would suggest however that there are delays or shortcomings in the full and effective implementation of these interventions.

In order to accelerate progress towards target 3 of MDG 1, the existing or potential bottlenecks hampering implementation of these interventions need to be analysed and ranked in accordance with their impact on the intervention in question and the extent to which it is feasible to remove these bottlenecks in the short term.

4.1 1. BOTTLENECKS SPECIFIC TO THE CHOSEN INTERVENTIONS

PRIORITY AREA 1: INTENSIFY AND DIVERSIFY CROP AND LIVESTOCK FARMING, ESPECIALLY AMONG SMALL PRODUCERS

A1.: DEVELOP SMALL-SCALE IRRIGATION AND OTHER SYSTEMS FOR SMALL PRODUCERS (CREATION OF SMALL IRRIGATED FIELDS, INLAND VALLEYS, LAKES, WATER RETENTION SYSTEMS AND EASY-TO-MANAGE CHANNEL SYSTEMS)

The main bottlenecks are as follows:

A.1.1 Insufficient promotion of sustainable irrigation techniques suited to SPs and the areas concerned (drip irrigation, hand pumps, water and run-off collection techniques, solar-powered pumps, etc.). Substantial public and private investment has been made in recent

years to develop agricultural water systems. Despite this investment, only a tiny percentage of farmland is irrigated, with the majority of the areas and regions affected by hunger located in the Sahel and Saharan zones, where there is a significant rainfall deficit. These developments have also been of little benefit to the poorest households. Furthermore, many inland valley creation projects (such as the Ligna project) have been hampered by land issues caused by the influence of customary and traditional authorities. This situation has been further exacerbated by secular water resource conflicts between crop and livestock farmers.

A.1.2 Insufficient capacity among SPs to manage small irrigated fields. The majority of irrigated fields have been created without any organisational, programming, maintenance and repair instructions or stakeholder empowerment measures (management, operator or administration committees). Producer organisations (of which there are tens of thousands) are poorly organised and structured. Users of these irrigated fields have also received little or no training and financial and water management arrangements are poor. Furthermore, the failure to consider gender issues and the needs of disadvantaged groups such as women and young people has also hampered irrigated field management. This is particularly evident in the case of rice fields, where male heads of household are prioritised over other social groups.

A.1.3 Insufficient capacity among SPs to bear the set-up and maintenance costs of small-scale irrigation infrastructures and other small-scale systems. The development costs of small-scale irrigation systems and water retention systems and pumping costs (fuel prices) are prohibitively high for low-income SPs, and budgetary allocations to this sub-sector are insufficient.

A large proportion of funding is channelled into the development of large irrigated fields, which are little used by SPs. Furthermore, poor small producers have no access to credit. For example, fuel-powered pump units are too expensive for isolated SPs to afford in the long term.

A.1.4 Land access problems for some SPs, especially women. Land management practices vary substantially from region to region and are subject to both the customary and traditional system, and the so-called “modern” system. In those areas of the country governed by traditional law, religious leaders have the final say on land access matters. Muslim law defines land exploitation obligations and criteria and tends to favour the principle of individual private ownership, even where the land concerned is, in principle, public property. Under modern law, however, all non-farmed and so-called “vacant” land automatically reverts to public ownership. The question of women and access to fertile land is particularly complex and challenging. The ongoing degradation of natural resources is exacerbating already poor living conditions for women in rural areas. As soil fertility decreases, men move to find new, more fertile land to farm. Women, meanwhile, do not have this same freedom of movement and struggle to find land which is still fertile. From a legal perspective, and pursuant to laws 23, 24 and 25 of 22 July 1967, land ownership is a universal right for all. Under customary law, however, only male heads of household have the right to own land. Muslim law, meanwhile, states that land is inherited by the descendants of the deceased.

A.1.5 Insufficient land conflict prevention systems. Land usage conflicts and rivalries are a regular occurrence, especially between crop and livestock farmers. These conflicts are caused by a lack of land management plans

and poor community-level conflict resolution mechanisms. Under Chad’s customary laws, community chiefs and leaders are responsible for land management. Their actions are guided by the specific rules of each community. In the south of the country, the “land chief” is responsible for administering and managing the land. It is his role to allocate land for farming or housing, based on the needs of community members. In the central and northern regions, meanwhile, land use is governed by Muslim laws and practices. All land belongs to God and it is the sultans, as representatives of God, who allocate land to those who request it⁷. These mechanisms need to be strengthened to prevent conflicts, improve conflict management and ensure that Chad’s land is used both fairly and effectively.

A2.: IMPROVE SMALL PRODUCERS’ (SP) ACCESS TO INPUTS AND SMALL-SCALE EQUIPMENT (SEEDS, FERTILISERS, TOOLS – PLOUGHS, CARTS, SEED DRILLS, HOES – FODDER AND VETERINARY MEDICINES)

The main bottlenecks are as follows:

A.2.1. Insufficient availability of suitable inputs for food crop production and small-scale equipment. Seed provision falls well short of the needs of producers. During the 2009-2010 farming season, for example, 226 tonnes of improved seed varieties were distributed (all crops combined). These seeds were only distributed in the Sudan zone. A total of 2,567 producers (out of a population of several hundreds of thousands) received cassava cuttings amounting to 182 hectares of crops, and achieved an average yield of 3,860 t/ha, compared with 2,745 t/ha in the previous year. ITRAD is responsible for the vast majority of seed production, acting as both an elite seed variety research and production organisation and a

7. Source: Toussaint Ablaye Roasngar “L'accès à la terre au Tchad” – December 2008 – Centre d'Etudes et de Formation pour le Développement (CEFOD) – Banque Tchadienne de Données Juridiques (BTDJ)

commercial seed supplier. As such, it is unable to cover domestic demand. There have also been difficulties in launching the seed production agreement between ITRAD and the PGRN.

As far as fertilisers are concerned, Chad does not have a central procurement unit or a sufficient number of outlets. Those outlets that do exist are rarely located close to producers. Some divisions of the ONDR are also located too far away from producers, who are required to travel vast distances and often leave empty-handed. Over 90% of Chad's mineral fertiliser imports are used for cotton and sugar production. As such, food crop producers are often forced to use fertilisers designed for cotton crops, with no guarantees over the quality of these fertilisers. The government has made some effort in recent years to distribute fertilisers, but the majority of this effort has focused on rice crops. Market gardeners are mainly left to fend for themselves and are forced to find their own fertiliser procurement solutions. The fact that fertilisers are sold in 50 kg sacks means that many crop farmers are unable to afford the steep costs. This situation penalises market gardeners working small plots of land in particular. Furthermore, the regulatory framework governing the fertiliser sub-sector remains vague. This lack of proper regulation poses three major risks for agriculture: the sale of poor-quality or counterfeit fertilisers at anti-competitive prices, the sale of fake fertilisers, and the use of fertilisers that are unsuitable for the crops or agro-ecological areas in question. Very few international fertiliser suppliers are willing to invest in Chad due to factors such as the country's narrow market, difficulties transporting goods within the country, its under-developed infrastructures, the high cost of factors of production (electricity, etc.), competition from the informal sector, fraud and corruption.

In terms of the distribution of veterinary medicines and inputs, the major challenge in this respect is a lack of capacity among small-scale operators (livestock breeding support workers, private vets and authorised retailers). This situation has hampered efforts to extend the local distribution network for livestock farmers. According to industry professionals, the introduction of impure products by travelling traders has led to unfair competition and has had an adverse effect on traditional distribution activities.

With respect to mechanisation, only the CST, SODELAC, government-run farms and a few large-scale producers currently use tractors and rotary tillers. However, the recent creation of a new organisation, known as the Industrial Farming Equipment and Tractor Assembly Company (Société industrielle de matériel agricole et d'assemblage de tracteurs – SIMATRACT), at a cost of 6 billion XAF to the government of Chad, sends out a promising signal in terms of promotion of this sub-sector.

In terms of the provision of cattle feed supplements (fodder, meal and feed) to small livestock producers during the dry season, no significant interventions have been made to improve upstream dairy production practices, despite the fact that dairy industry development is included in strategy documents covering this sub-sector.

A.2.2 Poor technical capacity of support services and insufficient technical monitoring of SPs. There are insufficient monitoring and support activities to ensure that producers use seeds and fertilisers correctly. This situation counteracts the potential benefits gained from the introduction of new inputs (seeds or fertilisers).

A.2.3 Insufficient purchasing power among SPs to buy inputs and agro-pastoral equipment, and poor management of subsidies that penalises vulnerable groups.

Due to the high level of poverty among the rural population, households and small producers in particular are unable to find the necessary funds to buy livestock, even at subsidised prices. The beneficiaries of microcredit development projects such as PARPIA feel that the amounts they are allocated are too low and the repayment terms too long to achieve quick turnaround. Pressure from members awaiting payments is a source of conflicts of interest which, in turn, threaten the survival of the consortiums in question. The general lack of financial products suited to the needs of small producers means that these producers are unable to access bank and/or microfinance services and are forced to rely on their own meagre resources.

A.2.4 Insufficient consideration of the production equipment needs (ploughs, carts, seed drills, plant protection equipment) of SPs in support programmes.

Although cultivation using animal traction was first introduced to Chad in the 1960s, this practice has not yet been adopted by all farms in the country. At present, the number of small producers equipped with these tools stands at just 31% in the Sudan zone. Extremely poor small producers are largely unable to access small-scale tools due to the prohibitive costs associated with purchasing such equipment. During the ONDR's last tool distribution campaign, it ordered a total of 10,000 ploughs and sold these to producers at a subsidised rate of 65% of the cost price. These highly subsidised prices were catastrophic for local farm machinery manufacturers, who were unable to sell their products. Sales of ploughs at such heavily discounted prices has also affected the distribution of cattle- and horse-drawn carts, which do not benefit from anything like the same level of subsidy. The equipment

acquisition process is also extremely complex and long-winded. As such, producers often fail to receive their equipment in time for the harvest. The process also excludes local farm machinery manufacturers. Tractors, meanwhile, are so expensive that producers cannot even afford them under group buying arrangements. There is therefore limited scope for growth in the market for this type of machinery.

A.2.5 Insufficient budget allocation for REPIMAT (Animal Disease Epidemiosurveillance Network in Chad).

Statistical data appears to show a marked decrease in animal disease monitoring and treatment activities compared with the situation 10 years ago. In 2008 and 2009, less than 20% of cattle were vaccinated against animal diseases. In the past, this figure was as high as 60%. An analysis reveals that the reasons for this poor performance lie in problems with REPIMAT (the Animal Disease Epidemiosurveillance Network in Chad) and insufficient capacities among field veterinary services (particularly private vets). This situation is the result of insufficient budget allocation to fund animal health interventions in recent years. In 2008-2011, a total of 4,000,000,000 XAF was allocated to this sector, less than a third of the total amount required.

A3: CONDUCT OUTREACH WORK TO IMPROVE PRODUCTION, AGRICULTURAL DIVERSIFICATION AND CLIMATE CHANGE ADAPTATION KNOWLEDGE AMONG SMALL PRODUCERS

The main bottlenecks are as follows:

A.3.1 An insufficient number of outreach workers, especially women. Over 70% of villages have inadequate outreach worker coverage. The ONDR's outreach system employs 971 agents, 717 of whom are involved in outreach work *per se*. This number falls well

short of what is needed. The percentage of villages covered by outreach workers stood at 31.79% in 2010. Under the PARPIA project, the ratio of technicians to beneficiaries is 1 to 135, compared with an intended ratio of 1 to 50. Where beneficiaries are required to travel vast distances on poor-quality roads, attendance and course numbers fall. Furthermore, there are only 43 women out of a total of 717 outreach workers (less than 6%), despite the fact that women are the head of the household in 20.5% of cases. This situation means that these women are unable to benefit from training in the use of agricultural techniques. There are also certain customs that prevent women from being in contact with unfamiliar men.

A.3.2 Insufficient financial and material resources for research and outreach bodies (ITRAD, ONDR, etc.) to run teaching fields, operate multifunctional platforms and disseminate new technologies. The funds allocated to this sector are insufficient to cover the travel costs of outreach workers, who therefore spend more time in the office than in the field. All grants and subsidies allocated to the ONDR are swallowed up by staff salaries, leaving little funding left over to purchase equipment and cover operating costs.

A.3.3 Insufficient promotion of new varieties and crops, due to a lack of suitable intervention strategies for the agro-ecological zones in question. Although market garden crops are grown across almost the entire country, and despite the fact that these crops are profitable and domestic demand is high, small producers lack the necessary inputs, support and practical information.

A.3.4 Insufficient use of ICTs (rural radio, mobile telephones, etc.) as outreach tools in vulnerable areas. Information and communication technologies are also under-used

for the dissemination of methods and practices.

PRIORITY AREA 2: FACILITATE ACCESS TO FOOD PRODUCTS FOR VULNERABLE POPULATIONS

B.1: FACILITATE PHYSICAL ACCESS TO FOOD FOR VULNERABLE POPULATIONS IN AREAS OF STRUCTURAL DEFICIT (LAC, KANEM, HADJER LAMIS, WADI-FIRA, GUÉRA, BATHA, SALAMAT, BAHR EL GAZAL, SILA AND OUADDAÏ)

The main bottlenecks are as follows:

B.1.1 Insufficient food processing, storage and marketing capacities. Post-harvest losses are extremely high, thereby reducing the volume of food available for consumption and sale. The most severely affected products include cereals and fruits. This situation often forces crop farmers to sell off their products due to a lack of preservation and processing infrastructures. Existing projects in this area are incapable of meeting the needs of the vast majority of producers, who remain poorly organised and suffer from a lack of adequate resources. Under current methods and practices, processed products have a short shelf-life. Furthermore, these practices often have little regard for existing hygiene rules. Storage and packaging practices are insufficient and often lead to a deterioration of the nutritional quality of the products concerned. The vast majority of fish, for example, is salted, dried and smoked before it is sold.

In terms of marketing, the majority of villages have extremely limited access to markets and market-related information. Chambers of commerce and other institutions have little effective representation in these regions.

B.1.2 Insufficient rural roads in areas in deficit and in production areas.

Those areas that are vulnerable to food insecurity and malnutrition are often isolated and difficult to access, which makes it extremely difficult to transfer goods and people between regions. Despite a vast road-building programme (NPRS 2) – initiated by the government with the support of development partners including AfDB and the European Union – the lack of rural roads remains a key limitation. The main problems in this respect remain insufficient resource mobilisation and a failure to consider the recurring maintenance costs needed to keep these roads in good condition.

B.2: FACILITATE FINANCIAL ACCESS TO FOOD FOR VULNERABLE GROUPS (SOCIAL SAFETY NETS)

B.2.1 Insufficient purchasing power to access food products, even at subsidised prices.

The government's current agricultural product subsidisation policy fails to meet the needs of those households who are vulnerable due to extreme poverty (87% of the rural population lives below the poverty line), as these families are still unable to afford these products, even at subsidised prices.

B.2.2 Insufficient targeting of beneficiaries and poor food aid management (misappropriation which penalises vulnerable populations).

There are serious problems with the targeting and distribution of food aid in Chad. Furthermore, there is evidence that subsidies are misappropriated in a way that penalises vulnerable groups. As such, these vulnerable populations are unable to become self-sufficient and depend on food aid to survive, particularly during food crises.

PRIORITY AREA 3: IMPROVE THE NUTRITIONAL STATUS OF VULNERABLE GROUPS (CHILDREN UNDER FIVE YEARS OLD, AND PREGNANT AND BREASTFEEDING WOMEN) AND MANAGE FOOD CRISES MORE EFFECTIVELY

C.1: TREAT ACUTE MALNUTRITION AMONG CHILDREN UNDER FIVE YEARS OLD, AND PREGNANT AND BREASTFEEDING WOMEN, AND PROMOTE NUTRITIONAL EDUCATION

The main bottlenecks are as follows:

C.1.1. Insufficient government budget allocation to the nutrition sector.

The vast majority of nutrition treatment projects and programmes are funded by technical and financial partners. This is an especially significant limitation in this sector, since the resources mobilised by these partners are insufficient to cover all nutritional treatment needs. Furthermore, efforts in this respect are hampered by the unpredictability of resources. As such, it is not always possible to take rapid, carefully planned action.

C.1.2. An insufficient number of adequately qualified personnel, with poor geographical distribution and vast distances between health and feeding centres.

Women and children who suffer from acute malnutrition are treated by healthcare and nutrition personnel in health and feeding centres located throughout the country. However, this treatment programme is hampered by a number of obstacles, including insufficient numbers of adequately qualified healthcare and nutrition personnel, poor geographical distribution of personnel and vast distances between health and feeding centres and populations living in those areas most vulnerable to malnutrition. Furthermore, despite plans to build numerous nutrition monitoring and recovery centres and to create therapeutic

feeding centres (TFCs) and supplementary feeding centres (SFCs), not all of these plans have come to fruition.

C.1.3. The lack of an effective national nutrition policy. Chad does not have a national nutrition policy. This represents an important bottleneck to implementing interventions to improve the nutritional status of vulnerable groups.

C.2: Prevent malnutrition by promoting nutritional education

Field-based nutritional education is limited to a few training centres, the majority of which have been created by NGOs and/or other bodies. The bottlenecks to effective implementation of nutritional education within community associations are as follows:

C.2.1. Insufficient nutritional education capacities among trainers. The anti-malnutrition strategy outlined in the NHDP focused on the promotion of nutritional education both at community level and in healthcare centres, therapeutic feeding centres and supplementary feeding centres. This type of activity is intended to be delivered by healthcare workers and nutrition specialists. According to various surveys and assessments, however, these workers find it difficult to fulfil this role successfully. Similarly, community-level education programmes remain insufficient due to a lack of delivery partners, poor technical capacities within the Ministry for Health and access problems.

C.2.2. Socio-cultural pressures and a high rate of illiteracy. Certain beliefs and socio-cultural practices exist in Chad which can lead to unhealthy dietary and nutritional behaviour. Furthermore, these beliefs and practices can sometimes prevent key messages from being

disseminated among, and accepted by local populations. Similarly, the high level of illiteracy among the most vulnerable population groups acts as a further barrier to the adoption of healthy practices.

C.3: SECURE AND STRENGTHEN THE FOOD CRISIS MANAGEMENT AND INFORMATION SYSTEM (CASAGC, FSIEWS, ONASA)

The following bottlenecks have been identified as priorities in this area:

C.3.1. An inadequate food crisis management system and poor information circulation: Since the closure of the EU-funded DIAPER (Permanent Agricultural Survey System), Chad's food security information system has fallen into disrepair, due in part to a lack of financial support. The European Union had funded the DIAPER project for over 14 years as part of the CILSS programme. Following the closure of this project, UNDP took responsibility for work in this area with the FSIEWS (Food Security and Early Warning Information System). However, this new system is not yet fully operational and the WFP is still responsible for monitoring at-risk areas and vulnerable populations. This demonstrates a lack of proper governance within the sector and insufficient ownership of the food security system at national level.

C.3.2. Insufficient stock of food aid to combat food insecurity: The national stock of food aid is not managed in accordance with the established rules. The minimum stock thresholds for cereal banks are never met. Similarly, subsidised sales and free food aid distribution by the government during food crises fail to benefit the neediest members of the population, and food sales in provincial capitals often exclude the most vulnerable people.

C.3.3. Difficulties in getting food to recipients in remote vulnerable areas during the rainy season:

Assessments conducted on programmes designed to support vulnerable people during periods of food and nutritional crises in Chad have revealed the problems that stakeholders face in getting food products to these populations. These problems are due to the vast distances between villages and communities, and a lack of rural roads in the most vulnerable regions. These problems are often exacerbated by floods during the rainy season, severely hampering the efforts of mobile feeding centres and/or food distribution teams.

C.3.4. Insufficient public capacity to manage the prices of essential commodities:

Despite the government's free market approach to price-setting, it has taken specific measures during periods of crisis to manage the prices of essential commodities such as cereals, meat and other food products. This food price-fixing mechanism fails to take certain important factors, such as production costs, into account. As such, the products concerned often disappear from the market once these measures have been put in place, leading to shortages and soaring prices.

4.2 CROSS-CUTTING BOTTLENECKS

As well as the above-mentioned bottlenecks to specific strategic interventions, the analysis has also revealed a number of cross-cutting bottlenecks that pose obstacles to the fight against food insecurity and malnutrition in general. These are detailed below:

1. Insufficient budget allocation to rural development and anti-food-insecurity programmes:

In structural terms, the proportion

of public resources allocated to the agricultural sector (both crop and livestock production) is low. As such, the country is unable to implement the full range of food security and malnutrition actions needed to meet its challenges. By way of illustration, the table below shows that in the last three budget years (2010-2012), an average of just 5% of public resources (approximately 70.23 billion XAF) were allocated to the sector. This level of funding is less than half the amount to which Chad's government committed under the Maputo agreement, under which governments are required to allocate 10% of their budget resources to agriculture. By way of comparison, the agricultural sector budgets in similar countries such as Burkina Faso and Mali are twice as high.

2. Poor management of rural development programmes and projects:

The project completion rate is generally low in Chad, particularly in the agricultural sector. Poor management is often caused by governance problems such as excessively long contract award procedures, private sector interference, lengthy document and agreement processing times and long delays in releasing counterpart funds. Another major obstacle to implementation is insufficient beneficiary participation in the project and programme design and implementation processes. A World Bank assessment of several projects has revealed that only 10% of allocated funding actually reaches the intended beneficiaries in rural areas. There are also multiple failings in the monitoring and evaluation of programmes and projects due to a lack of ownership and leadership from project managers and/or a substantial skills shortage among personnel.

3. Persistent gender inequalities in access to, management of and control over production facilities:

Surveys show that women account for over 80% of subsistence production. Despite this, women find it difficult to access land and other assets and, as such, are vulnerable to food insecurity. The majority of women also suffer from discrimination and social injustice linked to socio-cultural pressures and the existence of a traditionally patriarchal and gerontocratic society in which they are largely treated as second-class citizens⁸. In some regions, succession rules prohibit women from inheriting property, with women expected to marry and benefit from the assets and property of their husbands. In terms of education⁹, despite substantial rises in school attendance rates among girls over the last five years, vast inequalities remain. This discrimination means that women are often unable to benefit from training, outreach programmes and information which may help them to access production resources and credit. Similarly, women are responsible for the vast majority of household activities, leaving them

little time for productive work. Figures also suggest that families in which women are the heads of the household tend to spend a greater proportion of their resources on food (74%) than families where the head of the household is a man (72%)¹⁰. Promoting food security among women will therefore have a major impact on nutrition in general and will make a significant contribution to the fight against hunger and malnutrition. Effort from the government in this respect led to the approval of a National Gender Policy (NGP) in December 2011. According to the NGP, the aim is *“by 2020, to eradicate all forms of gender inequality and iniquity and all forms of gender-based violence, and to make Chad a country in which men and women have the same opportunities to access and control resources and to participate in decision-making bodies on an equal footing, in the interests of sustainable development.”* The recent creation of the Ministry for Microcredit for Women and Young People is a clear signal of a willingness to improve the economic position of women at the very highest level of government.

TABLE 9. PROPORTION OF THE BUDGET ALLOCATED TO AGRICULTURE

	“Agriculture and livestock farming” budget (in billions of XAF)	Proportion of total budget (%)
2010 (ENG.)	51.69	4.7
2011 (LFR)	71.3	4.5
2012 (LFI)	87.7	5.9
AVERAGE	70.23	5.03

Source: Ministry for Finance, 2012

8. With the exception of women in Peulh Bororo, where matriarchal communities prevail and where women have greater freedom to manage and use family resources. Women who carry out successful income-generating activities are held in high regard within these communities and have an important social role.

9. MDG monitoring report, 2010

10. Source: ECOSIT2 2004

TABLE 10. SUMMARY OF BOTTLENECKS AFFECTING PRIORITY INTERVENTIONS REQUIRED TO ATTAIN TARGET 3 OF MDG 1

Priority intervention	Policy and planning	Budget and funding
A.1 Develop small-scale irrigation and other systems for small producers (creation of small irrigated fields, inland valleys, lakes, water retention systems and easy-to-manage channel systems)	Insufficient land conflict prevention systems	Insufficient allocation of public resources to fund the development of small irrigated fields for SPs
A.2 Improve small producers' (SP) access to inputs and small-scale equipment (seeds, fertilisers, tools – ploughs, carts, seed drills, hoes – fodder and veterinary medicines)	Insufficient consideration of the production equipment needs (ploughs, carts, seed drills, plant protection equipment) of SPs in support programmes	Insufficient budget allocation for REPIMAT (Animal Disease Epidemiology Network in Chad)
A.3 Conduct outreach work to improve production, agricultural diversification and climate change adaptation knowledge among small producers	Insufficient promotion of new varieties and crops, due to a lack of suitable intervention strategies for the agro-ecological zones in question	
B.1 Improve physical access to food for vulnerable populations in areas of structural deficit and/or vulnerable areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)		
B.2 Facilitate financial access to food for vulnerable groups (social safety nets, income-generating activities, etc.)	Insufficient targeting of beneficiaries and poor food aid management (misappropriation which penalises vulnerable populations)	
C.1 Prevent and treat acute malnutrition among children under five years old, and pregnant and breastfeeding women	Lack of an effective national nutrition policy	Insufficient budget allocation for nutrition programmes
C.2. Promote nutritional education		
C.3. Secure and strengthen the food crisis management and information system (CASAGC, FSIEWS, ONASA)	An inadequate food crisis management system and poor information circulation	



Service provision	Use of services
<p>Insufficient promotion of sustainable irrigation techniques suited to SPs and the areas concerned (drip irrigation, hand pumps, water and run-off collection techniques, solar-powered pumps, etc.)</p> <p>Land access problems for some SPs, especially women</p>	<p>Insufficient capacity among SPs to manage small irrigated fields</p> <p>Insufficient capacity among SPs to bear the set-up and maintenance costs of small-scale irrigation infrastructures and other small-scale systems</p>
<p>Insufficient availability of suitable inputs for food crop production and small-scale equipment</p>	<p>Insufficient purchasing power among SPs to buy inputs and agro-pastoral equipment, and poor management of subsidies that penalises vulnerable groups</p>
<p>An insufficient number of outreach workers, especially women</p> <p>Poor technical, logistical and financial capacity of research and support services and insufficient technical monitoring of SPs</p> <p>Insufficient use of ICTs (rural radio, mobile telephones, etc.) as outreach tools in vulnerable areas</p>	
<p>Insufficient rural roads in areas in deficit and in production areas</p>	<p>Poor food product processing, preservation and marketing capacities among SPs</p>
	<p>Insufficient purchasing power among vulnerable populations to access food products, even at subsidised prices</p>
<p>Insufficient numbers of adequately qualified healthcare and nutrition personnel, and poor geographical distribution of personnel and healthcare and feeding centres</p>	
<p>Insufficient nutritional education capacities among trainers</p>	<p>Persistent socio-cultural pressures and a high rate of illiteracy</p>
<p>Insufficient stock of food aid to combat food insecurity and a lack of transparency in food aid management</p> <p>Difficulties in getting food to recipients during the rainy season</p>	





**V. ACCELERATING
PROGRESS TOWARDS
TARGET 3 OF MDG 1:
SOLUTIONS**

Photo: FAO Chad



This section outlines the solutions to the bottlenecks identified in the previous section. The solutions identified are also prioritised. Each solution has been analysed to determine its impact (extent, speed, durability and any collateral effects) on the bottleneck concerned, as well as its feasibility (governance, technical and financial capacities, existence of potential partnerships). In accordance with the MAF methodology, successful local initiatives and existing examples of good practice at national or international level have been prioritised in order to build upon ongoing projects and programmes within the country.

5.1 DEVELOP SMALL-SCALE IRRIGATION AND OTHER SYSTEMS FOR SMALL PRODUCERS (SPS)

In line with other countries in the sub-region such as Burkina Faso, small-scale irrigation systems, hand-operated or solar-powered pumps, inland valleys and easy-to-manage water retention systems will need to be developed in Chad by 2015. The following initiatives will be required to improve the management of these facilities: (i) deliver training in small irrigated field management techniques to SPs in target areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï) and build the capacities of the bodies involved; (ii) increase budget allocations to fund water system developments for 50,000 SPs in these vulnerable regions. Effort must be made to ensure that these initiatives include training in climate change adaptation techniques (drip and gravity-fed irrigation techniques, hand pumps, solar-powered pumps, barriers and bunds, stone barriers and pastoral water points).

In order for these actions to deliver long-term impacts, service cost-sharing (charging) mechanisms should be introduced at community level. Similarly, beneficiaries will need to receive training in how to manage small irrigated fields and receive micro-credit.

Development partners (donors and NGOs) will also have a crucial role to play in water management. Food for work programmes, designed to get people back into work, will need to focus on labour-intensive activities such as the construction of agricultural infrastructures which, in turn, will help to boost market garden crop production.

The issue of land access must be tackled through advocacy work and new programmes and projects in the target areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï). These efforts should focus on women in particular. Other solutions to this problem include introducing community-based land conflict prevention mechanisms, developing land management plans in a participatory manner and injecting new life into migratory livestock farming corridors and pastoral well digging programmes in the target areas.

5.2 PROVIDE SMALL PRODUCERS (SPS) WITH INPUTS AND EQUIPMENT

Inexpensive inputs and small-scale equipment should be used to boost production volumes and improve agro-pastoral productivity. In this respect, producers should be encouraged to produce inputs themselves (compost, improved seed varieties) through the allocation of more budget funding, and improvements should be made to the technical capacities of the relevant bodies (ITRAD, ONDR).

A national seed bank, a central procurement unit and a network of outlets selling seeds, fertilisers and small tools (ploughs, carts, seed drills, hoes, fodder, etc.) should be created and agro-pastoral medicines should be distributed in vulnerable regions. SPs will need to be trained in the use of the associated agricultural techniques. In order to achieve this, the government-run programme to distribute tools to SPs (130,000 beneficiaries in the target areas) will need to be extended and a strict control and monitoring system will need to be set up. Gender issues should play an important role in this system. To ensure that producers regularly use inputs in the long term, new microfinance institutions will need to be created in the target areas to accommodate 200,000 new members. A government guarantee fund should also be created, offering subsidised loans and other subsidies and grants (coupons, vouchers and subsidised prices). SPs should be encouraged and helped to set up their own associations to make group purchases (8,600 new consortiums in the target areas). A regular supply of veterinary medicines is also needed (including the allocation of more funding to REPIMAT).

5.3 CONDUCT OUTREACH WORK TO IMPROVE CLIMATE CHANGE ADAPTATION KNOWLEDGE AND PROMOTE THE DIVERSIFICATION OF PRODUCTION

In order to resolve insufficiencies in the number of outreach workers and available resources, effort should be made to extend existing experiments and redeploy agro-pastoral advisers

(600) to vulnerable regions to cover the vast majority of SPs. These activities should also be supported by increased budget allocations to research and outreach bodies (ITRAD and ONDR). New seed varieties should be promoted by disseminating varieties that are able to cope better with climate change, as well as out-of-season crops, providing training through demonstrations, and disseminating improved seed varieties. Efforts should also be made to raise awareness among SPs and provide training through exchange trips with different producers to learn about soil restoration and fertilisation techniques (compost, fertilisers, corridor crops, stone barriers and agroforestry).

ICTs are already used to facilitate diversification and disseminate new seed varieties (introduction and use of rural radios and mobile telephones) adapted to climate change. Producers are receiving grassroots support from both the government and NGOs in this respect. Some activities have delivered impressive productivity results (e.g. the introduction of "NERICA" rice varieties has led to a 30% rise in productivity in some regions such as Salamat). Chad currently holds the presidency of the Council of Ministers of the Africa Rice Center. FARA (Forum for Agricultural Research in Africa) is currently funding two projects in the country: Dissemination of New Agricultural Technologies in Africa (DONATA) and Regional Agricultural information and Learning System (RAILS). It is therefore important to build upon existing progress in this area.

5.4 FACILITATE ACCESS TO FOOD PRODUCTS FOR VULNERABLE POPULATIONS

Efforts should be made to strengthen the food storage, processing and preservation system. This, in turn, will lead to better management of available food products, reduce post-harvest losses and diversify the range of food sources. It is also important to develop marketing channels to make some regions affected by food insecurity less isolated. This will make it possible to transport products from these regions to other areas of the country and will help to reduce food product transport costs from production areas in surplus to those areas suffering from chronic food insecurity. The following activities should be undertaken as a matter of priority: (i) build community storage silos (2,500 in vulnerable regions); (ii) train 130,000 SPs in preservation, processing and marketing techniques and install multifunctional platforms (dryers and solar ovens) in 500 villages; (iii) renovate existing rural roads and build new roads to improve market access during the rainy season (1,000 km of roads); (iv) extend the use of ICTs for disseminating information about product prices and outlets to SPs.

5.5 FACILITATE FINANCIAL ACCESS TO FOOD FOR VULNERABLE GROUPS (SOCIAL SAFETY NETS)

Over the last decade, the government has organised subsidised sales during lean periods. However, these products remain inaccessible to SPs even at subsidised prices. Similarly, the WFP and other bodies and NGOs have introduced a

range of different measures to provide subsidised access to food (cash transfer, food for work, etc.). The implementation of the MAF will help to extend and broaden these food access options.

The recommended interventions involve providing food aid via the universal distribution of full rations during lean periods in regions suffering from severe food insecurity. Additional actions should include: (i) developing social safety nets (cash transfers, food for work, targeted food distribution through voucher schemes, subsidised purchases, etc.) for vulnerable households (10,000) in the target regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï); (ii) developing income-generating activities for vulnerable households (50,000) through microfinance and guarantee fund provision in order to restore sustainable livelihoods to these vulnerable populations and reduce their dependence on food aid; (iii) improving the way in which beneficiaries are targeted by involving them in the activity design and monitoring processes, and in the programme resource tracking process in particular.

5.6 PREVENT AND TREAT ACUTE MALNUTRITION AMONG CHILDREN UNDER FIVE YEARS OLD, AND PREGNANT AND BREASTFEEDING WOMEN

In order to overcome the problem of insufficient budget allocations to the nutrition sector, it is important to improve the implementation of prevention activities. One key recommendation in this respect is to increase the distribution of Plumpy'Doz/CSB ++ flour in the Sahel regions, especially during lean periods.

A range of treatment programmes and projects have been introduced in several Sahel regions by various international NGOs and United Nations agencies to meet the immediate needs of vulnerable households. In order to reduce the incidence of severe acute malnutrition in vulnerable areas, the government will need to strengthen existing programmes and projects and extend these to cover all regions in the Sahel area of the country.

In terms of personnel, a review of integrated acute malnutrition treatment programmes in Chad's Sahel regions has confirmed that these measures are effective. At outpatient feeding centres, for example, the recovery rate stands at 75%, with a fatality rate of just 10% and a dropout rate of less than 15%. These programmes and activities now need to be extended to cover all vulnerable areas. The solutions in this respect are as follows:

1. Recruit additional nutrition specialists (1,500) and deploy these in vulnerable areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï).
2. Create new nutrition services (500) in the above-mentioned areas.
3. Design and implement a plan to ensure that the most vulnerable areas are sufficiently covered by outpatient feeding centres.

In terms of national policy, various studies have shown a link between malnutrition (all forms) and a failure to consider nutritional requirements in health and development programme planning and funding. A nutrition stakeholder and intervention coordination framework is therefore required as a matter of urgency. This framework will need to set out the arrangements for incorporating nutrition into policies, strategies and activities in all development sectors in which

nutrition is an issue. A national nutrition policy, and an associated action plan, will also need to be developed and implemented.

5.7 PROMOTE NUTRITIONAL EDUCATION

Three key solutions have been identified to overcome problems relating to persistent socio-cultural pressures and the high rate of illiteracy in Chad. These are as follows:

1. Organise twice-yearly IEC (Information, Education and Communication) campaigns, using ICTs and other events (radio, mobile telephones, sketches), to improve family dietary practices in vulnerable areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï).
2. Promote the creation of allotments in these vulnerable areas.
3. Improve the information provided to mothers at feeding centres and within communities about key family practices (and the importance of exclusive breastfeeding in particular).

With respect to building the capacities of trainers, the chosen solution involves organising training sessions on nutritional treatments for the staff of healthcare centres, therapeutic feeding centres (TFCs) and supplementary feeding centres (SFCs) in these vulnerable areas.



5.8 SECURE AND STRENGTHEN THE FOOD CRISIS MANAGEMENT AND INFORMATION SYSTEM (CASAGC, FSIEWS, ONASA)

In response to recurring food crises, Chad's government has introduced a number of crisis management organisations and systems. The recommendation in this respect involves improving the way in which this system works and securing its long-term future. Appropriate solutions have been selected in response to each of the bottlenecks identified. These are as follows:

1. Develop a national multi-risk contingency plan and create a food security information system.
2. Train personnel working for the relevant bodies (CASAGC, FSIEWS, ONASA) and provide them with the necessary equipment and IT hardware.
3. Provide a sufficient, regular budgetary allocation to fund an adequate stock of food aid (100,000 tonnes).
4. Introduce a strict food stock management control system.
5. Build public food aid stores in the most vulnerable areas of the target regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï).

**TABLE 11. ACCELERATING PROGRESS TOWARDS TARGET 3 OF MDG 1
SUMMARY OF CHOSEN SOLUTIONS**

MDG	Priority area of intervention	Suggested interventions 2012–2015	Prioritised bottlenecks
<p>MDG 1: Eradicate extreme poverty and hunger</p> <p>Target 3: “Halve, between 1990 and 2015, the proportion of people who suffer from hunger”</p>	<p>A - Intensify and diversify crop (cereals, etc.) and livestock farming, especially among small producers</p>	<p>A.1 Develop small-scale irrigation and other systems for small producers (creation of small irrigated fields, inland valleys, lakes, water retention systems and easy-to-manage channel systems)</p>	A.1.1 Insufficient promotion of sustainable irrigation techniques suited to SPs and the areas concerned (drip irrigation, hand pumps, water and run-off collection techniques, solar-powered pumps, etc.)
			A.1.2 Insufficient capacity among SPs to manage small irrigated fields
			A.1.3 Insufficient capacity among SPs to bear the set-up and maintenance costs of small-scale irrigation infrastructures and other small-scale systems
			A.1.4 Land access problems for some SPs, especially women
			A.1.5 Insufficient land conflict prevention systems
		<p>A.2 Improve small producers’ (SP) access to inputs and small-scale equipment (seeds, fertilisers, tools – ploughs, carts, seed drills, hoes – fodder and veterinary medicines)</p>	<p>A.2.1. Insufficient availability of suitable inputs for food crop production and small-scale equipment</p>



Solutions with accelerating potential 2012–2015			
Solutions with accelerating potential 2012–2015	Cost (millions)	Potential partners	
A.1.1.1. Develop inland valleys, water retention systems and pastoral wells and install small-scale irrigation systems to support production for 50,000 SPs in target low-rainfall areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï) (drip and gravity-fed irrigation techniques, hand pumps, solar-powered pumps, barriers and bunds, stone barriers) and construct 500 pastoral water points.	73,465	Ministry for Agriculture and Irrigation (MAI); Ministry for Livestock Farming (ME); Ministry for Finance (MF) MPECI Donors NGOs	
A.1.2.1. Deliver training in small irrigated field management techniques to SPs in the target areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï) and build the capacities of the bodies involved (create a technique information kit covering small-scale water system management and control).		ONDR Rural engineering Producers et Associations	
A.1.3.1. Introduce and extend service cost-sharing (charging) mechanisms at community level by organising SP consortiums in the target areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)		Ministry for Planning, the Economy and International Cooperation (MPECI) Donors NGOs	
A.1.4.1 Conduct advocacy work and introduce programmes to promote land access for women and certain SPs in the target areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila, and Ouaddaï)		Ministry for Social Action MAI NGOs	
A.1.5.1. Introduce community-based land conflict prevention mechanisms in the target areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)		Ministry for Decentralisation Local authorities NGOs Donors Grassroots communities	
A.1.5.2. Develop land management plans in a participatory manner and reopen migratory livestock farming corridors and pastoral well digging programmes in the target areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)	Ministry for Decentralisation Local authorities NGOs Donors Grassroots communities		
A.2.1.1. Increase budget allocations to fund seed production bodies and associated production and certification divisions (ITRAD, etc.) and create a national seed bank	115,000	MAI ME MPECI World Bank NGOs	
A.2.1.2. Create a central procurement unit and a network of outlets selling seeds, fertilisers, veterinary medicines (village pharmacies) and farming equipment (ploughs, carts, western-style hoes and seed drills) in vulnerable regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)		MAI ME MPECI World Bank NGOs	





MDG	Priority area of intervention	Suggested interventions 2012–2015	Prioritised bottlenecks
		<p>A.2 Improve small producers' (SP) access to inputs and small-scale equipment (seeds, fertilisers, tools – ploughs, carts, seed drills, hoes – fodder and veterinary medicines)</p>	<p>A.2.2. Insufficient purchasing power among SPs to buy inputs and agro-pastoral equipment, and poor management of subsidies that penalises vulnerable groups</p> <p>A.2.3. Insufficient consideration of the production equipment needs (ploughs, carts, seed drills, plant protection equipment) of SPs in support programmes</p> <p>A.2.4. Insufficient budget allocation for REPIMAT (Animal Disease Epidemiology Surveillance Network in Chad).</p>
		<p>A.3 Conduct outreach work to improve production, agricultural diversification and climate change adaptation knowledge among small producers</p>	<p>A.3.1. An insufficient number of outreach workers, especially women</p> <p>A.3.2. Poor technical, logistical and financial capacity of research and support services and insufficient technical monitoring of SPs</p>





	Solutions with accelerating potential 2012–2015	Cost (millions)	Potential partners
	A.2.2.1. Create new microfinance structures in vulnerable areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddai) and introduce a government guarantee fund to support the acquisition of inputs and equipment for the most vulnerable groups (200,000 new members)	115,000	MAI Ministry for Social Action ME, MPECI World Bank NGOs
	A.2.2.2. Encourage the creation of SP consortiums for group purchases of equipment, training and education (8,600 new consortiums in vulnerable areas: Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddai)		MAI Ministry for Social Action MPECI World Bank, NGOs
	A.2.2.3 Introduce a subsidy or grant mechanism (vouchers, coupons, subsidised purchases) for SPs in vulnerable regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddai) to purchase inputs and small agro-pastoral tools.		MAI Ministry for Social Action MPECI World Bank NGOs
	A.2.2.4. Improve the way in which beneficiaries are targeted and monitored by involving them in these processes		Government Donors Communities NGOs Civil society
	A.2.3.1. Extend the government-run programme to distribute tools to SPs by increasing the quantity of small-scale equipment provided under this programme (ploughs, carts, seed drills, plant protection equipment) (130,000 beneficiaries in the target areas: Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddai)	20,000	Government Donors Private sector NGOs
	A.2.4.1. Extend the animal vaccination programme by increasing budget allocations to REPIMAT		REPIMAT, MAI Ministry for Social Action MPECI World Bank NGOs
	A.3.1.1. Recruit new agro-pastoral advisers (600 advisers in total, 20% of whom should be women) to support SPs in vulnerable regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddai)	20,000	CORAF/WECARD FARA Government ITRAD and ONDR
	A.3.2.1. Improve the material capacities of research, support and SP technical monitoring services (provide equipment and logistics resources, etc.)		ITRAD ONDR NGOs World Bank
	A.3.2.2 Build the technical capacities of research, support and outreach service personnel, including gender considerations (recycling, training, etc.)		ITRAD ONDR NGOs Donors





MDG	Priority area of intervention	Suggested interventions 2012–2015	Prioritised bottlenecks
		<p>A.3 Conduct outreach work to improve production, agricultural diversification and climate change adaptation knowledge among small producers</p>	<p>A.3.3. Insufficient promotion of new varieties and crops, due to a lack of suitable intervention strategies for the agro-ecological zones in question</p>
	<p>B. Facilitate access to food products for vulnerable populations</p>	<p>B.1 Improve physical access to food for vulnerable populations in areas of structural deficit and/or vulnerable areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddai)</p>	<p>A.3.4. Insufficient use of ICTs (rural radio, mobile telephones, etc.) as outreach tools in vulnerable areas</p> <p>B.1.1 Poor food product processing, preservation and marketing capacities among SPs</p>



	Solutions with accelerating potential 2012–2015	Cost (millions)	Potential partners
	A.3.3.1 Raise awareness among SPs and provide training through exchange trips with different producers (130,000 SPs) to learn about soil restoration and fertilisation techniques (compost, green fertilisers, fallow techniques, corridor and combined crop growing, working contoured land, stone barriers, creation of technical factsheets, agroforestry, development of grazing land using silage techniques, introduction of grazing crops) in vulnerable regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)	20,000	ITRAD ONDR NGOs Donors Producers' associations
	A.3.3.2. Train SPs in the target areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï) in the use of agricultural techniques (seeds, fodder, meal and feed) through the creation of consortiums or via their umbrella structures		ITRAD ONDR NGOs World Bank Donors
	A.3.3.3. Disseminate new varieties that are able to cope better with climate change, as well as out-of-season crops, provide training through demonstrations, and distribute improved seed varieties (cassava, resistant clones) to SPs (130,000) in vulnerable regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)		ITRAD ONDR NGOs Donors Producers' associations
	A.3.4.1. Extend the use of ICTs (rural radio, mobile telephones, etc.) as outreach tools to disseminate information about prices, agricultural techniques, new varieties, etc. in vulnerable areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)		MP Télécommunications ITRAD ONDR Community radio stations Mobile telephone companies NGOs Donors
	B.1.1.1. Build community stores managed by consortiums and train these consortiums in stock management techniques (2,500 warehouses or cereal banks in villages in vulnerable regions: Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)	124,791	Rural engineering ONASA Community associations NGOs Donors ONDR CFPR
	B.1.1.2. Train SPs in agro-pastoral product preservation and processing techniques (drying, flour, butter, concentrated syrup, preserves, cheese, etc.) (130,000 SPs in vulnerable regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)		ITRAD CFPR ONDR NGOs Donors
	B.1.1.3. Promote the creation of multifunctional food production processing platforms to help vulnerable households in vulnerable regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)		ITRAD CFPR ONDR NGOs Donors
	B.1.1.4. Train producers in marketing techniques and channels and outlets in vulnerable regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)		Chamber of Commerce ITRAD CFPR ONDR NGOs Donors





MDG	Priority area of intervention	Suggested interventions 2012–2015	Prioritised bottlenecks
			B.1.2 Insufficient rural roads in areas in deficit and in production areas
		B.2 Facilitate financial access to food for vulnerable groups (social safety nets, income-generating activities, etc.)	B.2.1 Insufficient purchasing power among vulnerable populations to access food products, even at subsidised prices
			B.2.2 Insufficient targeting of beneficiaries and poor food aid management (misappropriation which penalises vulnerable populations)
	C. Improve the nutritional status of vulnerable groups (children under five years old, and pregnant and breastfeeding women) and manage food crises more effectively	C.1 Prevent and treat acute malnutrition among children under five years old, and pregnant and breastfeeding women	C.1.1. Insufficient budget allocation for nutrition programmes
			C.1.2. Insufficient numbers of adequately qualified healthcare and nutrition personnel, and poor geographical distribution of personnel and healthcare and feeding centres
			C.1.3 Lack of an effective national nutrition policy





	Solutions with accelerating potential 2012–2015	Cost (millions)	Potential partners
	B.1.2.1 Extend rural road construction programmes to areas in deficit and major production areas (1,000 km of roads) and renovate existing infrastructures via FFW/CFW programmes, particularly in the Sahel regions of the country	124,791	Ministry for Infrastructures Rural engineering World Bank African Development Bank Donors
	B.3.1.1. introduce social safety nets (cash transfer, food for work, targeted food distribution, vouchers, subsidised sales) for vulnerable households (10,000) in the target regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)	40,000	ONASA Government Donors
	B.3.1.2 Develop microfinance activities to assist with income-generating activities (IGAs) for vulnerable households in the target regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)		Ministry for Microcredit NGOs Donors
	B.3.1.3. Strengthen economic farming activities (out-of-season crops, small-scale livestock farming, etc.) for the most vulnerable households in the following regions: Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï		DPSA ONASA Ministry for Social Affairs Ministry for Good Governance
	B.3.2.1. Improve the aid control and tracking system and improve the way in which beneficiaries are targeted and monitored by involving them in these processes		DPSA ONASA Ministry for Social Affairs Ministry for Good Governance
	C.1.1.1. Improve the implementation of prevention activities, in particular by increasing the distribution of Plumpy'Doz/CSB ++ flour in the Sahel regions, especially during lean periods	114,050	Government Ministry for Finance CNNTA Ministry for Health NGOs, Donors
	C.1.2.1. Recruit additional nutrition specialists (1,500) and deploy these in vulnerable areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)		CNNTA Ministry for Health NGOs, UNICEF WFP, WHO Donors
	C.1.2.2. Create new nutrition services (500) in the most severely affected areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)		CNNTA Ministry for Health NGOs, UNICEF WFP, WHO Donors
	C.1.2.3. Design and implement a plan to ensure that the most vulnerable areas are sufficiently covered by outpatient feeding centres		CNNTA Ministry for Health NGOs, UNICEF WFP, WHO Donors
	C.1.3.1. Design and implement a national nutrition policy and an associated action plan		CNNTA Ministry for Health NGOs Donors





MDG	Priority area of intervention	Suggested interventions 2012–2015	Prioritised bottlenecks	
	<p>C. Improve the nutritional status of vulnerable groups (children under five years old, and pregnant and breastfeeding women) and manage food crises more effectively</p>	<p>C.2. Promote nutritional education</p> <p>C.3. Secure and strengthen the food crisis management and information system (CASAGC, FSIEWS, ONASA)</p>	<p>C.2.1 Persistent socio-cultural pressures and a high rate of illiteracy</p> <p>C.2.2 Insufficient nutritional education capacities among trainers</p> <p>C.3.1. An inadequate food crisis management system and poor information circulation</p> <p>C.3.2. Insufficient stock of food aid to combat food insecurity and a lack of transparency in food aid management</p> <p>C.3.3. Difficulties in getting food to recipients during the rainy season</p>	





	Solutions with accelerating potential 2012–2015	Cost (millions)	Potential partners
	C.2.1.1 Organise twice-yearly nutritional IEC (Information, Education and Communication) campaigns, using ICTs and other events (radio, mobile telephones, sketches), to improve family dietary practices in vulnerable areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)	4,118.5	Government Ministry for Health CNNTA NGOs Donors
	C.2.1.2. Promote the creation of allotments in vulnerable areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)		ONDR NGOs Donors
	C.2.1.3. Improve the information provided to mothers at feeding centres and within communities about key family practices (and the importance of exclusive breastfeeding in particular)		CNNTA Ministry for Health NGOs UNICEF WFP WHO, Donors
	C.2.2.1. Organise training sessions on nutritional treatments for the staff of healthcare centres, therapeutic feeding centres (TFCs) and supplementary feeding centres (SFCs) in vulnerable areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)		CNNTA Ministry for Health NGOs, UNICEF WFP, WHO Donors
	C.3.1.1. Fund the creation and implementation of a food security information system action plan	52,675	CNNTA Ministry for Health NGOs UNICEF WFP, WHO Donors
	C.3.1.2 Train personnel working for the relevant bodies (CASAGC, FSIEWS, ONASA) and provide them with the necessary equipment and IT hardware		CNNTA Ministry for Health NGOs, UNICEF WFP, WHO Donors
	C.3.1.3. Develop and implement a national multi-risk contingency plan		Government Partners NGOs
	C.3.2.1. Provide a sufficient, regular budgetary allocation to fund an adequate stock of food aid (100,000 tonnes)		Government MAI Ministry for Finance Donors
	C.3.2.2. Introduce a strict food stock management control system		MAI ONASA Government Ministry for Good Governance
	C.3.3.1. Build public food aid stores in the most vulnerable areas of the target regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)	Rural engineering MAI ONASA Donors	



VI. ACCELERATION PLAN FOR TARGET 3 OF MDG 1

Photo: UNDP Chad

6.1 ACTION PLAN

The acceleration plan contains a summary of the main actions chosen to accelerate progress towards target 3 of MDG 1, the cost of these activities, the structures and bodies responsible for their implementation and the financial partners involved.

The cost of the MAF action plan is estimated at 544,100 million XAF over 3 years (2013-2015). Implementation of this MAF will require average funding of 182 billion XAF per year, which represents 14% of the government's annual budget (estimated at 1,300 billion XAF in 2011). Given the commitments made at the very highest level of government towards the rural sector and food security, Chad's government should be expected to cover a significant proportion of the costs of MAF activity implementation. In line with the President's commitments, development of the rural sector is one of the country's key priorities and significant investment will be made in this respect over the next three years (see the government's policy programme, issued on 17 August 2011).

The MAF is based on the existing NFSP, which will be discussed at a forthcoming round-table session involving donors. In this respect, priority will be given to funding to attain target 3 of MDG 1 by 2015. The majority of Chad's partners are already involved in food insecurity programmes and have increased their funding in this area. However, due to the sheer number of people who suffer from food insecurity, additional effort is needed. In 2012, less than 50% of the 3.5 million people considered vulnerable received support from the donor community and NGOs.

According to statements and forecasts issued by some donors, most of Chad's donor partners expect to fund the majority of the

MAF interventions targeting the rural sector over the next few years (rural infrastructures, input provision, outreach work, processing and storage, nutrition, rural roads, microfinance, etc.). Figures and programmes issued by some donors suggest that substantial funding will be allocated to food security and the rural sector in Chad. These include the European Union (over 65 billion XAF), AfDB (over 40 billion), AFD (over 19 billion), SDC (over 13 billion), FAO (over 17 billion) and the World Bank (over 13 billion). The United Nations agencies also plan to mobilise significant funding to support food security in Chad (WFP, UNICEF, etc.). As such, substantial funding has already been secured for many of the activities in this MAF. With the support of these partners, it is entirely possible to mobilise all of the resources (technical, human and financial) needed to achieve the goals of the MAF action plan in both the short and medium term.

There is now every possibility that national, regional and international public and private funds will be mobilised, the government's budget allocations to agricultural development will be put to good effect, and there will be genuine synergy and cooperation between public and private funding sources. This partnership will need to be extended to include national and international NGOs in order to accelerate progress in the fight against hunger and malnutrition.

TABLE 12. FUNDING PLAN

Prioritised bottlenecks	Solutions with accelerating potential 2013–2015	Cost (in millions of XAF)	Funding secured		Funding gap (in millions of XAF)
			Total (in millions of XAF)	Sources	
A.1.1 Insufficient promotion of sustainable irrigation techniques suited to SPs and the areas concerned (drip irrigation, hand pumps, water and run-off collection techniques, solar-powered pumps, etc.)	A.1.1.1. Develop inland valleys, water retention systems and pastoral wells and install small-scale irrigation systems to support production for 50,000 SPs in target low-rainfall areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï) (drip and gravity-fed irrigation techniques, hand pumps, solar-powered pumps, barriers and bunds, stone barriers) and construct 500 pastoral water points.	73,465	70,178	Government, SDC, FAO, AFD, EU, World Bank	3,337
A.1.2 Insufficient capacity among SPs to manage small irrigated fields	A.1.2.1. Deliver training in small irrigated field management techniques to SPs in the target areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï) and build the capacities of the bodies involved (create a technique information kit covering small-scale water system management and control).				
A.1.3 Insufficient capacity among SPs to bear the set-up and maintenance costs of small-scale irrigation infrastructures and other small-scale systems	A.1.3.1. Introduce and extend service cost-sharing (charging) mechanisms at community level by organising SP consortiums in the target areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)				
A.1.4 Land access problems for some SPs, especially women	A.1.4.1 Conduct advocacy work and introduce programmes to promote land access for women and certain SPs in the target areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila, and Ouaddaï)				
A.1.5 Insufficient land conflict prevention systems	A.1.5.1. Introduce community-based land conflict prevention mechanisms in the target areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)				
	A.1.5.2. Develop land management plans in a participatory manner and reopen migratory livestock farming corridors and pastoral well digging programmes in the target areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)				

Prioritised bottlenecks	Solutions with accelerating potential 2013–2015	Cost (in millions of XAF)	Funding secured		Funding gap (in millions of XAF)
			Total (in millions of XAF)	Sources	
A.2.1. Insufficient availability of suitable inputs for food crop production and small-scale equipment	A.2.1.1. Increase budget allocations to fund seed production bodies and associated production and certification divisions (ITRAD, etc.) and create a national seed bank	115,000	111,303	Government, SDC, FAO, AFD, EU, World Bank, UNDP	3,697
	A.2.1.2. Create a central procurement unit and a network of outlets selling seeds, fertilisers, veterinary medicines (village pharmacies) and farming equipment (ploughs, carts, western-style hoes and seed drills) in vulnerable regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)				
A.2.2. Insufficient purchasing power among SPs to buy inputs and agro-pastoral equipment, and poor management of subsidies that penalises vulnerable groups	A.2.2.1. Create new microfinance structures in vulnerable areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï) and introduce a government guarantee fund to support the acquisition of inputs and equipment for the most vulnerable groups (200,000 new members)				
	A.2.2.2. Encourage the creation of SP consortiums for group purchases of equipment, training and education (8,600 new consortiums in vulnerable areas: Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)				
	A.2.2.3 Introduce a subsidy or grant mechanism (vouchers, coupons, subsidised purchases) for SPs in vulnerable regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï) to purchase inputs and small agro-pastoral tools.				
	A.2.2.4. Improve the way in which beneficiaries are targeted and monitored by involving them in these processes				

Prioritised bottlenecks	Solutions with accelerating potential 2013–2015	Cost (in millions of XAF)	Funding secured		Funding gap (in millions of XAF)
			Total (in millions of XAF)	Sources	
A.2.3. Insufficient consideration of the production equipment needs (ploughs, carts, seed drills, plant protection equipment) of SPs in support programmes	A.2.3.1. Extend the government-run programme to distribute tools to SPs by increasing the quantity of small-scale equipment provided under this programme (ploughs, carts, seed drills, plant protection equipment) (130,000 beneficiaries in the target areas: Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)	115,000	111,303	Government, SDC, FAO, AFD, EU, World Bank, UNDP	3,697
A.2.4. Insufficient budget allocation for REPI-MAT (Animal Disease Epidemiosurveillance Network in Chad).	A.2.4.1. Extend the animal vaccination programme by increasing budget allocations to REPIMAT				
A.3.1. An insufficient number of outreach workers, especially women	A.3.1.1. Recruit new agro-pastoral advisers (600 advisers in total, 20% of whom should be women) to support SPs in vulnerable regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)	20,000	9,960	Government, SDC, FAO, AFD, EU, World Bank, UNDP, UNCFD	10,040
A.3.2. Poor technical, logistical and financial capacity of research and support services and insufficient technical monitoring of SPs	A.3.2.1. Improve the material capacities of research, support and SP technical monitoring services (provide equipment and logistics resources, etc.)				
	A.3.2.2 Build the technical capacities of research, support and outreach service personnel, including gender considerations (recycling, training, etc.)				
A.3.3. Insufficient promotion of new varieties and crops, due to a lack of suitable intervention strategies for the agro-ecological zones in question	A.3.3.1 Raise awareness among SPs and provide training through exchange trips with different producers (130,000 SPs) to learn about soil restoration and fertilisation techniques (compost, green fertilisers, fallow techniques, corridor and combined crop growing, working contoured land, stone barriers, creation of technical factsheets, agroforestry, development of grazing land using silage techniques, introduction of grazing crops) in vulnerable regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)				

Prioritised bottlenecks	Solutions with accelerating potential 2013–2015	Cost (in millions of XAF)	Funding secured		Funding gap (in millions of XAF)
			Total (in millions of XAF)	Sources	
A.3.3. Insufficient promotion of new varieties and crops, due to a lack of suitable intervention strategies for the agro-ecological zones in question	A.3.3.2. Train SPs in the target areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï) in the use of agricultural techniques (seeds, fodder, meal and feed) through the creation of consortiums or via their umbrella structures	20,000	9,960	Government, SDC, FAO, AFD, EU, World Bank, UNDP, UNCFD	10,040
	A.3.3.3. Disseminate new varieties that are able to cope better with climate change, as well as out-of-season crops, provide training through demonstrations, and distribute improved seed varieties (cassava, resistant clones) to SPs (130,000) in vulnerable regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)				
A.3.4. Insufficient use of ICTs (rural radio, mobile telephones, etc.) as outreach tools in vulnerable areas	A.3.4.1. Extend the use of ICTs (rural radio, mobile telephones, etc.) as outreach tools to disseminate information about prices, agricultural techniques, new varieties, etc. in vulnerable areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)				
B.1.1 Poor food product processing, preservation and marketing capacities among SPs	B.1.1.1. Build community stores managed by consortiums and train these consortiums in stock management techniques (2,500 warehouses or cereal banks in villages in vulnerable regions: Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)	124,791	38,536	AfDB, EU, World Bank, UNDP	86,255
	B.1.1.2. Train SPs in agro-pastoral product preservation and processing techniques (drying, flour, butter, concentrated syrup, preserves, cheese, etc.) (130,000 SPs in vulnerable regions: Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)				
	B.1.1.3. Promote the creation of multi-functional food production processing platforms to help vulnerable households in vulnerable regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)				

Prioritised bottlenecks	Solutions with accelerating potential 2013–2015	Cost (in millions of XAF)	Funding secured		Funding gap (in millions of XAF)
			Total (in millions of XAF)	Sources	
B.1.1 Poor food product processing, preservation and marketing capacities among SPs	B.1.1.4. Train producers in marketing techniques and channels and outlets in vulnerable regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)	124,791	38,536	AfDB, EU, World Bank, UNDP	86,255
B.1.2 Insufficient rural roads in areas in deficit and in production areas	B.1.2.1 Extend rural road construction programmes to areas in deficit and major production areas (1,000 km of roads) and renovate existing infrastructures via FFW/CFW programmes, particularly in the Sahel regions of the country				
B.3.1 Insufficient purchasing power among vulnerable populations to access food products, even at subsidised prices	B.3.1.1. Introduce social safety nets (cash transfer, food for work, targeted food distribution, vouchers, subsidised purchases) for vulnerable households (10,000) in the target regions: Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï	40,000	27,559	Government, SDC, FAO, AFD, EU, World Bank, UNDP, UNCFD	12,441
	B.3.1.2. Develop microfinance activities to assist with income-generating activities (IGAs) for vulnerable households in the target regions: Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï.				
	B.3.1.3. Strengthen economic farming activities (out-of-season crops, small-scale livestock farming, etc.) for the most vulnerable households in the following regions: Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï				
B.3.2 Insufficient targeting of beneficiaries and poor food aid management (misappropriation which penalises vulnerable populations)	B.3.2.1. Improve the aid control and tracking system and improve the way in which beneficiaries are targeted and monitored by involving them in these processes				

Prioritised bottlenecks	Solutions with accelerating potential 2013–2015	Cost (in millions of XAF)	Funding secured		Funding gap (in millions of XAF)
			Total (in millions of XAF)	Sources	
C.1.1. Insufficient budget allocation for nutrition programmes	C.1.1.1. Improve the implementation of prevention activities, in particular by increasing the distribution of Plum-py'Doz/CSB ++ flour in the Sahel regions, especially during lean periods	114,050	88,450	Government, SDC, FAO, AFD, EU, World Bank, UNICEF, WFP	25,600
C.1.2. Insufficient numbers of adequately qualified healthcare and nutrition personnel, and poor geographical distribution of personnel and healthcare and feeding centres	C.1.2.1. Recruit additional nutrition specialists (1,500) and deploy these in vulnerable areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddai)				
	C.1.2.2. Create additional nutrition services (500) in the most severely affected areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddai)				
	C.1.2.3. Design and implement a plan to ensure that the most vulnerable areas are sufficiently covered by outpatient feeding centres				
C.1.3 Lack of an effective national nutrition policy	C.1.3.1. Design and implement a national nutrition policy and an associated action plan				
C.2.1 Persistent socio-cultural pressures and high rate of illiteracy	C.2.1.1 Organise twice-yearly nutritional IEC (Information, Education and Communication) campaigns, using ICTs and other events (radio, mobile telephones, sketches), to improve family dietary practices in vulnerable areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddai)	4,118.5	1,750	Government, SDC, FAO, AFD, EU, World Bank, UNICEF, WFP	2,368.4
	C.2.1.2. Promote the creation of allotments in vulnerable areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddai)				
	C.2.1.3. Improve the information provided to mothers at feeding centres and within communities about key family practices (and the importance of exclusive breastfeeding in particular)				

Prioritised bottlenecks	Solutions with accelerating potential 2013–2015	Cost (in millions of XAF)	Funding secured		Funding gap (in millions of XAF)
			Total (in millions of XAF)	Sources	
C.2.2 Insufficient nutritional education capacities among trainers	C.2.2.1. Organise training sessions on nutritional treatments for the staff of healthcare centres, therapeutic feeding centres (TFCs) and supplementary feeding centres (SFCs) in vulnerable areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)	4,118.5	1,750	Government, SDC, FAO, AFD, EU, World Bank, UNICEF, WFP	2,368.4
C.3.1. An inadequate food crisis management system and poor information circulation	C.3.1.1. Fund the creation and implementation of a food security information system action plan	52,675	17,950	Government, FAO, EU	34,725
	C.3.1.2 Train personnel working for the relevant bodies (CASAGC, FSIEWS, ONASA) and provide them with the necessary equipment and IT hardware				
	C.3.1.3. Develop and implement a national multi-risk contingency plan				
C.3.2. Insufficient stock of food aid to combat food insecurity and a lack of transparency in food aid management	C.3.2.1. Provide a sufficient, regular budgetary allocation to fund an adequate stock of food aid (100,000 tonnes)	52,675	17,950	Government, FAO, EU	34,725
	C.3.2.2. Introduce a strict food stock management control system				
C.3.3. Difficulties in getting food to recipients during the rainy season	C.3.3.1. Build public food aid stores in the most vulnerable areas of the target regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)	52,675	17,950	Government, FAO, EU	34,725

6.2 IMPLEMENTATION, MONITORING AND EVALUATION

The MAF is based on the NFSP, which has its own implementation and monitoring and evaluation mechanism. This mechanism takes account

of the multi-sectoral and multi-disciplinary nature of food security, and the involvement of multiple stakeholders at national, regional and local level (government technical services, local communities and villages, civil society organisations, women's associations and farmers' and producers' organisations, the private sector and development partners). Pursuant to Decree 3010.PR/PM/CAB/2007, the system is overseen

by a steering body (Senior Inter-Ministerial Steering Committee – HCIP-PNSA), which is chaired by the Prime Minister (as the head of government) and vice-chaired by the Minister for the Economy and Planning.

In order to avoid unnecessary duplication, there are no plans to create new bodies to monitor the implementation of the MAF. Instead, an MAF focal point will be appointed. This person will be based within the Ministry for Planning, the

Economy and International Cooperation. This focal point will be responsible for overseeing the development and implementation of MAF activities by the ministries and partners concerned. He/she will produce quarterly reports on resource mobilisation for each solution category. These reports will be submitted to the NFSP steering committee. The focal point will work with the various NFSP structures (regional and national monitoring systems).

TABLE 13. IMPLEMENTATION AND MONITORING PLAN

Acceleration solutions and activities 2013–2015	Schedule			Responsibility
	2013	2014	2015	
<p>A.1.1.1. Develop inland valleys, water retention systems and pastoral wells and install small-scale irrigation systems to support production for 50,000 SPs in target low-rainfall areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï) (drip and gravity-fed irrigation techniques, hand pumps, solar-powered pumps, barriers and bunds, stone barriers) and construct 500 pastoral water points</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Surface area of inland valleys created • Number of pastoral wells created and/or renovated (target: 500 water points) • Number of water retention systems installed • Number of SPs who have benefited from irrigation systems (target: 50,000) 				Ministry for Agriculture and Irrigation (MAI); Ministry for Pastoral Development and Animal Production (MDPPA); Ministry for Urban and Rural Water Systems (MHUR); General Directorate for Rural Engineering and Agricultural Water Systems (DGGRHA)
<p>A.1.2.1. Deliver training in small irrigated field management techniques to SPs in the target areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï) and build the capacities of the bodies involved (create a technique information kit covering small-scale water system management and control)</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Number of SPs trained in small irrigated field management techniques • Number of training kits produced 				National Rural Development Office (ONDR); General Directorate for Rural Engineering and Agricultural Water Systems; Department for Agricultural Education and Rural Professional Training (DEAFPR); Lake Chad Development Society (SODELAC); Department for Pastoral Organisation (DOP)
<p>A.1.3.1. Introduce and extend service cost-sharing (charging) mechanisms at community level by organising SP consortiums in the target areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Number of new SP consortiums created • Level of SP consortium contributions to service costs 				ONDR; SODELAC; DOP

Acceleration solutions and activities 2013–2015	Schedule			Responsibility
	2013	2014	2015	
<p>A.1.4.1 Conduct advocacy work and introduce programmes to promote land access for women and certain SPs in the target areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila, and Ouaddaï)</p> <p>Indicators:</p> <ul style="list-style-type: none"> Number of women involved in land access initiatives 				Ministry for Social Action and Families; ONDR; SODELAC; Department for Agricultural Education and Rural Professional Training (part of the Ministry for Agriculture and Irrigation)
<p>A.1.5.1. Introduce community-based land conflict prevention mechanisms in the target areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)</p> <p>Indicators:</p> <ul style="list-style-type: none"> Extent of land conflict reduction in the target areas (as a percentage) 				Land Observatory (part of the Ministry for Higher Education); ONDR; SODELAC
<p>A.1.5.2. Develop land management plans in a participatory manner and reopen migratory livestock farming corridors and pastoral well digging programmes in the target areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)</p> <p>Indicators:</p> <ul style="list-style-type: none"> Number of land management plans introduced Number of migratory livestock farming corridors in place 				Ministry for Agriculture and Ministry for Livestock Farming
<p>A.2.1.1. Increase budget allocations to fund seed production bodies and associated production and certification divisions (ITRAD, etc.) and create a national seed bank</p> <p>Indicators:</p> <ul style="list-style-type: none"> Quantity of seeds produced National seed bank stock in relation to needs 				Ministry for Agriculture
<p>A.2.1.2. Create a central procurement unit and a network of outlets selling seeds, fertilisers, veterinary medicines (village pharmacies) and farming equipment (ploughs, carts, western-style hoes and seed drills) in vulnerable regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)</p> <p>Indicators:</p> <ul style="list-style-type: none"> Number of new agricultural input outlets (seeds and fertilisers) created and quantity of veterinary medicines supplied Number of new farming equipment outlets created Coverage rate of SPs' agricultural input and veterinary medicine needs Coverage rate of SPs' farming equipment needs 				Ministry for Agriculture and Ministry for Livestock Farming
<p>A.2.2.1. Create new microfinance structures in vulnerable areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï) and establish a government guarantee fund to support the acquisition of inputs and equipment for the most vulnerable groups (200,000 new members)</p> <p>Indicators:</p> <ul style="list-style-type: none"> Number of SP consortiums receiving credit from microfinance structures Number of new SPs receiving credit from microfinance structures (target: 200,000) Number of SPs benefiting from the government guarantee fund to acquire inputs and equipment 				Ministry for Microcredit; MAI; MDPPA

Acceleration solutions and activities 2013–2015	Schedule			Responsibility
	2013	2014	2015	
<p>A.2.2.2. Encourage the creation of SP consortiums for group purchases of equipment, training and education (8,600 new consortiums in vulnerable areas: Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Number of new SP consortiums created for group equipment buying • Number of new consortiums benefiting from training and information programmes 				ONDR; DOP
<p>A.2.2.3 Introduce a subsidy or grant mechanism (vouchers, coupons, subsidised purchases) for SPs in vulnerable regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï) to purchase inputs and small agro-pastoral tools.</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Subsidy management tools, total amount of subsidies provided • Number of SPs benefiting from subsidies or grants to acquire inputs and equipment 				ONDR; SODELAC; DOP
<p>A.2.2.4. Improve the way in which beneficiaries are targeted and monitored by involving them in these processes</p> <p>Indicators:</p> <ul style="list-style-type: none"> • A beneficiary targeting and monitoring system is in place • Number of SP consortiums involved in running the targeting system 				ONDR; SODELAC; DOP; Ministry for Microcredit
<p>A.2.3.1. Extend the government-run programme to distribute tools to SPs by increasing the quantity of small-scale equipment provided under this programme (ploughs, carts, seed drills, plant protection equipment) (130,000 beneficiaries in the target areas: Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Number of new SPs benefiting from the government-run small-scale equipment distribution programme (target: 130,000) • Number of farming tools (small-scale equipment) distributed 				ONDR; SODELAC
<p>A.2.4.1. Extend the animal vaccination programme by increasing budget allocations to REPIMAT</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Coverage rate of animal vaccination needs 				DOP; SODELAC
<p>A.3.1.1. Recruit new agro-pastoral advisers (600 advisers in total, 20% of whom should be women) to support SPs in vulnerable regions: Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Number of new agro-pastoral advisers recruited (target: 600 advisers) • Number of new female agro-pastoral advisers recruited (target: 120 women) 				ONDR; SODELAC; DOP



Acceleration solutions and activities 2013–2015	Schedule			Responsibility
	2013	2014	2015	
<p>A.3.2.1. Improve the material capacities of research, support and SP technical monitoring services (provide equipment and logistics resources, etc.)</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Technical equipment purchased for use by research and outreach services • Number of new forms of transport purchased 				MAI; MDPPA; ITRAD; Veterinary and Zootechnical Research Laboratory (LRVZ)
<p>A.3.2.2 Build the technical capacities of research, support and outreach service personnel, including gender considerations (recycling, training, etc.)</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Number of outreach and research service personnel recycled/trained 				MAI; ITRAD; LRVZ; ONDR; SODELAC; DOP
<p>A.3.3.1 Raise awareness among SPs and provide training through exchange trips with different producers (130,000 SPs) to learn about soil restoration and fertilisation techniques (compost, green fertilisers, fallow techniques, corridor and combined crop growing, working contoured land, stone barriers, creation of technical factsheets, agroforestry, development of grazing land using silage techniques, introduction of grazing crops) in vulnerable regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Number of technical factsheets on soil restoration and fertilisation techniques created • Number of SPs who have received information (target: 130,000) 				ONDR; SODELAC; DOP; MERH
<p>A.3.3.2. Train SPs in the target areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï) in the use of agricultural techniques (seeds, fodder, meal and feed) through the creation of consortiums or via their umbrella structures</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Number of SPs benefiting from information and training on agricultural techniques • Number of information sheets produced on agricultural techniques 				ONDR; ITRAD; DEAFPR; DOP; CNCPRTR
<p>A.3.3.3. Disseminate new varieties that are able to cope better with climate change, as well as out-of-season crops, provide training through demonstrations, and distribute improved seed varieties (cassava, resistant clones) to SPs (130,000) in vulnerable regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Number of SPs who have received information about out-of-season crops and new adapted varieties (target: 130,000) • Total surface area seeded with out-of-season crops and new adapted varieties 				ONDR, ITRAD



Acceleration solutions and activities 2013–2015	Schedule			Responsibility
	2013	2014	2015	
<p>A.3.4.1. Extend the use of ICTs (rural radio, mobile telephones, etc.) as outreach tools to disseminate information about prices, agricultural techniques, new varieties, etc. in vulnerable areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Number of topical messages designed for media (radio, television, mobile telephones) • Number of topical messages sent by SMS • Number of topical messages broadcast on the radio and/or television 				ONDR; SODELAC; DOP
<p>B.1.1.1. Build community stores managed by consortiums and train these consortiums in stock management techniques (2,500 warehouses or cereal banks in villages in vulnerable regions: Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Number of stores or cereal banks managed by SP consortiums in vulnerable regions (target: 2,500 stores managed by SP consortiums) • Number of SP consortiums trained in cereal store management techniques 				ONASA; ONDR; DEAFPR
<p>B.1.1.2. Train SPs in agro-pastoral product preservation and processing techniques (drying, flour, butter, concentrated syrup, preserves, cheese, etc.) (130,000 SPs in vulnerable regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Number of information and training kits produced • Number of SPs trained in agro-pastoral product preservation and processing techniques (target: 130,000 SPs) 				ONDR; DEAFPR; DOP; SODELAC
<p>B.1.1.3. Promote the creation of multifunctional food production processing platforms to help vulnerable households in vulnerable regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Number of multifunctional platforms set up • Number of SP consortiums benefiting from platforms 				ONDR; SODELAC; DEAFPR
<p>B.1.1.4. Train producers in marketing techniques and channels and outlets in vulnerable regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Number of training kits on marketing techniques and channels and suitable outlets produced • Number of SPs trained in marketing techniques and channels 				ONDR; DEAFPR; DOP; SODELAC

Acceleration solutions and activities 2013–2015	Schedule			Responsibility
	2013	2014	2015	
<p>B.2.1.1 Extend rural road construction programmes to areas in deficit and major production areas (1,000 km of roads) and renovate existing infrastructures via FFW/CFW programmes, particularly in the Sahel regions of the country</p> <p>Indicators:</p> <ul style="list-style-type: none"> Total distance of rural roads built (vulnerable areas and regions in surplus) Total distance of rural roads renovated (vulnerable areas and regions in surplus) 				DGRHA; PNSA
<p>B.3.1.1. Introduce social safety nets (cash transfer, food for work, targeted food distribution, vouchers, subsidised sales) for vulnerable households (10,000) in the target regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)</p> <p>Indicators:</p> <ul style="list-style-type: none"> Number of households benefiting from food distribution programmes Number of SPs benefiting from CFW/FFW programmes 				ONASA; ONDR; WFP
<p>B.3.1.2 Develop microfinance activities to assist with income-generating activities (IGAs) for vulnerable households in the target regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)</p> <p>Indicators:</p> <ul style="list-style-type: none"> Number of women benefiting from support to develop income-generating activities 				Ministry for Microcredit; ONDR; SODELAC
<p>B.3.1.3. Strengthen economic farming activities (out-of-season crops, small-scale livestock farming, etc.) for the most vulnerable households in the following regions: Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï</p> <p>Indicators:</p> <ul style="list-style-type: none"> Number of SPs receiving support for economic activities (out-of-season crops, small-scale livestock farming, etc.) 				ONDR; SODELAC
<p>B.3.2.1. Improve the aid control and tracking system and improve the way in which beneficiaries are targeted and monitored by involving them in these processes</p> <p>Indicators:</p> <ul style="list-style-type: none"> The aid control and tracking and beneficiary targeting and monitoring system is in place and operational Number of SP consortiums involved in running the system 				Department for Studies, Projects and Programmes (DEPP – part of the MAI)
<p>C.1.1.1. Improve the implementation of prevention activities, in particular by increasing the distribution of Plumpy'Doz/CSB ++ flour in the Sahel regions, especially during lean periods</p> <p>Indicators:</p> <ul style="list-style-type: none"> Number of households benefiting from Plumpy'Doz/CSB ++ flour distribution programmes 				ONASA; ONDR; SODELAC; WFP
<p>C.1.2.1. Recruit additional nutrition specialists (1,500) and deploy these in vulnerable areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)</p> <p>Indicators:</p> <ul style="list-style-type: none"> Number of new nutrition specialists recruited (target: 1,500 nutrition specialists) 				MAI; Ministry for Health; UNICEF

Acceleration solutions and activities 2013–2015	Schedule			Responsibility
	2013	2014	2015	
<p>C.1.2.2. Create new nutrition services (500) in the most severely affected areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)</p> <p>Indicators:</p> <ul style="list-style-type: none"> Number of new supplementary feeding centres created (target: 500 new centres) 				MAI; Ministry for Health; UNICEF
<p>C.1.2.3. Design and implement a plan to ensure that the most vulnerable areas are sufficiently covered by outpatient feeding centres</p> <p>Indicators:</p> <ul style="list-style-type: none"> Needs not covered by OFCs in vulnerable regions 				MAI; Ministry for Health; UNICEF
<p>C.1.3.1. Design and implement a national nutrition policy and an associated action plan</p> <p>Indicators:</p> <ul style="list-style-type: none"> The national nutrition policy and action plan have been designed and implemented 				Ministry for Health; UNICEF; DEAFPR
<p>C.2.1.1 Organise twice-yearly nutritional IEC (Information, Education and Communication) campaigns, using ICTs and other events (radio, mobile telephones, sketches), to improve family dietary practices in vulnerable areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)</p> <p>Indicators:</p> <ul style="list-style-type: none"> Number of mass public nutritional campaigns organised Number of specially designed adverts broadcast via each channel (radio, mobile telephones, television) 				Ministry for Health; UNICEF; DEAFPR
<p>C.2.1.2. Promote the creation of allotments in vulnerable areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)</p> <p>Indicators:</p> <ul style="list-style-type: none"> Number of households with allotments in vulnerable areas 				Ministry for Health; UNICEF; DEAFPR
<p>C.2.1.3. Improve the information provided to mothers at feeding centres and within communities about key family practices (and the importance of exclusive breastfeeding in particular)</p> <p>Indicators:</p> <ul style="list-style-type: none"> Number of grassroots community information campaigns 				Ministry for Health; UNICEF; DEAFPR
<p>C.2.2.1. Organise training sessions on nutritional treatments for the staff of healthcare centres, therapeutic feeding centres (TFCs) and supplementary feeding centres (SFCs) in vulnerable areas (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï)</p> <p>Indicators:</p> <ul style="list-style-type: none"> Number of healthcare and feeding centre personnel trained 				Ministry for Health; UNICEF; DEAFPR

Acceleration solutions and activities 2013–2015	Schedule			Responsibility
	2013	2014	2015	
C.3.1.1. Fund the creation and implementation of a food security information system action plan Indicators: <ul style="list-style-type: none"> Action plan created, approved and implemented Number of food security situation reports produced 				NFSP; TFPs (FAO, EU, AfDB, etc.)
C.3.1.2 Train personnel working for the relevant bodies (CASAGC, FSIEWS, ONASA) and provide them with the necessary equipment and IT hardware Indicators: <ul style="list-style-type: none"> Number of personnel within each body (CASAGC, FSIEWS, ONASA) who have received training Number of items of equipment and IT hardware purchased for use by these structures (CASAGC, FSIEWS, ONASA) 				MAI; NFSP; FAO
C.3.1.3. Develop and implement a national multi-risk contingency plan Indicators: <ul style="list-style-type: none"> The multi-risk contingency plan has been developed and is operational 				MAI; TFPs
C.3.2.1. Provide a sufficient, regular budgetary allocation to fund an adequate stock of food aid (100,000 tonnes) Indicators: <ul style="list-style-type: none"> There is a sufficient stock of food aid (target: 100,000 tonnes of cereals) 				MAI; MFB
C.3.2.2 Introduce a strict food stock management control system Indicators: <ul style="list-style-type: none"> A transparent food stock management mechanism has been approved and is operational 				DEPP, TFPs
C.3.3.1. Build public food aid stores in the most vulnerable areas of the target regions (Lac, Kanem, Hadjer Lamis, Wadi-Fira, Guéra, Batha, Salamat, Bahr El Gazal, Sila and Ouaddaï) Indicators: <ul style="list-style-type: none"> Number of public food aid stores built 				ONASA

REFERENCES AND SOURCES OF DATA

1. National Food Security Programme, 2011-2015, Final Document, September 2010
2. Ministry for Planning and the Economy, Growth and Poverty Reduction Strategy Paper: NPRS: 2008-2011
3. UNDP, Ten-Year MDG Implementation Report, 2010
4. Ministry for Planning and the Economy, INSEED, ECOSIT 1, June 1998, ECOSIT 2, 2002
5. Ministry for Livestock Farming and Animal Resources: National Livestock Farming Development Plan, July 2010
6. World Bank, Project completion and results document (IDA-3837-CD), Agricultural Service and Producer Organisation Support Project (ASPOP), 26 May 2009
7. CIMA/International, *Étude du sous-secteur de la pêche et de la pisciculture*, April 2003
8. MA, MERH, MERA, National Food Security Programme (NFSP), 2007-2011
9. Ministry for Agriculture, Validation workshop report on the National Medium Term Investment Programme (NMTIP), May 2004
10. Arditi C., Bosc P.-M. and Pochtier G., *Évaluation de quatre périmètres irrigués au nord de N'Djamena*, CIRAD, October 1992, 137 p.
11. Asfama S., *Le projet des périmètres irrigués dans la zone de Kim : rapport de synthèse et d'analyse*, 1999, 53p. present at CNAR – CR RPB 0966
12. BIEP, *Étude de la filière riz*, 1988, 100p. present at CEFOD – CF TCH 633 1 BUR
13. Coulter J. et Djitomadji, *Évaluation à mi-parcours du projet agro-commercial de la zone de Kim*, 1992, 44p. present at CNAR – CR RPB 0963
14. Dorsouma A., *Rapport circonstancié du Directeur technique de l'OMVSD sur la gestion, les réalisations et la restructuration proposée pour la période 09/89 – 04-91*, 1991, 41p. present at CNAR – CR RPB 0943
15. *Fiches techniques des variétés dont les semences sont disponibles pour la vente et la vulgarisation en zone sahélienne*, 1991, 20p., present at CNAR - CR RPB 0471
16. Koroua K., *Analyse économique des systèmes de production de la Préfecture du Mayo-Kebbi : le cas du casier B de Bongor*, final-year thesis for degree in economics (major in rural economics), Université de Cocody Abidjan, 1999, 144p., present at CNAR – CR TH 202
17. Koroua Kodjo D., *Analyse de la structure des coûts de production en riziculture irriguée : cas de Midekhin*, 1994, 59p., present at CEFOD – CF TCH 338 51 KOR
18. Taiwanese Technical Mission, Activity Reports, 2002 and 2003.
19. Mbailassem A., Gaissoumia S., *Structure de la commercialisation du riz*, 1992, 6p., present at DEPP
20. Ndari Ouatchi Daniel, *Synthèse de techniques pour une riziculture irriguée stable et durable*, 1997

21. Ngarasemta Ngaorndjam, Allarangaye Moundibaye, *Communication à l'atelier sous-régional de la FAO sur l'harmonisation des politiques et la coordination des programmes sur le riz dans la sous-région Afrique de L'Ouest - 25 - 28 / 02 / 02 Accra (Ghana)- Exposé sur le cas du Tchad*, 15p.
22. Nuttens F., *Les productions vivrières en zone soudanienne* (map, graphs and tables)
23. UNDP, Food Insecurity and Poverty Reduction Project - *Étude des stratégies de sortie et de pérennisation des acquis dans la zone d'intervention du PARPIA*, Africa Partner, 2011
24. German-Chadian Cooperation, *Programme de développement rural décentralisé II*, Annual Report 2009, Ministry for Planning and the Economy – GTZ
25. APDEI, Association for the Promotion of Sustainable and Integral Development, Progress Report, 1 February to 31 July 2012
26. MODEL, *Rapport sur l'économie rurale*, 2011
27. MODEL, *Rapport d'autoévaluation de l'ONG «Mobilisation pour le développement durable du Bassin du Logone»*, January 2012
28. ONDR, Projets rizicoles de Bongor, *Réhabilitation du casier B et restauration du casier A de Billiam-Oursi*, 1997, present at DEPP
29. UNDP, *Relance de la production rizicole dans les casiers de Santégui-Déressia*, 1989, 57p., present at DEPP
30. Roger Estrade A., *Les politiques du riz en Afrique subsaharienne : Étude de cas du Burkina Faso, Niger, Mali, Sénégal et Tchad, 1993, 129 p., present at CEFOD – CF TCH 381 4 ASS; Table ronde sur le Développement rural, Rapport de la commission n°5, Cultures pluviales et irriguées*, January 1993, 73p. + appendices, present at DEPP
31. Water and Sanitation Framework 2003-2020, thematic volume 3, Agricultural water systems, 96p.
32. Discussion seminar on the rice sector in Chad, 28-29/06/1989.
33. SOFRECO, *Documents d'évaluation du Projet de gestion des ressources naturelles en zone soudanienne (PGRN)*, 7 volumes, October 2002.
34. Henk Breman, *S'appuyer sur l'agroforesterie et des engrais*, February 2012, IFDC Catalist
35. December 2011 data - National Post-Harvest Survey on Food Security among Rural Households in Chad. December 2011 data.
36. Republic of Chad, Ministry for Planning, INSEED, *Third Survey on Consumption and the Informal Sector in Chad (ECOSIT3)*, Preliminary Report, October 2012



