



GLOBAL ENVIRONMENT FACILITY  
INVESTING IN OUR PLANET

Naoko Ishii  
CEO and Chairperson

April 13, 2015


Dear LDCF/SCCF Council Member:

IFAD as the Implementing Agency for the project entitled: ***Chad: Enhancing the Resilience of the Agricultural Ecosystems***, has submitted the attached proposed project document for CEO endorsement prior to final approval of the project document in accordance with IFAD procedures.

The Secretariat has reviewed the project document. It is consistent with the proposal approved by LDCF/SCCF Council in September 2013 and the proposed project remains consistent with the Instrument and LDCF/SCCF policies and procedures. The attached explanation prepared by IFAD satisfactorily details how Council's comments have been addressed. I am, therefore, endorsing the project document.

We have today posted the proposed project document on the GEF website at [www.TheGEF.org](http://www.TheGEF.org). If you do not have access to the Web, you may request the local field office of UNDP or the World Bank to download the document for you. Alternatively, you may request a copy of the document from the Secretariat. If you make such a request, please confirm for us your current mailing address.

Sincerely,

 Naoko Ishii

Attachment: GEFSEC Project Review Document  
Copy to: Country Operational Focal Point, GEF Agencies, STAP, Trustee



# REQUEST FOR CEO ENDORSEMENT

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: LDCF

For more information about GEF, visit [TheGEF.org](http://TheGEF.org)

## PART I: PROJECT INFORMATION

Project Title: Enhancing the resilience of the agricultural ecosystems (Projet d'amélioration de la résilience des systèmes agricoles au Tchad) - PARSAT			
Country(ies):	Chad	GEF Project ID: <sup>1</sup>	5376
GEF Agency(ies):	IFAD	GEF Agency Project ID:	TBD
Other Executing Partner(s):	Lead Agency: Ministry of Agriculture and Irrigation Partner ministries: Ministry of Environment and Fisheries Borrower Representative: Ministry for economy, planning and international cooperation	Submission Date: Resubmission Date:	13 Jan 15 02 Mar 15
GEF Focal Area (s):	Climate Change	Project Duration(Months)	96
Name of Parent Program (if applicable): ➤ For SFM/REDD+ <input type="checkbox"/> ➤ For SGP <input type="checkbox"/>	NA	Project Agency Fee (\$):	694,064

### A. FOCAL AREA STRATEGY FRAMEWORK<sup>2</sup>

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount (\$)	Cofinancing (\$)
CCA-1	Objective 1: Reduce the vulnerability of people, livelihoods, physical assets and natural systems to the adverse effects of climate change	Outcome 1.1: Vulnerability of physical assets and natural systems reduced	LDCF	3,465,500	3,659,000
		Outcome 1.2: Livelihoods and sources of income of vulnerable populations diversified and strengthened		1,220,000	6,373,900
		Outcome 1.3: Climate-resilient technologies and practices adopted and scaled up		1,997,300	5,872,400
CCA-2	Objective 2: Strengthen institutional and technical capacities for effective climate change adaptation	Outcome 2.1: Increased awareness of climate change impacts, vulnerability and adaptation	LDCF	623,136	8,594,700
<b>Total project costs</b>				<b>7,305,936</b>	<b>24,500,000</b>

<sup>1</sup> Project ID number will be assigned by GEFSEC.

<sup>2</sup> Refer to the [Focal Area Results Framework and LDCF/SCCF Framework](#) when completing Table A.

## B. PROJECT FRAMEWORK

Project Objective: Strengthen the resilience of smallholder farmers and improve food security						
Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount (\$)	Confirmed Cofinancing (\$)
<b>Component 1.</b> Protecting against climate risks and intensification of agricultural production	Inv.	Agricultural water catchment and management are improved	<ul style="list-style-type: none"> <li>Rehabilitation or the construction of water catchment facilities</li> <li>Development/rehabilitation of 10,000 ha (22,100 beneficiaries): (i) 700 ha of market gardening sites; (ii) 5,000 ha recession crop sites; and (iii) 4,300 ha rainfed sites</li> </ul>	LDCF	4,685,500	5,488,500
	Inv.	Resilient production systems are intensified through Training of farmers on improved crop management and access to seeds	<ul style="list-style-type: none"> <li>580 Farmer Field Schools (FFSs) on the themes of cereals, legumes and oilseeds, combining learning activities and initial kits of inputs or equipment (14,500 farmers)</li> <li>Specialized technical and economic training for the most enterprising farmers (leaders) on themes such as soil fertility; integrated pest management, seeds selection and conservation; etc.</li> <li>Creation of a network of seed multiplier farmers for food crop seeds (95 seed multiplier farmers trained and supported)</li> <li>Research and development of shorter-cycle crop varieties or crops that are more resistant to water stress (e.g. 'Kordofan' sorghum)</li> </ul>	LDCF	1,997,300	5,872,400
	Inv.	Cross-cutting support measures are provided	<ul style="list-style-type: none"> <li>Environmental education for all segments of the population, but particularly for youth and school children (5,700 people)</li> <li>Climate information and monitoring measures through the rehabilitation or installation of 18 climate stations and support for their operations, with the dissemination of agro-hydrometeorological newsletters</li> </ul>	LDCF	619,636	2,343,200
<b>Component 2.</b> Production enhancement and support to rural households' economic activities	TA	Production areas are opened up	<ul style="list-style-type: none"> <li>Construction of 106 works for treating critical points and grading roads over a general linear axis of approximately 100 km</li> <li>Distribution of 106 kits of tools to the associations in charge of the sustainable management of</li> </ul>	-	-	1,932,300

			the axis			
	TA	Storage facilities are improved	<ul style="list-style-type: none"> <li>• Trainings</li> <li>• Construction/rehabilitation of 40 community storage warehouses</li> </ul>	-	-	1,572,900
	Inv.	Economic activities of households are promoted	<ul style="list-style-type: none"> <li>• Promotion of 300 income-generating activities (3,000 beneficiaries)</li> <li>• Technico-economic trainings for all beneficiaries</li> <li>• Improvement of marketing activities</li> </ul>	-	-	1,039,200
Subtotal					7,302,436	18,539,700
Project management Cost (PMC) <sup>3</sup>				LDCF	3,500	6,251,500
<b>Total project costs</b>					7,305,936	24,500,000

### C. SOURCES OF CONFIRMED COFINANCING FOR THE PROJECT BY SOURCE AND BY NAME (\$)

Please include letters confirming cofinancing for the project with this form

Sources of Co-financing	Name of Co-financier (source)	Type of Cofinancing	Cofinancing Amount (\$)
IFAD	IFAD	DSF Grant	8,600,000
		Loan	8,600,000
ASAP		Loan	5,000,000
National Government	GoC		2,000,000
Others	Beneficiaries	In-kind	300,000
<b>Total Co-financing</b>			24,500,000

### D. TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY<sup>1</sup>

GEF Agency	Type of Trust Fund	Focal Area	Country Name/ Global	(in \$)		
				Grant Amount (a)	Agency Fee (b) <sup>2</sup>	Total c=a+b
IFAD	LDCF	Climate Change	Chad	7,305,936	694,064	8,000,000
<b>Total Grant Resources</b>				7,305,936	694,064	8,000,000

<sup>1</sup> In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this

table. PMC amount from Table B should be included proportionately to the focal area amount in this table.

<sup>2</sup> Indicate fees related to this project.

### F. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

Component	Grant Amount (\$)	Cofinancing (\$)	Project Total (\$)
International Consultants	31,700	24,900	56,600
National/Local Consultants	0	372,600	372,600

<sup>5</sup> PMC should be charged proportionately to focal areas based on focal area project grant IFAD amount in Table D below.

**G. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? NA**

(If non-grant instruments are used, provide in Annex D an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF/NPIF Trust Fund).

## **PART II: PROJECT JUSTIFICATION**

### **A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN OF THE ORIGINAL PIF<sup>4</sup>**

**A.1 National strategies and plans** or reports and assessments under relevant conventions, if applicable, i.e. NA NBSAPs, national communications, TNAs, NCSA, NIPs, PRSPs, NPFE, Biennial Update Reports, etc.

Chad faces numerous environmental challenges and problems, most due to the country's rampant demography, rural poverty and poor consideration of the environmental dimension in previous sector based plans and programs. The most visible signs of climate change impacts include: droughts severity, natural disasters, outbreaks of diseases and pests (locusts are of major concern), diminishing biodiversity, extended erosion, a generalized loss of soil fertility.

Chad ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1994, and the Kyoto Protocol in 2009. The implementation of the UNFCCC took place in two phases from 1998 until 2001. In the first phase, a National committee on climate change was set up, a campaign was organized to extend awareness of the adverse effects of climate change on the National Plan, an inventory of greenhouse gases emissions was compiled as well as a study on vulnerability and adaptation. The second phase concentrated on reinforcing national capacities, for which a workshop was organized, on evaluating technological needs as well as compiling a list of priorities, and on drawing up a national strategy for implementing the UNFCCC.

The current proposal supports the implementation of adaptation priorities related to agricultural production systems, as identified by the Government in its climate-related national policies and plans: the Poverty Strategy Reduction Programme - Strategic Development Plan 2013-2015. The Initial National Communication to the UNFCCC (2001) already recognized the need to develop adaptation measures in order to address the threats represented by climate change impacts on agricultural sector, which represents the main activity for 70% of the population. In particular, cereal yield gaps due to scarce access to production inputs, recurrent drought was identified as a major risk for the country food security.

Additionally, the vision of the Chad National Adaptation Programme of Action (NAPA) is to introduce a capacity for optimal adaptation by communities in the face of the damaging impact of climate variation and change by identifying the urgent and immediate need for adaptation and the response options, and by developing strategies to strengthen the capabilities of stakeholders and local communities. More specifically, the NAPA identifies seven main options in the area of strengthening the capacity of rural operators and producers exposed to climate change by supporting production and diversification; rational management of natural resources under threat; protection and securing of infrastructures and structural equipment at risk; and early warning of climate catastrophes. The adaptation priorities identified in the project profiles contained in the NAPA served as basis to develop the present proposal.

#### **A.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities.**

In line with the LDCF criteria for project proposal, the IFAD-supported programme implementation proposal is country-driven and responds to key Government's priorities for climate change adaptation. In line with the LDCF additionally principle, the identified activities are additional to baseline interventions without duplicating them and are based on the indications contained in the NAPA and other relevant climate-related policies and strategies. Consultation with the Government has been made in respect of the principle of country ownership.

***Contribution to national strategies.*** PARSAT has been identified jointly by the Government and IFAD, in consultation with the GEF focal point in Chad. The Project is in line with the strategies and development priorities listed in the documents of the National Development Plan (PND) of Agricultural Master Plan (SDA), and the priorities of the *National Adaptation Programme of Action to Climate Change (NAPA)*. In fact the project outcomes and activities stem from the NAPA and directly respond to implement the following national

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<sup>4</sup> For questions A.1 –A.7 in Part II, if there are no changes since PIF and if not specifically requested in the review sheet at PIF stage, then no need to respond, please enter "NA" after the respective question.

priorities as identified in the NAPA: (i) NAPA priority 1: water harvesting and better water management for adapting the agro-pastoral production systems; (ii) NAPA priority 2: diversification and intensification of agricultural activities; (iii) NAPA priority 3: adjusting crop calendars; (iv) NAPA priority 4: improving education and communication for better adaptation to climate change; (v) NAPA priority 5: soil and water conservation for agricultural activities; and (vi) NAPA priority 7: improving access to climate data for better monitoring of vulnerability. The proposed project is similarly aligned with the environmental conservation (National Action Programme to Combat Desertification – PAN/LCD). The adaptation options chosen are also consistent with the Convention to Combat Desertification (UNCCD), the Convention on Biological Diversity (CBD) and the United Nations Framework Convention on Climate Change (UNFCCC). Upon completion, PARSAT will have contributed to MDGs 1 and 7, namely: (i) halving extreme poverty and hunger; and (ii) integrating the principles of sustainable development into national policies by reversing the current trends in loss of environmental resources. The Project particularly focuses on two of MAI's current major priorities, i.e. the better use and management of agricultural water and the availability of quality seed.

***Alignment with IFAD's country strategy (RB-COSOP 2010-2015).*** The Results-Based Country Strategic Opportunities Programme (RB-COSOP) aims to improve living conditions and to diversify income of sedentary and transhumant rural poor populations, especially women and youth. To achieve this, it targets two direct objectives: (i) to improve access to water and its sustainable management by the rural poor; and (ii) to improve market access for products and agricultural inputs in the sectors where the rural poor have a comparative advantage. Access to rural finance is COSOP's cross-cutting objective. PARSAT draws from the draft project identified in the RB-COSOP (Natural Resources Protection and Management *Programme, or* PROGEREN), taking into account lessons learned from ongoing and completed projects.

***Complementarity with IFAD project portfolio in Chad and the other technical and financial partners (TFPs).*** PARSAT's activities, focusing on the development and resilience of agricultural systems, are complementary with those of: (i) PADER-G, which intervenes mostly upstream on the development of social and community infrastructures, structuring, supporting FOs, and developing microfinance instruments in the Guéra region; and (ii) *Programme d'hydraulique pastorale en zone sahélienne* (PROHYPA, Water and Resource Programme in the Sahelian Areas), which supports development of communities and pastoral systems in PARSAT intervention areas (see details in Annex 3). PARSAT will capitalize on the lessons learned and experience acquired of the Food Security Project North Guéra – Phase II (PSANG-II) and PADER-G regarding the lean period food banks and educational measures (literacy, nutrition education) that have had a strong impact on improving the living conditions of the rural poor.

Complementing PROHYPA and the Almy Al Afia II Project (French Development Agency, AFD), PARSAT shall propose concrete measures to promote social peace between sedentary and transhumant communities around the sites where it will intervene, in particular by promoting transhumants' access to water points and storage warehouses. It will also raise awareness among the sedentary communities of PROHYPA activities. Finally, PARSAT will work in consultation with the *Projet d'appui au développement local et de gestion des ressources nationales* (PADL-GRN, Project to Support Local Development and National Resources Management), *Projet d'appui à la production agricole au Tchad* (PAPAT, [Emergency] Project to Support Agricultural Production in Chad) and *Projet d'appui au développement local* (PROADEL, Project to Support Local Development) on issues regarding integrating activities according to local development plans and the implementation of support measures for farmers.

### **A.3 The GEF Agency's comparative advantage: IFAD has been present with several projects in Chad in the field of agricultural and rural development.**

Since 1991, IFAD has financed five loans to Chad with investments totaling USD 53.4 million. IFAD's operations are consistent with both the Chad Poverty Strategy Reduction Programme and the National Adaptation Programme of Action (NAPA). The main strategic axes around which IFAD's operations are articulated are: raising productivity of staple food crops; facilitating access to market; enhancing value added/marketing of the products; and promoting community development. The NAPA recognizes agriculture and food security as a major sector for adaptation and this offers a unique opportunity to couple agricultural and rural development, that are undertaken by IFAD with adaptation needs and climate proofing activities. In addition, IFAD's activities are guided by a clear targeting policy which ensures that they reach poor rural

women and men, who are usually the most vulnerable to climate change, and that they have maximal impact in reducing rural poverty and hunger in each context. In line with “Mainstreaming gender at GEF”, and to ensure successful impact and sustainability of its work, IFAD promotes women’s empowerment and gender equality in all its field operations. Additional advantages are represented by the fact that LDCF-funded activities will be fully integrated into the IFAD supported PARSAT programme, therefore cost-effectiveness will be ensured by: i) a common management structure that will contribute at reducing the transaction costs; ii) a single M&E framework and iii) reduced risks of overlapping with other activities.

#### **A.4. The baseline project and the problem that it seeks to address:**

Chad’s economy is very fragile, as it is affected by a number of constraints, including low economic growth, recurrent political instability, a projected population growth of 124% by 2050 (FAOSTAT, 2013), environmental (mainly climatic and pedologic) unfavourable conditions, low agricultural productivity, and extreme poverty. According to UNDP (2011), Chad ranks 183rd out of 187 countries surveyed in terms of human development. Although the country extracts oil since 2003 and has been investing in important infrastructure since 2009, about 58% of the total 12 142 000 inhabitants still live below the national poverty line since 2003. Estimations from 2011 (FAOSTAT) indicate that 57% of the population practices subsistence farming and small scale agro-pastoral and pastoral activities.

National food production barely covers population needs due to multiple reasons. With respect to the production systems, the large majority of them relies on low inputs, and is highly dependent on unreliable and scarce rainfall. With reference to the natural resource base influencing the agricultural potential, the following main soil types are found in Chad: aerosols, regosols, lithosols, vertisols. Most of these soils are sensible to water and wind erosion, have low structure and low soil organic matter, and support low productivity levels. 5 273 500 ha (equivalent to 4%) of Chad’s total land area (128 400 000 ha) are degraded and affect the livelihoods of 11% of the national population (GLADA, 2008). The production capacity supported by those soils for low input level rain-fed cereals ranges from an average of 0.1 t/ha through maximum 0.3 t/ha (GAEZ, 2011). Additionally, a large part of the country is arid or semi-arid with a maximum length of the growing period as short as 120 days. Further constraints to the agricultural productivity are related to the higher frequency of extreme weather events and climatic hazards as exacerbated by climate change. Chad’s climate is characterized by strong inter-annual rainfall variability (New et al., 2002). The severe 2008-2011 drought and the disastrous floods in 2012, show the tendency towards more frequent climate change-related disasters, and how these impact on food security and on the fragile rural ecosystems upon which 71% of the national population depends.

The following main agro-ecological zones are distinguished in Chad: i) Saharan (< 50 mm rain/year); ii) Sahelian (200 to 800 mm rain/year); iii) Sudanian (800 to 1200 mm rain/year). Since the 1960s a southwards migration of the 300 mm isohyet has been registered, resulting in an expansion of the Sahelian climatic zone and a reduction of the Sudanian one. Moreover, according to the National Adaptation Programme of Actions of 2009, maximum temperatures will increase by 0-1.3°C and minimum temperatures will increase by 0.5-1.7°C (results of the simulation with the model MAGICC/SENGEN), that is twice as much the current average global temperature (GIEC, 2001; MEE, 2001; Duma, 2005; NAPA, 2009).

Climate change projections for 2050 and 2080 indicate that Chad is likely to face a hotter, drier and more erratic future weather (RMDH, 2006), which in turn will result in the decrease in productivity of food crops and will sharpen food insecurity, particularly in rural areas. With regard to the pastoral activity, the increase of climate variability and its consequences (such as drought, floods, locust invasions) may lead to: i) drastic size reduction and degradation of pasture; ii) deficit in fodder and food production; and iii) deficit of water supply for cattle. This in turn will lead to important cattle mortality, in a reduction of husbandry production, a consequent reduction in supply of all cattle related products, expansion of agricultural and pastoral activities into fragile ecosystems, and increased competition between herders and farmers. The impact of floods is significant on the rural infrastructure (which is already barely developed). These floods are increasing the isolation and vulnerability of smallholders and aggravating the food-security situation in the country. Floods can be also devastating as they cause significant crop damages.

This project will focus on IFAD historical intervention area, i.e. the Sahelian area (Chari Baguirmi, Hadjer Lamis, Guéra and Batha). The specific zones targeted in this area, to be further defined at detailed design, are



characterized by: i) high population density, ii) rural poverty and food insecurity, iii) vulnerability to climate shocks, iv) potential for intensified agriculture and production concentration zones.

Taking into account the Adaptation of Smallholder Farming cofinancing to the project (ASAP loan – of \$ 5 million), some of the GEF activities have been realigned to match the updated structure of the project and grant consistency with ASAP financed activities.

PARSAT will adopt an integrated approach implemented through three main components. The first component (component 1) would aim at sustainably intensifying and securing resilient farming systems. Component 2 would be oriented towards increasing the value of the agriculture produce and agricultural activities. The last component (component 3) aims at strengthening coordination, management, and monitoring and evaluation (M&E) of the project. PARASAT's components are as follow:

### **Component 1. Protecting against climate risks and intensification of agricultural production**

Sub-component 1.1. Improving agricultural water catchment and management. PARASAT will support the rehabilitation or the construction of water catchment facilities, taking into account the physical and socio-economic contexts specific to each area. Different types of development to be carried out with PARASAT's support are: (i) 700 ha of market gardening sites; (ii) 5,000 ha recession crop sites; and (iii) 4,300 ha rainfed sites. A total of 10,000 ha will be rehabilitated or developed for 22,100 beneficiary farmers. The Project will support the establishment of users associations and their respective management committees, and train and support them so that they will be able to ensure the management and maintenance of the developed sites.

Sub-component 1.2. Intensification of resilient production systems. PARASAT will support sustainable intensification cereal production systems (millet, sorghum), complementary crops (groundnut, sesame, cowpea, etc.), market gardening crops and small livestock farming, which are activities whose complementarity is interesting and important for improving the resilience of rural households.

- The first set of activities will involve the training of farmers on improved crop management through: (i) Farmer Field Schools (FFSs), combining the learning activities with an initial kit of inputs or equipment, provided to participants so that they can apply the practices that they learned in the FFSs on a portion of their land; (ii) specialized technical and economic training for the most enterprising farmers (leaders); (iii) organizational training and support of Farmers' Organizations (FOs) for production; and (iv) exchange visits between farmers. In total, 800 FFSs will be set up and will benefit 20,000 farmers. Other training and exchange visits will benefit 2,890 people.
- The second set of activities will focus on access to seeds and veterinary inputs by supporting the creation of a network of seed multiplier farmers for food crop seeds; (ii) support to research and development of shorter-cycle crop varieties or crops that are more resistant to water stress (e.g. 'Kordofan' sorghum); and (iii) training and support for the creation of a network of women animal health workers for small-scale livestock farming. In total, 95 seed multiplier farmers and 90 women animal health workers will be trained and supported in their professional activities.

### **Sub-component 1.3. Cross-cutting support measures**

- The first set of activities will focus on educational support measures, which, in previous interventions, have demonstrated their relevance and complementarity to support productive activities of poor people. PARASAT offers three types of educational measures: (i) literacy, in order to reduce the particularly high level of illiteracy among women and early school leavers; (ii) nutrition education for households with cases of malnourished children, pregnant and lactating women; and (iii) environmental education for all segments of the population, but particularly for youth and school children. At least 6,400 people will become literate; 5,000 will have access to nutrition education sessions; and 5,700 will be provided with environmental education.
- The second set of activities will focus on climate information and monitoring measures through: (i) rehabilitation or installation of 18 climate stations and support for their operations, with the dissemination of agro-hydrometeorological newsletters; (ii) support for climate and environmental monitoring by promoting the establishment of a geographic information system (GIS); (iii) support to agro-ecological monitoring in collaboration with the International Centre for Research in Agroforestry

(ICRAF); and (iv) support for the monitoring of groundwater with the installation of a network of 18 piezometers.

## **Component 2. Production enhancement and support to rural households' economic activities**

Sub-component 2.1. Opening up of production areas. PARSAT shall not undertake continuous linear development, but rather, will concentrate its resources on constructing 106 works for treating critical points and grading roads over a general linear axis of approximately 100 km to improve the practicability of the axes during the rainy season. It will introduce and train – in collaboration with the relevant local authorities – the associations responsible for the maintenance of the water crossings completed. These associations will be provided with an initial set of maintenance tools.

Sub-component 2.2. Support for storage facilities. PARSAT will build or rehabilitate 40 community storage warehouses for various [economic] activities: (i) the lean period food bank (priority activity to be separated from other storage activities; (ii) storage linked to credit (warrantage) in Guéra, the only PARSAT intervention area where there is a microfinance network; (iii) the parcelling of products for marketing; (iv) cereal storage services for nomad populations when they move south; and (v) rental service centres for small agricultural equipment. For these activities, the Project will finance training, support and exchange visits to PO members and management committees responsible for the activities in the warehouses.

Sub-component 2.3. Support to the economic activities of households. This sub-component will support the promotion of 300 income-generating activities (IGAs) for the most vulnerable (3,000 beneficiaries) in a limited number of areas such as drying and preserving vegetables and fruits, oil production (groundnuts, sesame, balanites), apiculture and drying/preserving of fish (Lake Fitri) in order to develop and not disperse strong expertise and support, which are essential for the viability of the IGAs initiated. The purpose of the IGA is to provide training, technical and economic assistance, and productive capital (excluding working capital) to the poor so that they can develop a profitable economic activity in the dry season. Given the socio-economic profile of the beneficiaries and the lack of a microfinance institution (MFI) in two Departments of intervention (Fitri and Dababa), IGA will be cost-shared: the Project will finance 100 per cent of the training costs and 85 per cent of the provision of productive assets. In Guéra, these activities will be conducted in collaboration with the MFI Union des caisses d'épargne et de crédit du Guéra (UCEC-G, Savings and Credit Bank of Guéra) in the aim of linking the beneficiaries of the IGA with microfinance services in the long term. As regards marketing, the project will support: (i) awareness raising and organization of volunteer farmers for the marketing of products; (ii) support to market research and batch selling; and (iii) the participation of farmers in regional or national fairs.

## **Component 3. Coordination, management and the monitoring and evaluation of the Project**

Component 3 will ensure: (i) coordination and financial management of the Project; (ii) monitoring and evaluation, knowledge management and communication, with a particular focus on climate change adaptation; and (iii) institutional support and policy dialogue on climate change and the adaptation of rural farming.

PARSAT will build- and add on the positive experiences from projects of the African Development Bank (PVERS) and the European Union (10<sup>th</sup> EDF) and complement previous and ongoing IFAD interventions (PSANG II, PADER-G and PROHYPA) as portrayed in table 1. The most important lesson learned from these experiences that will be taken into account in the design of the present project is the careful sizing of the programmed activities. This will need to be planned in consideration of the weak local implementation capacity, delays at the level of the central administration and lengthy procurement.

Table 1 - Complementarity among IFAD projects in the intervention zone

COMPLEMENTARITY AMONG ACTIVITIES			
Activity	Prohypo <sup>1</sup> completion 2014	PADER-G <sup>2</sup> completion 2017	PARSAT <sup>3</sup>
Pastoral Infrastructure (Wells, Watering Points)	•		
Planning And Management Of Infrastructure And Transhumance Routes	•		
Management Of Conflicts Over Natural Resources (Water, Pastures, Transhumance Corridors)	•		•
Basic Services For Nomad Communities (Mobile Education, Basic Health, Animal Health, Livestock Products Processing)	•		
Water And Sanitation		•	
Rural Roads		•	•
Irrigation Systems			•
Capacity Building For FOs		•	•
Resilient Agricultural Production Systems			•
Support To Early Warning Agricultural Systems			•
Research And Development Of Agricultural Production		•	•
Microfinance		•	
Economic Support To FOs Activities		•	
Improving Access To Markets			•
Cereal Banks		•	•
Targeted Support To The Most Vulnerable Groups			•
1 MHUR/DHP: Batha, Bar El Gazal, Chari-Baguirmi, Guéra, Hadjer-Lamis, Kanem			
2 MAI: Guéra			
3 MAI: Batha - lac Fitri, Chari-Baguirmi, Guéra, Hadjer-Lamis			





**A. 5. Incremental /Additional cost reasoning:** describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the associated global environmental benefits (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

LDCF financed activities are driven by the PANA priorities and will build on existing projects and, being fully aligned with the IFAD-supported baseline investment, they will complement PARSAT in ways to strengthen capacity of vulnerable growers and institutions and to increase the resilience of the production (of both yields and post-harvest produce) as well as the resilience across the landscape, as described in the following table 2.

IFAD's historical portfolio in the country has no explicit focus on climate change adaptation issues. PARSAT is therefore proposed with the main objective to reduce the impact of climate change on the rural vulnerable groups, on essential natural resources and on the ecosystems to support agricultural production and enhance food security. Mainstreaming climate change adaptation and resilience in this IFAD/LDCF project is an innovative way to make smallholder farming more resilient and competitive, ensure sustainability of business models and viability of distinctive value chains in Chad. Specific innovative mechanisms promoted include:

- Early warning of climate catastrophes to support productions;
- Building and up-scaling new capacity for both cereal banks management and improved traditional post-harvest processing;
- Promoting small scale irrigation for market gardening to support specific value chains that are a major source of employment for women.

Table 2 - Additionality of LDCF activities with respect to the baseline

Identified climate change related risks to baseline intervention	<ul style="list-style-type: none"> <li>-Reduced and more irregular water availability</li> <li>-Increased risks for pest and diseases</li> </ul>	<ul style="list-style-type: none"> <li>-Small producers unaware of climate change impacts</li> <li>-Climate information not factored into agricultural investment decisions</li> </ul>	<ul style="list-style-type: none"> <li>-Increased soil degradation</li> <li>-Reduced yields</li> <li>-Increased post-harvest losses</li> </ul>		Climate change risks to development objectives: <ul style="list-style-type: none"> <li>-Reduced livelihood to reach food security objectives</li> <li>-Increased risks of socioeconomic vulnerability</li> <li>-Reduced resilience of the agro-ecosystem resulting in mid to long-term lower productivity</li> </ul>
Baseline	Providing on-farm inputs for crop intensification of farming system 	Promoting access to markets 	Promoting diversification of activities and income 	Strengthening institutional support 	
LDCF Additionality	<ul style="list-style-type: none"> <li>-Strengthening capacity of vulnerable growers on best management practices in a changing climate</li> <li>-Rendering crop yield resilient to climate change</li> <li>-Promoting sustainable and efficient water use</li> <li>-Promoting resilience at landscape level</li> </ul>	<ul style="list-style-type: none"> <li>-Investing in climate resilient infrastructures at sites impacted by floods and erosion</li> <li>-Forming processors aware of climate change</li> </ul>	<ul style="list-style-type: none"> <li>-Promoting small scale irrigation for market gardening</li> <li>-Selecting and reproducing climate-adapted seed varieties</li> <li>-Scaling-up cereal banks as an adaptation measure</li> </ul>	<ul style="list-style-type: none"> <li>-Promoting agricultural research on climate change impacts, adaptation and mitigation</li> <li>-Improving data and knowledge on climate change impacts</li> <li>-Raising awareness on climate change at the institutional level</li> <li>-Addressing climate change in policy groups</li> </ul>	Expected development objectives: <ul style="list-style-type: none"> <li>-Mitigating the impact of climate change on food production and enhancing food security and income of most vulnerable rural communities</li> <li>-Unlocking climate change-related bottlenecks to access to markets</li> </ul>

**A.6 Risks**, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and measures that address these risks:

*At implementation*, the key risks relate to: i) the management capacity of the PCU but this will be mitigated by the fact that the PADER-G team would manage the project; ii) the lack of inter-ministerial communication and frequent government reshuffling, preventing effective involvement of concerned Ministries. The use of existing PADER-G as focal point will mitigate this risk; iii) the decentralization of the National Food Security project which operates quite independently from the Ministry of Agriculture and Irrigation, and may challenge the harmonization efforts of intervention approaches; iv) the increased frequencies of droughts and floods and their impact on crops and food security. This latter risk will be mitigated by the project's direct focus on climate change adaptation (which will gradually contribute to lesser impacts of climate shocks). Other risk would relate to the potentially low absorption capacity at the country level but it will be mitigated by the establishment of local procurement commissions and by the existing agricultural potential in the 4 regions. There is also the risk of conflict between transhumant/nomads communities and agricultural households, this issue will be mitigated by the support which will be provided by the PARSAT project to the existing local consultative bodies and the synergies with the work of the AFD on transhumant livestock production systems in Chad.

*Risks related to the effectiveness of the interventions.* The risks that could negatively impact the effectiveness of the Project activities are principally the following:

- The low density of the population and the isolation of certain areas of production generate significant extra costs and delays in the realization of productive investments, which could also cause delays in the planning of activities and reduce the Project's expected benefits. The Project will prioritize areas with high potential, where there is generally an active population.
- For the construction of water catchment facilities, the low availability of qualified companies or labourers, and the shortage of labour in the dry season for high labour intensive works may impact negatively on meeting the work schedules. The Project should provide timely information on the opportunities of high labour intensive works.
- The weakness of trade, due to the low population density, low purchasing power of the rural communities, poor or impassable roads in the rainy season, and the weakness of the volume of marketable products all make it more difficult to carry out action for the development of input supplies and the enhancement of agricultural products. Nevertheless, the increase in production at certain sites will lead to the development of new local economic activities that ultimately may make the area more attractive.
- The fact that the communities, because of their poverty, are less sensitive to issues related to environmental natural resources conservation or the proper management of community assets may negatively affect the proper management/utilization of investments or the impact awareness measures taken. This makes it more difficult to ensure the sustainability of some activities such as WSC/LCS, and the rational management of community infrastructures. The economic benefits for the population from the (simple) development works proposed should mitigate this risk

**Table 3: Summary of risks and mitigation measures**

Risks	Description	Mitigation measures
<u>Security risk</u>	<b>High risk.</b> Particularly after the security situation in the Sahel has changed.	<ul style="list-style-type: none"> <li>• If necessary, report of the design.</li> <li>• Travel only in convoys and by day; access to the WFP plane for travel to Mongo; access to WFP and UNDSS housing infrastructure when possible; radio equipment.</li> <li>• Staff of projects has received training on the use of radios and the basic rules of safety.</li> </ul>
<u>Institutional risk</u>	<b>Medium risk.</b> Limited collaboration between the MAI and MERH	<ul style="list-style-type: none"> <li>• Nomination of focal points</li> <li>• Provide the MAI and MERH with secured consultative access to information in the M&amp;E system of the Project</li> </ul>

Risks	Description	Mitigation measures
	<b>High risk.</b> Slowing down of activities and limited disbursement rate due to the complexity of the procurement procedures	<ul style="list-style-type: none"> <li>Operational measures described in section D above and in Annex 8,.</li> </ul>
	<b>Medium to high risk.</b> Lack of transparency in the financial management of the Project.	<ul style="list-style-type: none"> <li>UCGP reference persons for procurement</li> <li>Beneficiary participation in the opening and awarding of tenders at the regional level, through their representation in the local procurement committee</li> <li>UCGP's knowledge IFAD procedures and proven good administrative and financial management</li> </ul>
<u>Social risk</u>	<b>Medium risk.</b> Tensions and conflicts between transhumant/nomadic livestock farmers and sedentary crop and/or livestock farmers	<ul style="list-style-type: none"> <li>Collaboration with AFD projects and PROHYPA in 4 regions that are work on this issue.</li> <li>Participation in strengthening local collaboration frameworks</li> <li>Partnership with local radio stations to facilitate communication and information of the various actors</li> <li>Full involvement of the Regional Action Committees (CRAs), the Departmental Action Committees (CDA), and the traditional authorities in the prevention of social conflicts</li> </ul>
	<b>Medium risk.</b> Land management by the traditional authorities may not always be to the advantage of the most vulnerable	<ul style="list-style-type: none"> <li>Extensive collaboration with the social-professional groups concerned prior to beginning development</li> <li>Negotiation of preliminary land agreements to ensure rights of access to all of the farmers concerned</li> </ul>
<u>Climate risk</u>	<b>High risk.</b> Frequent climate shocks in the Sahel (droughts and floods, locust plagues, epidemics)	<ul style="list-style-type: none"> <li>Developments that allow to an increase in working volume of agricultural water</li> <li>Set-up and training of water management committees</li> <li>Protection of water catchment facilities against erosion and siltation</li> <li>Tree planting at the development sites and the farmers' concessions</li> <li>Promotion of conservative agriculture techniques</li> <li>Supporting educational measures on environmental conservation</li> </ul>
<u>Technical risk</u>	<b>Medium risk.</b> Lack of harmonization of development approaches and in the implementation of the projects and programmes	<ul style="list-style-type: none"> <li>Consultations with programmes and projects working in the same areas - whether government or TFP projects – on intervention methods / approaches</li> <li>Seeking synergies between the interventions of the two projects to promote the proper use of equipment and inputs provided by the PNSA</li> </ul>
<u>Financial risk</u>	<b>Medium risk.</b> Limited financial management capacity leading to significant delays in reporting and the preparation of audits or breaks in financing.	<ul style="list-style-type: none"> <li>A single procedures manual harmonized between PADER-G and PARSAT</li> <li>Good knowledge and application of IFAD's procedures manual and administrative and accounting procedures by UCGP of the PADER-G</li> <li>Strengthening the human resources of the Administrative and Financial Department (SAF) of PADER-G-PARSAT as provided within the PARSAT framework</li> </ul>

## **A.7. Coordination with other relevant GEF financed initiatives**

The project will be designed and implemented in close consultation with sister GEF agencies and other donors in Chad. Up to this stage, the ideas presented in this PIF were discussed with all donors and GEF agencies that operate in the countries and it reflects potential areas for synergies and complementarities. These will be further explored at design and will become effective at implementation. Several partners operating in the region are likely to ensure the implementation of the proposed activities. With respect to the absence of a system of land ownership and the mitigation of conflicts between herders and farmers for the use of natural resources, PARSAT will seek collaboration and synergies with the existing local consultative bodies (run by state authorities and NGOs) and with AFD, that has a long-term experience on transhumant livestock production systems in Chad.

With respect to the support to the seed industry and the production of adapted cereal varieties, the project will consider collaborating with ITRAD and SDC, that are active in the Chadian seed sector. The actual implementation capacity of potential partners will be thoroughly assessed during detailed design. All partnerships will incorporate performance indicators and clear and measurable deliverables.

## **B. ADDITIONAL INFORMATION NOT ADDRESSED AT PIF STAGE:**

### **B.1 Describe how the stakeholders will be engaged in project implementation.**

The project will promote enhanced partnerships with the private sector and with the farmer's organizations that are most exposed to climate risk. Whenever possible, activities (particularly capacity building) will be implemented through civil society organizations in order to mitigate the limited capacity of public services and to ensure that the "economically active poor", the poorest food insecure population and the most exposed to climate risk members of grassroots associations/organizations (specifically women and youth) are at the centre of the project focus.

Partner civil society organizations will be engaged at implementation to carry out relevant project activities on a competitive basis.

**B.2 Describe the socioeconomic benefits** to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF):

***Quantifiable direct benefits.*** The Project will contribute to improving food security and incomes of rural households, which will allow for improved resilience to climate change and other external shocks. Direct benefits taken into account in the analysis are: (i) an increase in agricultural production related to crop protection and intensification; (ii) improvement in small short-cycle livestock farming; (iii) enhancement of agriculture products due to storage infrastructure and rural roads; (iv) long-term income and employment opportunities in the long term for youth and women through IGAs and high labour-intensive working, which in the dry season, temporarily offers a safety net for the most vulnerable.

***Indirect and/or unquantifiable benefits.*** Other benefits will derive from Project activities, notably, new employment opportunities for youth: such as development work on bunds, seasonal work related to market garden crops, manufacturing and the repair of small equipment. The environmental benefits will also be significant in terms of better water and soil management. Literacy, nutritional and environmental education will produce additional benefits in education and improve the analytical, managerial and social integration capacities of the most vulnerable.

***The main institutional benefits*** will be: (i) organizing the populations into associations and FOs around some key activities to improve their resilience (maintenance and rational use of water catchment facilities, agricultural development, optimal use of storage capacity, IGAs) and the professionalization of FOs; (ii) training of field staff to provide suitable advisory counseling services; (iii) the involvement of technical services and local authorities in support of productive community investments that are essential for rural development (water catchment facilities, community stores, roads). With respect to reducing risks and losses related to climate change and the adoption by the community of appropriate adaptation measures, the

significant benefits of the Project will be in the implementation of interventions to improve water management and phenomenon of erosion, the adoption of agro-ecological techniques, the dissemination of crop varieties that are better adapted to water stress, the educating of communities on environmental issues and climate change, and improved storage conditions.

### B.3. Explain how cost-effectiveness is reflected in the project design:

The financial analysis aims to estimate the profitability of certain activity models over the medium and long term. It focuses on five crop models (sorghum, berbere, ground nut, tomato, okra), two models of small short-cycle livestock farming (goats, back-yard poultry), a model for the road rehabilitation, a storage model and three IGA models (apiculture, oil extraction, and smoking /drying fish). Scenarios with and without the Project have been established for each activity. For the crops, the analysis includes the increase in cultivated areas, linked to developments, and the assumptions on increasing yields as a result of improved production techniques.

**Table 4: Yield per hectare with and without the Project**

Progression	Before the Project	With the Project				
		Year 1	Year 2	Year 3	Year 4	Δ %
		70%	75%	90%	100%	
Sorghum	800	840	900	1 080	1 200	50%
Berbere	700	700	750	900	1 000	43%
Groundnut	500	476	510	612	680	36%
Tomato <sup>*1</sup>	8 500	10 500	11 250	13 500	15 000	76%
Okra <sup>*1</sup>	5 500	5 670	6 075	7 290	8 100	47%
Market garden crops	7 000	7 560	8 100	9 720	10 800	54%

<sup>\*1</sup> For tomato and okra, after a deduction of 25% of losses.

The analysis of the operating accounts of crops indicates that all crops concerned are profitable with higher gross margins for farmers in the ‘with Project scenario’. The IRR and cash flows for each model are positive, with a high IRR for market garden crops. This generates a significant income for farmers in the off-season, which is used to purchase cereal, thus contributing significantly to food security. The self-consumption portion has been specified for each crop (main product). Part of the cereal is sold to cover operating expenses and/or repay loans. By-products are largely self-consumed and developed through small livestock farming and fertilization (groundnut hay, bran, straw, etc.).



### **C. DESCRIBE THE BUDGETED M & E PLAN:**

**Planning.** Project planning will be based on two fundamental management tools that are closely related: (i) the logical framework and (ii) the WPAB. Based on a preliminary understanding and ownership of the logical framework by UCGP, the focal points of the Ministries involved and implementation operators, and the beneficiaries, planning will be carried out in October of each year to prepare the WPABs of the following year. During the planning, the following will be defined: (i) the activities to be implemented over the next 12 months; (ii) the responsible actors; (iii) the resources and the time needed to successfully complete these activities; and (iv) the outcomes to be achieved in line with the logical framework indicators. The WPAB will be drafted in a participatory manner with the various service providers, starting from the assessment of the outcomes achieved. The draft WPAB will be sent in October to the NSC, which must hold a validation meeting before the end of October. The WPAB, approved by the NSC, must be submitted no later than 30 November to IFAD, which will provide its feedback and declaration of no objection no later than 31 December. The Procurement Plan (GPP), detailing the nature of the markets, estimated amounts and dates for implementing the different stages will be attached to the WPAB and validated by the Steering Committee (SC) and IFAD.

**Monitoring and evaluation.** *The Results and Impact Management System (RIMS).* PARSAT's monitoring and evaluation system (MES) will take into account the framework adopted by IFAD to measure and show the results and the impact of all the projects it funds, namely the RIMS. RIMS, shared by all IFAD projects, distinguishes three levels of results: (i) direct results of activities carried out by the Project. (level 1); (ii) the outcomes of Project activities (Level 2); and (iii) the overall impact of the intervention (Level 3). Measuring the impact must include the following two indicators: (i) child malnutrition; and (ii) assets of the beneficiary households of the interventions. These and other impact indicators will be collected through baseline surveys (at the start, mid-term and completion of the Project). Particular emphasis will be given to the assessment of yields increase on both the equipped and unequipped plots in order to measure the resilience of farming systems promoted by the Project.

**MES.** The MES of PARSAT will be based on the successful experiences and procedures in the monitoring and evaluation manual of PADER-G. The latter has a data information management system that takes into account RIMS requirements, making it possible to: (i) decentralized data entry at the regional level; and (ii) obtain at any time a clear outline of the situation on the progress and physical achievements of the Project. PARSAT's secured M&E data collection and processing will be provided by the computer system (SQL database) that is already in place for PADER-G, maintaining separate access to the two projects. The computerization of the MES will also allow the UCGP to ensure consultation and the immediate transmission of information to the implementing operators and relevant ministries (MAI agents have already been trained accordingly) through the 'personalized and secure access methods.

Staff dedicated to M&E will be strengthened. In the UCGP of Mongo, it will include: a monitoring and evaluation officer, supported by two M&E assistants, one of whom will specifically be responsible for monitoring CC/E indicators. The M&E CC/E assistant will also be responsible for educating and training all PARSAT agents and partners on how to take into consideration and monitor CC/E aspects. Each focal point will have a M&E assistant/database manager, responsible for coordinating the M&E at the focal point's intervention area and will enter data into the computer system. Participatory M&E by the beneficiaries themselves will be promoted at the various activity committees or the supported FOs. The FOs will be trained and supported to systematically record in a harmonized manner the beneficiaries of the support received from the Project and the activity results.

**PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)**

- A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT(S) ON BEHALF OF THE GOVERNMENT(S):** (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this form. For SGP, use this [OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
<b>Gaourang Mamadi N'Garkelo</b>	GEF Operational Focal Point	MINISTRY OF ENVIRONMENT AND FISHERIES	5 APRIL 2013

**B. GEF AGENCY(IES) CERTIFICATION**

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for CEO endorsement/approval of project.

Agency Coordinator, Agency Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
<b>John McIntire</b> Associate Vice President, Programme Management Department IFAD			<b>Naoufel Telahigue</b> Regional Climate and Environment Specialist, Environment and Climate Division IFAD	+39 06 5459 2572	n.telahigue@ifad.org

**ANNEX A: PROJECT RESULTS FRAMEWORK** (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

## SIMPLIFIED LOGICAL FRAMEWORK

LDCF indicators are specified in bold in the overall logical framework below.

Project Summary	Key performance indicators (RIMS indicator) (*)			Means of verification	Assumptions/risk
		Target value			
		Mid-term	End of Project		
<b>Overall goal</b> Contribute to the sustainable improvement of food security and incomes of rural households in the Project area	<ul style="list-style-type: none"><li>At least 40% of targeted households have greater food security (number of months of the lean period/year) *</li><li>The prevalence of chronic malnutrition of children under 5 years of age decreased/increased from X% to Y%* (depending on the baseline)</li><li>The asset accumulation rate has increased for at least 40% of targeted households *</li></ul>	4 000  4 000	14 000  14 000	<ul style="list-style-type: none"><li>Baseline studies</li><li>Household surveys</li></ul>	<ul style="list-style-type: none"><li>Socio-political stability and security</li></ul>
<b>Development objective of the Project</b> Improve the resilience of agricultural systems and the economy of rural households to climate chance and external shocks	<ul style="list-style-type: none"><li>At least 60% of target households have improved their adaptation capacities to cope with climate risks (inter-annual stabilization of yields, soil erosion rate measured on the Sentinel sites) (ASAP)</li><li>Cereal production has increased at least 40% for at least 30% of targeted households*</li><li><b>At least 30% of beneficiaries have the possibility of engaging in off-season activities (ASAP/GEF)</b></li><li><b>Number of people (men and women) who have benefitted from the Project services* (ASAP/GEF)</b></li></ul>	6 000 2 500 2 500 105 000	21 000 10 500 10 500 175 000	<ul style="list-style-type: none"><li>Yield and production surveys on</li></ul>	<ul style="list-style-type: none"><li>Good governance</li><li>No major natural disasters</li></ul>
<b>Component 1. Protecting against climate risks and intensification of agricultural production</b>					
<i><b>Outcome 1: The farmers have adopted the intensified production systems that are sustainable and better adapted to climate change</b></i>	<ul style="list-style-type: none"><li>Number of households having adopted the more intensive production systems (at least three cropping per year)</li><li><b>Number of households having adopted (short-cycle) adapted cereal varieties (LDCF-GEF)</b></li><li>Number of more resilient small livestock farming systems set up</li></ul>	6 000 500 900	21 000 10 500 2 250	<ul style="list-style-type: none"><li>Household surveys</li></ul>	
Result 1.1 The availability of water in the crop plots is improved	<ul style="list-style-type: none"><li><b>Number of ha. developed according to the different types of development (ASAP/LDCF-GEF)</b></li><li>Number of households benefitting from developed plots</li><li>Number of people trained in development techniques and/or management*</li><li>Number of development management structures that are operational</li></ul>	3500 7 500 7 500 100	10 000 22 100 22 100 200	<ul style="list-style-type: none"><li>Activity reports</li><li>Reports on the Participatory Self-Assessment Workshop</li><li>Supervision</li></ul>	<ul style="list-style-type: none"><li>Potential land/land use conflicts between producer groups</li><li>Availability of sufficient</li></ul>

Project Summary	Key performance indicators (RIMS indicator) (*)			Means of verification	Assumptions/risk
		Target value			
		Mid-term	End of Project		
Result 1.2. More intensive and resilient production systems are applied by the farmers	<ul style="list-style-type: none"><li>• Number of farmers having benefitted from different learning and measures and technical training measures*</li><li>• Quantities of cereal seeds provided</li><li>• Number of Farmers’ Organizations (FOs) for production trained *</li><li>• Number of female leaders trained *</li><li>• Number of seed farmers trained and supported *</li><li>• Number of animal health workers trained and supported *</li></ul>	5 640 35 t 430 40 45 80	20 720 57 t 650 100 95 90	Reports	<ul style="list-style-type: none"><li>• manpower in the dry season for high labour intensive works</li><li>• Availability of qualified small-scale enterprises and labourers</li></ul>
Result 1.3 Cross-cutting educational measures allow for better ownership of physical supports for improved production	<ul style="list-style-type: none"><li>• Number of people who have become literate*</li><li>• Number of people who have benefitted from nutrition education sessions</li><li>• Number of people who have benefitted from environmental education sessions*</li><li>• <b>Number of people who have access to agro-climate information (LDCF-GEF)</b></li></ul>	3 000 2 500  4 000	6 400 5 700  8 000		
Component 2. Product enhancement and support to the economic activities of rural households					
Outcome 2. Income earned from production and other agricultural activities is diversified and improved in the target households	<ul style="list-style-type: none"><li>• Number of households who have diversified and secured their sources of income (ASAP)</li><li>• Additional annual income obtained by target households</li></ul>		17 500  + 20%	<ul style="list-style-type: none"><li>• Baseline survey</li><li>• Household surveys</li></ul>	
Result 2.1. The critical points are treated and the rural roads are developed.	<ul style="list-style-type: none"><li>• Number of critical points to guard against climate risk (ASAP) (IFAD)</li><li>• Number of km of re-graded roads</li><li>• Number of road maintenance associations set up and trained</li><li>• Number of individuals trained in maintaining roads<sup>+</sup> (ASAP)</li></ul>	55 16 65 40 355	80 26 100 106 530	<ul style="list-style-type: none"><li>• Activity reports</li><li>• Self-assessment workshop reports</li><li>• Supervision reports</li></ul>	<ul style="list-style-type: none"><li>• Availability of sufficient manpower in the dry season for high labour intensive work</li><li>• Availability of qualified small enterprises and labourers</li></ul>
Result 2.2. The storage capacities have increased and are well used	<ul style="list-style-type: none"><li>• Number of constructed/rehabilitated community warehouses</li><li>• Number of households that have built an initial lean period food bank stock</li><li>• Number of heads of FOs trained*</li></ul>	40 2 000 600	40 2 000 720		
Result 2.3. The economic activities of households are diversified and	<ul style="list-style-type: none"><li>• Number of people having benefitted from support for IGAs* (ASAP)</li></ul>	2000 45	3 000 90		

Project Summary	Key performance indicators (RIMS indicator) (*)			Means of verification	Assumptions/risk
		Target value			
		Mid-term	End of Project		
productive	<ul style="list-style-type: none"><li>• Number of people trained in techniques and management*</li><li>• Number of farmers participating in marketing operations</li></ul>	350	900		

\a: Farmers capable of maintaining or increasing their income independently from the climate situation (lack of rain, floods, etc.); inter-annual variation of yields from the developed and non-developed plots; rate of soil erosion, measured at the SENTINEL sites

N.B. The term ‘farmer’ used in this report refers to men and women engaged in agricultural production activities (food and market gardening products, small livestock farming). The indicators of individuals should be disaggregated by gender and age whenever possible (See Logical Framework in Annex 6, Appendix 1).

**ANNEX B: RESPONSES TO PROJECT REVIEWS** (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

Following the PIF approval, IFAD managed to secure additional climate finance to co-finance this LDCF project from the ASAP window (Adaptation for Smallholder Agriculture Programme). US\$ 5 million were made available for co-financing from ASAP and this has entailed some minor adjustments and restructuring across the PIF outcomes and outputs. The LDCF funding is now mainly financing component 1 (which is mostly the investment activities as identified in the PIF based on the NAPA). PIF activities under component 2 are now mainly covered from co-financing. This gives more impact per dollar for the LDCF investment under component 1, makes clear implementation plans between the climate funding sources, ensures complementarity between the two funding lines and increases the overall co-financing ratio. The project objective, approach, scope and target group remain unchanged. The project is now responding also to CCA3 of the LDCF framework as some of the identified outputs that were detailed at design were aligned to CCA3 as well.

	Comments at PIF	Actions Taken	Sections in the Document
<b>GEF Secretariat Review</b>			
<b>Project Design:</b>	Expand on how LDCF interventions are expected to reduce conflicts over natural resources between sedentary and transhumant communities as described on page 1 under expected outputs. We encourage IFAD to facilitate dialogue and cooperation between the adaptation and conflict management communities in implementing this project; and,	The overall strategy of the project is based on an approach that would try to lead to less conflict (organizing communities, sensitization, awareness raison, training on conflict resolution and management watershed approach for planning and implementation etc.). Furthermore Experiences of previous interventions show that beyond the technical criteria, site selection should pay attention to the socio-economic context in order to avoid making adjustments that will be underused, poorly managed or poorly maintained. In selecting sites to be developed or the preferred crops, PARSAT will take into account the following: (i) competitive or complementary uses that exist or that may be created on potential sites; conflicts over use or land that could arise and the appropriate measures to be taken in order to agree on usage and access rights to development sites and to prevent conflicts; (ii) the cultural realities of the rural areas that need to adapt some of the approaches and involve the local authorities in the implementation and monitoring of the interventions; and (iii) adaptation to climatic and ecological physical constraints (soil science, geomorphology, changes in rainfall regime); and (iv) adaptation to the management capacities of the beneficiaries. This risk is also well documented and mitigation measures are adequately reflected	Paragraph 30 page 7 in the main report/ Ref to training on conflict management (paragraph 80 in the main report). Also ref paragraph 120 page 24 of the main report regarding partnerships with other partners and NGOs that have experience in conflict management in chad with whom PARSAT will collaborate.

	<p>Ensure that LDCF activities are adaptation-specific, and not general development activities (such as literacy programs described on page 6).</p> <p>In addition, we expect that IFAD, in the development of its full proposal, will:</p> <ul style="list-style-type: none"> <li>· Expand upon how it will engage other development partners, environmental NGOs and civil society organizations in the project. As it stands now in the PIF, no specific organizations have been identified in section A.2 on page 8;</li> </ul>	<p>in the project document.</p> <p>The identified activities for funding with adaptation money stem from the NAPA (which identifies and validates already the adaptation needs of the rural communities in Chad). Furthermore the design missions have exchanged intensively with national stakeholders and local communities to make sure that all proposed activities are well justified for climate finance.</p> <p>During the design phase, IFAD organized a consultation meeting with all relevant development partners for this project in the country. A clear understanding of roles, responsibilities, niche and added value of each partners was established. Then potential synergies were identified and described in the project document. Partnerships that will be explored at implementation are i) with the Swiss Agency for Development and the Swiss Cooperation (SDC), due its experience in supporting market garden chains; (ii) the German Technical Cooperation (GIZ) to carry out the WSC/LCS works; (iii) the French Development Agency (AFD) for its lessons learned on the prevention of conflicts between nomadic and sedentary communities; and (iv) the African Development Bank (AfDB) and the World</p>	<p>Additionality is demonstrated in table 2, page 11 of the CEO endorsement template - furthermore the whole project intervention strategy and approach is based on a comprehensive package of adaptation and development activities that are clearly articulated</p> <p>Paragraph 120, page 24 of the main report</p>
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	<p>Clarify how it will communicate results, lessons learned and best practices identified throughout the project to the various stakeholders both during and after the project; and,</p> <p>Provide more information on how beneficiaries, including women and indigenous groups, have been involved in the development of the project proposal and will benefit from</p>	<p>Bank (WB) to support agricultural development. Collaborations/synergies will also be sought with the National Food Security Programme (PNSA), particularly for defining sustainable access mechanisms for farmers to agricultural inputs and knowledge.</p> <p>The contents and tools of communication and visibility will be adapted to the target groups. The Project will use different communication tools/channels and will be selecting those that can reach a wide audience at a reasonable cost. The Project will strongly focus on: the establishment of partnerships with rural radios in order to widely broadcast in the Project intervention areas general information on the fields of intervention, activities and results of the Project as well as the themes that are core of its action (for example, rural radio in Mongo already regularly broadcasts the results of the UCEC-G general meetings); the regular dissemination of the news bulletin that strengthens contact with the target groups of the Project; the set-up of an attractive website and the regular updating of its contents so that it would be available to all, the participation in forums and seminars, which are vehicles for greater sharing of knowledge and experiences of Project activities national or internationally.</p> <p>During design, IFAD has undertaken intensive consultations with national and local stakeholders to ensure that targeting is relevant and inclusive. In fact, the Project's target groups are vulnerable farming households whose livelihoods mainly rely on food production (of which 60 per cent is cereal) on an average size of 2-3 ha, small livestock farming and various off-season supplementary activities, especially market gardening,. This target group includes two subgroups consisting of households that are particularly at risk: (i) women heads of households, including widows, with many young children and dependents; (ii) newlyweds establishing new households.</p>	<p>Section 3 in the main report page 25 (Knowledge management and communication )</p> <p>Section on Project area and targeting, page x of the main report and annex 2 on poverty analysis and targeting</p>
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	this project.	The Project will focus on women as much as men as well as youth in all initiated actions. At the same time, the Project will offer support for a number of activities carried by women or that particularly concern them, with the aim to promote positive development of their social and economic situation.	
ALL COMMENTS AT PIF LEVEL HAVE BEEN ADDRESSED SUCCESSFULLY			

**ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS<sup>5</sup>**  
No PPG was requested for this project.

A. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES FINANCING STATUS IN THE TABLE BELOW:

PPG Grant Approved at PIF:			
<i><b>Project Preparation Activities Implemented</b></i>	<i><b>GEF/LDCF/SCCF/NPIF Amount (\$)</b></i>		
	<i><b>Budgeted Amount</b></i>	<i><b>Amount Spent To date</b></i>	<i><b>Amount Committed</b></i>
<b>Total</b>	, reur de syntaxe, ,,	, reur de syntaxe, ,,	, reur de syntaxe, ,,

<sup>5</sup> If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for the activities.

**ANNEX D: CALENDAR OF EXPECTED REFLOWS** (if non-grant instrument is used)

Provide a calendar of expected reflows to the GEF/LDCF/SCCF/NPIF Trust Fund or to your Agency (and/or revolving fund that will be set up)

N/A



# REQUEST FOR CEO ENDORSEMENT

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: LDCF

For more information about GEF, visit [TheGEF.org](http://TheGEF.org)

## PART I: PROJECT INFORMATION

Project Title: Enhancing the resilience of the agricultural ecosystems (Projet d'amélioration de la résilience des systèmes agricoles au Tchad) - PARSAT			
Country(ies):	Chad	GEF Project ID: <sup>1</sup>	5376
GEF Agency(ies):	IFAD	GEF Agency Project ID:	TBD
Other Executing Partner(s):	Lead Agency: Ministry of Agriculture and Irrigation Partner ministries: Ministry of Environment and Fisheries Borrower Representative: Ministry for economy, planning and international cooperation	Submission Date:	13 Jan 15
GEF Focal Area (s):	Climate Change	Project Duration(Months)	96
Name of Parent Program (if applicable): ➤ For SFM/REDD+ <input type="checkbox"/> ➤ For SGP <input type="checkbox"/>	NA	Project Agency Fee (\$):	694,064

### A. FOCAL AREA STRATEGY FRAMEWORK<sup>2</sup>

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount (\$)	Cofinancing (\$)
CCA-1	Outcome 1.2: Reduced vulnerability to climate change in development sectors	Output 1.2.1: Vulnerable physical, natural and social assets strengthened in response to climate change impacts and vulnerability	LDCF	4,685,500	5,488,500
CCA-2	Outcome 2.1: Increased knowledge and understanding of climate variability and change induced risks at country level and in targeted vulnerable areas Outcome 2.2: Strengthened adaptive capacity to reduce risks to climate-induced economic losses Outcome 2.3: Strengthened awareness and ownership of adaptation and climate risk reduction process at local level	Output 2.1.2: System in place to disseminate timely risk information  Output 2.2.2: Targeted population groups covered by adequate risk reduction measures Output 2.3.1: Targeted population groups participating in adaptation and risk reduction awareness activities	LDCF	619,636	2,343,200

<sup>1</sup> Project ID number will be assigned by GEFSEC.

<sup>2</sup> Refer to the [Focal Area Results Framework and LDCF/SCCF Framework](#) when completing Table A.

CCA-3	Outcome 3.1: Successful demonstration, deployment and transfer of relevant adaptation technology in targeted areas Outcome 3.2: Enhanced enabling environment to support adaptation-related technology transfer	Output 3.1.1: Relevant adaptation technology transferred to targeted groups  Output 3.2.1: Skills increased for relevant individuals in transfer of adaptation technology	LDCF	1,997,300	5,872,400
<b>Total project costs</b>				7,305,936	24,500,000

## B. PROJECT FRAMEWORK

<b>Project Objective: Strengthen the resilience of smallholder farmers and improve food security</b>						
<b>Project Component</b>	<b>Grant Type</b>	<b>Expected Outcomes</b>	<b>Expected Outputs</b>	<b>Trust Fund</b>	<b>Grant Amount (\$)</b>	<b>Confirmed Cofinancing (\$)</b>
<b>Component 1.</b> Protecting against climate risks and intensification of agricultural production	Inv.	Agricultural water catchment and management are improved	<ul style="list-style-type: none"> <li>Rehabilitation or the construction of water catchment facilities</li> <li>Development/rehabilitation of 10,000 ha (22,100 beneficiaries): (i) 700 ha of market gardening sites; (ii) 5,000 ha recession crop sites; and (iii) 4,300 ha rainfed sites</li> </ul>	LDCF	4,685,500	5,488,500
	Inv.	Resilient production systems are intensified through Training of farmers on improved crop management and access to seeds	<ul style="list-style-type: none"> <li>580 Farmer Field Schools (FFSs) on the themes of cereals, legumes and oilseeds, combining learning activities and initial kits of inputs or equipment (14,500 farmers)</li> <li>Specialized technical and economic training for the most enterprising farmers (leaders) on themes such as soil fertility; integrated pest management, seeds selection and conservation; etc.</li> <li>Creation of a network of seed multiplier farmers for food crop seeds (95 seed multiplier farmers trained and supported)</li> <li>Research and development of shorter-cycle crop varieties or crops that are more resistant to water stress (e.g. 'Kordofan' sorghum)</li> </ul>	LDCF	1,997,300	5,872,400
	Inv.	Cross-cutting support measures are provided	<ul style="list-style-type: none"> <li>Environmental education for all segments of the population, but particularly for youth and school children (5,700 people)</li> <li>Climate information and monitoring measures through the rehabilitation or installation of 18 climate stations and support for their operations, with</li> </ul>	LDCF	619,636	2,343,200

			the dissemination of agro-hydrometeorological newsletters			
<b>Component 2.</b> Production enhancement and support to rural households' economic activities	TA	Production areas are opened up	<ul style="list-style-type: none"> <li>Construction of 106 works for treating critical points and grading roads over a general linear axis of approximately 100 km</li> <li>Distribution of 106 kits of tools to the associations in charge of the sustainable management of the axis</li> <li>Trainings</li> </ul>	-	-	1,932,300
	TA	Storage facilities are improved	<ul style="list-style-type: none"> <li>Construction/rehabilitation of 40 community storage warehouses</li> </ul>	-	-	1,572,900
	Inv.	Economic activities of households are promoted	<ul style="list-style-type: none"> <li>Promotion of 300 income-generating activities (3,000 beneficiaries)</li> <li>Technico-economic trainings for all beneficiaries</li> <li>Improvement of marketing activities</li> </ul>	-	-	1,039,200
Subtotal					7,302,436	18,539,700
Project management Cost (PMC) <sup>3</sup>				LDCF	3,500	6,251,500
<b>Total project costs</b>					7,305,936	24,500,000

### C. SOURCES OF CONFIRMED COFINANCING FOR THE PROJECT BY SOURCE AND BY NAME (\$)

Please include letters confirming cofinancing for the project with this form

Sources of Co-financing	Name of Co-financier (source)	Type of Cofinancing	Cofinancing Amount (\$)
IFAD	IFAD	DSF Grant	8,600,000
		Loan	8,600,000
ASAP		Loan	5,000,000
National Government	GoC		2,000,000
Others	Beneficiaries	In-kind	300,000
<b>Total Co-financing</b>			24,500,000

### D. TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY<sup>1</sup>

GEF Agency	Type of Trust Fund	Focal Area	Country Name/ Global	(in \$)		
				Grant Amount (a)	Agency Fee (b) <sup>2</sup>	Total c=a+b
IFAD	LDCF	Climate Change	Chad	7,305,936	694,064	8,000,000
<b>Total Grant Resources</b>				7,305,936	694,064	8,000,000

<sup>1</sup> In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table. PMC amount from Table B should be included proportionately to the focal area amount in this table.

<sup>2</sup> Indicate fees related to this project.

<sup>5</sup> PMC should be charged proportionately to focal areas based on focal area project grant IFAD amount in Table D below.

**F. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:**

<b>Component</b>	<b>Grant Amount (\$)</b>	<b>Cofinancing (\$)</b>	<b>Project Total (\$)</b>
International Consultants	31,700	24,900	56,600
National/Local Consultants	0	372,600	372,600

**G. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? NA**

(If non-grant instruments are used, provide in Annex D an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF/NPIF Trust Fund).

## **PART II: PROJECT JUSTIFICATION**

### **A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN OF THE ORIGINAL PIF<sup>4</sup>**

**A.1 National strategies and plans** or reports and assessments under relevant conventions, if applicable, i.e. NA NBSAPs, national communications, TNAs, NCSA, NIPs, PRSPs, NPFE, Biennial Update Reports, etc.

Chad faces numerous environmental challenges and problems, most due to the country's rampant demography, rural poverty and poor consideration of the environmental dimension in previous sector based plans and programs. The most visible signs of climate change impacts include: droughts severity, natural disasters, outbreaks of diseases and pests (locusts are of major concern), diminishing biodiversity, extended erosion, a generalized loss of soil fertility.

Chad ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1994, and the Kyoto Protocol in 2009. The implementation of the UNFCCC took place in two phases from 1998 until 2001. In the first phase, a National committee on climate change was set up, a campaign was organized to extend awareness of the adverse effects of climate change on the National Plan, an inventory of greenhouse gases emissions was compiled as well as a study on vulnerability and adaptation. The second phase concentrated on reinforcing national capacities, for which a workshop was organized, on evaluating technological needs as well as compiling a list of priorities, and on drawing up a national strategy for implementing the UNFCCC.

The current proposal supports the implementation of adaptation priorities related to agricultural production systems, as identified by the Government in its climate-related national policies and plans: the Poverty Strategy Reduction Programme - Strategic Development Plan 2013-2015. The Initial National Communication to the UNFCCC (2001) already recognized the need to develop adaptation measures in order to address the threats represented by climate change impacts on agricultural sector, which represents the main activity for 70% of the population. In particular, cereal yield gaps due to scarce access to production inputs, recurrent drought was identified as a major risk for the country food security.

Additionally, the vision of the Chad National Adaptation Programme of Action (NAPA) is to introduce a capacity for optimal adaptation by communities in the face of the damaging impact of climate variation and change by identifying the urgent and immediate need for adaptation and the response options, and by developing strategies to strengthen the capabilities of stakeholders and local communities. More specifically, the NAPA identifies seven main options in the area of strengthening the capacity of rural operators and producers exposed to climate change by supporting production and diversification; rational management of natural resources under threat; protection and securing of infrastructures and structural equipment at risk; and early warning of climate catastrophes. The adaptation priorities identified in the project profiles contained in the NAPA served as basis to develop the present proposal.

#### **A.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities.**

In line with the LDCF criteria for project proposal, the IFAD-supported programme implementation proposal is country-driven and responds to key Government's priorities for climate change adaptation. In line with the LDCF additionally principle, the identified activities are additional to baseline interventions without duplicating them and are based on the indications contained in the NAPA and other relevant climate-related policies and strategies. Consultation with the Government has been made in respect of the principle of country ownership.

***Contribution to national strategies.*** PARSAT has been identified jointly by the Government and IFAD, in consultation with the GEF focal point in Chad. The Project is in line with the strategies and development priorities listed in the documents of the National Development Plan (PND) of Agricultural Master Plan (SDA), and the priorities of the *National Adaptation Programme of Action to Climate Change (NAPA)*. In fact the project outcomes and activities stem from the NAPA and directly respond to implement the following national

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<sup>4</sup> For questions A.1 –A.7 in Part II, if there are no changes since PIF and if not specifically requested in the review sheet at PIF stage, then no need to respond, please enter “NA” after the respective question.

priorities as identified in the NAPA: (i) NAPA priority 1: water harvesting and better water management for adapting the agro-pastoral production systems; (ii) NAPA priority 2: diversification and intensification of agricultural activities; (iii) NAPA priority 3: adjusting crop calendars; (iv) NAPA priority 4: improving education and communication for better adaptation to climate change; (v) NAPA priority 5: soil and water conservation for agricultural activities; and (vi) NAPA priority 7: improving access to climate data for better monitoring of vulnerability. The proposed project is similarly aligned with the environmental conservation (National Action Programme to Combat Desertification – PAN/LCD). The adaptation options chosen are also consistent with the Convention to Combat Desertification (UNCCD), the Convention on Biological Diversity (CBD) and the United Nations Framework Convention on Climate Change (UNFCCC). Upon completion, PARSAT will have contributed to MDGs 1 and 7, namely: (i) halving extreme poverty and hunger; and (ii) integrating the principles of sustainable development into national policies by reversing the current trends in loss of environmental resources. The Project particularly focuses on two of MAI's current major priorities, i.e. the better use and management of agricultural water and the availability of quality seed.

**Alignment with IFAD's country strategy (RB-COSOP 2010-2015).** The Results-Based Country Strategic Opportunities Programme (RB-COSOP) aims to improve living conditions and to diversify income of sedentary and transhumant rural poor populations, especially women and youth. To achieve this, it targets two direct objectives: (i) to improve access to water and its sustainable management by the rural poor; and (ii) to improve market access for products and agricultural inputs in the sectors where the rural poor have a comparative advantage. Access to rural finance is COSOP's cross-cutting objective. PARSAT draws from the draft project identified in the RB-COSOP (Natural Resources Protection and Management *Programme, or* PROGEREN), taking into account lessons learned from ongoing and completed projects.

**Complementarity with IFAD project portfolio in Chad and the other technical and financial partners (TFPs).** PARSAT's activities, focusing on the development and resilience of agricultural systems, are complementary with those of: (i) PADER-G, which intervenes mostly upstream on the development of social and community infrastructures, structuring, supporting FOs, and developing microfinance instruments in the Guéra region; and (ii) *Programme d'hydraulique pastorale en zone sahélienne* (PROHYPA, Water and Resource Programme in the Sahelian Areas), which supports development of communities and pastoral systems in PARSAT intervention areas (see details in Annex 3). PARSAT will capitalize on the lessons learned and experience acquired of the Food Security Project North Guéra – Phase II (PSANG-II) and PADER-G regarding the lean period food banks and educational measures (literacy, nutrition education) that have had a strong impact on improving the living conditions of the rural poor.

Complementing PROHYPA and the Almy Al Afia II Project (French Development Agency, AFD), PARSAT shall propose concrete measures to promote social peace between sedentary and transhumant communities around the sites where it will intervene, in particular by promoting transhumants' access to water points and storage warehouses. It will also raise awareness among the sedentary communities of PROHYPA activities. Finally, PARSAT will work in consultation with the *Projet d'appui au développement local et de gestion des ressources nationales* (PADL-GRN, Project to Support Local Development and National Resources Management), *Projet d'appui à la production agricole au Tchad* (PAPAT, [Emergency] Project to Support Agricultural Production in Chad) and *Projet d'appui au développement local* (PROADEL, Project to Support Local Development) on issues regarding integrating activities according to local development plans and the implementation of support measures for farmers.

### **A.3 The GEF Agency's comparative advantage: IFAD has been present with several projects in Chad in the field of agricultural and rural development.**

Since 1991, IFAD has financed five loans to Chad with investments totaling USD 53.4 million. IFAD's operations are consistent with both the Chad Poverty Strategy Reduction Programme and the National Adaptation Programme of Action (NAPA). The main strategic axes around which IFAD's operations are articulated are: raising productivity of staple food crops; facilitating access to market; enhancing value added/marketing of the products; and promoting community development. The NAPA recognizes agriculture and food security as a major sector for adaptation and this offers a unique opportunity to couple agricultural and rural development, that are undertaken by IFAD with adaptation needs and climate proofing activities. In addition, IFAD's activities are guided by a clear targeting policy which ensures that they reach poor rural



women and men, who are usually the most vulnerable to climate change, and that they have maximal impact in reducing rural poverty and hunger in each context. In line with “Mainstreaming gender at GEF”, and to ensure successful impact and sustainability of its work, IFAD promotes women’s empowerment and gender equality in all its field operations. Additional advantages are represented by the fact that LDCF-funded activities will be fully integrated into the IFAD supported PARSAT programme, therefore cost-effectiveness will be ensured by: i) a common management structure that will contribute at reducing the transaction costs; ii) a single M&E framework and iii) reduced risks of overlapping with other activities.

#### **A.4. The baseline project and the problem that it seeks to address:**

Chad’s economy is very fragile, as it is affected by a number of constraints, including low economic growth, recurrent political instability, a projected population growth of 124% by 2050 (FAOSTAT, 2013), environmental (mainly climatic and pedologic) unfavourable conditions, low agricultural productivity, and extreme poverty. According to UNDP (2011), Chad ranks 183rd out of 187 countries surveyed in terms of human development. Although the country extracts oil since 2003 and has been investing in important infrastructure since 2009, about 58% of the total 12 142 000 inhabitants still live below the national poverty line since 2003. Estimations from 2011 (FAOSTAT) indicate that 57% of the population practices subsistence farming and small scale agro-pastoral and pastoral activities.

National food production barely covers population needs due to multiple reasons. With respect to the production systems, the large majority of them relies on low inputs, and is highly dependent on unreliable and scarce rainfall. With reference to the natural resource base influencing the agricultural potential, the following main soil types are found in Chad: aerosols, regosols, lithosols, vertisols. Most of these soils are sensible to water and wind erosion, have low structure and low soil organic matter, and support low productivity levels. 5 273 500 ha (equivalent to 4%) of Chad’s total land area (128 400 000 ha) are degraded and affect the livelihoods of 11% of the national population (GLADA, 2008). The production capacity supported by those soils for low input level rain-fed cereals ranges from an average of 0.1 t/ha through maximum 0.3 t/ha (GAEZ, 2011). Additionally, a large part of the country is arid or semi-arid with a maximum length of the growing period as short as 120 days. Further constraints to the agricultural productivity are related to the higher frequency of extreme weather events and climatic hazards as exacerbated by climate change. Chad’s climate is characterized by strong inter-annual rainfall variability (New et al., 2002). The severe 2008-2011 drought and the disastrous floods in 2012, show the tendency towards more frequent climate change-related disasters, and how these impact on food security and on the fragile rural ecosystems upon which 71% of the national population depends.

The following main agro-ecological zones are distinguished in Chad: i) Saharan (< 50 mm rain/year); ii) Sahelian (200 to 800 mm rain/year); iii) Sudanian (800 to 1200 mm rain/year). Since the 1960s a southwards migration of the 300 mm isohyet has been registered, resulting in an expansion of the Sahelian climatic zone and a reduction of the Sudanian one. Moreover, according to the National Adaptation Programme of Actions of 2009, maximum temperatures will increase by 0-1.3°C and minimum temperatures will increase by 0.5-1.7°C (results of the simulation with the model MAGICC/SENGEN), that is twice as much the current average global temperature (GIEC, 2001; MEE, 2001; Duma, 2005; NAPA, 2009).

Climate change projections for 2050 and 2080 indicate that Chad is likely to face a hotter, drier and more erratic future weather (RMDH, 2006), which in turn will result in the decrease in productivity of food crops and will sharpen food insecurity, particularly in rural areas. With regard to the pastoral activity, the increase of climate variability and its consequences (such as drought, floods, locust invasions) may lead to: i) drastic size reduction and degradation of pasture; ii) deficit in fodder and food production; and iii) deficit of water supply for cattle. This in turn will lead to important cattle mortality, in a reduction of husbandry production, a consequent reduction in supply of all cattle related products, expansion of agricultural and pastoral activities into fragile ecosystems, and increased competition between herders and farmers. The impact of floods is significant on the rural infrastructure (which is already barely developed). These floods are increasing the isolation and vulnerability of smallholders and aggravating the food-security situation in the country. Floods can be also devastating as they cause significant crop damages.

This project will focus on IFAD historical intervention area, i.e. the Sahelian area (Chari Baguirmi, Hadjer Lamis, Guéra and Batha). The specific zones targeted in this area, to be further defined at detailed design, are

characterized by: i) high population density, ii) rural poverty and food insecurity, iii) vulnerability to climate shocks, iv) potential for intensified agriculture and production concentration zones.

Taking into account the Adaptation of Smallholder Farming cofinancing to the project (ASAP loan – of \$ 5 million), some of the GEF activities have been realigned to match the updated structure of the project and grant consistency with ASAP financed activities.

PARSAT will adopt an integrated approach implemented through three main components. The first component (component 1) would aim at sustainably intensifying and securing resilient farming systems. Component 2 would be oriented towards increasing the value of the agriculture produce and agricultural activities. The last component (component 3) aims at strengthening coordination, management, and monitoring and evaluation (M&E) of the project. PARSAT's components are as follow:

### **Component 1. Protecting against climate risks and intensification of agricultural production**

Sub-component 1.1. Improving agricultural water catchment and management. PARSAT will support the rehabilitation or the construction of water catchment facilities, taking into account the physical and socio-economic contexts specific to each area. Different types of development to be carried out with PARSAT's support are: (i) 700 ha of market gardening sites; (ii) 5,000 ha recession crop sites; and (iii) 4,300 ha rainfed sites. A total of 10,000 ha will be rehabilitated or developed for 22,100 beneficiary farmers. The Project will support the establishment of users associations and their respective management committees, and train and support them so that they will be able to ensure the management and maintenance of the developed sites.

Sub-component 1.2. Intensification of resilient production systems. PARSAT will support sustainable intensification cereal production systems (millet, sorghum), complementary crops (groundnut, sesame, cowpea, etc.), market gardening crops and small livestock farming, which are activities whose complementarity is interesting and important for improving the resilience of rural households.

- The first set of activities will involve the training of farmers on improved crop management through: (i) Farmer Field Schools (FFSs), combining the learning activities with an initial kit of inputs or equipment, provided to participants so that they can apply the practices that they learned in the FFSs on a portion of their land; (ii) specialized technical and economic training for the most enterprising farmers (leaders); (iii) organizational training and support of Farmers' Organizations (FOs) for production; and (iv) exchange visits between farmers. In total, 800 FFSs will be set up and will benefit 20,000 farmers. Other training and exchange visits will benefit 2,890 people.
- The second set of activities will focus on access to seeds and veterinary inputs by supporting the creation of a network of seed multiplier farmers for food crop seeds; (ii) support to research and development of shorter-cycle crop varieties or crops that are more resistant to water stress (e.g. 'Kordofan' sorghum); and (iii) training and support for the creation of a network of women animal health workers for small-scale livestock farming. In total, 95 seed multiplier farmers and 90 women animal health workers will be trained and supported in their professional activities.

### **Sub-component 1.3. Cross-cutting support measures**

- The first set of activities will focus on educational support measures, which, in previous interventions, have demonstrated their relevance and complementarity to support productive activities of poor people. PARSAT offers three types of educational measures: (i) literacy, in order to reduce the particularly high level of illiteracy among women and early school leavers; (ii) nutrition education for households with cases of malnourished children, pregnant and lactating women; and (iii) environmental education for all segments of the population, but particularly for youth and school children. At least 6,400 people will become literate; 5,000 will have access to nutrition education sessions; and 5,700 will be provided with environmental education.
- The second set of activities will focus on climate information and monitoring measures through: (i) rehabilitation or installation of 18 climate stations and support for their operations, with the dissemination of agro-hydrometeorological newsletters; (ii) support for climate and environmental monitoring by promoting the establishment of a geographic information system (GIS); (iii) support to agro-ecological monitoring in collaboration with the International Centre for Research in Agroforestry

(ICRAF); and (iv) support for the monitoring of groundwater with the installation of a network of 18 piezometers.

## **Component 2. Production enhancement and support to rural households' economic activities**

Sub-component 2.1. Opening up of production areas. PARSAT shall not undertake continuous linear development, but rather, will concentrate its resources on constructing 106 works for treating critical points and grading roads over a general linear axis of approximately 100 km to improve the practicability of the axes during the rainy season. It will introduce and train – in collaboration with the relevant local authorities – the associations responsible for the maintenance of the water crossings completed. These associations will be provided with an initial set of maintenance tools.

Sub-component 2.2. Support for storage facilities. PARSAT will build or rehabilitate 40 community storage warehouses for various [economic] activities: (i) the lean period food bank (priority activity to be separated from other storage activities; (ii) storage linked to credit (warrantage) in Guéra, the only PARSAT intervention area where there is a microfinance network; (iii) the parcelling of products for marketing; (iv) cereal storage services for nomad populations when they move south; and (v) rental service centres for small agricultural equipment. For these activities, the Project will finance training, support and exchange visits to PO members and management committees responsible for the activities in the warehouses.

Sub-component 2.3. Support to the economic activities of households. This sub-component will support the promotion of 300 income-generating activities (IGAs) for the most vulnerable (3,000 beneficiaries) in a limited number of areas such as drying and preserving vegetables and fruits, oil production (groundnuts, sesame, balanites), apiculture and drying/preserving of fish (Lake Fitri) in order to develop and not disperse strong expertise and support, which are essential for the viability of the IGAs initiated. The purpose of the IGA is to provide training, technical and economic assistance, and productive capital (excluding working capital) to the poor so that they can develop a profitable economic activity in the dry season. Given the socio-economic profile of the beneficiaries and the lack of a microfinance institution (MFI) in two Departments of intervention (Fitri and Dababa), IGA will be cost-shared: the Project will finance 100 per cent of the training costs and 85 per cent of the provision of productive assets. In Guéra, these activities will be conducted in collaboration with the MFI Union des caisses d'épargne et de crédit du Guéra (UCEC-G, Savings and Credit Bank of Guéra) in the aim of linking the beneficiaries of the IGA with microfinance services in the long term. As regards marketing, the project will support: (i) awareness raising and organization of volunteer farmers for the marketing of products; (ii) support to market research and batch selling; and (iii) the participation of farmers in regional or national fairs.

## **Component 3. Coordination, management and the monitoring and evaluation of the Project**

Component 3 will ensure: (i) coordination and financial management of the Project; (ii) monitoring and evaluation, knowledge management and communication, with a particular focus on climate change adaptation; and (iii) institutional support and policy dialogue on climate change and the adaptation of rural farming.

PARSAT will build- and add on the positive experiences from projects of the African Development Bank (PVERS) and the European Union (10<sup>th</sup> EDF) and complement previous and ongoing IFAD interventions (PSANG II, PADER-G and PROHYPA) as portrayed in table 1. The most important lesson learned from these experiences that will be taken into account in the design of the present project is the careful sizing of the programmed activities. This will need to be planned in consideration of the weak local implementation capacity, delays at the level of the central administration and lengthy procurement.

Table 1 - Complementarity among IFAD projects in the intervention zone

COMPLEMENTARITY AMONG ACTIVITIES			
Activity	Prohypo <sup>1</sup> completion 2014	PADER-G <sup>2</sup> completion 2017	PARSAT <sup>3</sup>
Pastoral Infrastructure (Wells, Watering Points)	•		
Planning And Management Of Infrastructure And Transhumance Routes	•		
Management Of Conflicts Over Natural Resources (Water, Pastures, Transhumance Corridors)	•		•
Basic Services For Nomad Communities (Mobile Education, Basic Health, Animal Health, Livestock Products Processing)	•		
Water And Sanitation		•	
Rural Roads		•	•
Irrigation Systems			•
Capacity Building For FOs		•	•
Resilient Agricultural Production Systems			•
Support To Early Warning Agricultural Systems			•
Research And Development Of Agricultural Production		•	•
Microfinance		•	
Economic Support To FOs Activities		•	
Improving Access To Markets			•
Cereal Banks		•	•
Targeted Support To The Most Vulnerable Groups			•
<i>1 MHUR/DHP: Batha, Bar El Gazal, Chari-Baguirmi, Guéra, Hadjer-Lamis, Kanem</i> <i>2 MAI: Guéra</i> <i>3 MAI: Batha - lac Fitri, Chari-Baguirmi, Guéra, Hadjer-Lamis</i>			

**A. 5. Incremental /Additional cost reasoning:** describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the associated global environmental benefits (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

LDCF financed activities are driven by the PANA priorities and will build on existing projects and, being fully aligned with the IFAD-supported baseline investment, they will complement PARSAT in ways to strengthen capacity of vulnerable growers and institutions and to increase the resilience of the production (of both yields and post-harvest produce) as well as the resilience across the landscape, as described in the following table 2.

IFAD's historical portfolio in the country has no explicit focus on climate change adaptation issues. PARSAT is therefore proposed with the main objective to reduce the impact of climate change on the rural vulnerable groups, on essential natural resources and on the ecosystems to support agricultural production and enhance food security. Mainstreaming climate change adaptation and resilience in this IFAD/LDCF project is an innovative way to make smallholder farming more resilient and competitive, ensure sustainability of business models and viability of distinctive value chains in Chad. Specific innovative mechanisms promoted include:

- Early warning of climate catastrophes to support productions;
- Building and up-scaling new capacity for both cereal banks management and improved traditional post-harvest processing;
- Promoting small scale irrigation for market gardening to support specific value chains that are a major source of employment for women.

Table 2 - Additionality of LDCF activities with respect to the baseline

Identified climate change related risks to baseline intervention	<ul style="list-style-type: none"> <li>-Reduced and more irregular water availability</li> <li>-Increased risks for pest and diseases</li> </ul>	<ul style="list-style-type: none"> <li>-Small producers unaware of climate change impacts</li> <li>-Climate information not factored into agricultural investment decisions</li> </ul>	<ul style="list-style-type: none"> <li>-Increased soil degradation</li> <li>-Reduced yields</li> <li>-Increased post-harvest losses</li> </ul>		Climate change risks to development objectives: <ul style="list-style-type: none"> <li>-Reduced livelihood to reach food security objectives</li> <li>-Increased risks of socioeconomic vulnerability</li> <li>-Reduced resilience of the agro-ecosystem resulting in mid to long-term lower productivity</li> </ul>
Baseline	<ul style="list-style-type: none"> <li>Providing on-farm inputs for crop intensification of farming system</li> </ul>	<ul style="list-style-type: none"> <li>Promoting access to markets</li> </ul>	<ul style="list-style-type: none"> <li>Promoting diversification of activities and income</li> </ul>	<ul style="list-style-type: none"> <li>Strengthening institutional support</li> </ul>	
LDCF Additionality	<ul style="list-style-type: none"> <li>-Strengthening capacity of vulnerable growers on best management practices in a changing climate</li> <li>-Rendering crop yield resilient to climate change</li> <li>-Promoting sustainable and efficient water use</li> <li>-Promoting resilience at landscape level</li> </ul>	<ul style="list-style-type: none"> <li>-Investing in climate resilient infrastructures at sites impacted by floods and erosion</li> <li>-Forming processors aware of climate change</li> </ul>	<ul style="list-style-type: none"> <li>-Promoting small scale irrigation for market gardening</li> <li>-Selecting and reproducing climate-adapted seed varieties</li> <li>-Scaling-up cereal banks as an adaptation measure</li> </ul>	<ul style="list-style-type: none"> <li>-Promoting agricultural research on climate change impacts, adaptation and mitigation</li> <li>-Improving data and knowledge on climate change impacts</li> <li>-Raising awareness on climate change at the institutional level</li> <li>-Addressing climate change in policy groups</li> </ul>	Expected development objectives: <ul style="list-style-type: none"> <li>-Mitigating the impact of climate change on food production and enhancing food security and income of most vulnerable rural communities</li> <li>-Unlocking climate change-related bottlenecks to access to markets</li> </ul>

**A.6 Risks**, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and measures that address these risks:

**At implementation**, the key risks relate to: i) the management capacity of the PCU but this will be mitigated by the fact that the PADER-G team would manage the project; ii) the lack of inter-ministerial communication and frequent government reshuffling, preventing effective involvement of concerned Ministries. The use of existing PADER-G as focal point will mitigate this risk; iii) the decentralization of the National Food Security project which operates quite independently from the Ministry of Agriculture and Irrigation, and may challenge the harmonization efforts of intervention approaches; iv) the increased frequencies of droughts and floods and their impact on crops and food security. This latter risk will be mitigated by the project's direct focus on climate change adaptation (which will gradually contribute to lesser impacts of climate shocks). Other risk would relate to the potentially low absorption capacity at the country level but it will be mitigated by the establishment of local procurement commissions and by the existing agricultural potential in the 4 regions. There is also the risk of conflict between transhumant/nomads communities and agricultural households, this issue will be mitigated by the support which will be provided by the PARSAT project to the existing local consultative bodies and the synergies with the work of the AFD on transhumant livestock production systems in Chad.

**Risks related to the effectiveness of the interventions.** The risks that could negatively impact the effectiveness of the Project activities are principally the following:

- The low density of the population and the isolation of certain areas of production generate significant extra costs and delays in the realization of productive investments, which could also cause delays in the planning of activities and reduce the Project's expected benefits. The Project will prioritize areas with high potential, where there is generally an active population.
- For the construction of water catchment facilities, the low availability of qualified companies or labourers, and the shortage of labour in the dry season for high labour intensive works may impact negatively on meeting the work schedules. The Project should provide timely information on the opportunities of high labour intensive works.
- The weakness of trade, due to the low population density, low purchasing power of the rural communities, poor or impassable roads in the rainy season, and the weakness of the volume of marketable products all make it more difficult to carry out action for the development of input supplies and the enhancement of agricultural products. Nevertheless, the increase in production at certain sites will lead to the development of new local economic activities that ultimately may make the area more attractive.
- The fact that the communities, because of their poverty, are less sensitive to issues related to environmental natural resources conservation or the proper management of community assets may negatively affect the proper management/utilization of investments or the impact awareness measures taken. This makes it more difficult to ensure the sustainability of some activities such as WSC/LCS, and the rational management of community infrastructures. The economic benefits for the population from the (simple) development works proposed should mitigate this risk

**Table 3: Summary of risks and mitigation measures**

Risks	Description	Mitigation measures
<u>Security risk</u>	<b>High risk.</b> Particularly after the security situation in the Sahel has changed.	<ul style="list-style-type: none"> <li>• If necessary, report of the design.</li> <li>• Travel only in convoys and by day; access to the WFP plane for travel to Mongo; access to WFP and UNDSS housing infrastructure when possible; radio equipment.</li> <li>• Staff of projects has received training on the use of radios and the basic rules of safety.</li> </ul>
<u>Institutional risk</u>	<b>Medium risk.</b> Limited collaboration between the MAI and MERH	<ul style="list-style-type: none"> <li>• Nomination of focal points</li> <li>• Provide the MAI and MERH with secured consultative access to information in the M&amp;E system of the Project</li> </ul>

Risks	Description	Mitigation measures
	<b>High risk.</b> Slowing down of activities and limited disbursement rate due to the complexity of the procurement procedures	<ul style="list-style-type: none"> <li>Operational measures described in section D above and in Annex 8,.</li> </ul>
	<b>Medium to high risk.</b> Lack of transparency in the financial management of the Project.	<ul style="list-style-type: none"> <li>UCGP reference persons for procurement</li> <li>Beneficiary participation in the opening and awarding of tenders at the regional level, through their representation in the local procurement committee</li> <li>UCGP's knowledge IFAD procedures and proven good administrative and financial management</li> </ul>
<u>Social risk</u>	<b>Medium risk.</b> Tensions and conflicts between transhumant/nomadic livestock farmers and sedentary crop and/or livestock farmers	<ul style="list-style-type: none"> <li>Collaboration with AFD projects and PROHYPA in 4 regions that are work on this issue.</li> <li>Participation in strengthening local collaboration frameworks</li> <li>Partnership with local radio stations to facilitate communication and information of the various actors</li> <li>Full involvement of the Regional Action Committees (CRAs), the Departmental Action Committees (CDA), and the traditional authorities in the prevention of social conflicts</li> </ul>
	<b>Medium risk.</b> Land management by the traditional authorities may not always be to the advantage of the most vulnerable	<ul style="list-style-type: none"> <li>Extensive collaboration with the social-professional groups concerned prior to beginning development</li> <li>Negotiation of preliminary land agreements to ensure rights of access to all of the farmers concerned</li> </ul>
<u>Climate risk</u>	<b>High risk.</b> Frequent climate shocks in the Sahel (droughts and floods, locust plagues, epidemics)	<ul style="list-style-type: none"> <li>Developments that allow to an increase in working volume of agricultural water</li> <li>Set-up and training of water management committees</li> <li>Protection of water catchment facilities against erosion and siltation</li> <li>Tree planting at the development sites and the farmers' concessions</li> <li>Promotion of conservative agriculture techniques</li> <li>Supporting educational measures on environmental conservation</li> </ul>
<u>Technical risk</u>	<b>Medium risk.</b> Lack of harmonization of development approaches and in the implementation of the projects and programmes	<ul style="list-style-type: none"> <li>Consultations with programmes and projects working in the same areas - whether government or TFP projects – on intervention methods / approaches</li> <li>Seeking synergies between the interventions of the two projects to promote the proper use of equipment and inputs provided by the PNSA</li> </ul>
<u>Financial risk</u>	<b>Medium risk.</b> Limited financial management capacity leading to significant delays in reporting and the preparation of audits or breaks in financing.	<ul style="list-style-type: none"> <li>A single procedures manual harmonized between PADER-G and PARSAT</li> <li>Good knowledge and application of IFAD's procedures manual and administrative and accounting procedures by UCGP of the PADER-G</li> <li>Strengthening the human resources of the Administrative and Financial Department (SAF) of PADER-G-PARSAT as provided within the PARSAT framework</li> </ul>

## **A.7. Coordination with other relevant GEF financed initiatives**

The project will be designed and implemented in close consultation with sister GEF agencies and other donors in Chad. Up to this stage, the ideas presented in this PIF were discussed with all donors and GEF agencies that operate in the countries and it reflects potential areas for synergies and complementarities. These will be further explored at design and will become effective at implementation. Several partners operating in the region are likely to ensue the implementation of the proposed activities. With respect to the absence of a system of land ownership and the mitigation of conflicts between herders and farmers for the use of natural resources, PARSAT will seek collaboration and synergies with the existing local consultative bodies (run by state authorities and NGOs) and with AFD, that has a long-term experience on transhumant livestock production systems in Chad.

With respect to the support to the seed industry and the production of adapted cereal varieties, the project will consider collaborating with ITRAD and SDC, that are active in the Chadian seed sector. The actual implementation capacity of potential partners will be thoroughly assessed during detailed design. All partnerships will incorporate performance indicators and clear and measurable deliverables.

## **B. ADDITIONAL INFORMATION NOT ADDRESSED AT PIF STAGE:**

### **B.1 Describe how the stakeholders will be engaged in project implementation.**

The project will promote enhanced partnerships with the private sector and with the farmer's organizations that are most exposed to climate risk. Whenever possible, activities (particularly capacity building) will be implemented through civil society organizations in order to mitigate the limited capacity of public services and to ensure that the "economically active poor", the poorest food insecure population and the most exposed to climate risk members of grassroots associations/organizations (specifically women and youth) are at the centre of the project focus.

Partner civil society organizations will be engaged at implementation to carry out relevant project activities on a competitive basis.

**B.2 Describe the socioeconomic benefits** to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF):

***Quantifiable direct benefits.*** The Project will contribute to improving food security and incomes of rural households, which will allow for improved resilience to climate change and other external shocks. Direct benefits taken into account in the analysis are: (i) an increase in agricultural production related to crop protection and intensification; (ii) improvement in small short-cycle livestock farming; (iii) enhancement of agriculture products due to storage infrastructure and rural roads; (iv) long-term income and employment opportunities in the long term for youth and women through IGAs and high labour-intensive working, which in the dry season, temporarily offers a safety net for the most vulnerable.

***Indirect and/or unquantifiable benefits.*** Other benefits will derive from Project activities, notably, new employment opportunities for youth: such as development work on bunds, seasonal work related to market garden crops, manufacturing and the repair of small equipment. The environmental benefits will also be significant in terms of better water and soil management. Literacy, nutritional and environmental education will produce additional benefits in education and improve the analytical, managerial and social integration capacities of the most vulnerable.

***The main institutional benefits*** will be: (i) organizing the populations into associations and FOs around some key activities to improve their resilience (maintenance and rational use of water catchment facilities, agricultural development, optimal use of storage capacity, IGAs) and the professionalization of FOs; (ii) training of field staff to provide suitable advisory counseling services; (iii) the involvement of technical services and local authorities in support of productive community investments that are essential for rural development (water catchment facilities, community stores, roads). With respect to reducing risks and losses related to climate change and the adoption by the community of appropriate adaptation measures, the



significant benefits of the Project will be in the implementation of interventions to improve water management and phenomenon of erosion, the adoption of agro-ecological techniques, the dissemination of crop varieties that are better adapted to water stress, the educating of communities on environmental issues and climate change, and improved storage conditions.

### B.3. Explain how cost-effectiveness is reflected in the project design:

The financial analysis aims to estimate the profitability of certain activity models over the medium and long term. It focuses on five crop models (sorghum, berbere, ground nut, tomato, okra), two models of small short-cycle livestock farming (goats, back-yard poultry), a model for the road rehabilitation, a storage model and three IGA models (apiculture, oil extraction, and smoking /drying fish). Scenarios with and without the Project have been established for each activity. For the crops, the analysis includes the increase in cultivated areas, linked to developments, and the assumptions on increasing yields as a result of improved production techniques.

**Table 4: Yield per hectare with and without the Project**

Progression	Before the Project	With the Project				
		Year 1	Year 2	Year 3	Year 4	Δ %
		70%	75%	90%	100%	
Sorghum	800	840	900	1 080	1 200	50%
Berbere	700	700	750	900	1 000	43%
Groundnut	500	476	510	612	680	36%
Tomato <sup>*1</sup>	8 500	10 500	11 250	13 500	15 000	76%
Okra <sup>*1</sup>	5 500	5 670	6 075	7 290	8 100	47%
Market garden crops	7 000	7 560	8 100	9 720	10 800	54%

<sup>\*1</sup> For tomato and okra, after a deduction of 25% of losses.

The analysis of the operating accounts of crops indicates that all crops concerned are profitable with higher gross margins for farmers in the ‘with Project scenario’. The IRR and cash flows for each model are positive, with a high IRR for market garden crops. This generates a significant income for farmers in the off-season, which is used to purchase cereal, thus contributing significantly to food security. The self-consumption portion has been specified for each crop (main product). Part of the cereal is sold to cover operating expenses and/or repay loans. By-products are largely self-consumed and developed through small livestock farming and fertilization (groundnut hay, bran, straw, etc.).

### **C. DESCRIBE THE BUDGETED M & E PLAN:**

**Planning.** Project planning will be based on two fundamental management tools that are closely related: (i) the logical framework and (ii) the WPAB. Based on a preliminary understanding and ownership of the logical framework by UCGP, the focal points of the Ministries involved and implementation operators, and the beneficiaries, planning will be carried out in October of each year to prepare the WPABs of the following year. During the planning, the following will be defined: (i) the activities to be implemented over the next 12 months; (ii) the responsible actors; (iii) the resources and the time needed to successfully complete these activities; and (iv) the outcomes to be achieved in line with the logical framework indicators. The WPAB will be drafted in a participatory manner with the various service providers, starting from the assessment of the outcomes achieved. The draft WPAB will be sent in October to the NSC, which must hold a validation meeting before the end of October. The WPAB, approved by the NSC, must be submitted no later than 30 November to IFAD, which will provide its feedback and declaration of no objection no later than 31 December. The Procurement Plan (GPP), detailing the nature of the markets, estimated amounts and dates for implementing the different stages will be attached to the WPAB and validated by the Steering Committee (SC) and IFAD.

**Monitoring and evaluation.** *The Results and Impact Management System (RIMS).* PARSAT's monitoring and evaluation system (MES) will take into account the framework adopted by IFAD to measure and show the results and the impact of all the projects it funds, namely the RIMS. RIMS, shared by all IFAD projects, distinguishes three levels of results: (i) direct results of activities carried out by the Project. (level 1); (ii) the outcomes of Project activities (Level 2); and (iii) the overall impact of the intervention (Level 3). Measuring the impact must include the following two indicators: (i) child malnutrition; and (ii) assets of the beneficiary households of the interventions. These and other impact indicators will be collected through baseline surveys (at the start, mid-term and completion of the Project). Particular emphasis will be given to the assessment of yields increase on both the equipped and unequipped plots in order to measure the resilience of farming systems promoted by the Project.

**MES.** The MES of PARSAT will be based on the successful experiences and procedures in the monitoring and evaluation manual of PADER-G. The latter has a data information management system that takes into account RIMS requirements, making it possible to: (i) decentralized data entry at the regional level; and (ii) obtain at any time a clear outline of the situation on the progress and physical achievements of the Project. PARSAT's secured M&E data collection and processing will be provided by the computer system (SQL database) that is already in place for PADER-G, maintaining separate access to the two projects. The computerization of the MES will also allow the UCGP to ensure consultation and the immediate transmission of information to the implementing operators and relevant ministries (MAI agents have already been trained accordingly) through the 'personalized and secure access methods.

Staff dedicated to M&E will be strengthened. In the UCGP of Mongo, it will include: a monitoring and evaluation officer, supported by two M&E assistants, one of whom will specifically be responsible for monitoring CC/E indicators. The M&E CC/E assistant will also be responsible for educating and training all PARSAT agents and partners on how to take into consideration and monitor CC/E aspects. Each focal point will have a M&E assistant/database manager, responsible for coordinating the M&E at the focal point's intervention area and will enter data into the computer system. Participatory M&E by the beneficiaries themselves will be promoted at the various activity committees or the supported FOs. The FOs will be trained and supported to systematically record in a harmonized manner the beneficiaries of the support received from the Project and the activity results.


**PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)**

- A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT(S) ON BEHALF OF THE GOVERNMENT(S):**  
 (Please attach the Operational Focal Point endorsement letter(s) with this form. For SGP, use this OFP endorsement letter).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Gaourang Mamadi N'Garkelo	GEF Operational Focal Point	MINISTRY OF ENVIRONMENT AND FISHERIES	5 APRIL 2013

**B. GEF AGENCY(IES) CERTIFICATION**

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for CEO endorsement/approval of project.

Agency Coordinator, Agency Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
John McIntire Associate Vice President, Programme Management Department IFAD		1/9/15	Naoufel Telahigue Regional Climate and Environment Specialist, Environment and Climate Division IFAD	+39 06 5459 2572	n.telahigue@ifad.org

**ANNEX A: PROJECT RESULTS FRAMEWORK** (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

## SIMPLIFIED LOGICAL FRAMEWORK

LDCF indicators are specified in bold in the overall logical framework below.

Project Summary	Key performance indicators (RIMS indicator) (*)			Means of verification	Assumptions/risk
		Target value			
		Mid-term	End of Project		
<b>Overall goal</b> Contribute to the sustainable improvement of food security and incomes of rural households in the Project area	<ul style="list-style-type: none"><li>At least 40% of targeted households have greater food security (number of months of the lean period/year) *</li><li>The prevalence of chronic malnutrition of children under 5 years of age decreased/increased from X% to Y%* (depending on the baseline)</li><li>The asset accumulation rate has increased for at least 40% of targeted households *</li></ul>	4 000  4 000	14 000  14 000	<ul style="list-style-type: none"><li>Baseline studies</li><li>Household surveys</li></ul>	<ul style="list-style-type: none"><li>Socio-political stability and security</li></ul>
<b>Development objective of the Project</b> Improve the resilience of agricultural systems and the economy of rural households to climate chance and external shocks	<ul style="list-style-type: none"><li>At least 60% of target households have improved their adaptation capacities to cope with climate risks (inter-annual stabilization of yields, soil erosion rate measured on the Sentinel sites) (ASAP)</li><li>Cereal production has increased at least 40% for at least 30% of targeted households*</li><li><b>At least 30% of beneficiaries have the possibility of engaging in off-season activities (ASAP/GEF)</b></li><li><b>Number of people (men and women) who have benefitted from the Project services* (ASAP/GEF)</b></li></ul>	6 000 2 500 2 500 105 000	21 000 10 500 10 500 175 000	<ul style="list-style-type: none"><li>Yield and production surveys on</li></ul>	<ul style="list-style-type: none"><li>Good governance</li><li>No major natural disasters</li></ul>
Component 1. Protecting against climate risks and intensification of agricultural production					
<i>Outcome 1: The farmers have adopted the intensified production systems that are sustainable and better adapted to climate change</i>	<ul style="list-style-type: none"><li>Number of households having adopted the more intensive production systems (at least three cropping per year)</li><li><b>Number of households having adopted (short-cycle) adapted cereal varieties (LDCF-GEF)</b></li><li>Number of more resilient small livestock farming systems set up</li></ul>	6 000 500 900	21 000 10 500 2 250	<ul style="list-style-type: none"><li>Household surveys</li></ul>	
Result 1.1 The availability of water in the crop plots is improved	<ul style="list-style-type: none"><li><b>Number of ha. developed according to the different types of development (ASAP/LDCF-GEF)</b></li><li>Number of households benefitting from developed plots</li><li>Number of people trained in development techniques and/or management*</li><li>Number of development management structures that are operational</li></ul>	3500 7 500 7 500 100	10 000 22 100 22 100 200	<ul style="list-style-type: none"><li>Activity reports</li><li>Reports on the Participatory Self-Assessment Workshop</li><li>Supervision</li></ul>	<ul style="list-style-type: none"><li>Potential land/land use conflicts between producer groups</li><li>Availability of sufficient</li></ul>

Project Summary	Key performance indicators (RIMS indicator) (*)			Means of verification	Assumptions/risk
		Target value			
		Mid-term	End of Project		
Result 1.2. More intensive and resilient production systems are applied by the farmers	<ul style="list-style-type: none"><li>• Number of farmers having benefitted from different learning and measures and technical training measures*</li><li>• Quantities of cereal seeds provided</li><li>• Number of Farmers’ Organizations (FOs) for production trained *</li><li>• Number of female leaders trained *</li><li>• Number of seed farmers trained and supported *</li><li>• Number of animal health workers trained and supported *</li></ul>	5 640 35 t 430 40 45 80	20 720 57 t 650 100 95 90	Reports	<ul style="list-style-type: none"><li>• manpower in the dry season for high labour intensive works</li><li>• Availability of qualified small-scale enterprises and labourers</li></ul>
Result 1.3 Cross-cutting educational measures allow for better ownership of physical supports for improved production	<ul style="list-style-type: none"><li>• Number of people who have become literate*</li><li>• Number of people who have benefitted from nutrition education sessions</li><li>• Number of people who have benefitted from environmental education sessions*</li><li>• <b>Number of people who have access to agro-climate information (LDCF-GEF)</b></li></ul>	3 000 2 500  4 000	6 400 5 700  8 000		
Component 2. Product enhancement and support to the economic activities of rural households					
Outcome 2. Income earned from production and other agricultural activities is diversified and improved in the target households	<ul style="list-style-type: none"><li>• Number of households who have diversified and secured their sources of income (ASAP)</li><li>• Additional annual income obtained by target households</li></ul>		17 500  + 20%	<ul style="list-style-type: none"><li>• Baseline survey</li><li>• Household surveys</li></ul>	
Result 2.1. The critical points are treated and the rural roads are developed.	<ul style="list-style-type: none"><li>• Number of critical points to guard against climate risk (ASAP) (IFAD)</li><li>• Number of km of re-graded roads</li><li>• Number of road maintenance associations set up and trained</li><li>• Number of individuals trained in maintaining roads<sup>+</sup> (ASAP)</li></ul>	55 16 65 40 355	80 26 100 106 530	<ul style="list-style-type: none"><li>• Activity reports</li><li>• Self-assessment workshop reports</li><li>• Supervision reports</li></ul>	<ul style="list-style-type: none"><li>• Availability of sufficient manpower in the dry season for high labour intensive work</li><li>• Availability of qualified small enterprises and labourers</li></ul>
Result 2.2. The storage capacities have increased and are well used	<ul style="list-style-type: none"><li>• Number of constructed/rehabilitated community warehouses</li><li>• Number of households that have built an initial lean period food bank stock</li><li>• Number of heads of FOs trained*</li></ul>	40 2 000 600	40 2 000 720		
Result 2.3. The economic activities of households are diversified and	<ul style="list-style-type: none"><li>• Number of people having benefitted from support for IGAs* (ASAP)</li></ul>	2000 45	3 000 90		

Project Summary	Key performance indicators (RIMS indicator) (*)			Means of verification	Assumptions/risk
		Target value			
		Mid-term	End of Project		
productive	<ul style="list-style-type: none"><li>• Number of people trained in techniques and management*</li><li>• Number of farmers participating in marketing operations</li></ul>	350	900		

\a: Farmers capable of maintaining or increasing their income independently from the climate situation (lack of rain, floods, etc.); inter-annual variation of yields from the developed and non-developed plots; rate of soil erosion, measured at the SENTINEL sites

N.B. The term ‘farmer’ used in this report refers to men and women engaged in agricultural production activities (food and market gardening products, small livestock farming). The indicators of individuals should be disaggregated by gender and age whenever possible (See Logical Framework in Annex 6, Appendix 1).

**ANNEX B: RESPONSES TO PROJECT REVIEWS** (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

Following the PIF approval, IFAD managed to secure additional climate finance to co-finance this LDCF project from the ASAP window (Adaptation for Smallholder Agriculture Programme). US\$ 5 million were made available for co-financing from ASAP and this has entailed some minor adjustments and restructuring across the PIF outcomes and outputs. The LDCF funding is now mainly financing component 1 (which is mostly the investment activities as identified in the PIF based on the NAPA). PIF activities under component 2 are now mainly covered from co-financing. This gives more impact per dollar for the LDCF investment under component 1, makes clear implementation plans between the climate funding sources, ensures complementarity between the two funding lines and increases the overall co-financing ratio. The project objective, approach, scope and target group remain unchanged. The project is now responding also to CCA3 of the LDCF framework as some of the identified outputs that were detailed at design were aligned to CCA3 as well.

	Comments at PIF	Actions Taken	Sections in the Document
<b>GEF Secretariat Review</b>			
<b>Project Design:</b>			
ALL COMMENTS AT PIF LEVEL HAVE BEEN ADDRESSED SUCCESSFULLY			

**ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS<sup>5</sup>**  
No PPG was requested for this project.

A. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES FINANCING STATUS IN THE TABLE BELOW:

PPG Grant Approved at PIF:			
<i>Project Preparation Activities Implemented</i>	<i>GEF/LDCF/SCCF/NPIF Amount (\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent To date</i>	<i>Amount Committed</i>
<b>Total</b>	,□□reur de syntaxe, ,,	,□□reur de syntaxe, ,,	,□□reur de syntaxe, ,,

<sup>5</sup> If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for the activities.

**ANNEX D: CALENDAR OF EXPECTED REFLOWS** (if non-grant instrument is used)

Provide a calendar of expected reflows to the GEF/LDCF/SCCF/NPIF Trust Fund or to your Agency (and/or revolving fund that will be set up)

N/A