Improving the Resilience of the Agriculture Sector to Climate Change (IRAS)

**Overall Objective:**
Food insecurity resulting from climate change in Lao PDR minimized and vulnerability of farmers reduced

**Component 3: Community-based Agriculture Adaptation**
Community-based adaptive agricultural practices and off-farm opportunities demonstrated and promoted within suitable agro-ecological systems

**Government Co-financing amounts:** $1,513,000
**UNDP Co-financing amounts:** $475,000
**LDCF project grant:** $2,699,190

**Baseline:** Agricultural practices and extension services have not yet been adapted to take climate change risks into account. There is a lack of awareness about community-based approaches to address climate change risks and there is an urgent need for a framework of best practices that can be developed and adopted as a comprehensive and ecologically sensitive resilience approach to climate risk. Livelihoods and coping ranges within communities will continue to deteriorate as a result of increased variability and frequency of floods. More intensive rainfall events subsequent to longer dry periods will increase tendencies of land degradation, and changes in the distribution and severity of extreme drought and flooding events will increase vulnerability in haseep-sown agricultural areas.

**Adaptation alternatives:** In close coordination with the Department of Agriculture Extension and Conservation (DAEC) and the Provincial and District Agriculture and Forestry Offices (PAFOs/DAROs), and through a participatory approach, the demonstration and analysis of climate resilient cropping schemes in flash- and drought-prone areas will be carried out. Through the introduction and demonstration of diversified agricultural production for farmers depending on rain-fed crops, the project will strengthen resilience at all levels to increase the resilience of agricultural production systems. Main agriculture cropping or farming systems will be addressed through specific technical modules, to be developed by DAEC departments, NAFRI, and others. Under component 2 (capacity building), demonstration sites will showcase community-based rainfall capture, storage and reuse systems in drought-prone agricultural areas. A key part of this component, training of practitioners on policy, will be the work in micro-irrigation systems. A specific technical module will address the integration process. Local communities (e.g., women, youth) will be engaged in the extension and diversification process as a strong local contribution from the country’s mass organizations (women, youth) is expected in matters of traditional and gender-sensitive awareness creation. The target districts have been selected, based on the levels of exposure to drought and flooding hazards, socio-economic vulnerability and replication potential of project-related outcomes.

**Output 3.1:**

**Resilient elements in existing farming systems identified and strengthened as a basis both for the replication of successful practices and for the introduction of additional adaptation measures**

3.1.1 Analyses of existing farming systems
3.1.2 Identification of resilient elements
3.1.3 Integration of resilient elements into CCTAMs

**Output 3.2:**

**Supply chains for different climate-resilient crops, livestock, etc., and farming inputs analyzed and economic impacts assessment**

3.2.1 Existing supply chain analyses
3.2.2 Identification of resiliency crops, inputs etc., available in regional / international supply chains
3.2.3 Economic analyses for market barrier assessment
3.2.4 Economic impact farming households

**Output 3.3:**

**Climate resilient cropping, livestock, fisheries, and forestry practices, introduced across a least 1 flash- and drought-prone areas**

3.3.1 Implementation plan for CCTAMs on provincial, district, hamlet and village levels
3.3.2 Introduction of CCTAM Crop/Agro-Forestry
3.3.3 Introduction CCTAM Small Livestock
3.3.4 Introduction of CCTAM Fisheries/Aquaculture
3.3.5 Introduction of CCTAM Fruit/Vegetables
3.3.6 Introduction of CCTAM Off-farm adaptation / alternative income
3.3.7 Introduction of CCTAM "Safeguarding Lands" in schools

**Output 3.4:**

**Diversified agriculture, livestock, fish, vegetables, NTF production, and alternative feasible off-farm activities demonstrated in target districts**

3.4.1 Extension process for CCTAMs
3.4.2 Farming systems and farm budgets
3.4.3 Demonstration plots
3.4.4 Field days and workshops by farmers in target districts
3.4.5 Systematic follow-up on-site
3.4.6 Farming system monitoring / database

**Output 3.5:**

**Rainfall capture, storage and adaptive irrigation and/or drainage management, and small-scale flood protection measures introduced in target drought-prone districts**

3.5.1 Rainfall capture / rainwater harvesting facilities (tanks, etc.) made available
3.5.2 Water storage facilities (ponds, reservoirs) rehabilitated or constructed
3.5.3 Irrigation or drainage facilities with functional O-M mechanisms and water user groups rehabilitated
3.5.4 Irrigation and paddy cultivation rehabilitated or constructed
3.5.6 Trees established
3.5.6 Wells dug or drilled, pending on-site conditions
3.5.7 Equipment, tools etc. provided as material input into the agricultural extension process

Project Integration Objective: 1. Inter-link the modules designed and developed under phase I and phase II directly in the field based on the prevailing farming systems in the villages. Each village proponent farming household will be trained to use modules of the IRAS system. The supply chain for core agricultural inputs (seed, fertilizer, lime, etc.) will be established in the districts with the participation of local seed, feed, fertilizer and lime suppliers. The project activities will be monitored and evaluated by the implementing agencies, with data collected and reported to the LDCF Secretariat.