

Lao PDR and FAO

Achievements and success stories

FAO Representation in Lao People's Democratic Republic
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Introduction

The Lao People's Democratic Republic (Lao PDR or Laos) has reduced poverty levels substantially over the past 15 years. However, the mountainous land-locked country remains one of the poorest and least developed countries in Southeast Asia, with more than three-quarters of the Lao people living on less than US\$2 per day.

FAO collaborated with the Lao government since the establishment of the Lao PDR on 2 December 1975. A Permanent FAO Representative Office was established in Vientiane in 1980.

Since then, the country's population has more than doubled, from about 3.2 million to 6.6 million.

Agriculture is the country's most important economic sector, providing the main source of income for some 80 percent of the labour force and contributing more than 50 percent to GDP.

FAO provides support to the Lao government with policy formulation delivered by technical experts, social scientists, economists and statisticians. It provides agriculture, fisheries and forestry support through the expertise of agronomists, foresters, fishery nutritionists, livestock specialists and other professionals, who collect, analyze and disseminate data and information that assist the development process.

Guided by the National Medium-Term Priority Framework (NMTPF) 2006-2010, projects cover such issues as long-term food security and nutrition in rural households, sustainable natural resource management, transformation from subsistence to market-oriented agriculture, economic integration and institution and capacity building.

In financial terms, total assistance provided by FAO over the last three decades amounts to US\$68 million for national projects, of which the largest single donor was UNDP (some US\$37 million), followed by FAO's regular programme resources (US\$14.7 million) and various multi-bilateral donors (US\$16 million). In addition, Lao PDR has participated in FAO assisted multi-country projects, the value of which is not quantified.



1. Analytical summary

1.1 Building food and nutrition security

Food insecurity in the Lao PDR affects more than 10 percent of Lao households with an additional 50 percent being at risk of food insecurity should late or erratic rainfalls, floods or agricultural pests affect them. Undernutrition levels are the most severe in Southeast Asia – in rural areas 31 percent of children below the age of five are underweight.

Because of poverty, food insecurity and malnutrition are linked to many factors, a series of complementary multi-sector programmes have been implemented during the last 15 years aimed at reaching the poorest and hungriest people in Lao PDR.

The government, with support of FAO has made agriculture, food and nutrition security central components of the Lao Government's National Socio-Economic Development Plans (NSEDPP).

Techniques have been introduced to help households diversify their food production and income sources, as well as to improve processing, preservation and storage of food.

Until the early 2000s, agricultural production was insufficient to meet the requirements of the population and provide sufficient surplus for export. In the last ten years, there has been a notable improvement in rice yields and output. Official estimates now indicate that the area under dry-season rice cultivation has increased almost five fold from 1996 to 2000 thanks to the increased adoption of high-yield rice varieties and greater use of irrigated dry-season farming.

1.2 Supporting government policy by building capacity in statistics and scientific areas

Achieving the Millennium Development Goals in the Lao PDR is only possible when there are adequate institutional and human resources to enable the design and effective implementation of policies and programmes that can develop rural communities and the country's agriculture, fisheries and forestry sectors.

FAO has taken a lead role in providing policy support to the Government of Lao PDR to develop a statistics-based strategy to strengthen its policy, planning and decision making processes, particularly in addressing the impacts of external shocks and other events affecting agriculture.

FAO's work on developing an Assessment of the Situation and Outlook of Rice, Crop and Food Security Assessment, the Asia-Pacific Forestry Sector Outlook Study II and an Agricultural Census, among other initiative, responds to government's desire to attain sustainable economic growth. FAO initiatives help the country meet its food needs and increase its agricultural exports. Developing agribusiness is another area where FAO projects assist the country's development goals.

1.3 Edible insect supplement rice to improve food security

Rice is the major staple food for Lao people, but their diets are often supplemented by protein from wild insects for good nutrition. There is an acute need to improve Lao diets with regard to protein, energy and other nutrients such as vitamin A, iron, iodine and vitamin B1.

More than 95 percent of Lao people eat insects. There are about 1 700 edible insect species worldwide, but their nutritional benefits are a relatively recent discovery. FAO is encouraging insect breeding and marketing in Lao PDR through a programme that focuses on the whole insect chain – from bug breeding to commercialization and consumption.

Investing in sustainable insect farming and promoting the benefits of insect consumption could be part of the answer to chronic malnutrition in Lao PDR.

Traditionally, insects have played an important role in the Southeast Asian diet with beetles, termites, cicadas, dragonflies, crickets and locusts being commonly consumed.

Insects are a good source of nutrients with high protein content, as well as many vital vitamins and minerals and are comparable to more conventional animal sources. For example, when compared to conventional livestock, the food conversion efficiency – an animal's efficiency in

converting feed mass into increased body mass – is much higher in insects, making them a more 'environmentally friendly meat'. Currently in Lao PDR, the only species that is farmed is the cricket, and only in limited areas.

1.4 Fisheries and aquaculture

Through a partnership between FAO, World Wildlife Fund Lao, the Mekong River Commission and the Department of Livestock and Fisheries, a national Fisheries and Aquaculture Bill has been drafted.



The Bill reflects international fishery instruments and international commitments, with particular reference to the Code of Conduct for Responsible Fisheries. This comprehensive legal framework went before the National Assembly in June 2009 for ratification.

The legislation will be used to mainstream co-management interventions and to better ensure the integration of fisheries considerations into agriculture policy planning and development by ensuring appropriate management and use of fisheries resources and rational development of aquaculture. This will form the basis of other development interventions, which target natural resource management in the fishery sector in Lao PDR.

1.5 Responding to bird flu and other emergencies (Typhoon Ketsana)

The Lao government has made serious progress in containing avian influenza (AI), despite the fact that new outbreaks continue to emerge. Since H5N1 HPAI first

appeared in Asia in 2003, the virus continues to be found in poultry in some parts of the country, but now people know how to respond to the problem because of ongoing behaviour change communication efforts promoted by the government. People have learned how to prevent transmission and what to do in the event of an outbreak.

FAO has a lead role in the fight against avian influenza in Lao PDR, providing financial and technical support for active surveillance, procuring equipment, strengthening diagnostic laboratory network coordination, capacity building, human resource development, and in donor coordination support for the animal health sector. Several projects have been implemented since 2004, including strategy development for the AI Pandemic Preparedness Plan with the government, and active participation in the UN Cross-Sectoral Influenza Working Group.

Though progress has been made, as long as the virus is present in poultry there is still the threat of human infection at any time. Avian influenza remains a serious threat and FAO continues its field support to a wide range of stakeholders, particularly small backyard poultry farmers.

1.6 Helping the forests sustain lives and livelihoods

FAO is assisting Lao PDR in the field of forestry by assisting natural regeneration of forest ecosystem services through simple and cost-efficient methods that involve the participation of local communities in effective fire management, restricted grazing, managing invasive grass species. Natural regeneration restores a diverse mix of species that enhance watershed functions such as erosion resistance and maintenance of water quality.

2. Selected successful FAO programmes

With funding provided by Japan, during the 2000s the *Special programme for food security (SPFS)* and *South-South Cooperation* was implemented in Lao PDR with a total budget of US\$2 900 279.

The SPFS project GCPS/LAO/011/JPN, operational from 2001 to 2008, aimed at empowering groups of small

farmers and poor urban families to meet their food needs, to diagnose the constraints and opportunities which they face and to identify, test and take up viable, locally adapted and sustainable options for addressing them. The focus is on low-cost innovations and creation of local institutional capacities to continue the process, looking at food security from the perspective of the community as a whole, including vulnerable groups.

2.1 Nutrition and food security

One of the core priorities of the Lao government is the eradication of poverty, and to decrease high levels of malnutrition by creating an enabling environment for growth and development. An assessment in 2007 showed that, despite ten years of robust economic growth, undernutrition rates of Lao children under the age of five are among the highest in Southeast Asia. Chronic undernourishment affects not only a child's physical development, but also their cognitive capacity.

In the wake of this alarming assessment, renewed attention was given to the situation and the Lao government demonstrated its commitment to tackle the problem by requesting assistance from FAO and other development partners. FAO has played a key role in the participatory drafting of a National Nutrition Policy in 2008, a National Nutrition Strategy and a National Plan of Action for Nutrition in 2009 that together provide a framework for how the nutritional situation in the Lao PDR can be turned around.

The National Nutrition Policy, the Strategy and the Plan of Action make nutrition a cornerstone for development and emphasize the importance of nutrition for the well being of families. The Decree on the National Nutrition Policy is legally binding. FAO also continues to support the Lao government with several activities identified and agreed upon in the guiding documents. FAO trains staff from government to the village level to improve household nutrition. FAO also promotes indigenous food and solutions that are accessible to all Lao people.



Capacity building for food security and better nutrition, GCP/LAO/016/ITA, 2009-2011, US\$1 336 928 – funded by Italy

EC/FAO Food security programme phase II (Year 2 and 3) – Account 1 – GCP/GLO/162/EC, Facility for Global Donor Platform Rural Development, (US\$1 372 823) – funded by the European Union

EC/FAO Food security programme phase II (Year 2 and 3) – Account 2 – GCP/GLO/162/EC, Facility for Consultancy Service, US\$1 514 875 – funded by the European Union

EC/FAO Food security programme phase II (Year 2 and 3) – Account 3 – GCP/GLO/162/EC, main programme, US\$9 809 298 – funded by the European Union

Improved food safety and food quality at the national level, FNOP/INT/103/NOR, US\$976 808 – funded by Norway

Integration of food security and nutrition into the 7th NSEDP and improved food security and nutrition coordination among government ministries, FMPP/GLO/001/MUL, US\$200 000 – funded by an FAO multi-donor partnership programme

Finalization of national nutrition policy and support for the government of the Lao PDR, TCP/LAO/3201, US\$136 312

Development of a national nutrition strategy, national Plan of Action on Nutrition, TCP/LAO/3203, 2009-2011, US\$370 000

Regional support to alleviate the impact of soaring food prices on the most affected vulnerable farming populations of Asia, TCP/RAS/3204, US\$448 000

Development of vulnerability information base, mapping and dissemination system for Asia in support of the Food Insecurity and Vulnerability Information and Mapping System (FVIMS), GCP/RAS/170/JPN, Phase II, US\$3 664 562, funded by Japan

Improving food safety and its management in Cambodia, Lao PDR and Viet Nam, GCP/RAS/207/NZE, US\$ 1 149 520, funded by New Zealand

Enhancing food safety by strengthening food inspection systems in ASEAN countries, GCP/RAS/222/JPN, US\$1 270 073, funded by Japan

Support to the FAO programme on capacity building in food safety in selected ASEAN countries, GCP/RAS/223/JPN, US\$849 843, funded by Japan

Support to the EC programme on linking information and decision-making to improve food security for selected greater Mekong subregional countries, GCP/RAS/247/EC, US\$2 557 545, funded by the European Union

2.2 Policy support and building up much needed technical capacity

Lao PDR is impeded from achieving the Millennium Development Goals because of difficulties in implementing policies and programmes that could help rural development.

FAO has taken a lead role in assisting the Lao government to use statistics-based strategies to strengthen its policy, planning and decision making processes, particularly in addressing the impacts of external shocks and other events affecting the agriculture sector.

On 15 July 2008, FAO's Director-General approved a project to strengthen capacity for the statistical assessment of the rice situation and outlook in Lao PDR, using a statistics-based approach. Project components include household and village surveys and rapid assessments of rice stock and marketing systems.

In 2011, Lao PDR will undertake its second agricultural census, which will provide comprehensive information on the structure of the agriculture sector and an insight into the food security situation. The Agricultural Census is a direct result of assistance and support from FAO, which provided Lao PDR with significant and sound statistics on the state of the agriculture sector, allowing them to make more informed, robust and sustainable policy decisions on a large range of issues, including agriculture, food and nutrition security, health, trade and foreign policy.

From 2003 to 2008, FAO provided policy and technical assistance to the Lao government, specifically to develop and implement a National Agricultural Biodiversity Programme (NABP). The NABP was adopted as a policy document in 2004 and it contains concrete actions for the conservation and sustainable use of agricultural biodiversity. The document consists of five main thematic components: crop and crop associated biodiversity; livestock; non-timber forest products and other terrestrial food resources; aquatic resources; and household integrated agriculture production systems. During the implementation of selected activities of the NABP, the Lao government ratified the *International Treaty on Plant Genetic Resources for Food and Agriculture*.

The projects have resulted in stronger human capacity at all levels, from central level within the Ministries of Agriculture and Forestry, and Health, to the village level. Along with focusing on technical capacity, the projects promote the need to improve governance, transparency and accountability.

Lao PDR also benefitted from a New Zealand-AID-funded project that is improving food safety and its management in Cambodia, Lao PDR and Viet Nam. The project provides support for Lao PDR to develop a modern, science-based food control system.

Thousands of Lao people have attended workshops and training sessions supported by FAO over the past 30 years. FAO has been assisted by a large number of partners, from local civil society organizations and mass organizations like the Lao Women Union, to research organizations such as National Agricultural and Forestry Research Institute (NAFRI) to International Non-governmental Organizations, other UN agencies and

donors to promote collaboration and harmonization of capacity building efforts.



Strengthening capacity for statistical assessment of the situation and outlook of rice, TCP/LAO/3202, 2008-2009, US\$483 000

Preparation of the second Lao census of agriculture 2010, GCP/LAO/017/AUL, 2010-2010, US\$86 895, funded by Australian government

Second Lao census of agriculture 2010, GCP/LAO/017/SWI, 2010-2013, US\$650 000, funded by Switzerland

2.3 Raising edible insects to supplement poor diets

In May 2010, FAO and Lao PDR launched a project on *Sustainable insect farming and harvesting for better nutrition, improved food security, and household income generation*, financed entirely by FAO with a budget is US\$475 000 for implementation from 2010 to 2012. A comprehensive approach, recognizing the role of traditional collecting of insects from the wild, along with the introduction of insect farming, has been assessed as the most appropriate strategy for the project. The project focuses on strengthening the existing role of insects as a complementary food in the Lao diet. It promotes the sustainability of insect farming, preparation, post-harvest processing and safety of insect consumption. The project is even looking at the possibilities and procedures for insect exports.

With technical assistance from the project, the Lao PDR presented a proposal for new work on *Codex Alimentarius* regional standards for edible crickets (*Acheta domestica*) and their products (Codex document CRD 8) at the 17th Codex Committee meeting in Bali, Indonesia in November 2010. Having a regional standard would help protect consumer health and ensure the good quality of novel insect products in regional food trade.

Together with the Faculty of Agriculture, National University of Lao PDR, an edible insect farming demonstration unit was set up to farm four insect species: the house cricket (*Acheata domestica*), mealworm (*Tenebrio molitor*), palm weevil (*Rhynchophorus ferrugineus*) and the weaver ant (*Oecophylla smaragdina*).

The project continues to attract widespread international media attention, and was promoted at the UN pavilion of the World Expo in Shanghai, China. FAO's support to this project is an immediate response to several interventions identified in the National Nutrition Strategy (NNS) and National Plan of Action for Nutrition (NPAN) adopted in December 2009.

2.4 Aquaculture

Living aquatic resources are woven into the food culture and tradition of Lao people from every part of the country and each of its eco-regions. Most rural families in Lao PDR are involved in some kind of subsistence fishing, an activity for men, women and children. However, living aquatic resources are becoming heavily exploited and increasingly catches comprise smaller fish.

Aquaculture development in Lao PDR started with construction of several fish farms and hatcheries during 1956-1975 under a USAID programme. Subsequently, two FAO/UNDP projects focused on the rehabilitation of the existing fish farms and training of government staff. These two projects established and rehabilitated fish hatcheries and provided production-oriented training for technicians, extension agents and farmers. The projects piloted integrated livestock, crop and fish production and demonstrated the viability of semi-intensive fish production methods.

Fish seed farms and fish culture development, phase II, LAO/82/003, 1983-1993, US\$1 027 124

A third FAO/UNDP project – *Development of fish culture extension, LAO/89/003, 1992-1996, US\$1 114 025* – disseminated suitable scientific aquaculture technologies to the farmers to improve their traditional methods, and in turn improve their nutritional level and family income. The project tested aquaculture technologies in the field and adapted these technologies to local conditions. The project also trained farmers, district level extension workers, provincial and central-level staff, and organized overseas training and exchange visits. In total, 400 farmers were selected and monitored, of which 169 were considered model farmers. The project produced a significant increase in income among project farmers.

In 1997, a fourth FAO/UNDP aquaculture project was set up in five provinces by the Lao government with advisory support from FAO: *Provincial aquaculture development, LAO/97/007, 1997-2000, US\$4 321 687*. The project improved the earnings and nutrition of low-income farmers, with special consideration for gender and ethnic groups, through the introduction of fish culture. The project facilitated a self-sustaining aquaculture development programme that was replicable. Institutional capacity strengthening and human resource development of both government staff and the village community were an essential part of this process.

In 2007 the government of Lao PDR asked FAO to assist in developing a dedicated fisheries and aquaculture law, because widespread traditional management systems for fisheries were under pressure from changing economic conditions and increasing population. Under the project *Fisheries and aquaculture legislation, TCP/LAO/3201, US\$136 312*, FAO undertook a unique collaboration with the Department of Livestock and Fisheries, WWF, the Mekong River Commission's Fisheries Programme, the Asian Institute of Technology and the WorldFish Center.

Each organization provided technical and advisory input, including the organization of, and participation in stakeholder consultations. All have committed funding support. Significant support was also provided by the European Union.

As a result, the Lao National Assembly ratified the fisheries and aquaculture legislation in 2010. This law not only recognizes, but also encourages and supports the right of communities to manage these resources. The process was an excellent example of partnership that exemplifies modern development assistance and the kind of consultative and inclusive process that ensures a robust outcome that will benefit the people of the Lao PDR for generations to come.

2.5 Emergency responses to avian flu and natural disasters

FAO has provided crucial support and technical assistance to the Lao PDR in the management of highly pathogenic avian influenza H5N1, and environmental natural disasters.

Throughout the seven confirmed waves of H5N1 in Lao PDR, FAO provided updated information, through the UN Resident Coordinator Office to government counterparts, UN agencies, bi-lateral organizations, embassies and INGO networks, to coordinate the UN and INGO activities.



Following the establishment of a telephone hotline by the National Emerging Infectious Diseases Coordination Office (NEIDCO), reports of poultry mortality significantly increased, resulting in investigations and sampling in villages throughout the country. FAO has provided support to provincial and district livestock offices in conducting regular active and passive surveillance.

An intensive training programme has been developed to train Department of Livestock and Fisheries (DLF) provincial and district staff in active surveillance and disease investigation, as well as community-level village veterinary workers (VWV), in disease recognition and reporting.

FAO is also supporting the strengthening of regional cooperation by holding and participating in regional meetings and workshops. Through a number of consultancies and workshops, FAO helped to draft several decrees and veterinary laws. FAO is also working with the World Bank to upgrade the laboratory of the National Animal Health Centre and the development of a veterinary curriculum for Lao PDR.

Nearly 6 000 village veterinary workers have been trained across the country, covering 25 percent of all villages in the country. More than 3 400 poultry farmers have been trained in biosecurity issues, and 340 provincial and district staff were trained in technical matters regarding avian influenza response.

Since August 2007, FAO conducted a regular active surveillance programme in all 17 provinces concentrating on market and commercial farms in all high-risk districts. The AI Programme reached more than 150 000 poultry farmers across the country with its community awareness activities. Along with the government, FAO has developed information, education and communication materials adapted to poultry raisers in Lao PDR in collaboration with WHO, UNICEF, CARE and the Academy of Educational Development. The materials, aimed specifically at poultry farmers in Lao PDR, many of whom are only barely literate, have been distributed in all provinces through public announcements in markets, over radio and television, and at special events such as festivals.

FAO also provided US\$350 000 worth of assistance to support laboratory activities, and assisted the government in assessing socio-economic context and the potential livelihood impacts of control actions. Additionally, training and equipment were given to staff at border checkpoints and full-scale field simulation exercises have been undertaken.

FAO has also continued supporting the Lao government at all levels by providing emergency agricultural support to families affected by environmental shocks. Lao PDR has recorded over 30 significant floods since 1966.

Projects have focused on building capacity within the line departments of the Ministry of Agriculture and Forestry, provincial and district authorities, developing livelihood-based approaches for future disasters, and rapid restoration of agricultural, aquaculture and livestock activities in food insecure households in disaster-affected provinces.

Thousands of vulnerable households have been provided with agriculture inputs of improved rice seeds, vegetable seeds, fertilizers and farming tools. Livestock, fish seeds, food and animal medicines such as antibiotics and anthelmintics, have been provided to the Department of Livestock and Animal Health and delivered to farmers by the veterinary personnel and extension services.

In 2008, more than 57 districts and 680 villages were directly affected by floods, which threatened the livelihoods of more than 200 000 people. The project *Emergency agricultural response to flood-affected farmers* swung into action to rapidly restore agricultural and livestock activities in flood-affected food-insecure households.

Lao PDR requested emergency FAO technical assistance to provide urgent help to the flood-affected farmers so they could produce food during the coming rice and vegetable-planting season. FAO also coordinated technical support for the planning and implementation of immediate and medium-term rehabilitation strategies and plans.

The project helped build capacity within the line departments and other provincial and national authorities to develop livelihood-based approaches for future disasters, and was fully integrated in the national and provincial government flood response process.

The year long *Emergency assistance to support the rehabilitation of the livelihoods of flood-affected families in the Lao PDR* project reflects the longer-term needs of flood-affected people.

Two other emergency projects followed in 2009, focusing on agriculture and fisheries rehabilitation. Some 2 280 vulnerable households in Vientiane and Bolikhamxay were provided with rice seed, mineral rock fertilizer, conventional fertilizer and training.

Emergency agricultural response to flood-affected farmers in Laos, OSRO/LAO/801/CHA, 2009-2010, US\$199 873, funded from the Central Emergency Response Fund of the UN (CERF)

Agricultural response to typhoon Ketsana affected farmers, OSRO/LAO/901/CHA, 2009-2010, US\$589 735, funded from the Central Emergency Response Fund of the UN (CERF)

Support to aquaculture rehabilitation in districts highly affected by August 2008 floods, OSRO/LAO/802/SWE, 2009-2010, US\$255 480, funded by Sweden

Emergency agriculture response to typhoon Ketsana affected farmers, OSRO/LAO/902/MUL, 2009-2010, US\$450 053, funded from the FAO Multi-donor Partnership Programme

Support for strengthening animal health laboratory capacities in hot spot regions to combat zoonotic diseases that pose a significant public health threat, OSRO/INT/902/USA, US\$4 500 000, funded by the US

Transboundary animal disease control in Greater Mekong Sub-region, GCP/RAS/206/ASB, US\$1 000 000, funded by the Asian Development Bank (ADB)

Transboundary animal disease control for poverty reduction in the Greater Mekong Sub-Region, GCP/RAS/233/ASB, US\$430 000, funded by ADB

Sub-regional environmental animal health management initiative for enhanced smallholder production in South-East Asia, GCP/RAS/244/ITA, US\$1 400 000, funded by Italy

Emergency assistance for the control of avian influenza, TCP/LAO/3001, 2004-2005, US\$390 000

Emergency assistance to support the rehabilitation of the livelihoods of flood-affected families, TCP/LAO/3104, 2008-2009, US\$479 000

Emergency regional coordination assistance for control of avian influenza in Southeast Asia, TCP/RAS/3004, US\$400 000

Assistance on diagnosis and management of porcine reproductive and respiratory syndrome (PRRS), and other swine diseases to improve swine health status in selected countries, TCP/RAS/3215, US\$445 000

Building capacity at the grass-roots level to control avian influenza, GCP/LAO/014/GER, US\$749 981, funded by Germany

2.6 Forestry initiates develop a national code for forestry harvesting

Some three decades back, FAO implemented two UNDP funded forestry projects: from 1982 to 1992, Forestry development and watershed management, LAO/82/006, US\$2 309 831, and from 1988 to 1993, *Tropical forestry action plan*, LAO/88/015 with a budget of US\$211 761.

An assessment by the *Forestry Research Support Programme for Asia and the Pacific* (FORSPA) found research capability in Lao PDR inadequate, so FAO worked with the government and other stakeholders to improve research structures and develop a viable research programme for the country. Research priorities, institutional arrangements, and information systems for forestry were identified, while vision and the mission of forestry research and the organization of the *Forestry Research Centre* were defined.

At the same time ongoing research and country's priorities on non-timber forest products were reviewed. FORSPA followed up with training in technical capability in several areas, including information management. It provided hands-on training for development of the library of the *Forest Research Centre*.

Another significant contribution was in the rehabilitation of logged versus natural forests. Based on past experience, FORSPA established a 100-hectare demonstration site in Lao PDR. New nursery techniques, species selection and innovative planting methods were tested, along with biodiversity surveys and regeneration and growth studies.

The *Asia-Pacific Forestry Sector Outlook Study II* reviewed key trends in forests and forestry and identified emerging socio-economic changes impacting forestry, probable scenarios for forestry development to 2020, and priorities and strategies to address emerging opportunities and challenges. In this context, a country paper for Lao PDR was produced. The paper reviewed the current status of forestry, major trends it is undergoing, and the likely scenario in 2020.

Under the *ASEAN Forest harvesting initiative*, FAO assisted Lao PDR with the development of the *National Code of Practice for Forest Harvesting*, adopted in December 2005. This code was the result of a study that included developing the national code and promoting reduced impact logging. With this code, the Lao PDR belongs to a handful of countries in the region that have the practical tools to implement harvesting practices that are sustainable.

FAO is also assisting Lao PDR in reviewing the past and current status of planted forests. The initiative looks at the impact that planted forests have on forestry development and analyzes the effects of planted forest projects. It proposes actions that could improve the methodologies. In addition, linking with forestry as well as other land uses, FAO assists the Lao government to boost its capacity for geographic information systems and remote sensing for land cover mapping and monitoring.

Marketing system development for non-wood forest products in Lao PDR, TCP/LAO/3002, 2004-2006, US\$365 000

Linking communities in Southeast Asia to forestry-related Voluntary Carbon Markets, TCP/RAS/3201, US\$270 780

Linking communities in Southeast Asia to forestry-related Voluntary Carbon Markets, TCP/RAS/3210, US\$470 000

Applying Assisted Natural Regeneration (ANR) for restoring forest ecosystem services in Southeast Asia, TCP/RAS/3307, US\$465 000

Strengthening monitoring, assessment and reporting on sustainable forest management in Asia, GCP/INT/988/JPN, US\$2 573 493, funded by Japan

Enhancing sustainable forest harvesting in Asia, GCP/RAS/192/JPN, US\$810 073, funded by Japan

2.7 Coffee improvements for better rural livelihoods

With funding provided by UNDP, FAO implemented the project *Coffee development*, LAO/84/004 from 1986 to 1992 with a total budget of US\$585 391.

In addition, from 2004 to 2005, FAO ran a project entitled *Enhancing livelihoods and income generation of Lao smallholders through development of value-added coffee improvement interventions*, TCP/LAO/2903, US\$346 000. The project improved coffee production and processing technologies for Lao coffee and produced two coffee manuals (one in English and one in Lao/English) and a special final report. This project focused Lao farmers and processors on improving coffee production and processing to greatly improve coffee quality and returns to farmers.

Success stories

1. Promoting home food gardens to tackle high child malnutrition

The UN's Food and Agriculture Organization (FAO) will assist Lao PDR to popularise home food gardens to tackle high levels of chronic malnutrition in the Southeast Asian nation where nearly half of the children have stunted growth.

Under an agreement signed with the Government of Lao PDR today, the world food agency will offer its expertise to improve household food security in one of the world's poorest nations, where chronic malnutrition is a major obstacle to overall national development.

The US\$332 000 Technical Cooperation Project – TCP/LAO/2902 (A) – will set up home food gardens, including livestock and fisheries, to improve household nutrition intake and incomes in four villages with 200 families over an 18-month period. The pilot project, to be eventually replicated across the country, will also enhance rural incomes indirectly through decreased spending on health care. It will link up with the Special Programme for Food Security (SPFS) projects funded by Japan that were launched in the country in May 2001 to improve farm production.

"Malnutrition not only causes serious health problems, including higher incidence and severity of infectious diseases, mental retardation and blindness, it is also responsible for loss of human capital and worker productivity. An improvement of nutrition will lead to improved health status, well-being and development opportunities," said FAO's interim representative Mr Ramadhar today after signing the agreement with Mr Phouang Parisak Pravongviengkham, deputy permanent secretary of the ministry of agriculture and forestry.

The country has some of Southeast Asia's highest malnutrition levels with 47.3 percent of children suffering from stunting (low height for age) and another 40 percent being underweight. More than one-tenth of

the adult population of the Lao PDR is chronically undernourished. Deficiency of vitamin A, iron and iodine is a major public health concern.

Aware of the negative impact of high malnutrition on the national development potential, the Government adopted a national Plan of Action for Nutrition in January 1996 following its endorsement of the World Declaration on Nutrition and Plan of Action for Nutrition at the International Conference on Nutrition (ICN) in 1992.

The national plan requires diversification of food consumption for a more balanced diet and accordingly the country gives priority to increasing production of crop, livestock, fruits and vegetables. Home gardens, in combination with nutrition education, have been highly effective in improving nutrition in poor households in other Asian countries, especially Viet Nam.

The FAO project will assist the selected rural families in Lao PDR to improve the quantity and quality of their food production and consumption with special emphasis on food rich in micronutrients. Among other inputs, the families will be provided seeds, small livestock, fish fingerlings and gardening tools. This will be combined with a public nutrition education campaign, with special emphasis on children under five years and women of childbearing age.

2. Food safety training – beneficiary testimony

Mrs Sengchanh is a 36-year-old mother and Lao Womens' Union member from Ban Nonsomboun, Bolikhan district, Bolikhamxay province. Her three children are aged 11, 15 and 18. FAO's capacity building project has provided training in Ban Nonsomboun in 2009 and 2010.

"I am very happy to have had the opportunity to learn new things particularly about food processing and how to keep food so that we can consume it for a long time. Processed foods can be used to eat throughout the year and are very important for household food security. I am also selling some food, and now I have more money for

my children's education. I can produce rice noodles, vegetable, pumpkin or fish chips, jams, etc. I have been able to buy many things for my family, like a rice cooker, a fridge, an electric pot, bags, books, pens, pencils, and food. My family members are in good health and our lives have improved."



3. Emergency assistance to farmers in distress – beneficiary testimony

Ms Yao is a 56-year-old farmer from Ban Khavongsa, Phouvong district, Attapeu province. She is from the Lavay ethnic tribe. According to the chief of the village, 30 percent of the 177 households suffer from food insecurity. With this year's drought, the rate is expected to rise to 60 percent.

After distributing rice seeds in mid-2010, FAO distributed agricultural tools last November.

"My family and I have two hectares of paddy field, and a garden where we grow fruits and vegetables. We also have a buffalo and some chickens. Before the flooding in 2008 and typhoon Ketsana in 2009, we had enough food, especially rice, for the whole family. And, we are seven people including my mother. But, food was not a problem.

"But when typhoon Ketsana hit, we lost a lot. The harvest was not good and we also lost more than half of our tools. This year will be bad because of the drought. I'm really happy FAO provided us with tools. We will use them in our garden, because with the drought we could not even grow rice this year."

4. Fishery legislation

Living aquatic resources are woven into the food culture and tradition of Lao people from every part of the country and each of its eco-regions.

Most rural families in Lao PDR are involved in some kind of subsistence fishing, an activity for men, women and children. However, living aquatic resources are becoming heavily exploited and increasingly catches comprise smaller fish.

There are widespread traditional management systems for fisheries in Lao PDR but these are breaking down with the changing economic conditions and increasing population in the country. This strong reliance of much of the population on fishery makes widespread adoption of stringent effort controls impossible.

In practice, there is little active management of natural aquatic resources by the authorities and communities carry out most active management of natural aquatic resources.

Community and co-management schemes for aquatic resources are proving to be effective in conserving stocks. However, as a result of the difficulties in sustaining such initiatives when several villages are involved, active management is largely restricted to small areas and individual water bodies.

The right of communities to manage these resources is recognized by the government, and community management initiatives are encouraged and supported but until recently there was not a clear legal framework in which to promote this.

A dedicated fisheries and aquaculture law was thus needed. The government of Lao PDR requested FAO to assist in this important legal reform. FAO agreed to assist in developing a unique collaboration with the Department of Livestock and Fisheries, WWF, the Mekong River Commission's Fisheries Programme, the Asian Institute of Technology and the WorldFish Center (Southeast Asia Regional Office): *Fisheries and Aquaculture Legislation*, TCP/LAO/3201, US\$58 914.

Over the past two years, each organization has provided not only technical and advisory input to this process, including the organization of, and participation in stakeholder consultations, but has also committed funding support. Significant support was provided by the European Union.

As a result, the Lao National Assembly ratified in 2010 a fisheries and aquaculture legislation. This law not only recognizes but also encourages and supports the right of communities to manage these resources.

This process is an excellent example of partnership that exemplifies modern development assistance and the kind of consultative and inclusive process that ensures a robust outcome that will benefit the people of Lao PDR for generations to come.



5. Nam Lo fishing community

Few foods are as natural and safe as fish from the rivers of Lao PDR. But as populations increase, nature's bounty may not be able to provide for all.

Near Nam Lo village in rural Lao PDR, rising populations have put strains on the food supply in recent years.

Most villagers in Nam Lo depend upon fish from the Sekong River, a tributary of the Mekong River, as a source of food to feed their families and sell in markets for income.

But the numbers of people in Nam Lo and nearby villages have increased. And more of them are fishing in the Sekong River.

The result is that the fish are disappearing. That means less food and less income for villagers such as Choy Vangviengkham who fish for a living.

Choy Vangviengkham – fisherman: "I can't do anything without fishing because fishing is everything to me."

Choy invested nearly \$350 in his boat and fishing equipment. But the work is now harder. The catches smaller and smaller.

Seumsee Soulita – Provincial Head of Fisheries: "The numbers of villagers increase daily, and they are also using modern equipment, and so the numbers of fish are reduced."

Villagers began to fear that soon there would be no fish in the Sekong River.

On advice from international agencies, including the FAO, the provincial government initiated a plan to protect and conserve breeding grounds to restore fish populations.

Telling villagers they could not fish in certain areas, however, would never work unless the villagers were involved in managing their own resources.

That's where people such as Paisone, a teacher and fisherman, come in. Recruited by the Fisheries Department, he helps raise awareness among villagers about managing resources.

Paisone: "We only kept catching fish and so soon the fish would become extinct. So we had to make a conservation zone."

The government supplied 50 000 carp for the breeding and conservation area. But the programme worked because of the involvement of, and a sense of ownership by the villagers.

Paisone: "There are many people who look after the conservation zone. No one has complained that there are no areas for fishing.

"In order to look after the conservation zone the people on both sides of the river have to understand and help each other. We don't divide the zones, like this side is yours and this is ours. We help each other to look after it."

Conservation experts believed it would take three years to restore the fish population. But with the villagers working together, the programme succeeded faster than expected.

Paisone: "After we followed the regulations we didn't have to wait three years. Within one to two years we could the numbers of fish increase.

"People here are very happy about the conservation zone. Before there were not many fish. Now we can see lots of them."

(Text extracted from the FAO film *Towards food security: Stories from Asia and the Pacific*)

List of selected projects

Title	Symbol	EOD	NTE	Budget (\$)
Formation Acceleree de Vulgarisateurs-Animateurs de Production Agricole	TCP/LAO/6603	1976	1977	52 100
Emergency Assistance Rice Crop Protection	TCP/LAO/6601	1977	1977	100 000
Fourniture de Semences Vivrieres de Remplacement Aux Zones Rizicoles du Nord Devastees	TCP/LAO/6602	1977	1977	51 000
Fourniture d'urgence de Semences de Riz Aux Provinces Meridionales	TCP/LAO/6707	1977	1977	107 500
Emergency Aid to Lao in the form of Food and Technical Aid such as Spare Parts for Mills	TCP/LAO/6801	1978	1978	82 500
200 Tons of Rice Seeds for 1978 Rainy Season Rice Crop	TCP/LAO/6802	1978	1978	110 000
Formation Acceleree de Techniciens Formateurs Dans Le Domaine de la Petite Hydraulique Agricole	TCP/LAO/8803	1979	1980	129 000
Technologie du Biogaz – Demonstration et Formation	TCP/LAO/0001	1981	1982	50 000
Campagnes de Lutte Contre la Fievre Aphteuse	TCP/LAO/0106	1981	1982	236 000
Formation des Conducteurs et Utilisateurs des Machines Agricoles	TCP/LAO/0107	1982	1983	95 000
Rice Mill Rehabilitation	UNO/LAO/001/CDF	1982	1994	769 944
Forest Development and Watershed Management	LAO/82/006/ /01/12	1982	1992	2 309 831
Agricultural Cooperatives Development	LAO/82/003/ /01/12	1982	1992	542 442
Campagne de Lutte Contre la Fieve Aphteuse (Phase II)	TCP/LAO/2201	1982	1984	156 354
Integrated Agricultural Development	LAO/82/011/ /01/12	1983	1991	3 100 220
Fish Seed Farms and Fish Culture Development (Phase II)	LAO/82/014/ /01/12	1983	1993	1 027 124
Rehabilitation d' Urgence de la Production Rizicole des Provinces du Centre et du Nord	TCP/LAO/2310	1983	1985	214 000
Assistance Preparatoire Au Futur Centre de Mecanisation Agricole	TCP/LAO/2304	1984	1985	106 507
Formation pour l'Organisation et Le Soutien des Groups Depetits Exploitants Agricole	TCP/LAO/2305	1984	1985	121 000
Dong-Dok Poultry Farm	LAO/81/007/ /01/12	1984	1990	508 682
Laos – Emergency Assistance to Increase Rice Production (LAO/84/U01)	UNO/LAO/003/UNE	1984	1999	437 039
Rice Milling Industry Development	LAO/83/007/ /01/12	1984	1991	915 294
Strengthening the Vaccine Production Institute	LAO/83/006/ /01/12	1984	1991	857 145
Developpement de la Cafeiculture	TCP/LAO/4401	1984	1985	213 671
Assistance d'urgence Aux Regions Affectee Par la Secheresse	TCP/LAO/4404	1984	1984	166 126
Formation des Femmes Dans la Production Alimentaire	TCP/LAO/4405	1984	1986	128 700
Pig Multiplication	LAO/84/001/ /01/12	1985	1991	447 027
Formation pour l'Organisation et Le Soutien de Groupes de Petits Exploitants Agricoles	TCP/LAO/4507	1985	1986	67 521

Title	Symbol	EOD	NTE	Budget (\$)
Coffee Development	LAO/84/004/ /01/12	1986	1992	585 391
Mechanical Workshops Development	LAO/84/005/ /01/12	1986	1992	396 765
Installation of Ram Irrigation Pumps	LAO/84/031/ /38/31	1986	1996	376 390
Amelioration de la Production Agricole des Membres de Familles des Coop. Agricoles et des Travailleur	TCP/LAO/6653	1986	1987	178 500
Construction of Improved Small Craft for Fishing and Transportation	TCP/LAO/6654	1987	1989	75 000
Laos – Development of Agricultural Cooperatives (LAO/84/C02)	UNO/LAO/004/CDF	1987	1993	255 587
Assistance d'urgence a l'Agriculture	TCP/LAO/6757	1988	1988	97 850
Irrigation Service Assistance in Vientiane	LAO/85/009/ /01/12	1988	1993	720 636
Irrigation Service Assistance in Savannakhet	LAO/85/008/ /01/12	1988	1993	625 514
Organic Manures and Bio-Fertilizer Use	LAO/85/007/ /06/12	1988	1993	665 755
Tropical Forestry Action Plan (Formulation Mission)	LAO/88/015/ /01/12	1988	1993	211 761
Small Rice Mills for Saravane and Attopeu Provinces	UNO/LAO/005/CDF	1988	1994	606 413
Installation d'une Mini-Laiterie	TCP/LAO/8851	1988	1990	111 000
Formation en Mecanisation Agricole	TCP/LAO/8953	1989	1990	141 300
Agricultural Sector Policy Review Formulation Mission	TCP/LAO/8954	1989	1990	254 900
Food Crop Rehabilitation	TCP/LAO/8955	1989	1989	212 000
Rehabilitation Perimetres Irrigues Had Xiengdy et Tone Hene	TCP/LAO/8957	1989	1991	400 000
Formulation des Elements du Programme et des Projets de Securite Alimentaire	TCP/LAO/0051	1990	1992	246 000
Vaccine Production and Distribution (Phase II)	LAO/88/012/ /01/12	1990	1993	1 017 287
Legislation Fonciere Hydraulique et Forestiere	TCP/LAO/0153	1991	1993	179 000
Developpement de l'Horticulture et Amelioration de la Nutrition	TCP/LAO/0155	1991	1992	168 000
Development of Fish Culture Extension	LAO/89/003/ /01/12	1992	1996	1 144 025
Land Regularization Policy	LAO/92/011T/ /08/12	1992	1993	156 363
Developpement d'un Systeme Integre de Prevention des Pertes Apres-Recolte au Niveau Villageois, Laos	GCP/LAO/010/FRA	1993	1995	224 775
Forest Project Planning and Market Intelligence	TCP/LAO/2353	1993	1995	275 200
Ziagnostic de la Situation Nutritionnelle et Consommation Alimentaire	TCP/LAO/2354	1993	1995	110 000
Strengthening the Food Control System	TCP/LAO/2355	1993	1995	180 000
Medium Term Integrated Rice Production Programme	TCP/LAO/2358	1993	1994	163 500
Assistance in Formulating a National Agroforestry Programme	TCP/LAO/2357	1994	1994	60 000
Increasing Utilization of Locally Available Feed Resources for Cattle and Buffaloes	TCP/LAO/4451	1994	1996	156 000
Environmental Policy and Planning for Sustainable Agriculture and Rural Development	TCP/LAO/4453	1994	1996	396 000

Title	Symbol	EOD	NTE	Budget (\$)
Regional Development Strategy	LAO/94/01T/ /08/12	1994	1995	159 801
Strengthening Agricultural Statistics	TCP/LAO/4452	1994	1996	338 500
Assistance in Introducing Meat Inspection Legislation	TCP/LAO/4454	1995	1996	106 000
Emergency Assistance to Flood Affected Farmers Through Support to Diversification Activities During 1996 Dry & Rainy Sea	TCP/LAO/6612	1996	1997	205 000
Improved Benzoin Production	TCP/LAO/6611	1996	1998	305 000
Preparation of a Comprehensive Flood Loss Prevention and Management Plan for the Agricultural Sector	TCP/LAO/6613	1996	1998	250 000
Provincial Aquaculture Development	LAO/97/007/ /01/99	1997	2000	272 087
Provincial Aquaculture Development	LAO/97/007/ /09/12	1997	2000	150 600
Emergency Supply of Water Pumps, Vegetable and Maize Seed and Fertilizer to Farmers Affected by Floods	OSRO/LAO/701/BEL	1998	1999	286 846
Promotion of Smallholders Participation Through an Animal Health and Production Extension Model (Ahpem)	TCP/LAO/8821	1998	2000	252 000
Improved Utilisation, Quality and Safety of Fish and Fisheries Products	TCP/LAO/8823	1998	2000	158 000
Environmental Policy and Planning for Sustainable Agriculture and Rural Development (Phase II)	TCP/LAO/8822	1999	2000	102 000
Aquaculture Development	LAO/98/017/ /08/12	1999	1999	255 000
Development of Market Information – Information Marketing Extension Capability	TCP/LAO/0065	2001	2002	123 873
Development of Market Information – Information Marketing Extension Capability (recoded from TCP/LAO/0065)	TCP/LAO/9065	2001	2002	152 811
Emergency Supply of Agricultural Inputs to Flood-affected Households (recoded from TCP/LAO/0166)	TCP/LAO/9166	2001	2002	159 942
Emergency Supply of Agricultural Inputs to Flood-affected Households	TCP/LAO/0166	2001	2002	230 192
Special Programme for Food Security and South-South Cooperation in Lao DPR	GCSP/LAO/011/JPN	2001	2008	2 900 279
Promotion of Organic Fertilizers	TCP/LAO/2901	2002	2004	295 533
Pilot Project for the Promotion of Home Gardens for Improved Nutritional Well Being	TCP/LAO/2902	2003	2004	304 342
Enhancing Livelihoods and Income Generation of Lao Coffee Smallholders through the Development of Value-added Coffee Improvement Interventions	TCP/LAO/2903	2004	2005	341 862
Emergency assistance for the control of avian influenza	TCP/LAO/3001	2004	2005	384 125
Marketing system development for non-wood forest products	TCP/LAO/3002	2004	2006	356 419
Improvement and Development of Fruit and Vegetable Crops in Lao PDR	GCP/LAO/013/ITA	2004	2007	814 981

Title	Symbol	EOD	NTE	Budget (\$)
Building Capacity at the Grass-roots Level to Control Avian Influenza	GCP/LAO/014/GER	2006	2009	3 210 033
Enhancing Livelihoods and Income Generation of Lao Coffee Smallholders through the Development of Value-added Coffee Improvement Interventions-Phase II of TCP/LAO/2903	TCP/LAO/3101	2006	2006	36 000
Strengthening the policy, strategy and project formulation and management capacity of the Ministry of Agriculture and Forestry	TCP/LAO/3103	2007	2009	322 000
Strengthening capacity for statistical assessment of the situation and outlook of rice	TCP/LAO/3202	2008	2009	483 000
Emergency agricultural response to flood-affected farmers.	OSRO/LAO/801/CHA	2008	2008	199 873
Emergency assistance to support the rehabilitation of the livelihoods of flood-affected families	TCP/LAO/3104	2008	2009	479 000
Support to aquaculture rehabilitation in districts highly affected by August 2008 Floods – (SIDA component n.5204000001)	OSRO/LAO/802/SWE	2009	2010	255 480
Development of a National Nutrition Strategy, National Plan of Action on Nutrition	TCP/LAO/3203	2009	2011	370 000
Capacity building for food security and better nutrition	GCP/LAO/016/ITA	2009	2011	1 336 928
Emergency Agricultural Response to Typhoon Ketsana Affected Farmers	OSRO/LAO/901/CHA	2009	2010	589 735
Emergency Agricultural Response to Typhoon Ketsana Affected Farmers	OSRO/LAO/902/MUL	2009	2010	450 053
Sustainable insect farming and harvesting for better nutrition, improved food security, and household income generation	TCP/LAO/3301	2010	2012	475 000
Second Lao Census of Agriculture 2010	GCP/LAO/017/SWI	2010	2013	650 000
Second Lao Census of Agriculture 2010	GCP/LAO/017/AUL	2010	2010	86 895

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