

Maldives and FAO

Achievements and success stories

FAO Representation in Maldives
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Introduction

Maldives became a member of FAO in 1971 and was accredited to the FAO Representative's office in Sri Lanka in 1979.

The economy of Maldives has grown rapidly since 1975, making impressive socio-economic progress when measured by improvements in socio-economic indicators and poverty reduction. The government has played a central role in the rapid growth of fisheries and tourism, which are the main foreign exchange earners of the country.

Food security in Maldives has unique features as the country depends on imports for most of its food needs, including rice, which is the country's staple grain. Outside of Malé, fishing and subsistence agriculture are the main sources of food security and livelihoods for the vast majority of the people. The agricultural sector of Maldives is based primarily on coconuts and other tree crops with only some 4 000 hectares under other agriculture crops.

In response to the current food and fuel crisis, Maldives is integrating food security into national planning. It has removed tariffs on imported food items, agricultural inputs and fuel and is intensifying and diversifying agriculture and fisheries. Maldives is also promoting and strengthening small and medium enterprises (SMEs) in both these sectors, while providing financial support for small growers and fishers in rural areas.

Climate change is central to all discussions about food security in Maldives, because it is adversely affecting crops and fish stocks and reducing land area as the sea level rises.

Developing agriculture as the third pillar of the economy, after tourism and fishing, is one of the priorities of the *7th National Development Plan*, which is being implemented at present. The government is working with FAO and IFAD as well as the private sector to develop agriculture by introducing new and innovative techniques and technology that would make farming into a vehicle for commercially viable sustainable rural development.

Since the early 1970's, FAO has provided assistance to the government through national and regional programmes to address the needs and priorities of the country. Direct support from FAO in the form of targeted Technical Cooperation Programme (TCP) projects has totalled US\$9.5 million. Additionally, Maldives has been a recipient of support from numerous regional TCP projects. The country also received substantial amounts of emergency assistance for post tsunami recovery in 2005 and 2006. Donors supporting development through FAO in Maldives include: Japan, Finland, Sweden, Belgium, EC, Germany, Saudi Arabia, and the Netherlands.

1. Analytical summary

1.1. Agriculture

Due to the lack of land available for cultivation, poor soil conditions and a shortage of fresh water for irrigation, agricultural development is relatively limited in Maldives.

Except for coconut and fresh tuna, 90 percent of all food items are imported. Heavy import dependency, limited storage facilities and ad hoc distribution pose severe food security risks.

About half of the agricultural land is in the form of “agriculture islands,” which are islands leased to private entrepreneurs for agriculture development.

FAO has worked with the government to prepare a master plan for the sector, which would support sustainable small-scale farming as well as commercial agriculture development. To support implementation, FAO helped the government to draft the necessary legislation, which is now pending approval in parliament.

1.2. Fisheries

The Maldivian economy was entirely dependent on fisheries and other marine products for centuries and fishing and related marine activities continue to employ a significant proportion of population. The government gives priority to the development of the fisheries sector, which at present contributes over 15 percent of gross domestic product (GDP). About 30 percent of the country’s work force is engaged in the fisheries sector. It is the second most important sector after tourism.

The government established the Maldives Fishing Corporation in 1979 to exploit the country’s vast fisheries resource.

The use of fishing nets is prohibited and as a result, the more labor-intensive traditional method of fishing by hook and line is practiced. Consequently, the productivity of the fisheries sector has improved considerably during the 1990s. Today some 150 000 metric tonnes are harvested annually with skip jack and yellow fin tuna dominating the catch.

In the fisheries sector, Maldives is a signatory to current conventions supporting sustainable management and has adopted a policy that permits only hook and line fishing to protect the productivity of the resource. In 2010, shark fishing was banned throughout the country with the goal of generating more tourist revenue.

Marine ecosystem management is of utmost importance to the government and FAO is providing support for this through the *Bay of Bengal Large Marine Ecosystem* project.

1.3. Livestock sector

Maldives is a country without cows or buffalo. Manure is imported from India to be used as fertilizer. However, goat and poultry production are two growing economic activities for out-lying island communities. Goats are in demand for cultural events while eggs are popular throughout the country and especially among the 100 plus high-end resort islands.

Over the last 15 years, one TCP and four TeleFood funded projects, totaling some \$250 000, have provided investments in small scale poultry. In 2010, FAO in collaboration with the UNDP provided support to develop poultry production on two islands. The success of this activity has resulted in a government plan to expand egg production to a number of other islands because it generates income for the people while reducing the country’s dependency on imported eggs.

The demand for goats exceeds supply. The government has now requested assistance from FAO to develop fodder and pasture for goat rearing. This will be initiated in 2011.

1.4. Response to emergencies – tsunami

In the aftermath of the devastating Asian tsunami of 26 December 2004, Maldives has shown its resilience and commitment to “building back better.”

The 2004 Asian Tsunami had a massive impact on the nation, destroying years of hard-won infrastructure improvement. Together with the government, the World Bank and the Asian Development Bank, UN agencies conducted a Joint Needs Assessment (JNA) within two months of the tsunami. Estimating total losses at US\$470 million or 62 percent of GDP, this assessment

was also the basis of the National Recovery and Reconstruction Plan (NRRP), outlining recovery projects across 14 sectors and, subsequently formed the basis for the UN Flash Appeal launched in February 2005.

Since the tsunami, more than US\$110 million has been mobilized by the UN system for tsunami recovery efforts – significantly more than the US\$66.5 million envisaged in the UN Flash Appeal and representing nearly 30 percent of the total resources mobilized by the national authorities.

Building back better linked rebuilding efforts to national plans and programmes, including the Millennium Development Goals (MDGs). Consultation, participation

and empowerment were fundamental to the UN's contribution to Maldives development. In all UN projects, people and communities were consulted, allowing full participation in decisions about the types of materials, designs, and needs. This created a genuine sense of community ownership of projects, increasing the chances of sustainability and success for the projects.

FAO responded quickly after the tsunami and posted a full time senior staff member to the Ministry of Agriculture and Fisheries to assist with the recovery efforts. Some US\$5 million was provided by donors to support agriculture and fisheries rehabilitation. The FAO office within the ministry supported recovery efforts for a two year period finishing in 2007.

2. Selected successful FAO programmes

2.1. Agriculture

Maldives is comprised of 1 190 islands spread over 26 atolls and has a total land area of 30 000 hectares of which only 4 000 ha are arable. Half of the arable land is found on 36 islands, which are large enough to support commercial agriculture activity. These islands are leased for agriculture development, which includes cultivation of coconuts, bananas, papaya, eggplant, watermelon, pineapple and chilies. On larger inhabited islands, arable land is provided to interested families for subsistence agriculture and larger areas can be leased for commercial activities. FAO has worked with the government to support the development of small-scale to commercial agriculture, which is now elaborated within the recently completed *Agricultural Development Master Plan for Sustainable Food Security, Agriculture and Rural Development*.



At this time, there is no basic law covering the agricultural sector as a whole and the entire mandate of the Ministry of Agriculture. However, there are specific laws on some of the relevant aspects of the ministry's work, including the *Associations Act*, No. 1 of 2003 and the *Cooperative Societies Act* No. 3/2007, which together provide a framework for the registration and administrative oversight over all potential farmers associations and cooperatives. Key agricultural sector legislation is not in place and is needed to move forward with effective development of the agriculture sector.

Toward this end, FAO has provided US\$334 000 from its Technical Cooperation Programme to the project *Assistance in the drafting of agricultural legislation*. The objective of the 2008-2011 project is to assist the government in preparing legislation in four key areas in order to lay a firm basis for an institutional framework designed to support sound management of the agricultural sector and to thereby contribute to national food security, social and economic development. Through the provision of legal expertise, legislation has been drafted on 1) agriculture, 2) agriculture lands, 3) pesticides, 4) plant protection and 5) livestock. With the exception of the livestock legislation, the others have been translated into the local language of Dhivehi and are pending parliamentary approval. Livestock legislation will be completed in early 2011 and the project finalized by 30 June 2011.

With new legislation in place, new investment in the agriculture sector is expected. Given the limited amount of arable land in the country, Maldives will always be dependent on food imports. However, developing the sector will reduce unemployment, improve local livelihoods and contribute to food security and improved nutrition. It will also strengthen local economies.

2.2 Virgin coconut oil

The coconut palm is one of the most abundant plants in Maldives. While coconuts form an integral part of the Maldivian diet, current production is only used to a very marginal extent. Commercial use of coconuts for the production of copra has been phased out and value-added production from coconuts has not been realized. Currently, the productivity of coconut palms is low because of poor management, close planting, the almost non-existent use of fertilizers and damage from pests.

In 2006, FAO began implementing the TCP project *Production of virgin coconut oil and value added products* for the enhancement of livelihoods and food security through income generating opportunities. Aimed at smaller and vulnerable rural island household groups and coconut producers, the project focused on developing small-scale innovative technologies to extract high quality virgin coconut oil from fresh coconuts and to produce value-added products like soaps and massages oils for

sale to the tourist industry. The project has worked through women's groups and established a successful production facility on the northern atoll.

However, time ran out before a second facility could be developed on a southern atoll so a second phase of the TCP was approved. This extended project was finalized in December 2010 with the completion of a second virgin coconut production facility on Gan Island with a network of small collection centers on outlying islands.

Together, the two projects ran from 2006 to 2010 with a combined funding of US\$459 000 provided by FAO. The main strength of the projects was the emphasis on women and young people, teaching production skills for value added products from the abundant surplus of coconuts found on the islands, while at the same time stimulating improved coconut management and production. On a macro level, the projects provided an alternate source of good quality virgin coconut oil for local consumption and marketing.

2.3 Bay of Bengal Large Marine Ecosystem project

This regional project, which supports enhanced food security and improved livelihoods for fishermen, has been turned over to the government of Maldives. The project is linked with a sustained resource base of good

ecosystem quality and its activities include: 1) identifying sound policies leading to strengthening community-based approaches to integrated coastal resources management, 2) empowering local communities to participate in processes and decisions associated with the development of subregional and regional fisheries management plans and, 3) increasing options such as access to alternative livelihood opportunities.

2.4 Emergency support – Post-tsunami agricultural brief (18 April 2005)

FAO was very active in supporting agriculture recovery in the post-tsunami period, including the establishment of an office in Malé staffed by a former FAO Representative. After the initial severe salinization of agricultural lands, most field crops and fruit trees suffered and many died. FAO was quick to provide salinometers and practical advice to farmers on how to cope with salinity. Post-tsunami rainfall helped to remove the salt and the monsoon rains further cleansed the soil. Subsequent inputs from FAO included fruit trees seeds and seedlings, which enabled farmers to resume production and reestablish their livelihoods.

Total direct FAO post-tsunami emergency assistance totaled US\$3.1 million, funded through six projects. Main donors were OCHA, UNDP, Japan, Belgium, China and FAO's own Technical Cooperation Programme resources.

Success stories

1. FAO supports pest management in Maldives – Workshop, mist blowers and protective clothing help with pest eradication

Malé, 12 September 2006 – “Improved pest management is a priority for the agriculture sector. The sprayers and the training we are providing will enhance both income generation and food security in the islands,” Yon Fernandez de Larrinoa, FAO Officer-in-Charge for Maldives, said today.

FAO is distributing 56 motorized mist blowers and 300 kits of protective clothing to 20 atolls throughout Maldives.

The FAO Coordinator’s comments arose on the occasion of the opening ceremony for a workshop entitled *Workshop on pest management, safe use of pesticides and mist blower operation and maintenance*. The workshop will train 26 farmers on pest management and pesticide hazards.

The training and distribution is part of a project funded by Trinidad and Tobago, which had already conducted an assessment of boat damage in eight atolls. The project distributed 400 000 seedlings and cuttings of fruit trees and vegetable plants, as well as tools for more than 4 000 Maldivian farming families.

The blowers will ensure that each atoll will be equipped to rapidly combat various tree and plant pests and disease outbreaks. In 2004, 9 000 people suffered medically, economically and environmentally when agrarian islands in Maldives were invaded by gypsy moths.

FAO is the UN’s lead agency for the rehabilitation of the fisheries and agriculture sectors in Maldives. Following the tsunami disaster, the immediate priority for FAO and the Maldivian government was to restart the livelihoods of coastal communities as soon as possible. The longer-term strategy is to improve the sectors as a whole with a view to improving the livelihood opportunities of affected

communities. FAO’s programme to assist more than 50 Tsunami affected islands and over 40 000 Maldivian farmers and fishers will conclude in October.

2. Maldives post-tsunami

After extensive discussions with the government, procurement of inputs began. Items already procured and delivered include 15 salinity meters with training on how to use the equipment provided by the Ministry of Agriculture. Additionally 13 different varieties of vegetable seeds sufficient for 10 islands were provided. Some 150 handtools were delivered along with 300 tonnes of organic fertilizer, 152 tonnes of inorganic fertilizer and 89 small fishing boats were constructed. Some US\$190 000 worth of fishing gear followed by an additional US\$1.1 million of fishing gear will be procured and delivered in the coming months, Contracts for engine overhaul and hull repairs are being discussed with donor countries and the Ministry of Fisheries and Agriculture. As in Indonesia and Sri Lanka, FAO assisted the ministry with the assessments and planning for reconstruction.

3. Outstanding female fish processor from Maldives

(Extracted from the 1999 World Food Day celebration at the FAO Regional Office for Asia and the Pacific, honoring a Maldivian fisher for outstanding achievements.)

From Maldives, we welcome the presence today of Ms Sheereena Ali, the outstanding female fish processor from the village of Moonimaage, Dhiggaru island in the Mukala Atol.

Sheereena Ali’s family owns a fishing craft. All members of her family are involved in traditional marine fishing. Ms Sheereena speaking only Dhivehi, a local Maldivian language has managed to acquire a high degree of specialization in processing activities of the major produce of her country, fish.

For the last 22 years, she has been involved in various kinds of fish processing activities and has developed

appropriate fish processing technologies to pass on to others.

Her specialty is the production and processing of *Rihaakuru*, a Maldivian fish paste commonly used by the local community as a food additive.

At present she is also employed as a family health worker. She has been a member of the Women's Development Committee for the last 15 years.

4. Revamping the forestry sector in Maldives

The tsunami destroyed coastal vegetation, including mangrove forests on some islands in Maldives and timber and fruit trees on the country's inhabited islands were also affected.



Mangroves, vegetation, and trees in home gardens suffered extensive damage during the tsunami in Maldives. In many of the islands unsustainable land management practices had degraded coastal lands and vegetation prior to the tsunami.

FAO, through its Forestry programme for early rehabilitation in Asian tsunami affected countries, helped Maldives establish the forest policy using appropriate policy tools and legislation in subjects such as assessing the role of mangroves and other coastal vegetation in mitigating the impacts of the tsunami, tidal surges and storms. FAO also helped identify opportunities for community plantings, home gardens, agro-forestry, fruit trees and shade trees to restore and improve livelihoods. The Organization

further identified the physical and technical inputs needed to support the proposed forest rehabilitation, including needs for forest nurseries and seedling distribution systems.

Tree planting activities were based on a livelihoods approach that addresses poverty alleviation and food security, human capacity building and environmental sustainability while minimizing vulnerability to future natural disasters.

An integrated approach was taken to planning coastal and mangrove forest rehabilitation and tree planting. This was consistent with the highly integrated nature of the livelihoods of most of the people in the affected areas.

Action was based on participatory principles involving all stakeholders including the private sector wherever feasible.

The Forestry interventions were compatible with sustainable forest management practices. They were carried out within the context of integrated coastal area management and spatial planning that recognizes the multiple values of the natural resource base.



5. Assistance to tsunami victims

Maldives was one of the worst affected countries among those struck by the 26 December 2004 tsunami. Overall destruction was estimated at 62 percent of the country's pre-tsunami GDP. The tsunami hit the island nation with waves as high as four metres. were flooding along their

exposed eastern coasts devastated several of the islands. The agriculture and fisheries sectors, which provide livelihoods for two-thirds of the population, suffered significant damage. Fisheries were hit the worst. In the aftermath of the disaster, the Ministry of Fisheries, Agriculture and Marine Resources (MFAMR) conducted damage and needs assessments taking account of the state of fishing vessels, fishing gear and accessories, fish processing equipment and infrastructure.

At the request of the Maldives government, a United Nations Flash Appeal was launched on 6 January 2005 to address the urgent and immediate needs of the affected population and to facilitate a smooth transition from immediate rescue and relief phase to a medium- and long-term reconstruction and recovery phase. Through the Appeal, the UN committed itself to support the government, not only in providing short-term relief, but also through specific support to the recovery and reconstruction programme of the country.

In response, China contributed US\$1 375 000 (of which US\$275 000 in cash) in support of the FAO project entitled *Emergency in-kind assistance to fisheries communities in Maldives*. The project assisted government efforts to re-establish sustainable income-generating activities in the tsunami-affected Maldivian fisheries sector. The project was implemented from 1 August 2005 to 30 September 2006.

Fishing equipment was delivered to tsunami-affected fishers and fishing communities. The assistance allowed them to resume their fishing activities. Chinese-made fishing inputs were delivered to Malé, where they were distributed by FAO to tsunami-affected fishers identified by MFAMR. The project constituted an integrated part of FAO's overall fisheries rehabilitation programme in Maldives, which aimed to assess the level of damage, as well as replacing boats, engines and fishing equipment that had been lost in the tsunami.

FAO's programme reached 69 islands in 13 atolls. The project enabled a total of 501 vessels to re-commence fishing activities. Some 89 boats were fitted with new engines, while 412 boats received other inputs like carburetor kits and water pump impellers, fish finders, flood lights, life jackets and life buoys. The total number of fishers benefiting from new engines and other vessel-related inputs was approximately 4 387. Twenty refrigerated containers were distributed to ten islands, based on assessments of refrigeration capacity needs. Furthermore, the project distributed three refrigerators, five deep freezers, ten sets of Central Processing Unit boards, power boards, transceiver boards and a current speed meter to the Marine Research Centre in Malé and the Fish Aggregated Device Centre in Vilingili. The successful resumption of fishing activities benefited not only fishers, but also the country as a whole.

List of selected projects

Trust funds

Technical assistance under the South-South Cooperation (SSC) with Pakistan in support of the Special Programme for Food Security (SPFS) in Maldives (Baby 03 of project GTFS/INT/876/SAU and GTFS/MDV/031/SAU, 2007-2009, \$325 000

Regional programme for participatory and integrated agriculture, forestry and fisheries development for long-term rehabilitation and development in tsunami-affected areas (Indonesia, Maldives, Sri Lanka, Thailand), GCP/RAS/218/JPN, 2006-2011, \$4 353 663

Sustainable management of the Bay of Bengal large marine ecosystem (Bangladesh, India, Indonesia, Malaysia, Myanmar, Sri Lanka, Thailand), GCP/RAS/236/GEF, 2009-2014, \$12 082 099

FAO Technical Cooperation Programme (TCP)

Rehabilitation of coconuts, TCP/MDV/0108, 1983-1983, \$23 000

Poultry meat production, Northern Atoll Region, TCP/MDV/4553, 1995-1997, \$163 000

Emergency assistance to control coconut pests, TCP/MDV/6713, 1997-1997, \$29 000

*Integrated pest management of coconut Hispid Beetle (*Brontispa* sp.)*, TCP/MDV/2904, 2003-2005, \$198 074

Production of Virgin Coconut Oil (VCO) and value-added products for the enhancement of livelihoods and food security through income generating opportunities TCP/MDV/3101 and TCP/MDV/3203, 2006-2010, \$453 000

Assistance in fisheries and marine resources management and legislation, TCP/MDV/2901, 2004-2004, \$86 907

Assistance in the drafting of agricultural legislation TCP/MDV/3201, 2009-2010, \$334 000

Control of Papaya Mealy Bug in Maldives TCP/MDV/3301, 2010-2011, US\$24 824

Rehabilitation of coconut industry in Maldives, US\$29 534, 2010-2011

Improving post-harvest practices and sustainable market development for long-line fisheries for tuna and other large pelagic fish species in the Indian Ocean Region (Sri Lanka, Maldives, India, Iran, and Pakistan) TCP/RAS/3302, \$ TCP/RAS/3302, 2010-2012

Tsunami emergency operations

Immediate provision of agricultural inputs to worst affected fisher and farmer groups in the Maldives, OSRO/MDV/501/BEL, 2005-2006, \$80 000

Emergency assistance to support the rehabilitation in earthquake/tsunami areas, TCP/MDV/3002, 2005-2005, \$297 601

Assistance for affected rural communities in Maldives, OSRO/MDV/503/JPN, 2005-2005, \$403 000

Assistance for affected rural communities in Maldives, OSRO/MDV/502/JPN, 2005-2005, \$320 000

Emergency in-kind assistance to fisheries communities in Maldives, OSRO/MDV/505/CPR, 2005-2006, \$275 000

Rehabilitation of marine fisheries sector and agricultural infrastructure, OSRO/MDV/504/CHA, 2005-2006, \$1 000 000

Replacement of farming inputs to farmers and home gardeners, MDV/05/001, 2005-2005, \$700 000

TeleFood

Poultry development in selected islands, TLF-97/MDV/001, 1997, \$8 500

Poultry development in selected islands, TLF-98/MDV/003, 1999, \$10 000

Introduction of small scale commercial poultry in selected islands, TLF-03/MDV/001, 2004-2005, \$10 000

Introduction of small scale commercial egg production in HA.BAARAH in Maldives TFD-09/MDV/001, 2010-2011, US\$9 828

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