CELEBRATING 40 YEARS IN INDONESIA

Celebrating a 70-year partnership and 40-years of in-country Representation
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FAO in Indonesia today

Map source: www.freevectormaps.com
Years of great collaboration with Indonesia | highlights

1948-49

Indonesia applies for FAO Membership in 1948, and becomes member on 28 November 1949 at the third global FAO Conference of member countries held in Rome.

1978

The Minister of Foreign Affairs, on behalf of the Government of Indonesia, signs the Memorandum of Understanding on the establishment of the FAO Representation in Indonesia with the Director-General of FAO in October 1978.

1986

President Suharto receives the “Ceres Medal”, an FAO award, for his efforts to achieve self-sufficiency in rice. A year earlier (1985), Suharto traveled to Rome to present a speech at the FAO 40-year anniversary celebrations.

1989

South East Asia’s Integrated Pest Management (IPM) and Farmer Field School (FFS) programmes were initiated in Indonesia to reduce farmers’ reliance on pesticides in rice. The Farmer Field School is a form of adult education, which evolved from the concept that farmers learn best from field observation and experimentation. Policy-makers and donors were impressed with the results and the program rapidly expanded across Indonesia – and the world. Around one million farmers in Indonesia have participated in FFS. Because of its success, IPM Farmer Field School programs for rice were carried out in twelve Asian countries and gradually branched out to vegetables, cotton and other crops.
Indonesia faces a severe economic crisis following the Asia financial meltdown. Price hikes for many commodities, including food, combined with high unemployment, increased poverty and food insecurity.

In response, the government, with financial support from Japan for FAO technical assistance, launched the Special Programme for Food Security (SPFS) aimed at strengthening food security, revitalizing rural economies, alleviating rural poverty and enhancing nutritional well-being. Over six years, the total budget for the SPFS reached more than USD three million, of which USD 2.5 million was provided by Japan through FAO, and USD 0.8 million was provided by Indonesia itself. The main activities included participatory analysis of food security constraints, water control and management, intensification of farming systems and diversification of agricultural production.

The province of Aceh was most devastated by the 2004 tsunami. FAO and other donors delivered assistance to ensure a sustainable long-term recovery. The Multi-Donor Trust Fund for the reconstruction of Aceh and North Sumatra provided more than US$37 million in funds channeled through FAO. Local Indonesian communities benefited from support provided by FAO for the rehabilitation and sustainable development of fisheries and aquaculture, particularly those in the tsunami-affected areas of Aceh Province. The Aceh Fisheries Sector Steering Council was created. The provincial Aceh Marine and Fisheries Service (DKP) managed the rehabilitation of the affected coastal areas with support from FAO and funding from the American Red Cross.
In 2005, Indonesia had become one of the global epicenters for the human H5N1 highly pathogenic avian influenza (HPAI) infections with more human cases and fatalities than any other country by 2014. The disease has caused the deaths of millions of poultry in 32 of the country’s 34 provinces, disrupting the livelihoods of large numbers of people dependent on poultry-keeping.

The persistent HPAI threat to animal and human health in Indonesia brought the FAO Emergency Centre for Transboundary Animal Diseases (ECTAD) to Indonesia in 2006. With funding from USAID, AusAID and the Japan Trust Fund, FAO ECTAD has been working closely with the Ministry of Agriculture to enhance its capacity and ability to sustainably control HPAI. Over the past 12 years, ECTAD Indonesia has trained around 3 000 animal health officers in 32 provinces, and has implemented the Avian Influenza Control Programme at village level, in the commercial poultry industry, and along the poultry market chain.

The two Nusa Tenggara provinces of Indonesia are vulnerable to climate change, as manifested by more frequent agricultural drought, and more erratic rainfall. With funding from USAID, FAO in partnership with the Indonesian Agency for Agricultural Research and Development (IAARD) of the Ministry of Agriculture, introduced conservation agriculture (CA) techniques in Nusa Tenggara Timur and Nusa Tenggara Barat provinces to enhance small farmer adaptation to climate change. The CA techniques introduced have shown promising results, with maize yields on average 77% higher, when compared to conventional farming practices. As of today, around 12 000 farmer group members practice CA, with one third of the members being women. FAO and MoA are expanding CA in collaboration with the Food Security and Extension Board (BKPP) of NTT and the Extension Board (BAKORLUH) of NTB province.
FAO, in close collaboration with the Ministry of Marine Affairs and Fisheries (MMAF) starts to revive the traditional wisdom of Minapadi through the introduction of a method called “Innovative Rice Fish Farming based on a Cluster Approach”. The innovative technique was introduced in Sleman District, Yogyakarta and Limapuluh Kota District, West Sumatra. Within a short time, average rice yields increased from 6.5 tonnes/ha to 9.3 tonnes/ha with higher quality rice. As no pesticides are used, farmers have been able to sell the rice as “healthy rice”. The sale of fish reached as much as Rp 42 million per ha per season. The innovative rice-fish farming techniques, have been widely shared in the Asia-Pacific region and beyond. Representatives from 15 countries have visited Sleman District, in addition to many farmers from throughout Indonesia, all of whom expressed their interest to replicate the rice-fish farming approach in their own countries, and other parts of Indonesia.

The FAO ECTAD programme moves into a new direction to tackle not only avian influenza, but also new, or re-emerging global health threats, which risk spilling-over into human populations from animal populations. These global threats include Ebola, MERS-CoV, SARS and Zika, among others. Building upon the success of the previous avian influenza-focused programme and continuing our collaborative efforts with the Directorate General of Livestock and Animal Health Services (DGLAHS) of MoA, the new Emerging Pandemic Threats Programme (EPT2) was launched in 2016 with funding from USAID.

FAO celebrates the 40th anniversary of its country Representation, and its successes in the food, agriculture, fisheries and forestry sectors through a 70-year partnership with Indonesia.
Remarks by the FAO Representative
building trust and friendship

After seven decades of fruitful collaboration, the work of the United Nations Food and Agriculture Organization (FAO) today is more than ever aligned with the priorities of host governments in meeting the global Sustainable Development Goals (SDGs) by 2030 through localized action.

As a specialized agency in food and agriculture, and with its feet firmly on the ground, FAO implements programmes and projects in cooperation with its members and partners to achieve the shared goal of #ZeroHunger and all of the other SDGs by 2030.

While FAO had previously provided technical support to member countries without having a permanent presence on the ground, the 1977 opening of the first country Representation in Lebanon marked the beginning of FAO's long-term field presence at national level.

In Indonesia, the Minister of Foreign Affairs on behalf of the Government of Indonesia, signed the Memorandum of Understanding on the establishment of the FAO Representation in Indonesia just one year later with the Director General of FAO in October 1978. Hence, our celebration today, marking the 40th year, after which FAO established a permanent presence in Indonesia.

Close collaboration between FAO and the Indonesian Government across the food and agricultural sectors, including in fisheries and forestry, has strengthened over the decades, and has resulted in a long term trust and friendship between FAO and many government departments and agencies, as well as non-governmental actors in development. As of today, over 650 projects and programs have been implemented by FAO throughout Indonesia with the assistance of more than 1600 experts and consultants (both national and international).

Given still significant levels of rural poverty, malnutrition and rapid urbanization, Indonesia’s challenge is to make agriculture, fisheries and forestry more profitable, while also making these sectors more resilient to the effects of climate change to feed future generations.

It is FAO’s ambition to work with key line Ministries to demonstrate good practice through targeted interventions, which can then be scaled up with Government’s own human and financial resources, while also contributing at the policy level to help redirect investment to where it will have a more positive impact on achieving greater food and nutrition security.
1969, Indonesia - Two radio announcers of Jogjakarta taping interviews for a programme on agricultural vents during the harvest of a fertilizer demonstration plot. - - Freedom From Hunger campaign Fertilizer programme.. Demonstration plots are an effective means of convincing farmers of the importance of using fertilizer. A farmer is given fertilizer and improved seed, when available, for planting a portion of his field, and the rest is planted in the traditional way.
The year 2018 marks the 40th year since the Minister of Foreign Affairs, on behalf of the Government of Indonesia, signed the Memorandum of Understanding with the Director-General of the FAO on the establishment of an FAO Representation in Indonesia.

Over these years, both partners have intensified their longstanding collaboration towards realizing strategic objectives towards eradicating hunger, food insecurity and all forms of malnutrition, making agriculture more productive and sustainable, reducing rural poverty, ensuring inclusive and safe food systems, and protecting livelihoods from disasters. The success of the partnership has relied on the FAO’s in-depth expertise and experience provided to the government through integrated development projects and programmes, along with policy support, technical guidelines and knowledge exchange tools.

Over the years, the Indonesian Government ministries that have worked mostly closely with FAO at central and decentralized levels include the Ministry of Agriculture, the Ministry of Environment and Forestry, the Ministry of Maritime Affairs and Fisheries and the Ministry of National Development Planning (Bappenas).

By acting as an intermediary between the experts and decision makers, FAO has been able to facilitate a crucial dialogue between those who have the knowledge and those who need it. In this sense, the future of further collaborative effort is secured, as long as the need for advisory services and support remains. Thus, in an era of climate change and increased pressure on the food systems to deliver a healthy diet to all Indonesians, programs focusing on building the resilience of the food, agriculture, forestry and fisheries sectors to volatile conditions will likely prove to be the essence of FAO’s presence in Indonesia.
FAO’s engagement in recovery efforts from the 2004 Tsunami in Aceh

In December 2004, the Indian Ocean earthquake and tsunami swept away the lives of more than two-hundred thousand people, destroying the livelihoods of about 1.4 million of those who survived. The provinces in Indonesia most affected were Aceh and Northern Sumatra, which saw their agricultural systems completely obliterated. Damage to crops, livestock, fish ponds, boats, fishing gear and mangroves caused havoc for food production, leaving vast numbers of people extremely food insecure.

Prior to the tsunami, the 2005 main season paddy and maize crops were already in the ground. Along with this huge harvest loss, the waves also littered the paddy fields with debris and sediments, destroyed irrigation infrastructure and washed the soil of organic matter. An increase in soil salinity and the presence of heavy metals further reduced the soil fertility, making it very difficult for farmers to re-establish their fields after the disaster struck. In some areas, salinity caused yields to be reduced by 50 percent, while in others rice plants simply couldn’t grow.

Statistical data suggests that marine and fisheries production fell from about 134,000 tons to 102,500 tons in 2004 and subsequently to 81,100 tons in 2005. As fishing is an important economic activity in Sumatra, accounting for about one-third of the national fish catches, the loss of fishing gear and infrastructure caused a severe impact on local economies. In many cases, entire fishing communities were obliterated.

Like other organizations, the FAO was quick to respond to the needs of its affected member countries following the 2004 tsunami. Thanks to the generous contribution of its resource partners, FAO implemented a large emergency and recovery response programme in direct
support of the government of Indonesia. FAO’s technical expertise focused on protecting, restoring and enhancing the agriculture-fisheries-based livelihoods of the affected coastal communities. This support primarily targeted the replacement of lost assets, while at the same time promoting the wise use of natural resources, and helping to avoid restoring the pre-tsunami overfishing capacity in Aceh.

“FAO’s technical expertise focused on protecting, restoring and enhancing the agriculture-fisheries-based livelihoods of the affected coastal communities”
Integrated Pest Management (IPM) is an FAO-endorsed method of maintaining crop health through the minimization of pests and plant diseases by enhancing natural control mechanisms. Specific non-chemical measures include the use of disease- and pest-resistant crops, crop rotation and inter-cropping to reduce the risks associated with monocultures, and the inclusion of pasture breaks to limit the spread of disease to susceptible crops. Only as a last resort is the tactical use of agrochemicals encouraged to control weeds, pests, and diseases in line with guidelines on good application practices.

Landscape integrated pest management (IPM)

Due to the nature of plant diseases and pests, which can spread over large distances and affect many farms, ‘Landscape IPM’ stresses communal over individual management efforts. Building farmer networks and supporting the sharing of knowledge and resources between individual farmers ensures greater management success. In addition, landscape IPM must be flexible enough to adapt to changing field situations and problems. Therefore, this evolving specificity requires that farmers become IPM experts in their local area.
So far, the landscape IPM approach in Indonesia, a collaborative effort with the Ministry of Agriculture, has shown excellent results. In the target villages, rice yields have increased from 5.9 to 7.0 tonnes per hectare. The use of organic fertilisers, bio-control agents and refugia is also more widespread. At the ecosystem level, biodiversity has improved with the reduced use of chemical fertilisers and limited use of pesticides. As a result, innovative farmer groups have cut their expenditures on fertilisers and pesticides in half, leading to further benefits for the environment, farmer’s incomes and people’s health. Therefore, although landscape IPM requires the concerted contributions of farmer groups, it represents an effective and efficient solution to many agricultural challenges that can be tailored to local conditions.

“**In the target villages, rice yields have increased from 5.9 to 7.0 tonnes per hectare**”
A new hope for Indonesian farmers in eastern Indonesia

Conservation Agriculture (CA) is an approach to managing agro-ecosystems for improved and sustained productivity, as well as increased resilience to climate change. It is also associated with increased farmer profits and food security, while preserving and enhancing the natural resource base. CA is characterised by three linked principles, including continuous minimum mechanical soil disturbance, permanent organic soil cover and diversification of crop species grown in sequence and/or through inter-cropping. Through these methods, CA enhances biodiversity and natural biological processes above and below the ground surface, leading to improved yields and greater resistance of crops to diseases, pests, and climate variability.

Conventional “arable” agriculture is normally based on soil tillage. However, this can often lead in the long term to a reduction of soil organic matter. Soil organic matter not only provides nutrients for the crop, but it is also a crucial element for the stabilization of soil structure. Therefore, most soils degrade under prolonged intensive arable agriculture, leading to further complications such as soil erosion. CA therefore seeks to avoid this through reducing mechanical tillage.

Furthermore, in a soil that is not tilled, crop residues remain on the soil surface and produce a layer of mulch. This layer protects the soil from the physical impact of rain and wind, stabilising the soil moisture and temperature in the surface layers. The mulch also fosters a habitat for micro-organisms such as insects, earthworms, fungi and bacteria which decompose the soil, contribute nutrients to it and further stabilise the soil structure.

In villages targeted for FAO support, in partnership with the Indonesian Agency for Agricultural Research and Development (IAARD) of the Ministry of Agriculture, with funding from USAID, conservation agriculture has resulted in higher maize yields of up to 11.3 tonnes/hectare/year using double cropping methods. Other results include increased agricultural households’ incomes, reduced labour costs, improved soil management and better fertility of marginal lands, as well as greater resilience of farming families against the negative impacts of climate change. As of today, CA has expanded to more than 650 farmer groups with more than 12,500 members in 152 villages across West and East Nusa Tenggara.
Controlling avian influenza

Highly Pathogenic Avian Influenza (HPAI) is a disease that affects both wild and domesticated birds worldwide. H5N1 is one strain of the virus which is highly pathogenic, attacking multiple internal organs and causing a mortality rate that can reach 90-100 percent, often within 48 hours. Since the first detection of HPAI in Indonesia in 2003, the disease has caused the deaths of millions of poultry in 32 of the country’s 34 provinces, disrupting the livelihoods of large numbers of people dependent on poultry farming.

The persistent HPAI threat to animal and human health in Indonesia brought the FAO Emergency Centre for Transboundary Animal Diseases (ECTAD) to Indonesia in 2006. With funding from USAID, AusAID and the Japan Trust Fund, FAO ECTAD has been working closely with the Ministry of Agriculture to enhance its capacity and ability to sustainably control HPAI.

Significant progress had been made in Indonesia to minimise the spread of avian influenza in Indonesia through what is known as the “3-Zone Biosecurity” practices and an innovative system of disease surveillance known as the Influenza Monitoring System (IVM) Online.

Building upon the success and foundation of the previous avian influenza-focused programme and continuing our collaborative efforts with the Ministry of Agriculture’s Directorate General of Livestock and Animal Health Services (DGLAHS), FAO launched in 2016 the new Emerging Pandemic Threats Programme (EPT2) with funding from USAID. This has allowed the FAO/ECTAD programme to move in a direction to tackle not only avian influenza, but also new or re-emerging global health threats, which may affect humans from animal populations, including Ebola, MERS-CoV, SARS and the Zika virus.

Over the past 12 years, ECTAD in Indonesia has empowered more than 3,000 animal health officers in 32 provinces, implementing the Avian Influenza Control Programme at the village level, in the commercial poultry industry and along the poultry market chain.
Promoting sago starch utilization in Indonesia

In 2017, as part of a collaborative effort on food diversification to achieve greater food security, the Indonesian government and FAO opened an integrated sago processing plant in Southeast Sulawesi in the hope of reducing people's dependence on common sources of carbohydrate (rice and corn), while taking advantage of this indigenous source of starch. The ‘zero-waste’ facility is the first of its kind in the world and involves three programs. First, developing a more efficient sago farm with an agro-economic approach, ensuring better productivity and quality of the sago palms. Second, building an integrated hygienic and no-waste sago processing unit. And third, creating an integrated business unit that manages sago farming, processing, and marketing.
Southeast Sulawesi is the largest area in Indonesia after Papua, where sago palms grow. For generations, people in the province have harvested wild sago trees from the forest. Since 2016, FAO has been pioneering with local partners to achieve a commercially viable form of sago palm cultivation, while engaging farmer groups in the districts of Konawe and South Konawe in Southeast Sulawesi, and in supporting processing groups in Kendari municipality. The FAO-built sago processing unit aims to be ‘zero-waste’ as the sago tree bark waste can be used to make charcoal, while the dregs can be used to grow edible mushrooms, and the liquid waste can be turned into biogas or ethanol. As of today, inspite of many promising results so far, more work needs to be done to ensure that the facility remains sustainable and continues to serve the needs of the community.
In many provinces throughout Indonesia, farmers struggle to support themselves and their families because of low agricultural yields. This is often the consequence of poor soil health combined with drought and other risks faced by farmers. Since 2013, FAO, in cooperation with local farmer groups, has implemented a series of farmer field school (FFS) programmes to train farmers in conservation agriculture techniques with the intention of raising productivity and enhancing the soils’ biodiversity.

A key beneficiary of this work has been Amaq Genap, a small-scale traditional farmer and former migrant worker from Sekaroh Village in Eastern Lombok. Having inherited a half-hectare plot from his father, Amaq began planting exclusively a maize crop once a year. Harvests rarely surpassed the yearly average of 3-4 tonnes. In some years, there would be protracted dry spells, even lasting up to seven months at a time and making it near impossible for Amaq to adequately meet his family’s needs.

Amaq was determined to ensure the lasting success of his farm. It was then that he first came into contact with FAO and its FFS programme promoting Conservation Agriculture (CA) techniques.

“At first, I had doubts about the CA approach. How can this work? Not tilling the soil and not clearing away crop residues?” he explains. Despite his initial doubts, Amaq was willing to give it a try. During the 2015 - 2016 planting season, Amaq began applying CA principles on his farm. As this happened to be a season affected by drought, and to Amaq’s surprise, the maize on his farm continued to flourish, while surrounding farms experiencing crop failures. That year he harvested a bumper crop of over 6 tonnes.

Convinced of the benefits of the CA approach, Amaq expanded his land to one hectare and planted a hybrid type maize seed, interspersed with chili plants. This led to an even more improved...
harvest of around 7.6 tons per hectare and a gross income of USD 2,076 after selling his crop. The chilies also provided the family with an additional USD 30 - 40 of income per week. “With the income, I can have some money for my children’s education. I also bought goats. I now have 12 goats,” he says proudly.

“With the income, I can have some money for my children’s education. I also bought goats. I now have 12 goats.”
Imagine being a poultry farmer, and then one day you suffer huge losses, as you must prematurely kill 11,000 of your chickens. Bambang Sutrisno, a poultry farmer in Semarang district, Central Java, lived this experience when the highly pathogenic avian influenza (HPAI) virus attacked his farm in August 2003.

Through the EPT 2 Programmes, FAO ECTAD provided technical assistance to Bambang and other farmers through farm visits, disease surveillance and disease control training. Farmers are encouraged to make simple changes in their farm biosecurity set-up, vaccination practices and farm management, all of which are designed to fit their own capabilities.

The FAO and Government support was what changed Bambang’s life. He once quit the poultry business for a while, but now his hens’ egg production has remained stable with the “3-zone biosecurity” practice in place.

Bambang was not alone. Since the first detection of the HPAI virus in Indonesia in 2003, the disease has caused the deaths of millions of poultry in 32 of the country’s 34 provinces, disrupting the livelihoods of large numbers of people dependent on poultry-keeping. Moreover, since 2005, Indonesia has been one of the global epicentres for human H5N1 avian influenza infections.

Bambang’s story has proven that biosecurity practices, not only help create a healthier farm, but it also helps commercial poultry farmers to improve their productivity and boost their profitability.
In the fisheries and aquaculture sector, FAO has focussed its efforts on supporting rural women and their families to improve the processing and marketing of seaweed products. Thus, by adding value to traditional seaweed products, coastal communities receiving FAO assistance have experienced increased food security, local employment and female empowerment.

NTT is one of Indonesia’s poorest provinces with high levels of malnutrition and poverty. A 2010 baseline survey revealed the limited capacity of the seaweed processing industry in the province. Considering the current environment of declining catches and an irregular supply of fresh fish, a dynamic seaweed processing industry alongside actions to enhance processed product quality was found to be necessary to reduce the vulnerable livelihoods of coastal communities and to improve their food security.

Careful attention was paid to ensuring that all stages of the seaweed value chain were effectively improved upon. At the lower end of the chain, seaweed farmers were provided with training on the best cultivation and harvesting techniques to improve harvests. Further along the chain, groups of local women were provided with training in processing methods, financial management, and improved health standards to transform the raw seaweed into high-quality snacks and food products to be sold in regional markets.

The women’s groups have been very successful in fostering stable employment for villagers outside the agricultural and fisheries sectors. Furthermore, the additional income generated from the sale of their products has contributed to the prosperity of their households in terms of improved food security and education of their children. The end goal of FAO’s interventions, which has been to promote greater economic autonomy of the poorer households, has been realised, as many communities are now planning to establish their own seaweed processing facilities.

FAO’s work on improving agro-food value chains in Indonesia has helped to boost incomes and secure the livelihoods of vulnerable households.
Promoting blue growth in Indonesia

The Indonesian fisheries sector is a multi-billion dollar industry that is a vital source of employment and trade, income and improved nutrition, and which accounts for over 20% of the overall agricultural economy. However, despite its vital importance to the nation’s economic prosperity, marine resources continue to be overexploited. Through a more coordinated and sustainable approach, FAO has been assisting the Indonesian Government in conserving maritime ecosystem functions and maximizing the social and economic benefits derived from marine ecosystems, in particular off the coast of Sumatra in the Bay of Bengal and in south-eastern parts of the country.

The approach employed, known as the “Blue Growth Initiative”, first emerged at the 2012 Rio+20 Conference and seeks to implement a range of sustainable management strategies, targeting key areas including aquaculture, capture fisheries and ecosystem services. In the aquaculture sector, FAO has promoted policies and good practices for the farming of fish, shellfish and marine plants in a responsible and sustainable manner. Furthermore, to combat the depletion of wild fish stocks, FAO has supported the implementation of the ‘Code of Conduct for Responsible Fisheries’ to prevent ‘Illegal, Unreported and Unregulated’ (IUU) fishing...
and to foster good fish production practices. Finally, ecosystem services have been strengthened through the introduction of regulations to restore marine biodiversity. Recently, a project called “Integrated Economic Zone Development” was implemented in Lombok, with the combined aim to enhance sustainable fisheries and aquaculture development.

The promotion of the Blue Growth Initiative in Indonesia can also be viewed as strategic in terms of securing the nation’s food security. Through minimizing environmental impact, ocean ecosystems become more productive in serving the nutritional needs of the Indonesian population. This goal is also vital for poverty reduction considering that more than six million families depend on fisheries and aquaculture for employment. Furthermore, efforts to control IUU fishing represent an additional attempt to improve Indonesia’s food sovereignty. A Fishing Vessels Monitoring System (VMS) developed by FAO has enabled Indonesia to better understand and monitor the activities of foreign vessels in its waters, offering greater transparency in the face of ongoing illegal practices.
I feel proud that my friends work with me now. Together we can create jobs, so this is also beneficial for the community.

Sigit Priyono
Margoluwih, Sleman, Jogjakarta
Rice-fish farming, known in Indonesia as ‘Minapadi’, has been practiced for generations, not only in Indonesia, but in many other parts of East and South-East Asia. Unfortunately, with the introduction of ‘modern’ intensive farming techniques, especially those that include the use of pesticides, the fish and other aquatic animals that traditionally kept the rice fields in a healthy condition, died, and the practice was slowly forgotten.

Since late 2015, FAO in close collaboration with the Ministry of Marine Affairs and Fisheries, started to revive the tradition of minapadi through the introduction of a method called “Innovative Rice Fish Farming based on a Cluster Approach”. As a group, farmers were meticulously trained in the whole process of rice-fish farming that includes land preparation, seeding, feeding, weeding, harvesting, marketing, and even agro-tourism. The technique was first introduced in Sleman District, Yogyakarta and in Limapuluh Kota District, West Sumatra, and has since been scaled up in many locations throughout Indonesia.

Within a short time, the implementation of innovative rice-fish farming, which combines traditional wisdom with modern planting material and techniques, brought triple-win benefits to the farmers, farmer groups and their families. Rice production increased, incomes went up, and levels of nutrition started to improve with an easily accessible source of protein from the fish. The average rice yield increased from 6.5 tonnes/ha to 9.3 tonnes/ha of higher quality rice and the sale of fish reached as much as Rp 42 million/ha per season. Furthermore, the need for pesticides and fertilisers was significantly reduced through the role of the fish as efficient natural bio-control agents.

Following the remarkable success of the FAO’s innovative rice-fish farming program in Indonesia, implemented in close collaboration with the Ministries of Marine Affairs and Fisheries, and Agriculture, there have been concrete efforts to replicate the practice throughout the Asia-Pacific region and beyond. As a result, large numbers of farming families now have more stable and better livelihoods, while rural communities more broadly have benefitted from more diversified and eco-friendly economic activities, as well as improved access to nutritious food.
the marketing of the products was assisted and facilitated by the mentoring program. After that, we ran it by ourselves.
Seaweed farming and processing boosts incomes on Sumba

Seaweed farming is an important source of supplemental income for many small coastal communities throughout Indonesia. Recognising this and the potential for villagers’ lives to be transformed through value chain interventions, FAO developed and implemented a program to improve the cultivation and processing techniques of seaweed in some key regions. Women have been some of the greatest beneficiaries of this program, having received intensive skills training, which has proven to be highly effective in raising household incomes and nutritional status of the population.

Siti Bariyah, a 48-year-old housewife and seaweed farmer from Kaliuda Village in East Sumba, is a prime example of the rewards of investing in value chain upgrading of seaweed products. Before being coached by aquaculture experts from FAO, Siti, like other members of her community, did not realise that the way in which the seaweed was cultivated could have significant impacts on the volume of the harvest. “We just tied the seaweed and never thought about how we pick it, might affect the number of its branches” she said in an interview. As a result, villagers were instructed in better methods of cutting the seaweed, which promotes quicker regrowth and larger harvests over time.

Another aim of the intervention was to develop a market for the snack foods traditionally produced by female villagers, who use seaweed as their main ingredient. The Kalala Jaya brand was developed, employing a large group of local women, who gather to produce the snacks on a regular basis. Diversification of the products, along with targeted mentoring on how to meet hygiene and health standards, was achieved through a series of five-day workshops in the selected villages. Furthermore, advice was shared on maintaining relationships with retailers, such as the local airport, to promote greater autonomy. As Siti Bariyah states, “the marketing of the products was assisted and facilitated by the mentoring program. After that, we ran it by ourselves”.

The success of this programme can be clearly seen in the improved lives of villagers, who now can support their households through stable employment and higher incomes. Their new skills in other areas outside of seaweed cultivation, such as the management of finances, may hold further benefits for the communities in the future. Siti is very optimistic, saying “We hope that in the future we will have a standardised processing facility, a retail outlet and that our business will become better known”.

“We just tied the seaweed and never thought about how we pick it, might affect the number of its branches”
Towards sustainable forest management and a healthy community

Forests for the people

Sustainable forest management and community empowerment are the main aims of the FAO’s forestry programme in Indonesia. The country possesses the third largest area of tropical rainforest in the world with unparalleled natural biodiversity. However, for many decades now, Indonesia has been experiencing a high rate of deforestation, which has greatly contributed to greenhouse gas emissions and threatened the livelihoods of many forest communities. Since 2008, FAO with the United Nations Development Programme (UNDP) and the UN Environment Programme (UNEP), has been working towards the UN “Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation”, otherwise known as UN-REDD.

UN-REDD has made significant progress in Indonesia, especially in regard to enhancing the functioning of forest management institutions, improving laws and regulations against illegal logging, and raising the capacity of rural people to sustainably manage forest resources. There has also been a strong focus on ensuring that indigenous people gain secure tenue rights over local forests, so that they may continue to use vital forest resources in a sustainable manner.

This is further in alignment with the FAO’s commitment to safeguarding forests through community involvement and education. FAO and the Ministry of Environment and Forestry have worked together to empower forest communities. Only through these means will exploitation of forests be reduced as people become aware of the long-term potential of healthy forests to contribute to their prosperity.
Photo essay

11 November 1985, Rome Italy - A special ceremony to mark the 40th anniversary of the Food and Agriculture Organization of the United Nations was held at FAO Headquarters during the 23rd Session of the FAO conference. Their Excellencies Soeharto, President of the Republic of Indonesia and Mr. Francois Mitterand, President of the French Republic and FAO Director-General Edouard Saouma addressed delegates on important issues concerning the North-South dialogue.

Agro ecosystem: in order to utilize only the necessary minimum of pesticides, teams of farmers have been trained to identify and count insects and to draw graphic representations of the rice ecosystem allowing them to take informed field management decision. Training and Development of Integrated Pest Management in Rice-Based Cropping System. At the request of the Indonesian Government the Food and Agriculture Organization of the United Nations (FAO) supplies technical aid to this project, which is funded by USAID. Assistance also comes from a number of national universities and international.
Dried paddy being wrapped into bunches. Rice Growing in Java. Central Java is one of the most heavily populated rural areas in the world. In some parts, the demographic density reaches 1,500 inhabitants per square km. Javanese farmers are extremely diligent; they produce three rice crops per year, stock the flooded rice fields with fish and, in addition, raise ducks on the surface of the water. Undoubtedly, there is no other area in the world where as much starch and protein is being produced per area unit.

"We need healthy soils to achieve or food security and nutrition goals, to fight climate change and to ensure overall sustainable development."

Jose Graziano da Silva
FAO Director-General
Banda Aceh - In rice paddies just 2km from where the tsunami hit, a rice crop is being harvested. Threshed in the fields, it is then carried back to homes for storage.
Berson’s success in village-level fire management

Berson has been an enthusiastic adopter of new technology, especially in peatland management. Among others, he has kept the water table at a sufficiently high level through traditional canal blocking techniques (known as ‘tabat’), so that the peatland does not get drained excessively, allowing for productive agricultural activities to be conducted, even during dry season.

Berson is Head of the Panenga Farmer Group which has 40 farmer members, with 1,500 hectares of peatland that they maintain. In this role, he has demonstrated excellent leadership skills. Nowadays, during the dry season, the Panenga Farmer Group produces horticultural crops, such as chilies, maize, tomatoes, eggplants, and beans, while at the same time managing to prevent the incidence of wild fires on the peatland.

During the FAO-supported project in 2013, certified rubber tree varieties were introduced, to be maintained as ‘mother plants’. FAO provided training and practical guidance on rubber bark grafting. The Farmer Group has reported that, currently, they have been able to provide their own rubber planting materials. As part of various fire prevention measures, the FAO project also conducted training and practical work on the development of fire breaks to prevent wild fires.

Under the leadership of Pak Berson, the Panenga Farmer Group has furthermore successfully built two canal blocking systems and now, after two years of post-project activities, 12 canal blocking systems have been developed covering an area of 1,500 hectares. As a result of these initiatives, the Farmer Group has prevented wild fires from occurring, while neighbouring villages have suffered from the outbreak of fires.
Looking into the future: FAO and the SDG's

- **1. No Poverty**: Ending hunger can contribute greatly to peace and stability.
- **2. Zero hunger**: We produce food for everyone, yet almost 600 million go hungry.
- **3. Good health and well-being**: Good health starts with nutrition.
- **4. Quality education**: Nutritious food is critical to learning.
- **5. Gender equality**: Women produce 1/2 the world’s food but have much less access to land.
- **6. Clean water and sanitation**: Sustainable agriculture holds potential to address water scarcity.
- **7. Affordable and clean energy**: Modern food systems are heavily dependent on fossil fuels.
- **8. Decent work and economic growth**: Agricultural growth in low-income economies can reduce poverty by half.
- **9. Industry, innovation and infrastructure**: Agriculture accounts for 1/4 of GDP in developing countries.
- **10. Reduced inequalities**: Land reforms can give fairer access to rural land.
- **11. Sustainable cities and communities**: Rural investment can deter unmanageable urbanization.
- **12. Responsible consumption and production**: Land reforms can give fairer access to rural land.
- **13. Climate action**: Agriculture is key in responding to climate change.
- **14. Life under water**: Fish gives 3 bn people 20% of daily animal protein.
- **15. Life on land**: Forests contain over 80% of the world’s terrestrial biodiversity.
- **16. Peace, justice and strong institutions**: Partnerships help raise the voice of the hungry.
- **17. Partnerships for the goals**: Almost 8% of poor people live in rural areas.
Key partners institutions at national level

Ministry of Agriculture
Ministry of Marine Affairs and Fisheries
Ministry of Environment and Forestry
Ministry of Villages, Disadvantaged Regions and Transmigration
Ministry of National Development Planning (BAPPENAS)

Ministry of Foreign Affairs
Coordinating Ministry for Maritime Affairs
Coordinating Ministry for Economic Affairs
Coordinating Ministry for Human Development and Social Welfare
The President’s Office

Peatland Restoration Agency
Central Statistics Agency/Indonesia Statistics
National Disaster Management Agency
Indonesia Agency for Meteorology, Climatology, and Geophysics
National Nuclear Energy Agency of Indonesia