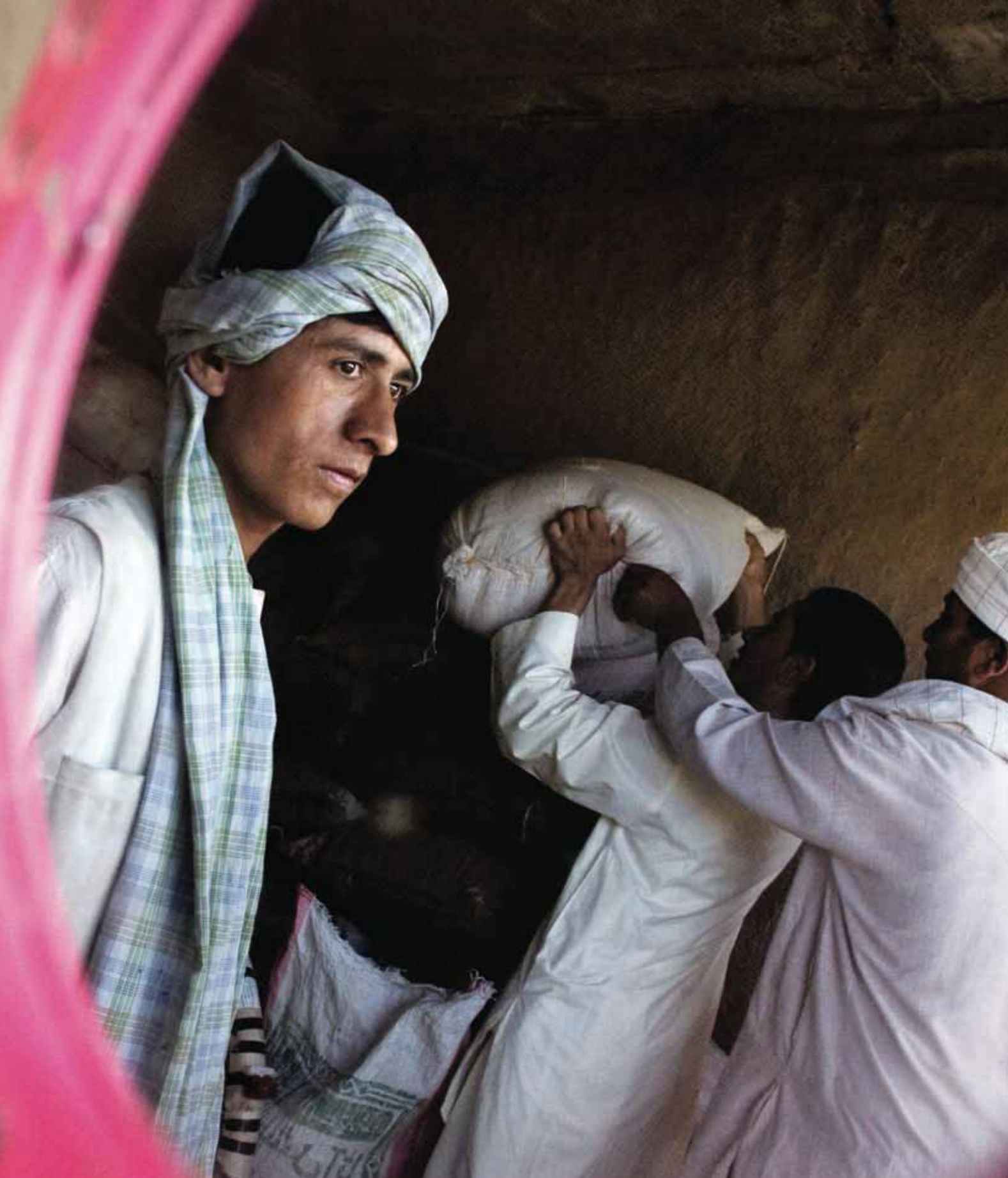


FAO AT WORK 2007–2008

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**FOOD
ENERGY
AND CLIMATE:
A NEW EQUATION**





THINKING OF FOOD, ENERGY AND CLIMATE AS ONE

Food, energy and climate. For the first time in history, these three are closely linked. Without an understanding of this new reality, countries and the international community lack the basis for the most fundamental policy decisions – decisions that affect access to food for millions of people.

What has changed?

For millennia, agriculture supplied three things: food, fodder and fibre, and played a part in shelter too. Now energy has been added to the list, even if wood has always been used for that purpose. With oil prices near an all-time high, governments are supporting the production of biofuels such as ethanol and biodiesel from crops previously grown for food, fodder and shelter. This is helping increase the price of food.

Climate is changing too. In tropical countries, even moderate temperature warming can significantly reduce crop yields. Rising temperatures, more intense droughts, floods, and greater temperature variability all mean productivity losses to crops and livestock.

In fact, greater numbers of crop failures and livestock deaths are already imposing economic losses and undermining food security. In order to reduce the emissions that cause climate change, countries are promoting among other things the production of biofuels.

Diets are undergoing a revolution. Compared with 10 years ago, hundreds of millions more people in many mid-level developing countries can now afford meat and dairy products. Livestock raised for meat consume large quantities of food such as grain – it takes eight kilos of grain to produce one kilo of beef. This drives up food prices as people and animals compete for the same foodstuffs, causing hardship for those at the lower end of the economic ladder.

Much is being written on the new economic and scientific relationships among food, energy and climate. I will try to show how we can see those relationships from the point of view of the poor.

The poor will be disproportionately vulnerable to the effects of climate change because of their greater dependence on agriculture and their lower ability to adapt. In the poorest countries farmers will not be able to adapt to climate change without outside help, or the range of the changes will prevent adaptation and leave only one way out: migration.

According to a recent study of thousands of farmers in 11 African countries, farmers are already planting different crop varieties, changing planting dates and adapting practices to shorter growing seasons. But in some countries, more than a third of all households that perceive greater climate variability or higher temperatures report no change in their agricultural practices. The welfare of the latter group worries me and should worry everyone. More than ever the poor are at the mercy of inexorable forces.

FAO was founded in 1945 to help the rural poor and we already have many tried-and-tested methods for dealing with difficult farming conditions. More efficient irrigation and watershed management, improved land cultivation and livestock practices and management, effective use of climate data and forecasts – as the climate gets warmer and dryer, we are ready to help farmers adapt.

The money has never been there in the past, either within the country or internationally, to help these same farmers better themselves on any large scale. Will it materialize now that food, climate and energy are coming together to change the rural landscape forever?







- ▶ **While energy production, transportation and industry are the main sources of greenhouse gases, agriculture and deforestation contribute as well. Small-scale farmers should be thought of as part of the solution to this problem.**

Agriculture plays an important role as a carbon “sink” by sequestering greenhouse gases from the atmosphere, and storing them as carbon in soils, plants and trees. Less deforestation, planting of trees, tillage reduction, soil cover increase and improved grassland management could, for example, lead to sequestration of more than two billion tonnes of carbon in around 50 countries between 2003 and 2012.

Food and fuel compete. The grain required to fill the fuel tank of a sport utility vehicle with ethanol (240 kilograms of maize for 100 litres of ethanol) could feed one person for a year. Some countries have moved to regulate what crops can be used in biofuel production in order to mitigate the negative impact of this trend on food security.

Crops for energy may well be grown on large plantations. Such a trend could have a negative impact on rural populations who don't own or have secure tenure on the land they farm. They could lose their land to big growers ready to cash in on the energy crop boom.

There are potential benefits from the growth of biofuels as well, apart from their attractiveness as a source of renewable energy and low emissions. Biofuel demand is opening attractive new markets for agricultural

producers. But will poor small-scale farmers miss out on these new markets as they miss out on so many things?

In a few countries, ethanol production is labour intensive and has created over a million jobs mostly in poor rural areas. In others, bioenergy from a sugar-cane waste called bagasse is used to generate electricity. Small-scale sugar-cane farmers sell bagasse to the power plants and share in plant profits.

In some cases, farmers can grow energy crops on wasteland not suitable for food production. For example, there are millions of hectares of wasteland worldwide suitable for growing the oil-bearing weed *Jatropha*, which can be made into biodiesel. In West Africa, pilot communities already run generators on such fuel.

In order to promote informed policy making in the areas I have been discussing, the Organization I have the privilege to lead hosted a high-level conference in June 2008 on the topic of world food security and the challenges of climate change and bioenergy.

The new ways in which food, energy and climate will interact in the 21st century have only just begun. Let us hope that when the powers that be make far-reaching policy decisions in the years to come they remember the city dwellers in developing countries who can't afford to eat properly, and their rural cousins who depend on a small farm or a job in the agriculture or fisheries sector just to survive.

Jacques Diouf

Director-General

Food and Agriculture Organization
of the United Nations



New approach is more targeted, sustainable

FAO has been at the forefront of capacity building in developing country agriculture for 60 years. As part of its determination to enhance the way it delivers this service to its member countries, FAO is taking a fresh look at the way it carries out its work. The primary focus is on participation and partnership, and working with local actors to address their needs. The principles of this new approach are the following:

- ▶ The needs and priorities of developing countries will take central place in the design of capacity building activities and projects.
- ▶ Development of the awareness and skills of FAO staff will ensure that the right approaches and methodologies are used in capacity building.
- ▶ FAO will look at ensuring sustainability of its capacity building activities by encouraging governments to embed such activities in national development plans and policies.
- ▶ FAO will capitalize on its achievements and draw on good practices from within the international development community.

Notwithstanding the review of how this work is carried out, all of FAO technical services have accomplished a lot in this area in recent years. In 2006-07 alone, FAO's Department of Agriculture and Consumer Protection ran 700 capacity building activities, training more than 100 000 people in better ways to raise crops, conserve water, combat pests and disease, and improve food quality.

Farmer Field Schools – a concept pioneered by FAO – are now operating in 78 countries and on every

continent, covering more than 20 topics from crops, livestock, forestry, and fisheries to income generation. More than 10 million farmers have graduated from the schools since their inception.

FAO's expertise has played an invaluable role in helping to control the spread of bird flu – from providing technical advice and providing supplies to educating vets in how to deal with the disease. In Asia, between 1999 and 2004, FAO combined with the European Union to help governments, development agencies, farmers and non-governmental organizations develop an integrated pest management programme for cotton.

As a pioneer in capacity building, FAO recognizes that helping people help themselves is more than just about training people. The process must operate at three levels: policies, institutions and individuals.

Policies that place value on capacity building and training are an important first step. FAO works at national, regional and global levels to assist agencies and countries develop such policies.

One of the most complex capacity building tasks is to help create robust institutions to influence the way people act and improve governance. It is not easy to achieve. On the one hand, part of the recipe for success is to build the capacity of individuals within the institution, but on the other hand capable individuals alone are not enough to make a capable organization.

Individuals make up the third dimension of capacity building. FAO works to enhance the knowledge and skills of agricultural professionals and technicians, usually through national and local intermediaries.





HIGHLIGHTS

NEW FOOD STANDARDS TO BENEFIT INFANTS, IMPROVE HYGIENE

The Codex Alimentarius Commission gathering in Rome, attended by a record 133 countries, adopted 44 new and amended food standards. A revised standard for infant formula for special medical purposes is expected to help save many infant lives worldwide. A revised code of hygienic practice for eggs and egg products will protect consumers from disease-causing bacteria such as *Salmonella enteritidis* and make international trade in eggs and egg products safer.

► JULY 2007

NEW INTERNET TOOLS TO ENHANCE DEVELOPMENT

Web 2.0, the name for Internet-based tools that improve interaction and participation, have changed traditional patterns of communication and knowledge sharing. FAO hosted an international conference called Web2forDev 2007 to explore ways to help rural communities harness these Internet technologies. Participants learned about exciting initiatives such as the Busoga Rural Open Source and Development Initiative project in Uganda, where a group of farmers has started experimenting with information and communication technology, using Web sites, blogs, Google maps, and Internet telephony and photo album software to improve their work.

► SEPTEMBER 2007

SOCCER STAR VISITS LAO PEOPLE'S DEMOCRATIC REPUBLIC

In his role as FAO Goodwill Ambassador, retired Italian soccer star Roberto Baggio visited Lao People's Democratic Republic to raise visibility about the problems of hunger and poverty. European soccer is popular in Asia and Mr Baggio spoke of the right of all people to a healthy and adequate diet. Around 20 percent of Laotians suffer from undernourishment, according to FAO figures.

► SEPTEMBER 2007





HISTORIC ACTION PLAN SIGNED ON ANIMAL GENETIC RESOURCES

In an historic move, representatives from 109 countries adopted the Global Plan of Action for Animal Genetic Resources at an FAO-organized conference at Interlaken, Switzerland. The action plan aims to halt the alarming rate of extinction of livestock breeds and to promote better use of the diversity of farm animals in the fight against poverty and hunger. Between 2000 and 2007, at least 62 livestock breeds died out, their genetic characteristics lost forever. Twenty percent of the world's breeds are currently at risk of extinction. The conference also adopted the Interlaken Declaration, in which countries committed to implementing the Global Plan of Action.

► SEPTEMBER 2007

FOOD AS A HUMAN RIGHT

In order to promote food as a human right, FAO has been working with both governments and non-governmental organizations to promote guidelines and a framework aimed at helping policymakers and others facilitate respect for the right. In 2007, World Food Day publicized food as a human right through activities in 120 countries. Highlights of the year's events included a worldwide candlelight vigil, musical events in Cairo, Rome, Yokohama and other cities and sporting events such as the Run for Food race in Rome and Havana. Universities in Italy and Iran announced they would establish university courses on the right to food.

► OCTOBER 2007

WEB SITE FOR YOUNG PEOPLE LAUNCHED

A comprehensive Web site aimed at young people was launched in multiple languages. Written in an informal, youthful style, the site is conceived as a teaching aid or for inquisitive young people roaming the Internet on their own. It covers hunger, the environment, human rights and other areas in which FAO is active. The site address is www.fao.org/kids.

► NOVEMBER 2007

FAO LAUNCHES INITIATIVE ON FOOD PRICES

In response to dramatic increases in food prices, to the highest level in nearly 30 years, FAO launched the Initiative on Soaring Food Prices, offering assistance to the most affected countries. FAO has already allocated US\$17 million and has called for a global response to help those countries boost food production by the next harvest and adopt appropriate policies in order to lessen the impact of the food crisis on consumers and build resilience to future shocks. FAO has joined forces with the UN Secretariat, International Fund for Agricultural Development, World Bank, World Food Programme and private foundations in a bid to come to grips with a crisis that has provoked social unrest across the developing world.

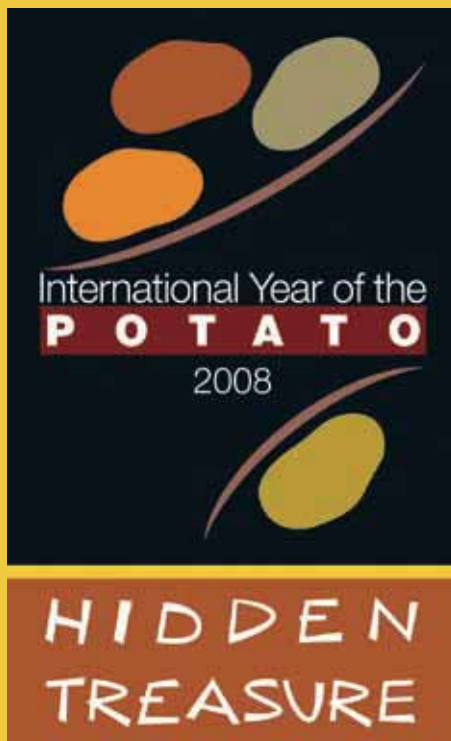
► DECEMBER 2007



FAO FACILITATES CREATION OF ARCTIC SEED VAULT

In order to safeguard the priceless pool of genetic material used to grow the world's food, Norway has created a Global Seed Vault at Svalbard, a frozen Arctic island. Designed to protect 4.5 million seed accessions, the initiative was facilitated by FAO's International Treaty on Plant Genetic Resources for Food and Agriculture. The treaty, an international legal framework for conserving and accessing crop diversity, has now been ratified by 116 countries. The Global Crop Diversity Trust, hosted by FAO, provides operating funds for the seed vault.

► FEBRUARY 2008



FOCUS ON THE POTATO AT CUSCO, PERU

With world cereal prices soaring, FAO helped organize in Cusco, Peru a global conference on an age-old crop that could help ease the strain of food price inflation – the potato. The four-day conference was one of the flagship events of the 2008 International Year of the Potato, for which FAO is lead agency. More than 90 leading potato experts shared insights and recent research results in an effort to develop strategies for increasing the productivity, profitability and sustainability of potato-based systems. FAO points out that potato prices are determined largely by local production costs, not the vagaries of international markets. The “humble potato” is therefore a highly recommended food security crop that can help low-income farmers and vulnerable consumers ride out current turmoil in world food supply and demand.

► MARCH 2008

INFORMATION CRUCIAL TO SAVING FORESTS

A key weapon in the fight to halt forest destruction is information. For the past 60 years the Global Forest Resources Assessment has provided a snapshot of the state of the world's forests, which between 2000 and 2005 were lost at a net rate of around 73 000 square kilometres a year. FAO kick-started the process of compiling the next assessment, due to be finalized in 2010. A network of 175 national correspondents, which gathers the information published every five years in the assessment, met in Rome to iron out technical details; a series of regional workshops will help countries implement the assessment. The 2010 report will review the status of forests in 235 countries and territories.

► MARCH 2008

INDIAN AGRO-INDUSTRY FORUM ATTRACTS 500 PARTICIPANTS

Efficient food production, processing and marketing can add significant value to agricultural products. Developed countries add US\$180 of value to each tonne of agricultural products compared to developing countries, which add only US\$40 of value per tonne. Concerned about this gap, FAO co-organized the first global forum on agro-industries in New Delhi, India, attracting over 500 participants from 110 countries. Working with other development agencies and NGOs, FAO promotes cooperation between small farmers and buyers, encourages farmers to form producer associations and cooperatives, and helps gain access to markets.

► APRIL 2008





SOCCER LEAGUES BECOME ALLIES AGAINST HUNGER

Soccer leagues are proving a powerful new ally in the fight against hunger. In October 2007, the 42 teams in the Spanish Professional Football League, through the initiative of Raúl González, FAO Goodwill Ambassador, each adopted an FAO microproject and encouraged their fans to make donations to support the projects. Players took to the fields wearing shirts with the FAO and league logos and the number 854, referring to the number of millions of people suffering from hunger. The Italian Lega Calcio dedicated all Series A matches on 19-20 January 2008 to the fight against hunger. The following spring, FAO signed cooperative agreements with both the Confédération africaine de football and the Association of European Professional Football Leagues.

► APRIL 2008

CONFERENCE ADDRESSES CLIMATE CHANGE, BIOENERGY AND FOOD SECURITY

Anxiety over the impact of climate change and the biofuel boom on food security and food prices prompted FAO to organize a high-level conference on 3-5 June 2008. People from developing countries are likely to be hit hardest by the effects of climate change, either because they live in regions of severe drought, in flood-prone river valleys or near the coast. With their vulnerable economies, developing countries have a lower capacity to adapt to changing conditions. Linked to mitigation of climate change is the trend to biofuels, and the impact this might have on food security. The conference was attended by 43 heads of state, 183 government ministers and representatives of civil society organizations and the private sector.

► JUNE 2008



BIRD FLU HELD IN CHECK

Four years after a new and potent strain of bird flu moved out of its Southeast Asian birthplace, spreading throughout most of the region and into parts of Africa, the Middle East and Europe, the disease still exists but fortunately a human pandemic has not yet materialized. Much of the credit for this goes to international agencies, including FAO, which immediately took an innovative and aggressive approach towards fighting the disease. Drawing on a US\$184 million fund, FAO and other donors are assisting 40 countries that lack the infrastructure or experience to contain the epidemic.

> Highlights

FAO UNVEILS NEW BIOENERGY ASSESSMENT TOOL

Bioenergy is the new buzzword but the risk is that countries might jeopardize their food security by investing in this rapidly growing field. In response, FAO has developed a decision making tool that allows governments to calculate the effect of their policy decisions on food security. Through five steps it can assess: biomass potential; biomass production costs; the economic bioenergy potential; macro-economic consequences; and national and household-level impact on food security. It is being field-tested in Cambodia, Peru, Thailand and the United Republic of Tanzania.



FRESH APPROACH TO LOCUST CONTROL

In 2007-08, FAO responded to a desert locust outbreak in Yemen. Working with vehicles and transport aircraft borrowed from the World Food Programme, the Organization moved pesticides quickly to contain the pests, which can devour crops and fodder. Under the auspices of FAO, the Mauritanian government donated stocks of pesticides, which speeded up response time. In addition, in just two weeks, FAO headquarters secured US\$3 million from the United Nation's Central Emergency Response Fund for the aerial and ground operations and a further US\$2 million from Japan towards the campaign.



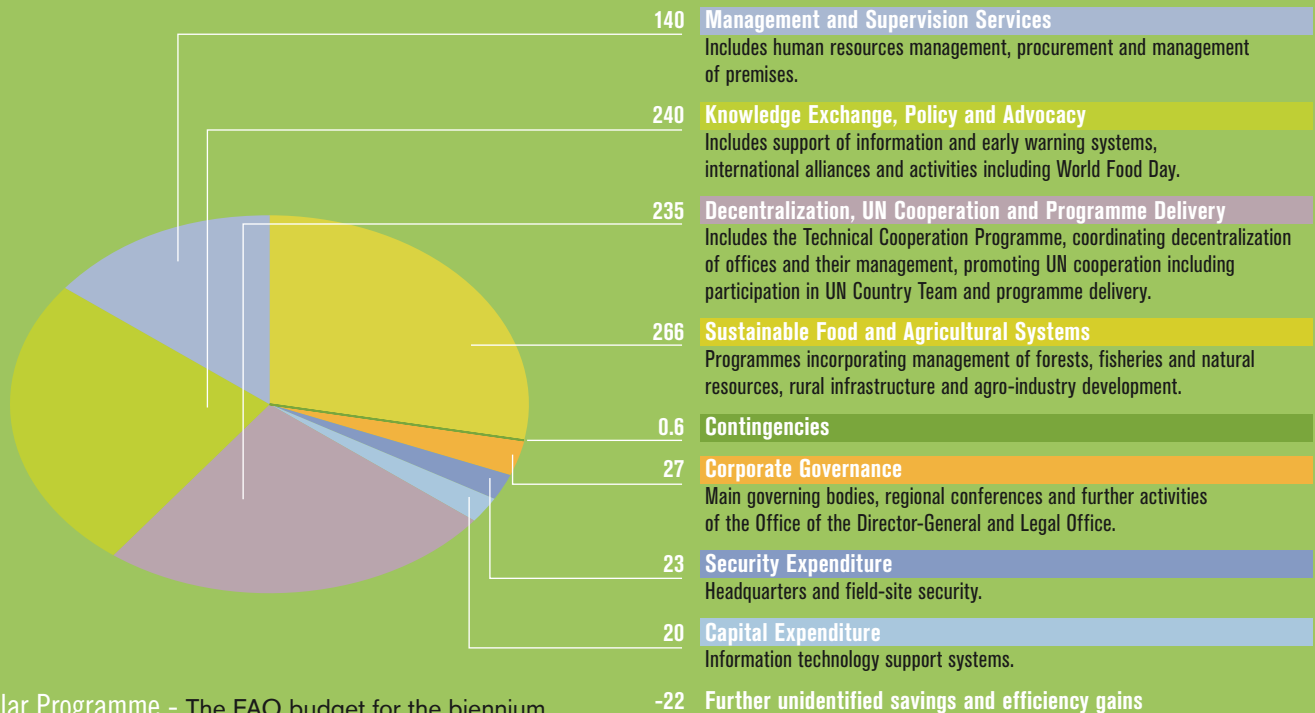
TSUNAMI FISHERIES RELIEF MOVES TO LONG-TERM ISSUES

Almost four years after the Asian tsunami, FAO continues to work with partners, governments, donors and affected fishing communities towards rehabilitation of the sector. During the initial emergency and rehabilitation phase, FAO Fisheries and Aquaculture Department provided a wide range of support, including damage and needs assessment, replacement or repair of lost assets and technical advice. The emphasis is now on long-term rehabilitation, while developing the sector in a sustainable way. In 2007-2008, FAO had a number of on-going projects in such areas as fisheries resource and infrastructure management, policy advice and safety at sea.

FAO REFORM PROGRAMME MOVES TO ACTION PHASE

A major step forward in the FAO reform occurred with the publication of 109 reform recommendations contained in the recent Independent External Evaluation report. FAO welcomed the report, which described the FAO as a "vitaly important organization, performing vital services ... but also an organization in urgent need of reform in order to rejuvenate itself". Some reforms have already begun and the FAO Conference has set up a committee with three working groups: Strategy and Programmes, Governance, and Administration and Culture Change. The committee will draw up a plan of action and report to a special session of the Conference in November 2008, which is expected to approve a programme of overall reform for immediate implementation.

FAO IN FIGURES



Regular Programme - The FAO budget for the biennium 2008-2009 is US\$929.8 million at the Euro/US dollar exchange rate fixed by the FAO Conference. It is divided as above (numbers are in US\$ millions and have been rounded).

Members - An intergovernmental organization, FAO has 192 member countries plus one member organization, the European Community.

Governance - Every two years, representative from all members meet at the FAO conference to review work carried out and to approve a new budget. The Conference elects a smaller group of 49 member countries, known as the Council, to serve three-year rotating terms to govern the Organization's activities. The Conference also elects a Director-General to a six-year term. The current Director-General, Dr Jacques Diouf, of Senegal, began his third term in January 2006.

Departments - FAO is composed of eight departments: Agriculture and Consumer Protection; Economic and Social Development; Fisheries and Aquaculture; Forestry; Human, Financial and Physical Resources; Knowledge and Communication; Natural Resources Management and Environment; and Technical Cooperation.

Offices - FAO maintains five regional offices, ten subregional offices, five liaison offices, four information offices and 73 country offices (excluding those hosted in regional and subregional offices), in addition to its headquarters in Rome.

Staff - As of 1 April 2008, FAO employed 1 607 professional staff and 1 983 support staff. Two thirds are based at headquarters in Rome, while the remainder work in offices worldwide.

Field Programme - In 2007, FAO-assisted projects used US\$473.2 million from donor agencies and governments for agricultural and rural development projects and emergencies. Some 64.7 per cent of Field Programme finances were taken from national trust funds. During the same year, FAO itself contributed 6.3 per cent (or US\$31.9 million), provided by the Regular Programme budget through its Technical Cooperation Programme and its national and regional programmes for food security.





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