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Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases

Key facts

For millennia rinderpest has been a dreaded animal disease, affecting livestock, rural livelihoods and food security. FAO spearheaded efforts to eradicate rinderpest and is expected to declare the world rinderpest-free in 2010. This would be the second disease to be eradicated worldwide after smallpox.

A virulent new strain of wheat stem rust emerged in East Africa in 1999 and by late 2007 had reached Iran. If its spread is not halted it could devastate wheat crops across East Africa, the Near East and Central and South Asia, where wheat is an important staple crop.

The global nature of food safety was brought home by the large-scale crisis in 2008 triggered by melamine-contaminated food that caused human casualties, trade disruption and huge economic losses.

Nearly 50 percent of the world's food fish is now produced by aquaculture. This sector is growing faster than any other animal food-producing sector. Millions of people around the world depend, directly or indirectly, on aquaculture for their livelihoods.

Keeping the food chain safe

Animal diseases and plant pests are spreading across borders faster and farther than ever. Global trade is increasing the risk of unsafe food reaching consumers in distant markets. Recent outbreaks of animal diseases and plant pests and food safety emergencies have affected human health, livelihoods, national economies and global markets. To address these challenges more effectively and provide better coordinated and timely assistance to affected countries, FAO created the Crisis Management Centre for the Food Chain.

Prevention and early warning

Within the Crisis Management Centre for the Food Chain, the Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases (EMPRES) covers:

- animal health;
- plant pests and diseases;
- food safety;
- aquatic animal diseases;
- forest health.

The functions of EMPRES include:

- early warning and detection;
- rapid response;
- monitoring and communication;
- research on new survey and control mechanisms;
- promotion of environmentally sound control technologies; and
- close collaboration and partnership with affected countries, national and international agricultural research centres and other international institutions.

Protecting plants from pests and diseases

The plant health component of EMPRES initially focused on the desert locust, a migratory pest that moves rapidly in large swarms, devastating crops in its path. But other species of locusts also pose serious threats in wide areas of Asia and Africa, and FAO is now using its successful desert locust management model to combat these pests. It is applying similar monitoring mechanisms to another cross-border plant threat: a new virulent strain of wheat stem rust. It is also promoting the use of environmentally sound control technologies. Global cooperation is key to reducing the world's vulnerability to these plant threats.



Keeping a watchful eye on animal disease.

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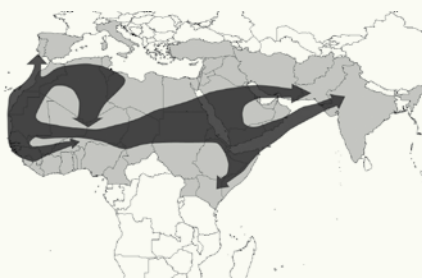
Fighting animal diseases

EMPRES is at the forefront of the global fight to prevent, contain, control and eliminate the world's most serious livestock diseases, some of which also affect human health. It keeps a watchful eye on newly emerging diseases and works towards improving tools to fight animal diseases. Its strategy is to control diseases at their source and prevent their spread. When outbreaks occur, rapid deployment teams provide veterinary and other technical support. The complexity of transboundary animal diseases requires a coordinated approach, and FAO has developed joint initiatives with the World Health Organization and the World Organisation for Animal Health. This has proven useful with avian influenza, Rift Valley fever, African swine fever, foot-and-mouth disease, *peste des petits ruminants* and other animal disease outbreaks.

Globalization and food safety

Food safety crises may occur following a natural disaster or the contamination of food or water supplies, potentially leading to the exposure of consumers to contaminated food and the outbreak of food-borne diseases. The globalization of the food supply system has increased global food safety threats. The consequences can be far-reaching, affecting farmers, food processors, retailers and consumers in many parts of the world. That is why FAO is now implementing a new EMPRES component to help maintain a global supply of safe food. Besides identifying potential and emerging food safety threats, FAO provides scientific advice and builds capacity to address food safety risks. It responds rapidly with technical support in food safety emergencies.

Desert locust affected countries



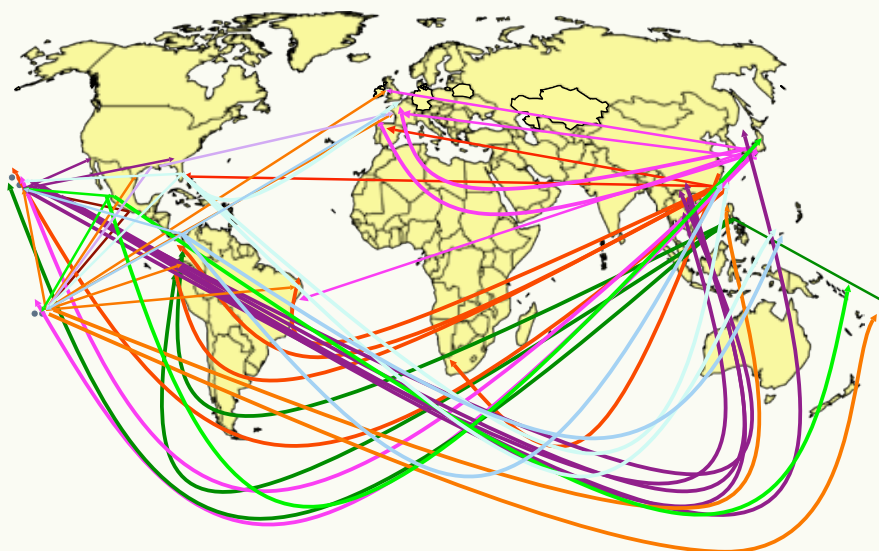
Desert locust can affect countries in grey. Arrows show seasonal migration between breeding areas. Desert locust can remain harmless in small numbers in one region, while increasing in numbers and swarming in another region, for example, in Northwest and West Africa during the 2003–2005 upsurge.

Source: FAO

Reducing risks from aquatic animal diseases

Aquaculture, or farming of fish, molluscs and crustaceans, is the fastest-growing global food sector. But its potential to contribute to food security, nutritional well-being and economic development is threatened by transboundary aquatic animal diseases. Unregulated global movement of aquatic animals is causing serious disease outbreaks. Once a disease agent is introduced and established in the natural environment, it is difficult to treat or eradicate. Prevention is the best strategy. FAO works to reduce risks from aquatic animal diseases by building capacity to prevent their introduction. This includes promoting responsible movement of aquatic animals and providing farmers with information and tools for better management and practical measures at farm level.

Extent of trade in live shrimp



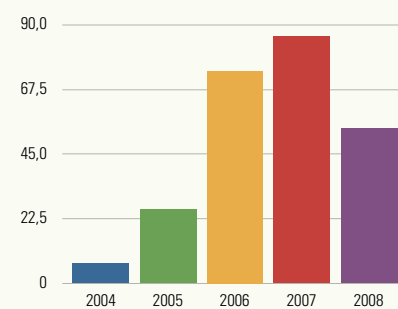
Extensive trade in live shrimp, shown in the map as coloured lines, carries with it the danger of the spread of transboundary aquatic animal diseases such as White Spot, which cause major economic losses.

Source: University of Arizona 2007

Keeping forests healthy

Forests, like other ecosystems, are threatened by pests and diseases that can cause trees to die or reduce the ability of forests to provide goods and services. Emerging forest protection challenges include global trade and climate change. Developing countries seldom have the resources to monitor, gather and disseminate information on forests pests and diseases. International cooperation is required. FAO assists by gathering data and information on forest insect pests and diseases, invasive species, pest outbreaks and control measures. FAO also assists countries to respond to pest outbreaks and establish long-term prevention and forest protection strategies.

Funding for FAO's avian flu programme (US\$ millions)



Source: FAO



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