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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 2011. 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.
- One of every two fish produced comes from aquaculture, now growing faster than any animal food producing sector with millions of people depending on it directly or indirectly for food and nutritional security and livelihoods.
- Global trade is increasing the movement of forest pests through shipments of food, wood products and other items.
- Among the 80 new infectious diseases identified since 1970, 70 percent are of animal origin and pose a threat to food supplies across the globe.
- Since 2004, over 60 countries have been affected by avian influenza. The virus remains endemic in five countries.

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 Food Chain Crisis Management Framework (FCC).

Prevention and early warning

Within the FCC, EMPRES covers:

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

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.



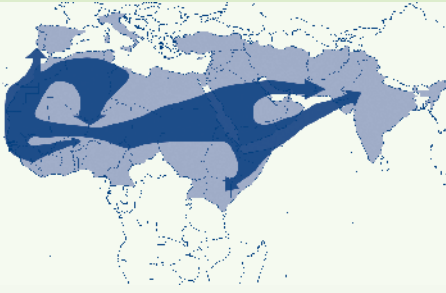
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Looking for the rinderpest virus in Sri Lanka.

Protecting plants from pests and diseases

The plant protection component of EMPRES initially focused on the desert locust, a migratory pest that moves rapidly in large swarms, devastating crops in its path. 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 developing response strategies to outbreaks of virulent strains of banana and cassava diseases in Africa. The EMPRES plant protection component assists countries to undertake surveillance and contingency planning. It also promotes the use of environmentally sound control technologies. Global cooperation is key to reducing the world's vulnerability to these plant threats.

Countries affected by desert locust



Countries in blue may be affected by desert locust. 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

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. This 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.



Food testing laboratory in Lebanon.

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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. Challenges to forest protection 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.

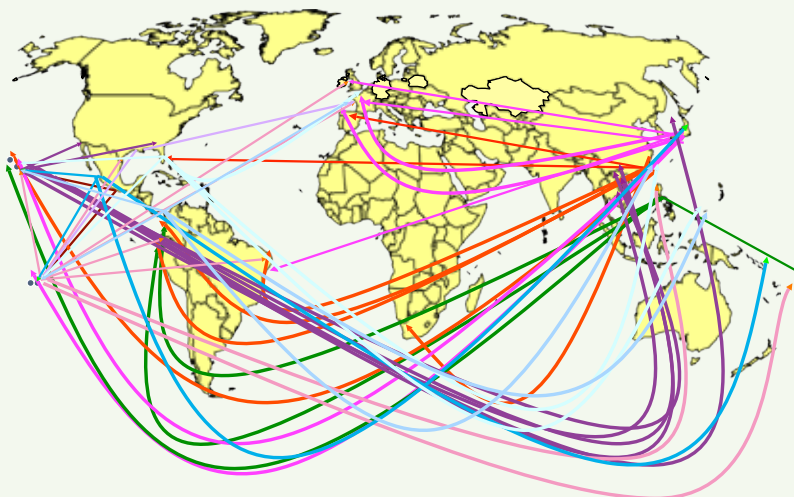
Aquatic animal diseases: protection and prevention

Aquaculture's potential to contribute to food and nutritional security and socio-economic growth is threatened by transboundary aquatic animal diseases. Irresponsible global movement of aquatic animals can cause serious disease outbreaks of farmed and, in some cases, wild populations. Once a disease agent is introduced and established in the natural aquatic environment, it is difficult to treat or eradicate. FAO works to reduce risks from aquatic animal diseases

by building capacity through protection and prevention, including:

- promoting responsible movement of aquatic animals;
- improving biosecurity governance through effective national strategies;
- enhancing compliance with international agreements; and
- providing farmers with information and tools for better management and practical on-farm biosecurity.

Extent of trade in live shrimp



Extensive trade in live shrimp, shown on the map as coloured lines, carries with it the danger of the spread of transboundary aquatic animal diseases.

Source: University of Arizona



Food and Agriculture Organization
of the United Nations
Viale delle Terme di Caracalla
00153 Rome, Italy

Telephone: (+39) 06 57051
Fax: (+39) 06 57053152
E-mail: FAO-HQ@fao.org

Media enquiries:
Telephone: (+39) 06 57053625
Fax: (+39) 06 57053729