



FOOD CHAIN CRISIS EMERGENCY PREVENTION SYSTEM (FCC-EMPRES)

THE CHALLENGE

transboundary threats threaten the food chain continuously



CAUSES OF INCREASED FOOD CHAIN EMERGENCIES

- ▶ **GLOBALIZATION**
- ▶ **INTENSIVE FOOD PRODUCTION SYSTEMS**
- ▶ **CLIMATE CHANGE**
 - rising temperatures
 - extreme weather conditions
 - droughts and floods
 - changes in precipitation patterns
- ▶ **DEMOGRAPHIC GROWTH**
7349 MILLION IN 2015¹
- ▶ **URBANIZATION**
70% OF THE WORLD'S POPULATION WILL LIVE IN CITIES BY 2050²



INCIDENCE AND LOSSES

- APPROXIMATELY **70%** OF DISEASES AFFECTING PEOPLE HAVE ANIMAL ORIGINS
- PLANT PESTS AND DISEASES ACCOUNT FOR AN ESTIMATED **30%** OF GLOBAL CROP PRODUCTION LOSSES ACROSS THE WORLD
- ESTIMATE OF GLOBAL LOSSES DUE TO SHRIMP DISEASES IS MORE THAN **US\$3 BILLION**³
- FOREST INSECT PESTS AFFECT MORE THAN **85 MILLION HECTARES**⁴
- MORE THAN **200 DISEASES** ARE SPREAD THROUGH FOOD⁵



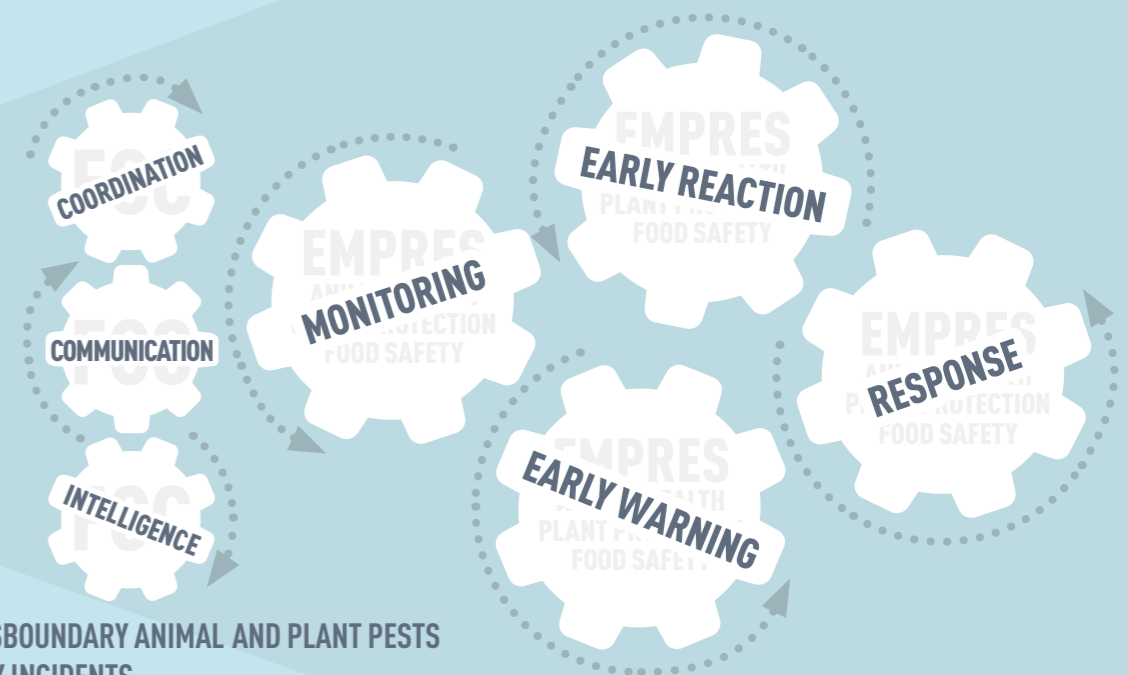
IMPACT ON LIVELIHOODS

- NEARLY **1 BILLION** OF THE WORLD'S POOREST PEOPLE DEPEND ON LIVESTOCK FOR THEIR LIVELIHOODS⁶
- 10-12%** OF THE WORLD'S POPULATION DEPENDS ON FISHERIES AND AQUACULTURE FOR THEIR LIVELIHOODS
- CROP PRODUCTION PROVIDES ABOUT **84%** OF GLOBAL FOOD, FEED AND FIBRE NEEDS
- CLOSE TO **1.6 BILLION** PEOPLE RELY ON FOREST RESOURCES FOR THEIR LIVELIHOODS
- CONTAMINATED FOOD** ADVERSELY IMPACT NATIONAL ECONOMIES AND LIVELIHOODS THROUGH REDUCED AVAILABILITY OF FOOD FOR CONSUMPTION



FAO RESPONSE

FOOD CHAIN CRISIS



FCC-EMPRES TO PREVENT TRANSBOUNDARY ANIMAL AND PLANT PESTS AND DISEASES AND FOOD SAFETY INCIDENTS

MONITORING TRANSBOUNDARY THREATS

- ▶ Desert Locust Information Service (DLIS) to collect and send information from remote locations to decision-makers in good time
- ▶ FAO Global Early Warning System (GLEWS) to inform prevention and control measures, through the rapid detection and risk assessment of health threats and events
- ▶ FCC forecasting approach to predict FCC threats having a high impact on food and nutrition security and livelihoods
- ▶ EMPRES-i Global Animal Disease Information System to provide timely and reliable information on global animal disease distribution and current threats at national, regional and global level

NEW TECHNOLOGIES FOR COMBATting TRANSBOUNDARY THREATS

- ▶ Geographic Information System (GIS) to combine and cross-analyse a large amount of visual and numerical data and produce predictions of disease spread
- ▶ eLocust3 for recording and transmitting locust field observations during survey and control operations
- ▶ Risk modelling tool to predict diseases
- ▶ EMA-i application mobile for real-time disease reporting
- ▶ Wheat rust mobile surveillance system to transmit data to database

MANAGING TRANSBOUNDARY THREATS

- ▶ Contingency plans
 - Training and simulation exercises
- ▶ Control methods for prevention
 - Quarantine, vaccination, hygiene measures, burning plant residues and ploughing the soil
- ▶ Control methods to slow down epidemics
 - Zoning and information on regional movements of products/animals/plants
- ▶ Integrated Pest Management
 - Environmentally sound control technologies, use of cultivars and tree breeding for resistance

CAPACITY DEVELOPMENT

- ▶ Training
- ▶ Technical consultation
- ▶ Guidelines and handbooks
- ▶ Information systems
- ▶ Standard operational procedures
- ▶ Letter of agreement
- ▶ Policy and technical support
- ▶ Partnership

FCC-EMPRES UTILIZES ALL FAO TECHNICAL AND OPERATIONAL CAPACITIES IN AN INTEGRATED WAY, EMBRACES THE ONE HEALTH APPROACH AND CONTRIBUTES TO SEVERAL SUSTAINABLE DEVELOPMENT GOALS