Final Workshop: FAO project TCP/INT/3501: Strengthening biosecurity governance and capacities for dealing with the serious shrimp infectious myonecrosis virus (IMNV)

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Emergency Preparedness and Response (EPR) systems survey

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A national aquatic animal emergency disease preparedness and response (EPR) system

- The policies, procedures and institutional capacities and capabilities in place to detect the incursion of an emergency disease into a country and to respond to that incursion by containing or eradicating the disease.

EPR and aquatic animal health management

international reporting

emergency disease preparedness and response

zoning/compartmentalisation

export health certification

animal welfare management

surveillance (passive/active)

import risk analysis

farm biosecurity plans

animal health advisory services

intelligence gathering

domestic movement controls

inspection/audit

chemical use management

diagnostic capacity/capability

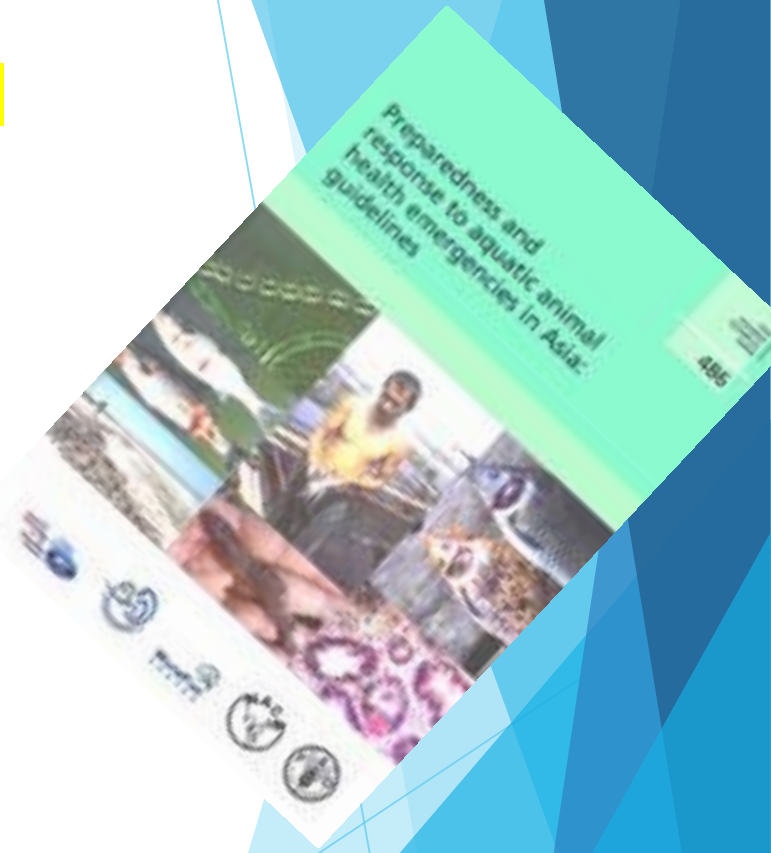
awareness building/extension

good aquaculture practice/industry codes

support (including legislation, IT, licensing/ permitting, infrastructure, finance, human resources, research and development)

Process

- Survey designed to get an insight into country level capacity to mount an effective response in the event of an emergency aquatic disease outbreak
- Looked at all the systems elements needed for a comprehensive (ideal world) EPR system based on FAO and OIE publications (and model used in Australia)
- Assessment of survey looked for strengths and weaknesses in surveyed countries on which recommendations were developed to improve EPR systems
- Draft sent to all countries for comment



Survey limitations

- Survey was inclusive of all elements, covering national, state/local government and industry components – this made the survey long and complex, with open questions
- Limited time (and resources?)
- Language – losses/misunderstanding in translation?

Questionnaire structure

GENERAL ADMINISTRATION

- System structure
- Communications
- Risk analysis
- Operational capacity/capability
- Contingency plans
- Personnel skills
- Resource allocation
- Legislation
- Systems review and improvement

OPERATIONAL COMPONENTS

EARLY WARNING SYSTEM

- Intelligence gathering
- International reporting
- Trading partner networks

EARLY DETECTION SYSTEM

- Personnel competencies
- Standard operating procedures (SOPs)
- Awareness building/training programmes
- National information sharing networks
- Surveillance systems
- Disease reporting
- Rapid diagnostic capability/capacity

EARLY RESPONSE SYSTEM

- Personnel competencies
- Awareness building / training
- Standard operating procedures (SOPs)
- Contingency plan documents

OPERATIONAL SUPPORT SYSTEMS

- Legislation
- Information management systems
- Communications systems
- Resources

RECOMMENDATIONS

1.1 Communications/consultation

- Stakeholder consultation critical to long term EPR system success, especially in terms of industry buy-in and engagement
  - Recommendation 1 Each country should review the stakeholder consultation processes that underpins its EPR system
- Successful detection/response dependent on effective/rapid comms
  - Recommendation 2 China has a novel web-based disease reporting system which should be examined for possible adoption by other countries

1.2 Risk assessment

- Risk assessment appears in all countries to focus on IRA. Risk assessment should be applied to the EPR system planning so there is focus on diseases and/or commodities that represent the greatest risk.
  - Recommendation 3 Risk analysis (even after establishment of an EPR system) is recommended so the system's resources can be weighted toward dealing with the highest risks.

1.3 Operational capacity/capability

- Operational capacity and capability varies significantly from country to country.
- In countries where EPR systems not well resourced, early detection is unlikely to happen, that aquatic disease surveillance is mostly not in place, that technical expertise is lacking in both the private and public sectors, that laboratory capability is limited and the private sector tends not to report aquatic animal diseases.
  - Recommendation 4 Each country consider detailed ERP system audit and emergency simulation exercises to evaluate the effectiveness of existing EPR capability
- China has an impressive National Surveillance System spanning all jurisdictional levels (State, Province, City, County) with >4,000 monitoring points and 8,000 people involved in monitoring and reporting. China also has a remote diagnostic network supported by 18 national platform experts and 184 provincial platform experts.
  - Recommendation 5 China's remote diagnostic system is worthy of study for possible development of similar systems in other countries

1.4 Contingency plans

- Contingency plans allow fast decisions and effective response to disease incursions, and their development is an effective way of getting stakeholder engagement and ownership of EPR systems. Typically there is a lack of documented disease specific and non-specific contingency plans
  - Recommendation 6 All countries should look to develop documented general and disease specific contingency plans for responding to emergency aquatic animal disease outbreaks where such plans do not exist.

1.5 Resourcing and Personnel skills development

- Personnel skills varied significantly from country to country. China has a program of re-educating and registering of aquatic veterinarians, designated aquatic animal disease surveillance sites and reporting personnel for AAD
  - Recommendation 7 All countries should ensure the existence on on-going programs to build and maintain national expertise in the range of disciplines needed to support EPR systems
- Most countries reported absence of specific EPR funding, e.g. for stock destruction and compensation.
  - Recommendation 8 All countries should review the funding basis for meeting costs of disease emergencies, outside of that associated with maintaining laboratory capacity

1.6 Legislation

- All countries had aquatic animal health related legislation covering aquaculture management, import controls and disease control, including some disease specific legal instruments – e.g. WSS in Mexico and AHPND in Indonesia.
  - Recommendation 9 Legislation underpinning authority powers to enforce containment/eradication measures (such as movement controls and forced stock destruction) should be assessed.
  - Recommendation 10 Political appetite to enforce legislating should be periodically gauged through simulation exercises, which both help to manage stakeholder (including political) expectations and make for faster decision making.

1.7 Systems review and improvement

- Review and improvement essential to EPR systems, not just operationally but also for building farmer acceptance of, and therefore cooperation in, containment/eradication efforts. Surveyed countries are at varying stages of development in EPR system review through simulation exercises, ranging from no simulation exercises e.g. in Brazil, through planned exercises in Indonesia, to a regular program of exercises in Mexico
  - Recommendation 11 All countries should consider an on-going program of simulations to periodically test the effectiveness of EPR systems

2.1 Operational components: Early warning systems

- All countries report to OIE and NACA as relevant to region. Intel gathering through general monitoring of OIE databases, especially as part of import risk analysis (IRA), monitoring scientific literature and conference attendance.
  - Recommendation 12 Countries should ensure effective linkage between OIE focal points and aquaculture and fisheries agencies.

2.2.1 Early detection systems: Personnel competencies

- The effectiveness of repose to disease emergencies is primarily a function of quick action. So, the ability of farmers and on-ground government personnel to recognize a potential disease incursion is paramount
  - Recommendation 13 It is recommended that where such programs do not already exist, each country should consider the need to commit to an on-going program of training and general on-ground awareness building

2.2.3 SOPs

- SOPs an essential tool in an EPR system, both for ready, consistent application of EPR measures and as a training tool. From an audit perspective, the absence of SOPs or similar instructional materials and the frequency with which they are reviewed and updated are indicators of a possible lack of seriousness on the part of authorities. The survey generally indicated a relative emphasis on SOPs for laboratory analysis but less so for other aspects of EPR systems.
  - Recommendation 14 Well documented and regularly reviewed SOPs or instructional materials are recommended for all countries

2.2.5 National information sharing

- As a general observation information sharing at laboratory level appears more developed than at the farmer/front line government personnel level
  - Recommendation 15 Countries should consider if there is a need to review information sharing across the EPR system

2.2.6 Disease surveillance

- The rigor of surveillance systems aimed at supporting early detection of emergency disease incursions varies greatly across the surveyed countries.
  - Recommendation 16 Individual countries should investigate the level of confidence that stakeholders have in the effectiveness of the country's surveillance systems, consistent with international standards.
  - Recommendation 17 Each country should establish clear definitions for key terms: surveillance versus monitoring, passive versus active and targeted versus non-targeted types of surveillance.

2.2.7 Disease reporting

- All surveyed countries have mandatory reporting requirements (including OIE/NACA listed diseases) and mechanisms for reporting, and maintain lists of reportable diseases consistent with OIE/NACA
  - Recommendation 18 All countries should ensure operational linkages between disease reporting and EPR systems (for example through contingency plans)

2.3.2 Awareness building/training

- Awareness and info sharing generally good at laboratory level but farmer/front line government awareness lacking
  - Recommendation 19 Training is an on-going process, so countries should ensure there are training/awareness building programs rather than one-off projects.

3.3.3 Documentation

- Documented contingency plans and operational instructions help speed of decision making and response implementation, and the effectiveness of interventions. The survey found there to be a wide range in level of documentation between countries
  - Recommendation 20 Each country should review EPR system documentation, including SOPs and contingency plans

Key areas of need where EPR not well developed

- Stakeholder consultation – incl in context of AAH management
- Systems audit/review
- Simulation exercises
- Education/awareness building
- Documentation
- Dedicated resourcing

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