



Wrap-up:

Discussion on potential collaboration under e-ASIA JRP

- **Topics/issues addressed by the presentations**
- **Possible subjects/ideas for multilateral research collaboration**

Topics/issues addressed by the presentations

Session 1: Cattle and underexploited species (4 presentations)

1. Conservation and utilization of cattle and buffaloes in Sri Lanka (*Dr. Dematawewa*)
2. Utilization of Thai pig genetic resources (*Dr. Chaweewan*)
3. Conservation and utilization of small ruminants/non-ruminants in Sri Lanka (*Dr. Silva*)
4. Pig, cattle and chicken genetic diversity and utilization in Asia (*Dr. Nishibori*)



Session 2: Chicken (4 presentations)

1. Genetic diversity and origin of Japanese chicken -from mitochondrial D-loop region
(Dr. Nunome)
2. Meat quality traits and disease prevalence of Sri Lankan chicken
(Dr. Jayasena/Dr. Satharasinghe)
3. Stem cell technology for conservation and utilization of chicken *(Dr. Kagami)*
4. Technologies for chicken production and risk management *(Dr. Molee)*



Session 3: Aquatic animals (3 presentations)

1. Genetic tools to enhance the quality of aquaculture in Sri Lanka

(Dr. Munasinghe)

2. Utilization of genetic diversity of aquaculture in Thailand

(Dr. Na-Nakorn)

3. Aquaculture: an effective tool for protecting wild species population

(Dr. Koshio)



Issues addressed and to be challenged through multilateral collaboration

1. Evaluation of genetic diversity of native species/breeds

Many studies revealed the existence of both great diversity in native genetic resources as well as threat to native animal genetic resources

Q: Fully described or identified ? If not, how is it possible? Could we identify the threats to genetic diversity and evolutionary routes? Which method or technologies are suitable for?

2. Methodology for conservation of genetic resources

Several new technologies are being studied: Molecular and reproductive biotechnologies are being employed. Inclusion of stakeholder groups and multi disciplinary approach in conservation of genetic resources.

Q: What technologies are available/promising in the future? How to identify the appropriate process to identify unique circumstances of respective countries. What are the possibilities of using stem cells or embryo cryopreservation like technologies in our countries?

3. Utilization of genetic resources under current food systems

Q: How/for what can native genetic resources be utilized? Stakeholder involvement and generation of tangible output.

Possible subjects/themes and for multilateral research collaboration

By strengthening networking of researchers in Asia

- Elucidate the detailed genetic background of the resources by harmoniously using cutting-edge and conventional technologies (genetics, molecular biology, genomics, etc...)
- Develop multi-faceted methods for the conservation of the genetic resources by developing novel technologies (molecular and reproductive biotechnologies, etc.) and stakeholder participation.
- Identify genetic traits conferring tolerance to biotic/abiotic stresses, and nutritional/functional values as food, for utilizing the genetic resources to breeding

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- Enhance small farmers livelihood (food security, income) in different production and market ecosystems through the utilization of genetic resources, which can lead to financial support by funding organizations
- Create databases which store useful information on animal genetic bioresources (phenotypic, genotypic, agronomic, etc.) in a manner to be shared by researchers (as well as all the stakeholders?) in the regions
- Educate all stakeholder groups including students and young researchers on the importance of animal genetic resources and their sustainable utilization.

Precepts emphasized in the workshop:

“Asia: Biodiversity hotspot”

“Conservation requires utilization”