PROTECTING THE ENVIRONMENT FROM THE IMPACT OF THE GROWING INDUSTRIALIZATION OF LIVESTOCK PRODUCTION IN EAST ASIA
(by Hans Wagner, FAO-RAP, Bangkok)

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Protecting the Environment from the Impact of the Growing Industrialization of Livestock Production in East Asia
LEAD AWI
GEF - PDFB

APHCA 26th Session,
Subang Jaya, Malaysia
24 - 26 August 2002

Slide 2

Livestock trends

- The livestock sector is increasing faster than crops
  - Livestock 3.3% per year;
  - Crops only 1.4% per year

- But there are large variations within the region
Slide 3

**Total meat demand in South and East Asia**

- **Ruminant meat**
- **Monogastric meat**

South Asia | East Asia
---|---
1970 | 1990 | 2030
1970 | 1990 | 2030

Million tonnes

0 | 20 | 40 | 60 | 80 | 100 | 120 | 140

1970 1990 2030

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**Total milk demand in South and East Asia**

- **South Asia**
- **East Asia**

South Asia | East Asia
---|---
1970 | 1990 | 2030
1970 | 1990 | 2030

Million tonnes

0 | 50 | 100 | 150 | 200 | 250 | 300

1970 1990 2030
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But the social gap is widening...

The main beneficiaries of the demand surge are:
• large-scale, urban, capital-intensive producers and processors;
• urban middle and upper class consumers;

The overwhelming majority of the poor do not benefit (increase of 75 million)

Slide 6

Production increase 1992 - 1997

• 16 % from medium - large farms

• 80 % from industrial production
...with intensification come mounting environmental problems....

• pollution of land and water by industrial livestock and aquaculture in high density areas;
• exploitation of common property/open access resources, mainly by the poor (deforestation, overgrazing,
• Inland fisheries and aquaculture are impacted by environmental degradation especially of water resources.
Slide 9

**ESTIMATED PIG DENSITY IN ASIA (animals per km$^2$)**

Legend

Source: LEAD FAO
Year: 2002
Map prepared by LEAD - FAO

Data collected at first administrative breakdown (i.e. province)

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**HUMAN POPULATION IN ASIA (persons per km$^2$)**

Legend

Source: Landscan 2000
Year: 2000
Map prepared by LEAD - FAO

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ESTIMATED POULTRY DENSITY IN Thailand Laos and Vietnam (animals per km²)

Legend

Source: LEAD FAO
Year: 2002
Map prepared by LEAD - FAO

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ESTIMATED PIG DENSITY IN Thailand Laos and Vietnam (animals per km²)

Legend

Source: LEAD FAO
Year: 2002
Map prepared by LEAD - FAO
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ESTIMATED POULTRY DENSITY IN CHINA (animals per km²)

Legend

Source: LEAD FAO
Year: 2002
Map prepared by LEAD - FAO

Administrative level
For data collection

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ESTIMATED PIG DENSITY IN CHINA (animals per km²)

Legend

Source: LEAD FAO
Year: 2002
Map prepared by LEAD - FAO

Administrative level
For data collection
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Region 2 - Thailand

Ecological zone: Tropical Humid
Farming system:
• Important peri-urban distribution
• Region designated for exportation
• Importance of livestock contract farming
• Solid and liquid waste separation
Environmental issues:
• Surface and ground water pollution,
• Wetlands and gulf of Thailand
• Odour - health

One dot = 10 tons live weight

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Jiangsu Province - China

Ecological zone: Sub-tropical Humid
Farming system:
• Presence of very large scale (public) farms
• High concentration of animals, Gradient North - South
• Solid and liquid wastes separation
Environmental issues:
• Surface water (Taihu lake)
• Coastal wetlands
• Odour - health

The Livestock Environment and Development Initiative
Ho Chi Minh - Vietnam

Ecological zone: Tropical Humid
Farming system:
• Middle and small scale mainly
• Few large public farms (planned relocation)
• Important peri-urban distribution
• Bio-gas production

Environmental issues:
• Surface and ground water
• Odour
• Health

Common observations (1)

Under market pressure, and in a framework of weak regulations, traditional mix-farming systems have progressively split into specialised crop and livestock activities that operate in different geographical areas and under different management rules.

• Concentration of animals (Urbanisation)
• De-connection between livestock and land resources
  → Environmental issues
  → Public health issues
  → Animal health issues
  → Poverty alleviation issues
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Common observations (2)

Impacts on the Global environment

- Pollution (eutrophication) of surface and ground water
  - Wetland affected: bio-diversity losses
  - Pollution carried downstream to Marine Ecosystems

- Emission of green house gazes (methane, nitrous dioxide)
  - Manure management
  - Renewable energy (bio-gas)

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Project Objectives

- Integration specialised livestock production with cropping activities on a national/regional scale;
- linking intensive livestock production to a land-based system rather than an often profitable, but undesirable and polluting component of the urban industrial system;
- provide local institutions and decision-makers with tools in order to insure the sustainability of livestock development
Project characteristics PDF-B

- Participating countries, Cambodia, China, Laos, Philippines, Thailand, Vietnam;
- Area South China Sea - Gulf of Thailand
- Expansion of baseline information;
- Development of a full GEF project (US $ 10 million)

- PDF - B document submitted - delays in GEF replenishment
UPDATE ON THE FIRST REPORT ON THE STATE OF THE WORLD'S ANIMAL GENETIC RESOURCES
(by Hans Wagner, FAO-RAP, Bangkok)

Slide 1

Update on The First Report on the State of the World's AnGR within FAO's Global Strategy for the Management of Farm Animal Genetic Resources

Slide 2

CONSERVATION AND DEVELOPMENT of AnGR

- It is important to conserve and develop local breeds animals genetically adapted to their environment
  - More productive at lower costs
  - Sustainable in the long term
  - Support food, agriculture and cultural diversity
  - Most effective in achieving local food security objectives
Slide 3

Contribution of the SoW-AnGR to achieving the objectives of the Convention on Biological Diversity (CBD)

- Conservation of biological diversity [*agrobiodiversity*] and sustainable use
- Fair and equitable sharing of benefits
- Access to resources and technology transfer
- SBSTTA-7 and COP-6

Slide 4

The intergovernmental support mechanism

- Commission on Genetic Resources for Food and Agriculture (CGRFA)
- Intergovernmental Technical Working Group on AnGR (ITWG-AnGR)
- National Governments
Slide 5

The planning and implementation structure

- National Focal Points
- Regional Focal Points [Resource Persons]
- Global Focal Point
- Donor and Stakeholder Involvement
- DAD-IS [www.fao.org/DAD-IS]

Slide 6

Brief History and timeline

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>Time lines</th>
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</thead>
<tbody>
<tr>
<td>Support by the ITWG and CGRFA</td>
<td>2000 - 2001</td>
</tr>
<tr>
<td>Preparation of tools, guidelines</td>
<td>2001</td>
</tr>
<tr>
<td>Invitation by the DG</td>
<td>March 2001</td>
</tr>
<tr>
<td>180 member and 10 non-member countries</td>
<td></td>
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<tr>
<td>120 positive replies</td>
<td></td>
</tr>
<tr>
<td>Regional Training Workshops</td>
<td>2001 - 2002</td>
</tr>
<tr>
<td>Asia 22 countries</td>
<td>Nov. - Dec 2001</td>
</tr>
<tr>
<td>Total 176 countries 320 professionals</td>
<td></td>
</tr>
<tr>
<td>In-country training, draft report preparation</td>
<td>Sep 2002</td>
</tr>
<tr>
<td>Submission of Final Country Reports:</td>
<td>May 2003*</td>
</tr>
</tbody>
</table>
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Financial assistance to complement country efforts and activities

- Condition, acceptance of the DG invite, submission of a work-plan and establishment of an NC and NCC.
- Direct assistance through FAO or through WAAP (10 countries in South East Asia)
- Other countries still negotiated (China, Pakistan, India, Iran and Mongolia)

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Structure of Country Report

The Country Report should comprise six main parts:

<table>
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<tr>
<th>Part</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>State of Farm Animal Genetic Resources</td>
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<tr>
<td>2</td>
<td>Changing Demands on National Livestock Production</td>
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<td>3</td>
<td>State of National Capacity</td>
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<td>4</td>
<td>National Priorities for the Conservation and Utilization of AnGR</td>
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<tr>
<td>5</td>
<td>International Co-operation in Farm Animal Biodiversity</td>
</tr>
<tr>
<td>6</td>
<td>Other Elements</td>
</tr>
</tbody>
</table>
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**Developing the Country Report**

The Country Report is meant to be a **strategic policy document**

It should provide answers to 3 strategic questions:

- Where we are?
- Where do we need to be?
- How to get to where we need to be?

It should then consider the **priority issues** surrounding these questions, and the **needs**

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**COUNTRY REPORT**

- is not an inventory of AnGR
- it is not an update of WWL-DAD
- it is not a report to satisfy international reporting commitment
Slide 11

What is a COUNTRY REPORT?

It is an **OPPORTUNITY**

to create

a **VISION** and **STRATEGIC DIRECTIONS**

for the better management of AnGR

and to

clearly establish priorities for action and needs

Slide 12

Follow- up activities

Regionalization process as Phase II
of SoW-AnGR

Regional review meeting

Preparation of regional priority actions report

Use experience for global synthesis

Prepare strategy for global synthesis