Water, Food, Sanitation, and Health of the Jeju Islanders

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Introduction
Previous studies on Jeju Island

- Academic expedition (1959)
- Water supply and sanitation (1984-85)
- Community development (1989)
I. Introduction

Purpose of Study

• General purpose:
  – identify the nexus

• Specific purposes:
  – examine water supply and use, pig raising, raw pork eating, sanitation, communicable diseases
Research methods

- general basic method
  - anthropological fieldwork

- specific methods
  - participant observation,
  - intensive interview,
  - nexus approach,
  - following-up approach
General Characteristics of Jeju Island and People
Natural environment

- Location: 140 Km south of the Korean mainland
- Area: 1,849 km$^2$, largest island in Korea
- Volcanic landforms
- Highest rainfall (1975mm) in Korea,
- Rare surface water, no perennial streams,
- Abundant groundwater and springs
**Socio-economic characteristics**

- **Population:** over 600 thousand
- **Tourists:** over 10 million/year
- **Economic activities:**
  - service work
  - cash corp farming
  - Fishing
  - Pasturing
  - construction, transportation, manufacturing, etc.
Traditional ways of life

- distinct from the mainland of Korea
  - important role of women in bread winning
  - nuclear family ideology
  - Unique beliefs and rituals
Traditional Water, Sanitation, and Health
Water supply and use

- diverse water supply systems for different purposes of water use including:
  - Drinking & cooking,
  - Washing & bathing
  - Farming & stock raising, etc.
Water management and sanitation

- disposal of used water, toilet, sewage, and sanitary conditions
Water and health

- water-borne diseases including:
  - Malaria
  - Filariasis
  - Elephantiasis
Traditional Food, Sanitation, and Health
IV. Traditional Food, Sanitation, and Health

Traditional Piggery, Toilet and Sanitation

- traditional latrine type toilet to raise pigs
  → breeding bed of flies and mosquitoes, epidemic diseases
Raw Pork and Health

- Systicercosis prevailed in the past Jeju Island directly related to eating raw pork infected with Cysticercus cellulosae (pork tapeworm)
Raw freshwater Snail or Fish and Health

- liver distoma (Clonorchis sinensis) and the development of praziquantel and albendazole
Rapid Change of Water Supply, Food, Sanitation, and Health
Development of Water Supply Systems

- From: primitive spring and rain water collection
- To: modern water supply systems using groundwater wells
Changes in Food, Sanitation, and Health

- rapid improvement of housing problems including kitchen and bath facilities, particularly the separation of traditional latrine and piggery
- prohibition of eating raw pork and freshwater snail and fish

→ contributed to the dev’t of sanitary and health conditions
Nexus of Water, Food, Sanitation, and Health

- drastic changes and developments mentioned above are interrelated and accelerated the overall rapid changes of water, food, sanitation, and health
Conclusion and Recommendations
Water supply systems in all the inhabited 9 Jeju islands, 2011

<table>
<thead>
<tr>
<th>Source</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>underground water</td>
<td>83.9%</td>
</tr>
<tr>
<td>spring water</td>
<td>8.5%</td>
</tr>
<tr>
<td>rain water</td>
<td>4.3%</td>
</tr>
<tr>
<td>others *</td>
<td>3.3%</td>
</tr>
</tbody>
</table>

* including reservoir surface water mainly for farming, artificial recharge wells, and bottled water
Nexus Effects of Water, Food, Sanitation, and Health

• better quality of life in many aspects
• eradication of water-borne and epidemic diseases
Recommendations

- saving and rational utilization of water, food, energy as the limited resources, which may be affected directly or indirectly by unexpected climate changes.