Sustainable Highland Development: Health cares and nutrition

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- Chairman of Nutrition Development Foundation

Presentation at the International Conference .. On Sustainable Highland Development: The Royal Project Model.

Royal Park Rajapruek, Chaing Mai

22-24 December 2019
Presentation Outline

- The Royal Highland Development Project
- Alleviation of food insecurity and under-nutrition in Thailand
- Sustainable health and nutrition cares
- Conclusion
The Royal Project Foundation

- 1969 H.M. the King Rama 9 initiated the Royal Project during his visit to an opium growing village in Doi Pui.
- 1972, The UN/Thai Program for Drug Abuse Control was begun.
- Subsequently, research and development supported by the USDA to the Royal Project and Kasetsart University.
- 1992, the royal project changed its name to the Royal Project Foundation (RPF) and became a public organization for the people's benefit permanently.
Thai Highlands

Areas:
- 67.22 million rai (= 10.76 million hectares)
- 4,148 villages in 20 provinces area in northern and western part (Chaing Mai: 34.1%, Mae Hong Son: 13.69%, Chaing Rai: 13.40%)

Hill-tribe population: 233,826 households (740,494 people)

- Karen 37%
- Thai 26%
- Hmong 8%
- Lahu 7%
- Lua 5%
- Akha 4%
- Other 13%

Source: HRDI strategy 2017 - 2021
Main problems of highland in Northern Thailand during the sixty.

- Poverty
- Opium poppy cultivation
- Deforestation: Slash and burn cultivation
- Lack of basic services & infrastructures

Source: https://www.youtube.com/watch?v=ACFKH-02v74
Peaches research

Source: https://artsandculture.google.com/partner/royal-project-foundation

Opium field in the past

Royal coffee project
Slash and burn cultivation on highland

Source: the Royal Project Foundation
H.M the Late King Rama 9 and Highland Development Project since 1969

Source: the Royal Project Foundation
The Royal project Foundation

The Royal project: food processing/factory
The Royal Project Foundation

The goals of the Royal Project Foundation are:
• To help hill tribes achieve a better life
• To prevent the destruction of natural resources
• To stop opium growing
• To care for make best use of the soil in each area
• To increase the amount of alternative agriculture for the benefit of Thailand's economy

There are 38 development centers spread across five provinces in northern Thailand.

Source: the Royal Project Foundation
Strategies and actions of the Royal project

Land use planning water and soil conservation

Integration of GOs and local communities

Research program

Social and community development

Farm demonstration and technology transfer

Postharvest and marketing

Sufficient income
Better livelihood
Sound environment

Source: the Royal Project Foundation
Benefits

• To 288 villages 168,445 people living in the highland through its 38 development centers in 5 Northern provinces; Chiang Mai, Lampung, Chiang Rai, Phayao, and Mae Hong Son.

• The expansion to other highland areas in Chiang Rai, Mae Hong Son, Tak, Nan, Kamphaeng Phet and Kanchanaburi.

• The successful outcomes: raising incomes, improvement quality of life of people and communities, crop replacement, strengthening of people and communities and the restoration of watershed forests in the highlands, scaling up in others areas and technical cooperation with many countries in highland development with Taiwan ROC, Lao PDR, Myanmar and Bhutan.
Key success factors of the Royal Project in highland as business model

• The Royal Brand
• Create Shared Values: social issues and business values
• Multi stakeholders for actions and social enterprises. .co-venturing business
• Management principle with active people participation
The Royal Highland Development Project

Alleviation of food insecurity and under-nutrition in Thailand

Sustainable health and nutrition cares

Conclusion
Nutrition is a link between food and health, regarding the fulfillment of energy, protein and micronutrient requirements and non-nutrients from food in human life course.

**Ultimate goals**

*Good nutrition & Well-being for all*
Thailand

- Population of 68.3 m.
- Area of 514,000 sq. kilometers
- Success in reduction of maternal and child malnutrition since the eighty under the Poverty Alleviation Plan (PAP)
- Currently facing with double burden of malnutrition (DBM), a coexistence of under and over nutrition, and related non-communicable diseases (NCDs)
- Thailand has been a major food exporter
- Mountain areas confine mainly in the Northern Region
Great progress in reducing hunger in Thailand*

- Hunger fell from 35% to 7% (1990-2015) or reduced by 79%.
- Number of hungry people fell from 20 to 5 million in same period or reduced by 75%.
- Thailand has achieved MDGs.

*Slide courtesy from IFPRI with some modification.

Sources: FAO 2017, Tontisirin et al. 2014.
Elimination of undernutrition: a global deficit and priorities*

*From ACC/SCN 1999
Multi-stakeholder Comm.

Nutrition goals and indicators are incorporated to strategies and actions.

Community based approaches

Provision of basic services with mass mobilization: 1 volunteer / 10 households

Agri. & food production for subsistence econ., suppl. food for mothers, complementary food for IYC & dairy farm for school children
Basic Principles of the PAP

1. Priority to specific areas with high poverty concentration

2. Develop living standard to subsistence level with minimum basic services to be available everywhere in the specified areas

3. Emphasis on the need of making improvements so that people can gradually do more to take care of themselves

4. Emphasis on low-cost technology that people can handle themselves

5. Maximum community participation
Community-Based Approaches

- Is an *integrated program* implemented at local level (district level and below)

- *National commitment* with sound nutrition improvement strategies and goals

- *Community actions*: basic services, mass mobilization, mutual efforts/actions to reach all people and to prevent malnutrition
Components of a successful community based program

Minimum Basic Services
(Health, Education, Agr. Extension)

Supportive System
- Training
- Funding
- Problem Solving
- Supervision

Interface
(service providers and community leaders)
- Plan/goals
- Implementation
- Monitoring/evaluation

Community Leaders
Family
Individual

Facilitators
Mobilizers
(1:10 households)

Menus (Activities)
- Antenatal Cares (ANC)
- Growth Monitoring and Promotion (GMP)
- Food production
- Food and nutrition education
- Food sanitation & safety
- School lunch and milk program since 1992
- Other activities

Basic Minimum Needs Goals/Indicators

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Success components of community-based program

1. Provision of basis services
2. Active community organization/leader engagement
3. Community volunteers of 1:10 households
4. Community goals and indicators for situation analysis, planning, actions and evaluation
5. Community actions including remedial actions
## Improvement of Maternal & Child Nutrition, Thailand

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<tr>
<th></th>
<th>1980</th>
<th>1990</th>
<th>2006</th>
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<tr>
<td><strong>ANC coverage %</strong></td>
<td>35</td>
<td>75</td>
<td>95</td>
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<tr>
<td><strong>Anemia in pregnancy %</strong></td>
<td>50-75</td>
<td>18.8</td>
<td>10</td>
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<tr>
<td><strong>LBW %</strong></td>
<td>16</td>
<td>10</td>
<td>&lt;10</td>
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<tr>
<td><strong>Underweight of under 5 %</strong></td>
<td>51</td>
<td>20</td>
<td>&lt;10</td>
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### Recent Trend of Nutritional Status of Under 5*

* Source: NHES 2; Holistic Development of Thai Children; NFNS 5; NHES 4; and NHES 5
### Nutritional status of underfive in upland Chiang Mai*

<table>
<thead>
<tr>
<th>Groups / Village</th>
<th>Number of children</th>
<th>Stunting (height for age) No. (%)</th>
<th>Underweight (weight for age) No. (%)</th>
<th>Wasting (weight for height) No. (%)</th>
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<tr>
<td></td>
<td>Baseline</td>
<td>Endline</td>
<td>Baseline</td>
<td>Endline</td>
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<tr>
<td><strong>Control</strong></td>
<td></td>
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<tr>
<td>Ban Mae Hae Tai/ Ban Sedosa</td>
<td>28</td>
<td>31</td>
<td>10</td>
<td>6</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>(35.7%)</td>
<td>(19.4%)</td>
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<tr>
<td>Ban Mued Long</td>
<td>16</td>
<td>16</td>
<td>6</td>
<td>4</td>
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<td>(37.5%)</td>
<td>(25.0%)</td>
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<td>Ban Pae</td>
<td>29</td>
<td>31</td>
<td>10</td>
<td>13</td>
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<td>(34.5%)</td>
<td>(41.9%)</td>
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<td>15</td>
<td>2</td>
<td>1</td>
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<td>(9.1%)</td>
<td>(6.7%)</td>
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<td><strong>Total</strong></td>
<td>95</td>
<td>93</td>
<td>28</td>
<td>24</td>
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<td></td>
<td></td>
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<td>(29.5%)</td>
<td>(25.8%)</td>
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<td><strong>Intervention</strong></td>
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<tr>
<td>Ban Kok Noi</td>
<td>20</td>
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<td>1</td>
<td>1</td>
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<td></td>
<td></td>
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<td></td>
<td>(34.8%)</td>
<td>(19.0%)</td>
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<tr>
<td>Ban Ho</td>
<td>28</td>
<td>32</td>
<td>5</td>
<td>4</td>
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<td>(17.9%)</td>
<td>(12.5%)</td>
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<td>19</td>
<td>11</td>
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<td>(46.3%)</td>
<td>(31.4%)</td>
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<tr>
<td><strong>Total</strong></td>
<td>112</td>
<td>104</td>
<td>33</td>
<td>20</td>
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<td></td>
<td></td>
<td></td>
<td>(29.5%)</td>
<td>(19.2%)</td>
</tr>
</tbody>
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*From IDRC project 2016: Nutrition and food security in upland of Thailand (One year intervention)
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Multi-stakeholder approaches

SFFM covers: Food Security, quality & Safety, Education & research, and Management

Linking of food, nutrition & health implemented at central & community levels for nutrition and p/c of NCDs

Roles of agriculture and food systems:
- Ensuring nutritious and safe food supply i.e fruits & veg; low sugar, fat & sodium food; legume & fishes, milk … etc
- Facilitation of trade and tourism
- Caring of environment & sustainable agriculture.

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King Bhumibol’s Sufficiency Economy Philosophy

The Middle Path

- Moderation
- Self-Immunity
- Reasonableness

Knowledge and wisdom
Ethic and morality

Lead to

Life/ Economy/ Social / Environment Progress in balance, stable and sustainable way

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“Thailand ensures food and nutrition security, and is a sustainable source of nutritious and safe food with premium quality for Thai and the world”
Holistic Approach for Food Management in Thailand

Consumer Driven/Demand Pull

Agriculture
Food & Non Food

Farming
- Zoning (province data/information)
- Smart Farmers/Smart Officers
- GAP Mandatory
- Productivity
- Traceability

Food Systems
Safe Food & Premium/Nutrition Quality

Processing
- Household
- OTOP
- Industry

Trade/Consumption
- Service Outlets
- Community
  - Schools
  - Workplaces

Consumer Health & Well Being

Environment Sustainability

Economic & Prosperity

Consumer Driven/Demand Pull

• Value Chain
• Logistic Efficiency
• Reduction of Food Loss and Waste
• Strengthening Linkage between Individual Sectors
• 5P (Public - Private - Professional – People Partnership) & Fair Income Distribution

• R & D
• Area & Setting Based

• Capacity Building
• Monitoring & Evaluation

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**Theme 1: Food Security**

*Principle*: Ensuring a sustainable food security and effective management of food production resources by active stakeholders participation.

- **Natural & Agricultural Resources**
  - Land & water Mgt/reform
  - Balancing food, feed & fuel

- **Production**
  - Zoning for production
  - Innovation & technology
  - Capacity career & development in agriculture

- **Supply & Access**
  - Enhancing food access at household & communities
  - Logistics improvement

Active stakeholders participation

R & D along the food chain

Crisis management systems

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New theory for land uses in agriculture*

Land is divided in 4 areas:

- Vegetables/Fruits: 30%
- Rice field (and paddy field fishery): 30%
- Water reservoir and aquaculture: 30%
- House & gardens with animal foods: 10%

*From King Bhumibol’s Sufficiency Economy and land use aiming for household food security

Source: http://www.kasetporpeang.com

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Theme 2: Food Quality and Safety

**Principle:** Ensuring high quality and safe food to protect consumer health and to facilitate domestic/international trade

**Trade & market promotion**
Consumer protection and create fairness

**Food standard**
- Quality
- Safety
- Nutrition

**Food industry**
- Value added
- Strengthening/improve food technology
- R&D/innovation

**Primary product**
- R&D, GAP
- Standard farm
- Farm cluster/cooperative
- Smart Farmers
- R&D/innovation

**Community food production**
- Promote collecting and processing station
- Food storage and processing/food loss/waste reduction
- Local culture/tourism
- R&D/innovation

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Organizational structure of MOPH Thailand

Ministry of Public Health

Public Health Development Cluster
- Department of Disease Control
  - Bureau of Non-Communicable Disease
- Department of Health

Medical Service Development Cluster
- Department of Medical Services
- Department for Thai Traditional and Alternative Medicine Development
- Department of Mental Health

Public Health Services Support Cluster
- Department of Health Service Support
- Department of Medical Sciences
- Food and Drug Administration

Office of the Permanent Secretary

National Health Security Office (NHSO), Thailand

Thai Health Promotion Foundation

Central administration.
Regional administration.
Local government

Government Pharmaceutical Organization

Central / General Hospital
District Hospital
Community Hospital / Health Station
Health Volunteers (1per10 households)
Provincial Health Administration Thailand

Ministry of Public Health
- Permanent Secretary
  - Technical Departments
    - Director-General
  - Office of the
    - Permanent Secretary
- Provincial Public Health Offices (76)
  - Provincial Chief Medical Officers
- Regional & General Hospital
  - Primary Care Unit
  - Tambol Health Promoting Hospitals
- Community Hospitals
- Districts
  - Governors
  - Municipalities
  - Tambol Administration Offices

...Health Volunteers (1:10 Households)
Universal Healthcare Coverage (UHC)

• Thailand has implemented UHC since 2002 and continued to be strengthened with quality cares.

• Enhanced role for primary care… Affordable, available, holistic, self-sustaining and diverse cares.

• UHC sustainability as a basis for SDG achievement.
The potential of primary care for achieving sustainability of Thailand’s universal health coverage policy*

*Kanitsorn Sumriddetchkajorn et al; Bulletin WHO 2019;97:415-422
Community Based Program for Health Promotion

Minimum Basic Services
(Health, Education, Agricultural Extension)

Interface
(service providers and community leaders)
- Plan/goals
- Implementation
- Monitoring/evaluation

Supportive System
- Training
- Funding
- Problem Solving
- Supervision

Menu (Activities)
- Antenatal care
- Growth monitoring/promotion
- Elderly cares
- Cares of NCDs
- Food production
- Nutrition education
- Food sanitation & safety
- Other activities (Tobacco and alcoholic consumption control)
- Recreation and physical activities
- Etc.

Facilitators

Community Leaders
Family
Individual

Minimum Indicators
of well-being & NCDs

Volunteers
(1:10 households)

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Conclusion

• The Royal Project of the King Rama 9 has provided lessons and approaches that improving quality of life and environment in highland could be achieved and scaled up to other areas.

• Achieving food security, good nutrition and health required specific goals and indicators along with multi-strategic and multi-stakeholder approaches at multi-levels.

• UHC Policy, Food management Strategy and Community actions include provision of basic services, active community participation, community volunteers (1:10 HH), remedial actions to alleviate food insecurity and malnutrition.
Thanks for your attention