Overview

The project activities began by forming a working group called the “core team” which participants mainly come from academic and research organization, and included foresight experts. The core group reviewed a set of relevant literature (national and international) comprising more than 40 papers. The scenario building process summarized in Table 1 was prepared by data collection and interview of key stakeholders in the field.

The need for an agricultural foresight

Thailand is one of the world's top food exporters. It is the world's no.1 for rice, tapioca, sea shrimp, no.2 for sugar, no.4 for chicken, and no.13 as overall food exporter. Today the Thai agriculture is at the crossroads, facing pressure of energy crisis, low productivity, low value-added, loss of biodiversity, farmer debt and poverty, an aging population, a reduction in the number of people engaged in agriculture, and impact of climate change. The economic and social crises in agriculture have been building up over a long period of time. Yet, agriculture development is not high on the agenda of governments, financial institutions or the media. Reaching the goal of sustainable agricultural development will require foresight, science and technology development, policy direction, implementation and commitment.

The Knowledge Network Institute of Thailand (KNIT), the Federation for the Promotion of Ministry of University Affairs with APEC Center for Technology Foresight (APEC CTF), in corporation with the National Science Technology and Innovation Policy Office (STI) together with other 8 partners including, research institute, funding agency, academic, agriculture bank, press and mass media initiated an examination process of future scenarios of Thai agriculture. This project collaboration, called Thai Agriculture Foresight 2020, was initiated in September 2010 and lasted until May 2011. Its purpose was to illustrate a vision of long-term Thai agriculture to alert Thai society to prepare itself for a new dimension as well as to create a network of cooperation of core knowledge building for planning and designing new directions of Thai agricultural development.

This brief series was developed in preparation for the Foresight Breakout Session of the Global Conference on Agricultural Research for Development (GCARD 2012) and the Global Foresight Hub1. The briefs were written to communicate to a wider audience, such as policy makers, civil society organizations, researchers, and funders. The briefs were classified into three categories: Future Studies, Regional Update, and Visioning.

Fallen, Wild or Planted? The Future of Thai Agriculture

Angkarn Wongdeethai, APEC Center for Technology Foresight (APEC CTF), National Science Technology and Innovation Policy Office (STI)


“We are made wise not by the recollection of our past, but by the responsibility for our future.” George Bernard Shaw.

1) What were the most important changes in Thai agriculture in the past decade?

2) What could be the trends (opportunities and threats) that will impact on Thai agriculture in the future?

3) What might be a story about Thai agriculture you can think of, that would make you sleepless?

4) Could you tell us how you imagine Thai agriculture in the future?

5) What would you do, and how would you do it, to make next generations proud of Thai agriculture?

To get a larger consensus, and variety of viewpoints cutting across all key stakeholders, the core group organized two workshops. The workshops were designed for 2 target groups of different key stakeholders (big players, and small players) to build a certain atmosphere among the group for effectively sharing viewpoints and observations about the future of agriculture. The timeframe of this foresight exercise was set as a 10-year period which was considered as not too close that could not foresee the future, but not too far that could not see anything. The first workshop was designed for “big” players, representatives from both public and private sectors such as governmental organization, politicians and policy makers, business group, and medium and large enterprises. A second workshop was held to get viewpoints and observations of from “small” players: smallholder producers, wholesalers, distributors and non-profit organizations. Participants of the two workshops were guided to think and imagine “out of the box” of the current situation.

The following questions were used to open up the brainstorming process of the workshops:

1) How can international economic cooperation affect agriculture sector?

2) Are there any possibilities of a structural change of land ownership, and Why?

3) Which technology Thai agriculture needs in the future, and How to develop it?

4) Are there any changes in the way of life (farming process and product producing) of traditional farmer (self employed) in the future?

5) How likely would it be for the faculty of agriculture being listed in the Top 5 most popular education cursus?

6) Can Carbon credit and Water footprint being used intensively, and How?

An important step in scenario building was to identify “influencing factors” which have an impact on the key issue of the scenario building process. A wide range of factors was explored through the following questions:

1) What will be the role and status of Thailand agriculture in the next 10 years?

2) What would then be the implications?

3) What factors are enabling or impeding this situation to occur in the next 10 years, and Why?

4) What could be the uncertainties?

<table>
<thead>
<tr>
<th>Activities</th>
<th>Stakeholders</th>
<th>Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scoping, Data collection and Stakeholders Interviews</td>
<td>Core team</td>
<td>Project framework and Background information</td>
</tr>
<tr>
<td>1st Scenario workshop</td>
<td>Government organization, scientist, politician, business group, medium</td>
<td>3 Scenarios</td>
</tr>
<tr>
<td>2nd Scenario workshop</td>
<td>Small-famer, exporter-importer, distributor, wholesaler, retailer, small and medium enterprise, NGO</td>
<td>8 Scenarios</td>
</tr>
<tr>
<td>Workshops synthesis</td>
<td>Core team</td>
<td>3 draft Scenarios</td>
</tr>
<tr>
<td>Public hearing</td>
<td>Wide audience</td>
<td>3 improved Scenarios</td>
</tr>
<tr>
<td>Finalization of Scenarios</td>
<td>Core team</td>
<td>3 final Scenarios</td>
</tr>
</tbody>
</table>

Table 1. Developing the scenarios

The interviews included the following questions whose answers were used as background information:

1) What were the most important changes in Thai agriculture in the past decade?

2) What could be the trends (opportunities and threats) that will impact on Thai agriculture in the future?

3) What might be a story about Thai agriculture you can think of, that would make you sleepless?

4) Could you tell us how you imagine Thai agriculture in the future?

5) What would you do, and how would you do it, to make next generations proud of Thai agriculture?
This brainstorming process gave an initial list of more than 50 influencing factors. To identify the most influential ones, the core team conducted first a ranking process, each factor being given a score of 1-10 on both the importance of the impact and the level of uncertainty. Then, each factor was plotted on a two-axis chart with uncertainty as the x-axis and impact/importance as the y-axis. From the chart, it was easy to visualize and select the two factors that had the highest critical impact and uncertainty scores (see Figure 1). As the results from the workshops Domestic Politics and Climate Change were the two critical factors used to develop scenarios. 

As a result of the scenario building process from the two workshops, 11 scenarios were obtained initially. After the core team analyzed and interpreted the 11 initial stories based on causal relationships, key factors, uncertainties, and impacts on the system, it appeared that these could be summarized into 3 probable scenarios. Three different narratives were drafted and simplified to help audiences grasp the concepts and complete pictures for Thai agriculture scenarios in year 2020.

Subsequently, the 3 drafted scenarios were presented and reviewed in a public hearing process, with more than 70 stakeholders actively participating, giving critical feedback and suggestions on important issues. Finally, the core team compiled all suggestions and recommendations resulting in the final scenarios: 1.) Wild Trees, 2.) Planted Trees and, 3.) Fallen Trees. Figure 2 shows how these scenarios related to the two critical factors previously identified.

Each scenario is named from an aspect trees can take symbolized as wild, fallen or planted. Each scenario displays a long-term vision of Thai agriculture and corresponds to a network of cooperation to plan and design the new direction of Thai agricultural development.

**Fallen, planted and wild trees**

**Wild trees** yield fruit in a natural and symbiotic ecosystem. The strong wild trees grow and branch out into innovation. The provide shade for weaker tress and cover the surface of the soil, under which is a rich knowledge base and foundation. All is tied together as a cohesive network to withstand external challenges of storms and other threats and disasters. In a wild trees scenario changing weather and global warming have given rise to innovation and the adoption of technology and knowledge to change agricultural production. New plant varieties are developed while information technology is advanced to allow farmers to access information and communicate readily among each other. Consequently, a network is formed and integrated agriculture or network agriculture is established as well as cooperatives and community enterprises. In addition, a specialized agricultural school is founded (Agriculturists University) and marketing is further expanded.

**Planted trees** grow and branch out with new leaves, requiring persistent care (feeding, watering, shoveling, sheltering from disease) to prevent and mitigating effects of climate change. The planted trees and tap root growth are a strong and stable anchor. In a planted trees scenario, policy shifts from providing more clear direction to promote integrated farming (planting to marketing). The value farmers’ products is now optimized while new generations are more motivated to work in the field and adopt new technology and marketing knowledge. They are also encouraged to learn more about agriculture, and farming careers are more popular and financially secure. With new farm management methods in place, farms can also cater to tourists and become a creative agro-industry.
The need for an agricultural foresight

The Thai agricultural foresight project is a means to equip Thai society with information to cope with changing and complex political and environmental conditions. The scenarios are expected to help Thai farmers to move forward on a path of self-reliance and interdependence. Their impact on various sectors of the society cannot be yet fully identified. However the foresight work has already induced some changes.

On policy – The scenarios have been used as one of the data sources for planning and developing the agricultural system. At national level, five key research funding agencies and the national policy office are working in collaboration to strive the country need of strengthening agriculture competitiveness, by spotlighting the research directions and top up its grants on rice, tapioca, sugarcane, rubber, and palm oil researches.

On the private sector – Many Thai SMEs and large enterprises make their development on product and process. The scenarios have paved the way for capacity building and education of private-sector staff so that they can strengthen the competitiveness of agricultural production and distribution of small businesses. Charoen Pokphand Foods PCL., and CPF Group, Thailand leading agro-industrial and food conglomerate share the vision depicted in the scenarios.

On the education system – The Council of the Dean of Agricultural Science has used Thai’s agriculture scenarios as a starting point to make a foresight for strategic policy for the Agriculture Department for Higher Education.

On smallholder livelihoods – Though mass media e.g., television, newspapers, magazine, websites disseminated Thai agriculture scenarios, it has yet to reach a large number of smallholder farmers. However, there are examples of new wave farmers who participated in the foresight workshop who have not only shared scenarios with their group members but also made data available to the public to understand and become aware of upcoming uncertainties and challenges in order to prepare themselves for agricultural sustainability.

Lesson Learned

Most members of the core team members came from the research and academic spheres. It would have been more efficient if one of the team member had also been from an agriculture policy planning and implementation agency. This was a missing link when it came to integration of the scenario findings into national agricultural strategic policies and plans.

Specialized universities offer a wide range of educational opportunities in agriculture. Nevertheless, the number of students who wish to continue their studies in agriculture is declining. In contrast, the “wild trees” scenario showed that there will be huge opportunity and great demand for specialized agricultural schools and universities. It means that agricultural facilities for education need to increase their capabilities and be reshaped to meet the future demand.

At the national level, the Thailand agriculture foresight has been an important factor in creating better awareness and understanding of the greater potential of agriculture development for plan and policy.

Citation:

Contact information:
Angkarn Wongdeethai (angkarn@sti.or.th); the Brief series coordinator Robin Bourgeois (Robin.Bourgeois@fao.org).

License Disclaimer:
Creative Commons Attribution & Noncommercial License (BY-NC). Licensees may copy, distribute, display and perform the work and make derivative works based on it only for noncommercial purposes and if they give the author or licensor the credits in the manner specified by these.