

**Public Seminar:  
The Futures of Low-Carbon Society:  
An Asia-Pacific Vision Beyond 2050  
27 August 2010**

**Opening Remarks by  
H.E. Dr. Virachai Virameteekul  
Minister of Science and Technology**

Dr. Pichet Durongkaveroj,  
Distinguished Guests,  
Ladies and Gentlemen,

It is both an honour and a pleasure for me to be here at this important international gathering. I am here to talk about what the Ministry of Science and Technology is doing or not doing on the issue of climate change.

Climate change poses a real threat to us and our future hangs in the balance. As powerful storm becomes even more powerful, severe flooding becomes even more severe; truth is, we are facing potential disasters threatening us more and more. This is not fiction. This is fact. This is real science.

Before it is too late, international co-operation, with strong will and full determination, is needed to tackle the global issue of climate change. So far – from Bali to Copenhagen, and recently in Bonn – the past two years have witnessed some progress in certain areas, while in some other areas, less progress have been made.

This is simply unacceptable. There is so much more work to be done if we are to come up with a mechanism to implement this common goal towards a “low-carbon” society. And there is also so much more progress to be made if we are to save this planet for our future generation.

Ladies and gentlemen,

Thailand shares the vision with other ASEAN countries in driving the ASEAN community resilient to climate change. We have incorporated the agenda of climate change into the national development and planning process since 2007. These plans aim to move our economy towards a low carbon economy

by restructuring the production sector towards being low carbon /

promoting green transportation and logistics /

remodeling the agricultural sector to promote sustainable and organic agriculture /

increasing the share of alternative energy, particularly renewable energy /

and perhaps most importantly : changing the pattern of public consumption towards more environmental-friendly products.

In accordance with the national development plan, the Ministry of Science and Technology is committed to moving Thailand towards a low-carbon society. We are now conducting and providing supports for many R&D projects and activities to mitigate and adapt to the impact of climate change. They can be grouped into three main areas.

1. The first area is related to the preparation for the impact of climate change and adaptation strategies, especially for the agricultural sector. This area of work covers a wide range of R&D projects.

For example, the National Science and Technology Development Agency or NSTDA has been working on crop improvements by making our crop becoming more resilient to stresses that have tendency to increase due to climate change, such as drought and flooding, and improve crops to become more resistant to insects and diseases that come naturally with climate change. Technically speaking this is done by using DNA marker-assisted breeding in combination with conventional breeding technology. R&D in crop improvements needs greenhouse environment, so does the cultivation of some crop plants to give them suitable environment for optimal growth. Therefore NSTDA has conducted R&D on greenhouse materials, greenhouse design for tropical plants, and environmental control system for greenhouses.

Another good example is the work done by the Hydro and Agro Informatics Institute or HAI. This Institute has developed a forecasting model for flood and drought risk analysis for 25 basins in Thailand based on irrigation infrastructure and rainfall. In addition, through the use telemetry technology, the Institute has also

developed a flood warning system which can be used anywhere in Thailand.

Ladies and gentlemen,

2. The second area is concerned with mathematical modeling of climate change. This work involves the development of climate change models that use remote sensing data such as sea surface temperature, and geographical information. These data are provided by the satellite of the Geo-Informatics and Space Technology Development Agency or GISTDA and fed into the model developed by the Climate Change Knowledge Management Center or CCKM within our ministry.

Results from these models are very important in developing adaptation strategies. For example, it can be used to identify “Hot Spot” areas that are vulnerable due to high risk from climate change impact or having low coping capacity, or both. Identifying these areas is becoming increasingly important because they need proper management of resources and a certain level of investment. In the future, the models can also be used for the planning of potential reduction of greenhouse gas emissions.

Again, HAI is currently involved in a research on wind map, and together with the capability to trace the circulation of water in the region using isotope hydrology research by the Thailand Institute of Nuclear Technology or TINT, and the satellite data from GISTDA, we can make an even more reliable prediction model of the whole system of rainfall, wind, and temperature.

Apart from this, we are incorporating the use of satellite imaging to directly monitor actual change in coastal erosion and the identification of proper areas of plantation.

3. Now we come to the third area. This involves the development of Life Cycle Assessment or LCA database, in which the Ministry of Science and Technology, particularly NSTDA, is playing the leading role. As we all know, LCA database can be used for many applications such as calculating carbon footprint of a product or an organization. The LCA database also provides a basis for further development of Life Cycle Inventory (LCI) system or emission inventory (EI) system. The ultimate goal of this area of work is to develop cross-cutting body of knowledge and information that are essential for setting national target for greenhouse gases emission.

But ladies and gentlemen,

The Ministry of Science and Technology does not limit itself only to these in-house activities. For I am a strong believer of collaboration and alliance, I deem it of vital importance that we reach out to other agencies to address this very issue. In this light, we also provide R&D groundwork and support information to the National Climate Change Committee for the development of the National Strategy for Climate Change for 2008 – 2012. Equally substantial is our undertaking of R&D programs to acquire a better understanding of the impact of climate change, including the development and collection of important indicators for policy planning and management, as well as adaptation, development and transfer of relevant technology.

As far as relevant technology is concerned, the National Science Technology and Innovation Policy Office (STI) has been cooperating with the Office of National Resources and Environmental Policy and Planning (ONEP) to establish a project on Technology Needs Assessment (TNA) for Thailand. Assessing technology needs is the first step in making a practical action plan in the context of the United Nations Framework Convention on Climate Change process. In the end, we aim to have a national roadmap for technology development and technology transfer using international mechanisms such as Clean Technology Fund, among many others.

The ultimate goal is to accomplish Thailand's technology development priorities for climate change adaptation and mitigation in a sustainable manner.

Ladies and Gentlemen,

Despite all these R&D programs within our ministry, there are still many new areas to be explored and to expand on. In fact, with reference to the report of the foresight work, capacity building at the very local level is emphasized. This is why I have asked relevant agencies in our ministry to seriously work closer with local leaders who are in fact our perfect and best resource to reach out to the communities and their people. They are the ones who will help make a difference... make a change. We should not overlook their enormous potential in fostering innovation and adopting appropriate technologies in order to enable the grass roots to be climate-resilient.

To this end, the government must facilitate the design of technology roadmaps at the national level to allocate resources with the focus to induce private investment accordingly, and work with local industries and local

governments to make sure that such innovation takes place and reaches local users in the right place at the right time. The Ministry of Science and Technology has many examples in working with the locals such as the community water resource management by HAI, community biodiesel by NSTDA, community zero-waste rice mill by Office of Technology Promotion and Transfer, and the Bioplastic Initiative by National Innovation Agency.

I would like to specifically emphasize the work of NSTDA on Industrial Technology Assistance Program or ITAP that has been very successful in helping, by way of matching grants, small and medium enterprises throughout the country to conserve energy in the local factory production process. These are some examples that have been launched and implemented along this strategic direction, in the spirit of public-private partnership, or PPP.

Ladies and Gentlemen,

We should not, however, let the effort of combating climate change hinder the attainment of the effort to fight poverty and enhance quality of life. The choice is not between climate change and Millennium Development Goals. We are not asking any country whether or not they want to grow their economy; but we are asking them to find ways and means to grow the economy with more care and love for the environment. There is no other way forward.

I regard this Low-Carbon Society initiative by the APEC Center for Technology Foresight, hosted by the National Science Technology and Innovation Policy Office, as an important joint vision statement that responds to both the need to mitigate the impact of climate change, and to achieve

development goals at the same time. I reckon that this vision together with its pathways to the futures of low-carbon society is comprehensive and sustainable because it integrates, with foresight, all imaginable aspects of life in the year 2050.

In conclusion, ladies and gentlemen, it is important that we unleash the creative mind of our best scientists, for we do strongly believe that science, technology and innovation will play a powerful role to overcome the climate change challenges. They are key to moving towards a low-carbon society.

Thank you and Sawasdee krub.