

## CITY REPORT UDON THANI



(Images from Udon Thani Municipality's website)

### OVERVIEW

- Udon Thani municipality is the capital city of Udon Thani province, locating in the northeastern Thailand (a.k.a Isaan or Esan). With an area of 47.70 km<sup>2</sup>, this medium-sized city is the habitat of at least 130,000 residents of 100 communities; the population density is around 2,976 km<sup>2</sup> (as of June 2016).
- Udon Thani municipality is the center for provincial administration, accessible by train, car, public bus, and airplane. Udon Thani International Airport is the busiest airport in the region, locating only about 6.3 kilometers away from the city center and serves as a regional transportation hub for GMS countries<sup>1</sup>.
- The downtown area is increasingly urbanized with plenty of historical, cultural and recreational attractions. The highlight is Nong Prachaksinlapakhom Public Park or Nong Prajak Park, the municipality's most popular public park which named after General HRH Prince Prachaksinlapakhom, the founder of Udon town in 1893. Nong Prajak Park is a multipurpose, high-maintenance and accessible public park surrounded by educational institutes, governmental offices, temples, city's museum, shops and restaurants.
  - **History**
    - The name of Udon Thani was mentioned the first time during Ayutthaya Period as part of Vientiane. Udon Thani is a combined word; Udon derives from Pali-sanskrit root which means "North," while Thani means "town." Combined together, Udon Thani simply means the town of the North.
    - Udon Thani is famous for its ancient civilization site, Baan Chiang, where the 5,000-to-7,000-years-old archaeological sites were found with the evidence of the prehistoric humans' habitation. The red-line patterns pottery unearthed here are believably among the world's oldest which has been on the UNESCO World Heritage list since 1992.
  - **Economy**
    - Agriculture and local handcrafting are the main occupation of the people in Udon Thani municipality. The main agricultural products are rice, vegetables and tapioca.
    - The municipality administration strives to strengthen and stabilize the local economy, in respond to the city expansion, population spawning and newborn enterprises. Some of the development strategies involve

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<sup>1</sup> GMS stands for Greater Mekong Subregion, which includes Cambodia, the People's Republic of China (PRC, specifically Yunnan Province and Guangxi Zhuang Autonomous Region), Lao People's Democratic Republic (Lao PDR), Myanmar, Thailand, and Viet Nam.

tourism promotion, promotion of the local syndicates for public administration, a joint public-private partnership for the public affairs in the municipality, OTOP program, and People bank project.

○ **Environment trends**

- The budget allocation for the natural resource and environmental management is the fourth highest (74 billion Baht or equivalent to 2.26 million USD).

Fiscal Budget	Investment and Commerce	Agriculture	Tourisms	Natural Resource and Environment	Society and Quality of Life	General Management	Total (THB)
2010	2,000,000	29,500,000	4,410,600	-	-	10,000,000	45,910,600
2011	33,960,000	44,950,000	33,950,000	67,195,100	2,835,000	10,000,000	192,890,100
2012	58,556,900	90,700,000	13,500,000	1,000,000	25,350,000	10,000,000	199,106,900
2013	97,486,000	17,412,000	43,851,000	5,900,000	24,500,000	10,000,000	199,149,000
<b>Total</b>	192,002,900	182,562,000	95,711,600	74,095,100	52,685,000	40,000,000	637,056,600

Table 1: Udon Thani fiscal budget during 2010-2013  
Source: Udon Thani Provincial Office

- **Solid waste management**

- Udon Thani municipality alone produces 127.50 tons of solid waste per day or equivalent to 0.92 per person.
- The municipality’s sanitary landfill site covers the area of 296 Rai or 473,600 km,<sup>2</sup> serving as the disposal center for 40 local administrative organizations. The center also has the wastewater treatment pond and the infectious waste incinerator, making Udon Thani the center of infectious waste disposal for the Upper Isaan region<sup>2</sup>.
- The capacity of the municipality’s solid waste management is still at a good number at 95.1%, while the landfill site can hold up around 250 tons of waste per day.

- **Energy**

- Udon Thani, as well as most cities in the northeastern region, is considered as the region with the highest energy security in Thailand, thanks to the main source of energy from Laos. Despite this, the city still strives to provide alternative energy source by initiating the waste-to-energy power plant project. The municipality signed the MoU for Conducting Feasibility Study of Waste-to-Energy Project with three co-investors: Udon Thani Power Plant Co., Ltd, Thai Solid Renewable Energy Co.,Ltd and Udon Thani Zero Waste Co., Ltd. The progress until now still lagging, as the project receives controversial feedback and encounters resistance from local people several times.

<sup>2</sup> Consists of 9 provinces: Kalasin, Loei, Mukdahan, Nakhon Phanom, Nongbua Lamphu, Nong Khai, Sakon Nakhon, Udon Thani, Bueng Kan

#### ▪ **Soil & Water management**

- Water management and irrigation system still remain a challenge to Udon Thani municipality. The quality of water sources, climate variability and the physical condition of the soil, which is scaled as poor to very poor at water absorption, cause the difficulty to farmers in Udon Thani during drought season.
- The excessive use of chemical substance and pesticide in agriculture also severely affects the quality of the soil, resulting in the degradation of soil in several areas.

### **GOOD PRACTICES**

#### **Environment**

- The municipality of Udon Thani led by Mr. Ittiphon Triwatanasuwan calls for a good collaboration between three main actors: the central government, local government and, most importantly, the people in the communities to participate in the environmental promotion activities. *“Environmental issues do not cause problematic affects to just one community, province or region but globally,”* said the Mayor in the opening ceremony of the three learning centers.
- Among the large-scaled municipalities nationwide, Udon Thani was awarded a prestigious princess cup from HRH Princess Sirindhorn for winning the best sustainable and livable city of the year in 2016.
- The newly signed MoU on plastic bag reduction between Udon Thani Municipality, Udon Thani Province, DEQP, Udon Thani Provincial Regional Environment Office 9, and Provincial Offices of Natural Resources and Environment Udon Thani, reflects the high-level of commitment which in line with a national policy *“Give less, Get less, Reduce the use of plastic bag”* (ลดรับ ลดให้ ลดใช้พลาสติก) through strong networks and partnerships.
- The city also encourages a friendly competition between local people by awarding the outstanding individual and community the certificates of participation on sustainable environment promotion.
- Udon Thani municipality places emphasis on building the awareness of household waste management to its residents by encouraging them to separate wastes at source. Local people are encouraged to learn how to reuse and recycle wastes.

#### **Culture**

- The local government officials in Udon Thani are encouraged to wear Thai traditional clothes on every Tuesday in order to promote the use of local fabric known as Khit, the woven cloth made by Thai silk using the unique weaving techniques.
- The concept of ESAN was referred by the mayor as the concept to develop the Municipal. E stands for Eat, the promotion of local foods and ingredients; S is songs, referring to music and traditional dances; A is amazing; and N is nature.

## Public Health

- **Healthy Municipality**

- Udon Thani municipality raises the bar to its peers by aiming at being the “Healthy Municipality,” through the implementation of the full-scale public health program. The commitment to the 3Ps: public health promotion, health protection and disease prevention, manifests through the health promotion activities and education. The public health unit is working hard to safeguard and improve the health of people in the community.
- As regard to the disease treatments, Udon Thani Municipality Hospital is established and equipped with modern, high-standard medical technology; however, the alternative medical treatment is also made available as an option for the patients. The Physical Therapy and Dialysis Center is also operating for patients with particular needs, as well as the MRI and CT scan.

- **Sport City**

- Udon Thani has a bold leading role of being selected as one of the six Sport Cities in Thailand, in respond to the National Sports Development Plan No. 6, alongside with Chonburi, Suphanburi, Buriram, Sisaket and Krabi.
- The Sport City is selected based on four criteria: i) The promotion of sports and exercise, ii) Sports development for excellence, iii) The capability to host international sports competition, and iv) The promotion of sport and tourism industry.

## SITES VISIT

**Date: August 27-29, 2018**

**Event:** The Honor Ceremony of Udonthani Municipality Environmentally Sustainable Management Learning Center and Knowledge Sharing on Environmentally Sustainable Cities

**Host:** Department of Environmental Quality Promotion (DEQP)

**Key Participants:** Udon Thani municipality, Chiang Rai municipality, Sakon Nakorn municipality, Phichit municipality, Nong Teng municipality, Ubon Ratchathani municipality, Phayao municipality, IGES team

**Key activities:** i) **Memorandum of Understanding signing ceremony on plastic bag reduction in Udon Thani Municipality**, ii) **Awarding the certificate of Participation for outstanding individuals on sustainable environment** iii) **The grand opening of three learning centers** (*Community-based waste management and waste recycling innovation learning center, Environment management and agricultural in the city learning center Forest garden in the city*)

(Images from NNT)



Figure 1: MoU signing ceremony on plastic bag reduction in Udon Thani Municipality



Figure 2: Awarding the certificate of Participation for the outstanding individuals on sustainable environment

### Site 1: Community-based waste management and waste recycling innovation learning center

- The center located in the privately-owned house of the community leader of Non Uthom Phorn community who contributed part of his house as a waste management and waste recycling innovation learning center and the waste-separation-at-source center.
- People in the community are working together to create environment promotion projects and activities to raise public awareness and encourage knowledge exchange in the community. Some of the projects are:
  - Community-based agriculture; residents are growing vegetable and herbs along their fences and street for public use.
  - Solid waste separation at source
  - Utilization of recyclable waste such as PET bottle, glass bottle, foam container, vegetable oil, waxes, etc.
  - Utilizing renewable/alternative energy sources such as solar cell, biomass
  - Teaching local people how to make organic compost and EM

### Site 2: Environment management and agricultural in the city learning center

- This newly-innovated (200,000 Baht budget) center situated right in front of the clean irrigation canal in Klong Charoen community. The learning center is expected to serve as the alternative source of income and bring unity to the community so that they could contribute to a self-reliant and sustainable economy within their households.
- The leader of the community whom everyone in the community regards her as a “mom” is taking the lead on knowledge sharing for the know-how and indigenous knowledge of how to grow the fruitful organic vegetables that are resilient to bugs and the weather that varies by seasons.



Figure 3: Hand-made products from the recycled waste

- People in the community learned how to add value to recyclable waste by making products from recycled bottles, beer cans, milk cartons, etc. and sell them to gain more income to the community.
- Typical products cultivated from the garden are passion fruits, Mamao (Thai berries), Chebulic Myrobalans, Baby Jackfruits and local vegetables. The products are sold in the local market as well as used as the main ingredients in the restaurant operated by local people in the community.
- The community also makes profit from frog and cat fish farming.

### Site 3: Forest Garden in the City



Figure 4: The opening of the Forest Garden District 8

- As a former graveyard, Municipality 8 Forest Garden is now a natural learning center for everyone in the community and visitors to learn about over 108 species of plants, including local herbs, ornamental plants, vegetables, flowering plants, economic woods, etc. within the greenery area of 6.7 Rai or 10,720 km<sup>2</sup> (1 Rai=1,600 km<sup>2</sup>).

- The learning center has registered all plants species, provide specifications and create the QR code for every single species to make it easier to access to the information of each plant.

- Besides serving as the forest learning

center, this Forest Garden has also incorporated health promotion center where it offers the alternative medical services by using Thai local herbs that could be cultivated from the plant nursery situated next to the center. In Thai massage learning station, there is a professional naturopathic physician who offers health advice, proper diagnosis and treatment to the patients.

- The learning center comprises of 5 learning stations:
  - 1. Thai massage learning station
  - 2. Plant Nursery learning station
  - 3. Organic composting learning station
  - 4. QR code for learning station
  - 5. The multi-purpose Forest Garden in the City pavilion
- The learning center is also serving as a home for small animals such as squirrels and birds, creating a good biodiversity that promotes the ecosystem of the forest garden.



Figure 5: A group of students are demonstrating how to make organic compost to be used at the Forest Garden



Figure 6: A display of plants' name and its QR code to access for more information

## **Keynote Lecture: Advance learning center towards knowledge city**

**Speaker: Dr. Aphichat Prasert, the office of Knowledge Management and Development**

- The last day of Udon Thani’s site visit was spent in the lecture hall, where Dr.Aphichat Prasert, the chief of Knowledge Management and Development Office gave the participants a special lecture on how to develop local learning centers that meet the need of local community in order to achieve an inclusive, sustainable and life-long learning society. In addition, the participants learned about the theories of knowledge and knowledge management, as well as how to improve and enhance the existing learning centers within the community to reap the maximum benefits.
- Dr.Aphichat emphasized on the national economic development agenda, Thailand 4.0, that aims to steer the country forward in pursuit of “security, prosperity and sustainability” though technological leverage. The model is developed from Thailand 3.0, the current model in which the economy relies greatly on the heavy industry (Thailand 1.0 on agriculture, i.e. farmland and livestock and Thailand 2.0 on light industry). The vision initiated by the administration of Prime Minister, Gen. Prayuth Chan-ocha, to transform Thailand’s industry-driven economy into the innovation-driven one. The main objective is to advance Thailand from the so-called middle-income trap into a high-income and robust economy in the near future.
- Thailand 4.0 will be achieved based on three development indicators:
  - Competitive Growth: The integration of knowledge, creativity, technology, and innovation to advance the economy and society of Thailand
  - Inclusive Growth: The promotion of a wealth distribution of people across the country to reduce the disparity between high-income and low-income citizens through the development of socio-economy from a grassroots level (bottom up).
  - Green growth: The eco-friendly and sustainable development strategies through smart people, smart city and smart industry (industry 4.0).



Figure 7: A group of participants sharing their thoughts in the workshop

- At the end of the session, the participants were asked to split into groups, based on their origins, in order to brainstorm and generate the ideas of what they got from this 2-days trip and what could be brought back as the idea to improve the learning center in their hometowns. Several participants from other municipalities were impressed by the high-level of local participation within Udon Thani municipality; a strong bond between local people

and their communities creates unity and a good sense of attachment to their hometown, making them want to contribute to the development of the community

and the city. In addition, the participants were asked for their recommendations to improve or enhance the learning centers in Udon Thani. Some of the participants suggested that the directional sign towards the learning centers should be clearer and easy-to-read; each center should have its own gimmick or a unique selling point and the person-in-charge should consider holding the monthly events to promote the learning centers to keep them active.

- As a closing remark, three final remarks had been given by Udon Thani governor, Mr. Ittiphon Triwatanasuwat;
  - Each municipality has different variables: size, budget, manpower, the level of community participation, etc. So the development should be tailored accordingly.
  - The importance of knowledge exchange between local community and DEQP should be highlighted.
  - The “sustainability,” per se, should last long and be seamlessly built on from every sector until it becomes parts of our daily life. Therefore, it requires the cooperation from every sector.

### **IGES OBSERVATION/ASSESSMENT**

- Udon Thani has a high-potential for being the eco-friendly and self-initiated city; the city’s administration seems to be very committed to address the issues such as waste management (3Rs) and capacity building through the promotion of local learning centers to improve the livelihood of local people and city’s prosperity. We could also see the development strategy with a multidisciplinary integration between environment and public health through the projects from the local government and community such as the construction of trail and bike lane around Nong Prajak Park or the Thai massage center that makes a good use of Thai herbal products grew in the Forest Garden.
- To ensure the sustainability and efficiency of the learning centers, the implementing agencies (DEQP, etc.) should be conducting an effective and consistent evaluation assessment towards the funded projects.
- Donor(s) should conduct periodical follow-up on the projects’ status to ensure the activeness and consistency of the projects. The most direct benefit of doing such is its contribution to the cost-effectiveness assessment; the outcomes retrieved from each assessment will definitely be the assets for the next screening of the candidate cities or projects. Besides, it would draw out the best practices that could be replicated to another city as well.