

Training on Global Warming Mitigation and Adaptation by Balancing Sustainable Energy Management (GSEM)

1. Course Title:

Training on Global Warming Mitigation and Adaptation by Sustainable Energy Management

2. Duration:

July 7th – July 27th 2021

3. Rational:

Global Warming is the rising of the mean temperature of the Earth's atmosphere and oceans since the late 19th century. The average surface temperature has increased about 0.8 degree Celsius since the early 20th century. The primary cause is the increasing of the greenhouse gases from fossil fuel and deforestation. The Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC) is the international treaty developed in order to reduce the greenhouse gases. With limitation of commitment, it is not enough to stabilize the greenhouse gas.

The UNFCCC was adopted on 9 May 1992 and open for signature from 4 June 1992, during the United Nations Conference on Environment and Development (UNCED), or the Earth Summit, at Rio de Janeiro, Brazil. The Convention enters into force on 21 March 1994 and currently has 197 Parties. Thailand becomes a Party in the Convention on 28 March 1995, and thereafter participates in the Conference of the Parties (COP) to this day.

The post 2015 development agenda namely 17 Sustainable Development Goals (SDG). The SDG number 7 is the affordable and clean energy. The issue of energy is much more getting attention when various studies of global warming lead the people to the conclusion that the energy consumption is one the major causes for global warming. Referring to the Act of Energy Conservation and Promotion B.E. 2535 (1992) together with the Energy Conservation and Promotion Fund, Thailand has been revealing the consciousness and awareness in energy through various programs under the ministry of energy and its departments. The academic sector by many universities in the theme of energy in Thailand is directed toward to the part of mitigation by the technology of energy conservation and renewable energy. The emphasized technology is however caused the unbalance of environmental, social, and economical issues. Thailand is facing with the problem of energy consumption growth whereas the power supply by constructing the new power plant is in the difficulty of making people understand. There is always protest by local community during the preparation or construction of the new power plant. This reflects clearly to the unbalance of three pillars of sustainability.

As the aforementioned situation, Prince of Songkla University has attempted to initiate the master program of Sustainable Energy Management by the faculty of Environmental Management together with the Institute of Systems Sciences, Innovation and Sustainability Research (SIS) Sustainable, Graz University, Austria. This course pays attention to the area of the environmental, social and economic issues. A part of this program is the 2.5-week training on Global Warming Mitigation and Adaptation by Sustainable Energy Management.

The program aims at building the concept of balancing components in sustainable development. The output of this training is to have a training filling in the gap of the overview picture of the university and country. The participants will be able to disseminate and apply the concept of sustainable energy management aiming to solve the global warming in their countries. The

sustainability in view of self-direction without support from world scheme is the expected outcome.

4. Objectives

- To learn the balancing of sustainability among economic, social and environmental aspects.
- To exchange the international idea of global warming mitigation and adaptation
- To create the network among all participants.

5. Course Content:

Day/Time	08.30 – 12.00 a.m.	13.00 – 16.30 p.m.
Wednesday 7 – July – 21	Welcome, Introduction Assoc. Prof. Dr. Kuaanan Techato, PSU Opening of the Training by representative from TICA Global Warming – Climate Change Mr. Hafiz All Amin	Country Report Assoc. Prof. Dr. Kuaanan Techato, PSU
Thursday 8 – July – 21	Mitigation and Adaptation (1) VDO presentation: @Faculty of Environmental Management, Price of Songkla University Mr. Md. Hafiz All Amin	Country Report Assoc. Prof. Dr. Kuaanan Techato, PSU
Friday 9 – July – 21	Sustainable Development Goals (SDGs) Mr. Arup Kumar Biswas	Country Report Assoc. Prof. Dr. Kuaanan Techato, PSU
Saturday 10 – July – 21	Official Holiday	
Sunday 11 – July – 21	Official Holiday	
Monday 12 – July – 21	Solar PV Mr. Md. Shahariar Chowdhury	Country Report Assoc. Prof. Dr. Kuaanan Techato, PSU
Tuesday 13 – July – 21	Solar Thermal (2) VDO presentation: Rooftop Solar Cell @ The Prince of Songkla University Saving and Credit Cooperative, Limited Mr. Md. Shahariar Chowdhury	Country Report Assoc. Prof. Dr. Kuaanan Techato, PSU
Wednesday 14 – July – 21	Solar Recycling Mr. Md. Shahariar Chowdhury	Country Report Assoc. Prof. Dr. Kuaanan Techato, PSU
Thursday 15 – July – 21	Wind turbine (3) VDO presentation: Wind turbine @ Nakhon Si Thammarat Province Asst. Prof. Dr. Montri Luengchavanon	Country Report Assoc. Prof. Dr. Kuaanan Techato, PSU
Friday 16 – July – 21	Low speed vertical wind turbine Asst. Prof. Dr. Montri Luengchavanon	Country Report Assoc. Prof. Dr. Kuaanan Techato, PSU
Saturday 17 – July – 21	Official Holiday	
Sunday 18 – July – 21	Official Holiday	

Day/Time	08.30 – 12.00 a.m.	13.00 – 16.30 p.m.
Monday 19 – July – 21	Coal-Fired Power Plant (4) VDO presentation: MAEMOH Electricity Generating Authority of Thailand @ Lampang Province Mr. Arup Kumar Biswas	Country Report Assoc. Prof. Dr. Kuaanan Techato, PSU
Tuesday 20 – July – 21	Biomass Energy (5) VDO presentation: Pattalung Green Power Company Limited @ Pattalung Province Mr. John Simon	Country Report Assoc. Prof. Dr. Kuaanan Techato, PSU
Wednesday 21 – July – 21	Fuel Cell (6) VDO presentation: Fuel Cell Lab @ PSU Mr. Pankaj Kumar Jha	Country Report Assoc. Prof. Dr. Kuaanan Techato, PSU
Thursday 22 – July – 21	Energy Saving in Agriculture Miss Than Htwe	Country Report Assoc. Prof. Dr. Kuaanan Techato, PSU
Friday 23 – July – 21	Geothermal (7) VDO presentation: Kantang Hot Springs Forest Park @ Trang Province Mr. Jafar Sharafeldean Albagir Mohammad	Country Report Assoc. Prof. Dr. Kuaanan Techato, PSU
Saturday 24 – July – 21	Official Holiday	
Sunday 25 – July – 21	Official Holiday	
Monday 26 – July – 21	Gasification (8) VDO presentation: Dr. Arkom's Lab @ PSU Miss Jane Rose Atwongyeire	Country Report Assoc. Prof. Dr. Kuaanan Techato, PSU
Tuesday 27 – July – 21	Conclusion Assoc. Prof. Dr. Kuaanan Techato, PSU	Closing Ceremony Assoc. Prof. Dr. Kuaanan Techato, PSU

- **Advance Assignment**
to present by Prepare Country Report each participant every day in the morning. The format should follow the topic as follows; Introduction, Name of Training Course, Name of Applicant, Home Address, Organization Address, Position/Role/Responsibility/Tasks in Organization, Country Information - Geography, climate, population, language, social, education, and economics, Situation of environment, law, and regulation related to the training topic, Problem related to the training course.
- **Reading Assignment**
Please read about Global Warming, Kyoto Protocol, Energy Conservation, Renewable Energy, Sustainable Energy Management, and Sustainability Measurement.
- **Project Assignment**
The solving scheme will be assigned to the participants to designed and it will be presented and discussed at the end.
- **Culture Assignment**
At the end of the day, participant should prepare a performance to show for cultural exchange.

6. Number of Participant

18 invited

2 Thai

7. Participant Criteria

- At least bachelor degree in relation to environment, energy, and science.
- At least 2 year working experience
- Related closely to global warming and sustainable energy management

8. Invited Country

Afghanistan, Angola, Bangladesh, Benin, Bhutan, Botswana, Burundi, Cambodia, China, CARICOM Member Countries, Egypt, Eritrea, Ethiopia, FEALAC Member Countries, Gabon, Ghana, India, Indonesia, Iran, Jordan, Kenya, Lao PDR, Lesotho, Libya, Madagascar, Malaysia, Maldives, Mali, Mauritania, Mongolia, Morocco, Mozambique, Myanmar, Namibia, Nepal, OAS Member Countries, Nigeria, Pakistan, Palestine, Philippines, PIF Member Countries (Fiji, Papua New Guinea, Palau, Cook Island, Solomon Island, Marshall Island, Niue, Samoa, Tonga and Vanuatu), Republic of Seychelles, Senegal, Sri Lanka, South Sudan, Sudan, Swaziland, Tajikistan, Tanzania, Timor-Leste, Tunisia, Vietnam, Uganda, Uzbekistan, Zambia and Thailand

9. Venue

Songkhla: Faculty of Environmental Management, Hatyai, Songkhla

Nakhon Si Thammarat: Wind turbine

Lampang: MAEMOH Electricity Generating Authority of Thailand

Pattalung: Green Power Company Limited

Trang: Hot Springs Forest Park

10. Expected Result

The participant will be able to be a balancer in the future and join with the faculty of environmental management to produce at least one case of global warming solving in their countries.

11. Evaluation

Passed the case study and attend more than 90% of total training period.

12. Institution

Funding will be supported by Thailand International Development Cooperation Agency, Ministry of Foreign Affairs.

13. Further relevant information is available at the following addresses:

Human Resource Development Bureau (HRD Branch 2)
Thailand International Development Cooperation Agency (TICA)
The Government Complex, Building B (South Zone), 8th Floor,
Chaengwattana Road, Laksi Bangkok 10210, Thailand
Tel.: (662) 2035000 ext. 43305 Fax: (662) 1439325
E-mail: boonmee@mf.go.th, sureeratp@mf.go.th

14. Institution

Faculty of Environmental Management, Prince of Songkla University
4 doctoral instructors in field of sustainable development, global warming and sustainable energy development
Contact Address and Person:
Dr. Kuaanan Techato,
Faculty of Environmental Management, Prince of Songkla University, Hat yai, Songkhla, Thailand 90110, Tel + 66-7428-6843 Fax +66-7442-9758
Email: kuaanan.t@psu.ac.th Website: www.envi.psu.ac.th