

## Capacity Building & Knowledge Sharing: Climate Change Downscaling and Hydrological Modelling & Time Series Analysis of Hydroclimate and Fisheries

**Asian Institute of Technology  
 October 15-21, 2018**

*Training Schedule  
 Venue: AITCC*

### Day 1: October 15, 2018 (Monday)

Time	Topic	Resource Person
08:30 – 09:00	Arrival and registration of participants	Ms. Supaluck Luchutawachee (Kom.)
<i>Session 01: Opening session</i>		
09:00 – 09:10	Welcome remarks	Dr. Vilas Nitivattananon, AIT
9:10 – 9:20	Welcome remarks	Ms. Napak Tesprasith, USAID Regional Development Mission for Asia, Regional Environment Office
9:20 – 9:30	Welcome remarks	Prof. John Sabo, ASU
9:30 – 9:40	Opening remarks	Dr. Eden Y Woon, President, AIT
9:40 – 9:50	Brief introduction and objectives of training programme	Dr. Sangam Shrestha, AIT
09:50 – 10:00	Introduction of training participants and resource persons	
10:00 – 10:30	<i>Group photo and coffee break</i>	
18:30 – 20:30	<i>Welcome dinner</i>	

**Day 4: October 18, 2018 (Thursday)**

Time	Topic	Resource Person
07:00 – 07:30	Arrival of participants in front of AITCC lobby	All
08:00 – 10:30	All participants and resources persons are heading to multipurpose Pasak Jolasid Dam, Lopburi	All
10:45 – 12:00	Introduction of dams, tour and Q&A	
12:00 – 13:00	<i>Lunch break – Field</i>	
13:00 – 16:00	Visit to Ayutthaya	All
17:30 – 19:30	Dinner at Ayutthaya, return to AIT	All (tbd)

**Day 5: October 19, 2018 (Friday)**

<i>Session 02: Introduction to climate change and climate change projection</i>		
09:00 – 10:00	Understanding climate change science, climate change scenario, responses to climate change and justice, and basic terminology, vulnerability and linkage between climate change and disaster	Dr. Sangam Shrestha, Lecture
10:00 – 10:30	<i>Coffee break</i>	
<i>Session 03: Introduction to hydrological modelling</i>		
10:30 – 12:00	Overview of the fundamentals of hydrologic modelling of watershed systems to develop and test watershed simulation models	Dr. Thanapon Piman, Lecture
12:00 – 13:00	<i>Lunch break</i>	
<i>Session 04: Software Installation and extraction of climate data</i>		
13:00 – 16:30	In this session participants learn about climate models and extraction of climate data to excel from nc file	Binod Bhatta, Muhammad Babur, Manish Shrestha, Hok Panha, Siriwat Boonwichai, Shakthi Gunawardana., Practical
16:30 – 17:30	<ul style="list-style-type: none"> <li>Group presentation about field trip of day 1</li> <li>Basic ideas and guidelines for next day group presentations</li> </ul>	Dr. Vilas Nitivattananon

**Day 6: October 20, 2018 (Saturday)**

<i>Session 05: Historical climate and hydrological analysis</i>		
09:00 - 09:30	RClimDex, climatic indices	Dr. Sangam Shrestha , Lecture
09:30 – 10:00	In this session participants learn how to analyze historical climate and hydrological indices, and graphical plotting	Binod Bhatta, Muhammad Babur, Manish Shrestha, Hok Panha, Siriwat Boonwichai, Shakthi Gunawardana, Practical
10:00 – 10:30	<i>Coffee break</i>	
<i>Session 06: Continue...</i>		
10:30 - 12:00	Continue..... of Session 5	Binod Bhatta, Muhammad Babur, Manish Shrestha, Hok Panha, Siriwat Boonwichai, Shakthi Gunawardana, Practical
12:00 - 13:00	<i>Lunch break</i>	
<i>Session 07: Data acquisition and quality control of required data</i>		
13:00 - 14:00	In this session participants learn to acquire spatial and temporal data for hydrological modelling and its quality check, and understand how to use those data for hydrological modelling	Dr. Thanapon Piman, Lecture
<i>Session 08: Linear scaling method of bias correction and performance analysis</i>		
14:00 – 17:30	Participants learn linear scaling method (LSM) of bias correction and calculate performance statistics ( $R^2$ , SD, RMSE) of climate data before and after bias correction	Binod Bhatta, Muhammad Babur, Manish Shrestha, Hok Panha, Siriwat Boonwichai, Shakthi Gunawardana, Practical

**Day 7: October 21, 2018 (Sunday)**

<i>Session 09: Quantification of future climate</i>		
09:00 – 10:00	Participants learn to quantify the future climate with respect to base line climate data during three time horizon i.e. near future 2030s [2020-2044], mid future 2060s [2045-2069], far future 2080s [2070-2099]	Binod Bhatta, Muhammad Babur, Manish Shrestha, Hok Panha, Siriwat Boonwichai, Shakthi Gunawardana, Practical
10:00 – 10:30	<i>Coffee break</i>	
<i>Session 10: Continue...</i>		
10:30 – 12:00	Continue..... of session 09	Binod Bhatta, Muhammad Babur, Manish Shrestha, Hok Panha, Siriwat Boonwichai, Shakthi Gunawardana, Practical
12:00 – 13:00	<i>Lunch break</i>	

<i>Session 11: Connecting hydrology with food and energy</i>		
13:00 – 14:30	Climate change impacts on hydrology, hydropower, and fisheries	Dr. Sangam Shrestha, Lecture
<i>Session 12: Demonstration on hydrological modelling considering climate change</i>		
14:30 – 16:00	In this session participants learn about hydrological modelling and climate change impacts on future hydrology of selected watershed	Dr. Thanapon Piman, Practical
<i>Session 13: Group presentation &amp; Discussion</i>		
16:00 – 17:30	Group presentations, [Q/A]	Dr. Vilas Nitivattananon
<i>Session 14: Closing session</i>		
17:30 –	<ul style="list-style-type: none"> <li>• Training evaluation</li> <li>• Review of training program</li> <li>• Overview of training from participants</li> <li>• Certificate distribution</li> <li>• Closing</li> </ul>	All