

Panel Discussion Summary Report
Asia-Pacific Regional Initiative on Energy, Environment and Ecosystems (3E) Nexus for
Sustainable Development
24-25th February, Hulhule Island, Male', and Maldives

Summary of each panel discussion by session-wise:

Session 3- Ecosystems

All four presentations on topic of Ecosystems have been discussed during this session.

First presentation introduced by Dr.Han Ji from East China Normal University. Title of presentation was on “Urbanization in the Shanghai-Yangtse River Delta Urban Agglomeration (SHYRDUA) region, China: Its trajectories, landscape impacts, and ecological issues. In the beginning of the presentation he introduced about socio-economic characteristic of study area of Shanghai region of China.

- Mainly, methodology of analysis for trajectories of urban development and its impact on urban landscapes have been introduced by. Dr.Han Ji. For the analysis of past history of Shanghai area was used Integrated Urban Ecology Model (GREAT). Basically, carbon emission per capita and GDP per capita used as basic indicators for the analysis of urban development in China. For the comparative analysis, Dr.Han Ji used some relevant data from 226 countries for the testing of the GREAT model.
- Regarding with output of analysis, some types or trajectories of urban development have been introduced. According to his analysis, three types of urban development have been classified. First trajectory is declining stage in the period of 1960-1978; second trajectory of stable development of urbanization- in the period of 1978-1988 and third trajectory of urbanization in China – acceleration stage for 1989-2011.
- In addition, impact of urban development on urban landscape was discussed in the second part of presentation. The phenomenon of urbanization influencing to urban landscape was characterized by land use and land cover changes (LUCC) in the region. Specially, increasing trend of transfer of crop land into

forestland by 1990-2000 and 2000-2010 highlighted in this part of presentation.

- Finally, methodology of assessment for overall quality of ecosystems was introduced basing on carbon source and quantity of carbon sink in urban area. Initial output of the overall quality assessment of ecosystem was introduced by some provinces of China.

After introduction of presentation, the speaker made answer and clarification of the participants. Output of this presentation was quite interesting for the delegated of some countries of the region.

Second presentation on “Restoring greenery for Sustainable Ecosystem Services in Urban Sprawl of Kathmandu Valley of Nepal” was made by Prof. Krishna Kumar Shrestha from Tribhuvan University of Nepal.

- In the beginning of presentation, Prof. Krishna Kumar Shrestha introduced about socio-economic condition of Nepal. subtropical zone, environmental issues, environmental index, life index, populous country ownership of forest resources;
- It gives clear picture of needs of greenery action in Kathmandu city due to promote carbon sink through greenery activity.
- Environmental issues in Kathmandu, including air pollution, water pollution, major governance issues; ecosystem services have been introduced to the participants. Hence, low carbon initiative will be new paradigm for the nation of Nepal in the future.

Third presentation on Study on suitability for Nang Xuan rice variety by combination of soil database and climate change scenario was introduced by Dr. Nguyen Xuan Hai from Vietnam National University. Introduction, objectives, data and methodology, land use issues related to suitability for Nang Xuan rice variety well illustrated and some initial results have been introduced for the discussion. According to results of climate modeling, adaptation of rice variety is crucial option of soil database and climate change scenario of for 2090.

Low temperature signal and prediction could be investigated more detail in the future

regarding with climate change scenario for Nang Xuan rice variety in Vietnam.

Last presentation on Ecological vulnerability issues in Mongolia: Towards Sustainability made by Dr. Tsogtbaatar Jamsran from Mongolian Academy of Sciences. He made introduction about vulnerability issues and factors in Mongolia and highlighted about pastureland ecosystem is very vulnerable comparing to other ecosystems and lifecosystems in Mongolia. In Mongolian land, ecological vulnerability is interlinked with climate change, drought, land degradation, desertification and recent mining activities. In this presentation, early warning of ecological vulnerability in Mongolia well justified and demonstrated through assessment of land degradation and desertification in the country.

Finally, that question is coming at national level how can co-exist energy harvesting and food and sustainability of rangeland ecosystem in Mongolia.