Training Workshop on the
System of Environmental-Economic Accounting for Water (SEEAW)
New York, 13-17 November 2006

Main conclusions

1. The meeting was opened by Mr. Havinga, Chief of the Economic Statistics Branch on behalf of Mr. Paul Cheung, Director of the Statistics Division of the Department of Economic and Social Affairs of the United Nations. Mr. Havinga welcomed the Chinese delegation and briefly introduced the background of the project "Pilot implementation of the SEEAW" and put in the broader context the work being done by UNSD on water accounts.

2. Mr. Chen, Deputy Director General of the Ministry of Water Resources thanked UNSD for organizing and hosting the workshop as part of one of the activities of the joint MWR and NBS project. He mentioned that the national government has decided to conduct a research on the SEEAW in China, and conduct pilot projects including in the Haihe river basin. This project is therefore very important for China.

Session 1 - SEEAW for Integrated Water Resource Management

3. The main water issues in China consist of: (a) Water scarcity, in particular in Northern China; (b) Floods, which amount up to 2-3% losses in GDP; (c) water pollution - environmental degradation, with rivers becoming dry and reduced wetland, is causing severe impacts on the ecosystems health.

4. China's strategy in the Water Management Plan calls for: (a) promoting the reuse of water; (b) establishing water conservation policies; (c) using advanced engineering construction projects to mobilize the water from the water rich south to the water scarce north; (d) promoting the use of alternative sources of water, including rain harvesting, desalination of seawater and reuse of wastewater and efficient use of the resource; and (e) protect water ecosystems.

5. China has already embraced Integrated Water Resource Management at the river-basin level.

Session 2 - The SEEAW framework and introduction to the 1993 SNA and classifications used in the SEEAW

6. The National Bureau of Statistics of China undertakes a benchmark compilation of the Input-Output tables, every 5 years since 1980s. 2002 is the last benchmark compilation. For the intervening years simplified IOT are produced. The I-O is also compiled at the provincial level with industries chosen by the provinces. It should be noted that the national table is not constructed by simple aggregation of the provincial tables.

Classification issues

7. *Industries related to water.* The NBS will clarify whether information on ISIC 36, 37 and 39 is available at the national and provincial level. The NBS will clarify whether the supply of waste and sewerage is classified in the product classification.

8. MWR is conducting research to compile data using a classification of activities consistent with ISIC at the two-digit level and a classification of products consistent with CPC at the more detailed level. The proposal of the new classifications has been submitted by the MWR to the NBS and it is currently under consideration for it to be issued as a national standard classification of water-related activities and products. The UNSD will review the proposal of the classifications of water-related industries (end of December).

9. In China, there are several Ministries that collect data related to water. Starting from 1994 the Ministry of Water Resources started to publish the Water Resources Bulletin. The Water Resource Bulletin combines information and data collected by various Government Institutions as well as other government agencies.

10. The classification of water uses presented in the Water Resources Bulletin for collecting physical data on water abstraction and returns and some economic data, is not consistent with ISIC. It consists of the following categories:

    a. Agriculture

    b. Industry – It includes Mining and quarrying and Manufacturing

    c. Big living – It includes construction, service industries, households (final consumption as well as for small scale activities)

    d. Environment – It deals with the water requirements of the environment in order to maintain the water ecosystem intact.

Session 3 – Physical supply and use tables

11. The Chinese delegation considered the PSUT tables in the SEEAW as conceptually very sound. However they indicated that their compilation requires considerable amount of information as well as some re-adjustment of their current classifications.

12. The presentation by the Chinese delegation linked the SEEAW standard tables with the data available in China at the level of the administrative regions and the river-basin, which seem to have different scope. The general conclusion is that the row- and column-totals can be compiled using the classification presented in para. 10. However, although some of the cells in the PSUT can be compiled with existing data sources, the information may be the result of estimates and may not be reliable. It was also noted that aligning the water-related data to the SEEAW classifications may be worth the effort and it is currently under consideration.

13. The river-basin agencies collect hydrological information, including abstraction and returns of water. The local government, which decides on water-policies including allocation of water among users, collects also water data as well as economic information. There is an issue of boundaries in particular in the case in which an administrative region falls in two river basins. Given the current data collection organization, it seems easier to compile the SEEAW tables at the level of administrative regions, but different options are currently being explored. At present, the allocation of different administrative regions that belong to two or more river basins is done on the basis of the proportion of land that falls within the river basins boundaries. Sometimes population and value added are taken into account.

14. There seems to be an issue of terminology, which reflects an issue of perspective. While the SEEAW takes the perspective of the economy and considers water abstraction as a "use" the water used by the economy, the China Water Resources Bulletin takes the perspective of the water resource system and calls the same concept "supply" of water from the environment.

15. In terms of data availability, the following was concluded:

    a. There exist good data on water supply from the big water supply companies. However, especially in the case of the rural areas where water may be supplied by a communal distribution system, the information may not be available. It is however estimated.

    b. Abstraction for own use is also estimated from the data on licenses and permits. It may be metered but this is not always the case, especially for water used by agriculture. The information is good in particular in northern China where water is scarce.

    c. There are no permits given for abstraction by households for final consumption (including water used for animals).

    d. There is good data on returns of water collected by CEPA.

    e. The concept of Water consumption is defined consistently with the SEEAW. It is calculated directly using coefficients, as opposed to the SEEAW in which it is calculated as the difference between supply and use.

Session 4 – Emission accounts

16. Emission accounts tables can in general be filled in according to the classification presented in para. 10. Surveys are carried out to collect information on:

    a. geographic location of the emissions

    b. volume of and pollutants contained in wastewater discharged without treatment

    c. volume of and pollutants contained in wastewater treated (on-site treatment or by ISIC 37)

    d. destination and pollutants contained in wastewater discharge

    e. pattern of discharge

17. In China it is mandatory to monitor the emission of COD and NH3. Gross emissions can be calculated.

18. Emission data is obtained through survey or estimated through coefficients.

19. The collection of emission data from non-point sources (e.g. agriculture, urban runoff, soil erosion, etc.) is carried out on an experimental basis and needs more guidance/country practices on how to carry out the data collection.

Session 5 – Hybrid supply and use tables

20. There is some information to compile the monetary SUTs which is compiled at the level of the administrative regions but not fully compatible with the SEEAW.

21. Information available for the compilation of the monetary SUTs include:

    a. Investment in water-related infrastructure

    b. Physical information of water-related infrastructure (e.g. number of dams, capacity of the dam, capacity of the water supply system, etc.)

    c. Service charges paid by the users for distributed water

    d. Water abstraction regulated by permits, number of permits, charges for over-abstraction.

    e. Number of employees, assets, expenditures, income, profit of water supply companies – at least the large companies

Session 6 – Asset accounts

22. There seems to be a wealth of data on water resources in China. Although stocks of assets are not compiled, all the flows in the asset accounts can be compiled either from direct observation or modeling.

23. Water policies focus on renewable resources. For this reason the information collected is on flows (including changes in stocks) and not on stocks. Extraction from fossil (confined groundwater) water is forbidden but the stock of fossil water is not monitored.

Session 7 - Quality accounts

24. The basic information to compile quality accounts is available. China classifies water resources according to various uses on the basis of a number of determinands. Quality classes are defined on the basis of the rule of the worst. To define the quality of the river, the river is divided in stretches homogeneous in terms of pollution which are aggregations on the basis of the length of the stretch. Stretches are not weighted on the basis of the flow, although information is available on the flows.

Session 8 – Valuation of Water Resources

25. This session provided the Chinese delegation an overview of different techniques to value water.

Session 9 – Applications of the SEEAW

26. This session provided the Chinese delegation an overview of several country examples in applications of the SEEAW, with a focus on Southern Africa. The Global Water Partnership presented the SEEAW as the much needed conceptual framework for monitoring and assessment within MDG/IWRM context.

Session 10 –Closing session

27. Mr Havinga thanked the Chinese delegation for their active participation in the training course.

28. Mr. Chen, Deputy Director General of the Ministry of Water Resources thanked UNSD again for organizing, hosting and conducting the workshop. Mr. Chen indicated that there is a strong political will in China to implement the SEEAW. Further, he indicated that the training broadened the perspective of the delegation to

look at water not only from the hydrological perspective but also look at its link with the economy, which is necessary for integrated water resource management.