**Attachment 1**

About HydroAsia

HydroAsia is an innovative course dedicated to water issues in Asia and based on the collaborative engineering concept. The partner institutions wish to innovate massively in the pedagogic approach and to promote a completely new approach that is based on the concept of “problem-oriented project based learning” (POPBL). The experience already gathered over more than 20 years in the HydroEurope has demonstrated that POPBL can provide a relevant approach in water domain. The introduction of a multidisciplinary course within which almost all generic competencies required for employability and sustainability can only be delivered through a complex curriculum and innovative teaching and learning as opposed to traditional teaching method. The basic principles of POPBL can be summarized as:

• Student-centred and able to motivate and gain commitment among students;

• Problem-oriented and not subject-oriented;

• Focus is more on learning process in finding solution rather than recall knowledge Project-Based which has goal and action for change;

• Exemplarity instead of generality;

• Promote group work/teamwork, social and communication skills.

The objective of the HydroAsia is to develop a unique set of pedagogic resources dedicated to the implementation of hydro-informatic solutions (numerical modelling tools) for water resources and water related hazards management. This set of resources (course material, exercises, data sets, modelling environment integrating numerical models and communication services) is jointly elaborated by the project partners. The partners integrate these new resources in specific training modules integrated within their master course and intensively use an innovative project oriented pedagogic approach towards the participants. The development of the resources and their innovative use allow promoting to young professionals the new approaches for water resources and water related hazard management. Most important, the practice gained through these training modules contributes to increase competences and professional skills of young engineers in charge water resources at the international scale.

Since the year 2000, many countries have adopted measures as legislative framework aimed at better manage water resources as well as reduce, through the right measures, the risks and impacts of floods to human well-being and the environment. Experience has shown that the most effective way is through the adoption of an integrated approach to flood management – one that recognizes both the opportunities provided by floodplains for socioeconomic activities and that manages the associated risks – which is essential for the sustainable exploitation of water resources. The success of an urban planning project is thus based on adopting an across-sector approach and know-how based on:

• Sound knowledge of legislative frameworks and economics (micro-economics, public finance and government procurement);

• Fundamental knowledge of earth science (e.g. hydrosphere and atmosphere)

• Strong skills in numerical modeling and data processing;

• Experience of using analysis and synthesis tools and associated methodologies;

• Familiarity with decision support system (DSS) and communication techniques.

**HydroAsia has the ambition to equip participants with new competences and skills for water issues management. Join us and discover HydroAsia spirit!**