The Hydrology 2020 Working Group was created on January 2002 to explore how hydrological sciences can meet the world water challenges that are expected to prevail by 2020 (for more details, consult the IAHS Newsletter N°74). The group, constituted by young scientists representing a large range of hydrological research fields, met for the second time on 11th -12th June 2002 in Paris to continue its discussions to identify possible and recommended directions for the field of future hydrology.

Each member of the group presented the state of the art in his/her fields of interest. The main hydrological themes presented concerned scientific research as well as applications of hydrology: global hydrology, ground water, tracers, erosion, runoff generation processes, snow hydrology, ecohydrology, assessment of global reservoir water resources, water quality, remote sensing techniques, modeling approaches, atmospheric model downscaling and impact studies, hydrology in the international policy arena, and application of hydrology to water resources management. For each theme, the most important research in the past 20 years ago was reviewed, and their impact on the present state of the field was explored. Major gaps in hydrological knowledge and understanding were assessed in order to identify the future directions to be explored. Finally, each member gave a personal view of the future evolution of his/her field of interest.

Subsequent discussion focused on the current gaps within hydrological science and expected trends within the discipline during the next 20 years. Although hydrology is linked with many other disciplines (ecology, soil science, climatology, geology, etc.), there are many aspects that are unique to hydrology. For example, hydrology is the only science dedicated to investigate water issues such as temporal availability/variability of water resources, water quality or water resources in a changing environment. The group also discussed several "bottlenecks" that are current obstacles to progress within the discipline. These bottlenecks ranged from scientific obstacles to institutional, funding, and policy-related issues. Great hopes for future developments in hydrology are founded on technological advances for providing new sensors and tracers, improved communication tools (e.g., the Internet), remote sensing techniques and modeling improvements. Finally, it is the working group's view that hydrology should be a more proactive problem-solving science, with closer connections to the societal challenges and with better cooperation between the various hydrological sub-disciplines.

Member tasks over the next year include the production of an intermediate report, which will deal with four critical questions: the uniqueness of hydrology, the needs of society, advances in technology, and critical bottlenecks. The interim report will be disseminated at the IAHS meeting in Sapporo (July 2003). The working group will also organize an open workshop during the IAHS meeting, with the goal to meet and discuss with a large panel of hydrologists and other scientists. The debate between HY2020 members and other participants will focus on a set of critical questions concerning scientific and political choices, for instance:

- Do we need sophisticated physically-based models when the data sets are not sufficient?
- How can different measuring and modeling scales be combined?
- Should hydrology be integrated into other sciences or be an integrater of other sciences?
- How can the field of hydrology more effectively influence water policy?
- How can hydrology effectively respond to the needs of the developing countries?

- Will hydrologists succeed in promoting and helping to develop international networks for measurement, knowledge and cooperation?
- Can we attract the necessary quality and quantity of young scientists to the field of hydrology that are required to meet the water challenges of the future?…

The HY2020 group invites everybody interested in discussing such questions to participate in the Sapporo workshop (http://www.cig.ensmp.fr/~iahs/sapporo/iahs-sapporo.htm). Please send comments and suggestions to: taikan@iis.u-tokyo.ac.jp.