

## ***Interactive comment on “Hydrological education and training needs in Sub-Saharan Africa: requirements, constraints and progress” by D. A. Hughes***

**A. Viglione (Referee)**

viglione@hydro.tuwien.ac.at

Received and published: 23 January 2012

The paper gives a perspective on the education needs in sub-Saharan Africa. The content is based on the indeed relevant personal experience of the author. He identifies the constrains to an adequate development of academic research capacity and technical skills. The main constrains are: lack of funding, which are intermittent and mainly from foreign countries; lack of faculty members/experts in hydrology; too strong focus on practical problems without recognising the importance of teaching/learning hydrology as a science; and lack of involvement of local administration/water resources managers

C5827

in helping to translate the research into practice. The author suggests that increasing the networking within sub-Saharan universities/institutions and promoting sharing of data and experience could help to build the critical mass of local expertise, needed for the education/training system to be self-sustainable.

The paper is well written, synthetic and well organised. As the author says, the content of the paper is based on personal experience and opinions discussed with other teachers/researchers/engineers in the area. Personally, I can share some thoughts on my recent experience. During Christmas time this year, I was involved in a three-week Winter Research Workshop at the Ethiopian Institute of Water Resources (EIWR) held in Addis Ababa. It was my first time in Africa and my first academic experience there. All the constrains discussed in this paper are very much real in Ethiopia. Actually, the EIWR has been launched less than one year ago to face most of them, specially the lack of faculty members/experts in hydrology who are required due to the fast growing demand in education, research and development in the water sector in Ethiopia. 18 PhD and 24 MSc students from many universities in the country have been enrolled by the institute. The theses/dissertations are designed to focus on Ethiopia's immediate hydrological problems on selected basins, but three research-papers in international journals are required from each PhD, who will be coordinated by three advisors each - one from US/EU, one from Ethiopian Universities, and one water professional from the sector. We were asked to go there mainly to give our opinion on the PhD proposals and help the students to finalise them. They address mainly the three topics: Drinking Water - Food Security - Hydroelectric Energy. During the workshop, we proposed a collective exercise of comparative hydrology using data collected by some of the students. I was amazed by the enthusiasm and commitment of all of them. Despite all the problems underlined in this paper, I can see the future of hydrology (in Ethiopia) with optimism, due to this new generation of hydrologists. Also the population as a whole is fully engaged. Recently all Ethiopians donated 100% of their salary for one month to fund the construction of the Renaissance Dam. From those we spoke to, most did this willingly, recognising the importance of water resource development to their future and

C5828

the future of their country.

Alberto

---

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 8, 10565, 2011.

C5829