

G8 Recognition for Earth Observation

The G8 concluded its summit this year with a declaration deserving of our community's full attention. The Hokkaido Toyako Summit Leaders Declaration observes in Paragraph 31: "To respond to the growing demand for Earth observation data, we will accelerate efforts within the Global Earth Observation System of Systems (GEOSS), which builds on the work of UN specialized agencies and programs, in priority areas, inter alia, climate change and water resources management, by strengthening observation, prediction and data sharing. We also support capacity building for developing countries in earth observations and promote interoperability and linkage with other partners."

To my knowledge, this is the first time that the importance of earth observation has been recognised and expressed at this top political level. Equally interesting is the direct link to the need for capacity building. ITC has been active in this field for almost sixty years and our experience has been that despite all our intensive efforts to train and/or educate scientists and professionals, there was always a growing need for more.

Based on our (ITC) experience we estimate that, on average in each country, about two to four geo-information and earth-observation professionals are required per ten thousand inhabitants. This means that worldwide this community should consist of some 1.2 to 2.4 million professionals. It is reasonable to assume that a professional career lasts about forty years, that retraining is required about every fifteen of these, and that 10% of professionals annually change job to an other sector. This implies that about 20% of the professional community requires education or re-education each year, say 250,000 to 500,000 persons.

This is a highly innovative sector and thus demands a high percentage of highly educated professionals; say 40%. That is to say we have to (re)educate about 100,000 to 120,000 professionals at this level each year. If we assume that a course of higher education (i.e. Masters programmes) in this field delivers an average of 25 graduates per year, we need about four to five thousand courses across the world. Also needed are courses for the 60% of professionals who need to be educated at other levels, such as vocational training etc.

I am not quite sure precisely how many courses are currently available, but my estimate is that no more than 25% or 30% of the required educational and training capacity is presently available. So substantial investments are required. The GEOSS process referred to by the G8 provides an adequate umbrella. The GEO Capacity Building Committee has forwarded the idea of a global 'virtual university' for Earth Observation and Geo-Information. The time would seem to be right for professional societies like ISPRS, IEEE, FIG, GSDI, ICA and universities to get together and elaborate this idea, to see how the concept might be realised so as to expand present educational capacity.