

Anthropocene

The age known as the Anthropocene is upon us and it is an existential reality of our time. We have never before seen an era with such rapid technological progress. Progress, however, that has had – and is having – a major impact on our planet, leading to undeniable climate change. According to Jeffrey Sachs, director of the Earth Institute and professor of Sustainable Development at the Columbia University in New York, USA, new technological developments are needed to help us out of the trap of an unsustainable future. An economist by profession, Sachs was director of the UN Millennium Project from 2002 to 2006 and special advisor to the United Nations Secretary-General Kofi Annan on the Millennium Development Goals, the internationally agreed goals to reduce extreme poverty, disease and hunger by the year 2015. At the Annual Meeting of the American Association of Geographers, 24-26 February 2012 in New York City, he called for rapid research & development in geo-IT. In his view, new geo-IT applications that help to incorporate the spatial component into the economy – and hence into sustainable development – could be just the technological developments we need to escape the trap of the Anthropocene.

There are very few global economic models with spatial components available, yet there is a considerable need for them. Economists all over the world would find it very helpful to study spatial temporal models incorporating demographic and technological changes linked to physical geography. To open up a new chapter of analytical spatial-temporal modelling would not only offer chances to the field of geomatics in terms of business opportunities and new products, but it would also help those professionals, policymakers and governments who are involved in sustainability matters. One can imagine how many questions could be answered through this kind of modelling. The impact of local sustainability initiatives and actions could be measured on a global scale. One could gain insights into the effect of demographic phenomena such as migrant streams on economies, and hence sustainable development, as well as the changes caused by technology.

This is an amazing challenge for the field of geomatics. Of course, initiatives are being deployed here and there, and we have covered them – such as Gilberto Camara from INPE in Brazil who is mapping deforestation with satellite imagery (featured in GIM International July 2011) and Rainer Reuter who expects remote sensing to play a significant role in environmental issues (featured in GIM International October 2011). Nevertheless, the next step is to link these initiatives and developments to form the currently lacking spatial temporal model Sachs was talking about. Such a model could give us valuable insight into how to reverse – at least partially – the negative effects of technologies that lead to climate change. I realise it's probably wishful thinking, but just imagine how great it would be if geomatics offered us a way out of the Anthropocene!