

Welcome Address

Ladies and Gentlemen, Dear Participants, it is my pleasure to welcome you to this 10th International Symposium on High Mountain Remote Sensing Cartography. We are very proud to have you here and hope that you will have very interesting sessions with much learning and sharing of experiences. I hope that you will also have the time to enjoy the hospitality not just of ICIMOD, but also of Kathmandu and Nepal. For those who haven't been here before, you will see that it is really worthwhile.

I would like particularly to welcome Prof Dr Manfred Buchroithner, founder of the HMRSC Symposia series, from the International Cartography Association (ICA), Austria; Dr Jürg Lichtenegger from the European Space Agency (ESA); Dr MSR Murthy from the National Remote Sensing Centre of India; Prof Dr Brigitte Winklehner, President of Eurasia-Pacific Uninet and all the Austrian team with her; and Dr Wolfgang Sulzer and Dr Victor Kaufman from the University of Graz.

I think that it is very appropriate and timely to have this 10th Symposium in Nepal. If you are reading the newspapers, you will know about the flooding that is happening in the Koshi catchment areas due to the dam breach. What happened there is an engineering failure, but it is also an extreme event of the type that will be perpetuated by climate change. In the future, we can expect to experience more flooding during monsoons and extended dry days in the winter period. Here, we see already that remote sensing is very important as an instrument for provision and planning. I also think that the whole debate on climate change has become more dynamic, starting with the publication of the fourth report of IPCC, where for the first time we have a consensus among the international scientific community on the origins and consequences of climate change. We realise suddenly that the agenda that ICIMOD is pursuing is the mainstream agenda. Now you do realise that the IPCC report doesn't talk much about the Hindu Kush-Himalayas and the mountain areas. When we talk about this to the scientists, they say that they had to publish a scientific report but they don't have sufficient data on the Hindu Kush-Himalayan region to be able to argue consistently on the scientific level. Now what does this mean for us? It means that lack of measuring stations, and lack of hard core facts and figures, has to be compensated partly by remote sensing. Therefore remote sensing technologies are a very important element for us to be able to substantiate and discuss what is happening in this region.

I am emphasising the Hindu Kush-Himalayan region because it is where we are, but other mountain areas are also as much affected by climate change as the Hindu Kush-Himalayas. However, for the Alpine areas we have long range data, on glacier monitoring alone there are data available going back to 1895. This is not the case in the Hindu Kush-Himalayas, which is the basic challenge we are having and why we are here in the HMRSC conference; not only ICIMOD but the whole region has a high expectation.

We are particularly proud as ICIMOD that we are in a position to host this symposium in Nepal. We realise that the debate on climate change is making our agenda even more important; awareness in the region among our member countries, as well as internationally, has increased substantially. So now we are considering how we can respond to these growing challenges. We, as ICIMOD, have come through an intensive process of trying to see what are our strengths, what is our comparative advantage, what can we do in the region where we have countries like China, India, and Pakistan, where governments are investing heavily in strengthening their institutions. This is less the case in Nepal which has just gone through ten very difficult years, but 25 years ago, ICIMOD might have been the only institution in the region taking up such issues. Today, we have very strong regional partners. So what is the specific role of ICIMOD in this context?

Coming back to the IPCC report, we realise that although we know to some extent what is happening in the mountain ecosystem, and we know the likely risks that we will be facing, we have problems to substantiate these ideas in detail with facts and figures. We have to continue to reduce the scientific uncertainty on climate change. Here we think that remote sensing instruments are very important ingredients; and of course we think that mountain ecosystems have a special need for remote sensing because there is a deficit of ground-based stations, and it is difficult to have ground measurements because of the difficult terrain, poor accessibility, and lack of infrastructure. Equally, we see that remote sensing instruments, even with the progress of technology, are mainly useful for providing an overview. For details, we still have to marry remote sensing instruments with field verification, and I think here ICIMOD has a role to play. But a small institution like ICIMOD is not in a position to do this for the whole of the Hindu Kush-Himalayas. That is why we have to work with and through our strategic partners in these member countries and contribute to the strengthening of their capacities.

Another role of ICIMOD is bringing people together as in this symposium to discuss common methodologies and issues, so that we speak the same language. We also realise that we have to build up regional data banks. We have to have access to common data so that we know what is happening beyond the borders of individual countries, this is one of the essential lessons of the whole debate on climate change. In the mountain ecosystem, and particularly in the Hindu Kush-Himalayas, the issues related to climate change are transboundary, they are regional, and I think the role of ICIMOD is to have a regional vision and to discuss this with the regional institutions.

We also need certain regional programmes because they have to be transboundary. For example, you can look at the details of what is happening in the Koshi, and look for an engineering solution, but actually you have to be aware of the whole river system. We consider the Koshi to be a typical Nepali river system, but if you look at the map, you can see that the catchment area of the Koshi in China is as large as the one in Nepal. If you look at the precipitation maps, the precipitation in Nepal in the week before and the week after the disaster in the Koshi was not above average; the main precipitation was actually on the China/Tibet AR side. I am not saying that this was the cause, but it does show that when there are such problems we have to consider the whole river system; we have to see the whole base and not just the part of an engineering issue in the dam.

Here again, I return to your responsibility. We are expecting answers and assistance from you to promote remote sensing technologies in order to have instruments with a long-term value, not just in ICIMOD, but so that we can discuss with our regional partners. I think this is a very important aspect, and we are very determined in these discussions and exchange. We have a strong demand for ICIMOD, and when I say 'for ICIMOD', then I mean, and insist, that it has to be for the region, for the whole Hindu Kush-Himalayan mountain system. It has to be for our member countries, and if we can play a role as a facilitator, as a knowledge hub, then this is exactly the role we want to play.

I wish you a very successful three days. There are some very relevant and interesting topics and I am sure that you will have very interesting discussions; I hope that the meeting will be fruitful and interesting for you all. I wish you all the best, and thank you very much.

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