

Rappoteur's Summary

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SESSION V- "Are Regional/Developmental Characteristics Well-Represented within IAMs?"

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for Environmental Studies (AIRIES).

Session V discussed the question "Are regional / developmental characteristics well-represented within IAMs?" The meeting was chaired by Dr. Fred Langeweg, National Institute for Public Health and the Environment (RIVM). Dr. Mohan Munasinghe gave a presentation entitled 'Representation of Value Systems in Developing Countries', and Dr. Weerawat Chantanakome (Thailand) gave a presentation on 'Reflection of Indigenous Culture in Developing Countries'. Dr. Richard S.J. Tol and Prof. Hadi Dowlatabadi presented nominated discussions. The main result was the view that regional/developmental characteristics are NOT well-represented within IAMs.

Dr. Munasinghe's presentation was entitled "Representation of Value Systems in Developing Countries." A main point was that values should be considered as weights in decision-making. A common approach is to compare marginal costs to marginal benefits but social elements and environmental elements such as culture biodiversity, etc. are harder to capture in modelling. Making evaluations based on willingness to pay can lead to great distortions, since often willingness is indistinguishable from ability to pay. For example, the amount the average person in Sri Lanka is able to pay to avoid a disease, such as diarrhea, is much less than what an American would be able to pay. Valuation of human life is both difficult and problematic, and Dr. Munasinghe discussed various approaches, such as considering emissions rights per capita versus gross emissions. He gave an example of two approaches to valuation: air cargo is charged by weight, whereas air travel charged per capita (tickets for airline seats). He pointed out the difference between 'procedural equity' versus 'consequential equity', citing United Nations voting procedures, and that the way this is handled for burden sharing of carbon reductions will affect the willingness of countries to get involved.

He concluded that cultural diversity is as important as biodiversity, as a survival tool. We need to keep in mind that dealing with climate change is not only a technical problem, but also includes social aspects.

Dr. Tol's (Netherlands) presentation was entitled "Economic Valuation and Asian Values." His emphasis was that although some people resist the use of cost-benefit analysis for assessing the impacts of climate change, it is still necessary because in the end, policy makers will make decisions based on cost-benefit analysis. Willingness to accept compensation is generally higher than willingness to pay for something for which a party is accountable. Regions need to do their own analysis, since global figures do not reflect the different costs and benefits of regions. He described his method of aggregating local figures and then building global aggregates in modelling.

Dr. Chantanakome's (Thailand) presentation was entitled "Reflection of Indigenous Culture in Developing Countries." His approach was based on the Asian Development Bank framework for considering the impact on indigenous people of development projects. His main points were that people are the center of development and development is for all people; climate change has impacts on all people; social dimension issues are involved in climate change, and therefore the human perspective and human resources development are necessary. We need to narrow the gap between decision makers and scientists, and between North and South; this is an evolving process; and we must try to ensure that AIMs are fully

representative. He closed by saying that a goal should be building IAMs upon the desirable socio-cultural characteristics of communications design models that are socially responsive, thereby facilitating more effective project implementation.

Hadi Dowlatabadi made a 'nominated discussion.' Commenting on previous discussions, he said that cultures are evolving rapidly. We don't know what culture is now. Cultures which have survived in the past have had a balance between their economic and social aspects. Social norms now are being changed by changes in ideals and aspirations. Has culture been included in the past in assessment studies? The Mackenzie Basin Impact (Canada) study has done this well, he said. He reported that in his work he found that subjectivity dominates in every case over scientific uncertainty. The culture flavors are reflected in different ways in models. Although many models account for marginal costs, the real world does not reflect marginal figures, and climate change is 'non-marginal change.' It involves changes over many cultures, and over many generations, and not in only one region or nation, but internationally. He said that there was merit in considering the dollar cost of climate change mitigation versus dollar cost of health protection.

Stewart Cohen (Canada) made a 'nominated discussion.' Referring to the Mackenzie Basin Impact Study, he said it took indigenous knowledge into account, but that no way was found to fit indigenous knowledge into a model. A key question is "Do we need to include culture into models? Or can we elevate integrated assessment to include social and cultural issues, even without forcing it into a model."

In the succeeding discussion, a Sri Lankan participant agreed that the question was good, and that there was an important difference between computer models and the process of integrated assessment. Researchers in Sri Lanka looked at elements of sustainable development. Certain factors, such as loss of human life and the number of days of illness (sick days), are separate from objective functions in models. Biodiversity loss is dealt with in a separate index. Integrated assessment attempts to use other ways to consider these. He said that all figures and factors should not be expected to fit into one enormous model.

Another participant said that in the end, each and every factor must be quantified, and it should be done explicitly rather than implicitly and consistently rather than inconsistently. While agreeing with Mr. Cohen's points, he said that ultimately decisions are made quantitatively.

On the other hand, Mr. Chantanakome agreed with Dr. Munasinghe that qualitative and quantitative elements should be treated differently from the beginning.