

Track three: Sustainable Development

1. Introduction

Sustainable development is a fundamental element of modern policy-making. Many challenges related to global human activities require a central focus on sustainability and development. These challenges include: long-term and sudden climate change; extreme poverty; infectious disease in a globalising world; global demographic change; urban growth; biodiversity loss and ecosystem functioning, and the sustainable use of ocean space and its resources.

The main objective of this track is to give students insights into the principles of governance, sustainable development, and scientific theories by understanding the challenges, constraints and interactions of its academic definitions, decision-making tools and practices. The track builds on an understanding of governance and sustainable development as a co-evolutionary, adaptive process that needs to permeate both human societies and the natural environment. The emphasis will be on explaining and using the generic, complex and, by definition, flexible terms of sustainable development with the help of specific tools and methods. Attention will be given to the processes of international (environmental) politics, the role of NGOs and the civil society.

The unique feature of the course is its interdisciplinary core, which provides students with a broad and integrated understanding of sustainable development. It differs from other programmes related to sustainable development in its coverage of sustainable development not only from an ecological perspective, but also from social, economic and institutional point of views.

2. The multidisciplinary research base

The External advisor of this track is Prof. John Robinson, working at the Sustainable Development Research Initiative (SDRI), University of British Columbia in Canada.

The educational programme of the SD-track is supported by research of the various research groups that participate in the programme. It furthermore takes advantages of the large network the International Centre for Integrative Studies has established the last several years, reflected by guest-speakers from national and international research institutes and universities.

International Centre for Integrated assessment and Sustainable development (ICIS) at the University of Maastricht addresses the increasing need for integrated analyses of environments and complex issues (e.g. sustainable development, human health, tourism and water). Such integrative studies involve analysis of the causes, effects and the mutual interlinkages between economic, environmental, institutional and socio-cultural processes associated with a specific environment or complex issue. These interdisciplinary analyses complemented with participatory processes involving stakeholders usually form the basis for the development of visions and long-term strategies. ICIS can be characterized as an institute for Integrated Assessment. The mission of ICIS is thus to support consciousness-raising processes with regard to integrative thinking and acting in policy circles, the business community and society at large.

Maastricht Economic Research Institute on Innovation and Technology (MERIT) research activities centre around the analysis of economic aspects of technical change and innovation, clustered around several themes. The macroeconomics and international economics division investigates issues of technical change mainly in the fields of human capital and labour, economic growth and international economics. Research on the microeconomics of technology and industrial dynamics focuses on the processes at the firm, sector, and regional levels by which technology is developed and diffuses throughout the economy.

METRO, the Institute for Transnational Legal Research (Maastrichts Europees instituut voor Transnationaal Rechtswetenschappelijk Onderzoek), was founded in 1991 by the Faculty of Law of the Universiteit Maastricht. METRO initiates and stimulates comparative and transboundary legal

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research and organizes conferences about various legal themes. Moreover, the institute publishes the Maastricht Journal of European and Comparative Law and the *Ius Commune Europaeum* book series.

The academic staff of the Faculty of Arts and Culture conducts research into the problems of modern culture from a broad cultural perspective. In this, an interdisciplinary approach is applied. The domain thus formed overlaps both the humanities and the social sciences. The composite disciplines are: Philosophy, History, Literature and Art, social science & Technology. The Faculty of Arts and Culture participates in three national research schools: the Graduate School of Science, Technology and Modern Culture (WTMC), the Huizinga Institute of Cultural History, and the Graduate School for Literary Studies (OSL).

The School of Natural Sciences, Open University Netherlands, develops courses in biotechnology, photochemistry, environmental policy, nutrition, toxicology, and other fields. The problem-oriented

courses link an understanding of natural phenomena to policy and management analyses. It also offers a Dutch degree programme in Environmental Science. There are two areas of specialisation: natural science, which concentrates on the scientific aspects of environmental problems; policy, which explores the physical and social causes of environmental problems and how to solve them best through policy measures.

Track three, core course 1: Introduction to Sustainable Development

1. Content and objectives

According to the Brundtland report, sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. But what does this mean in reality for policy makers? The concept of sustainable development has become critically important, since many of the key policy challenges facing the planet need a central focus on sustainability and development. Sustainable development requires an understanding that inaction has consequences and that we must find innovative ways to deal with the important economic, social and ecological trade-offs involved. This course gives an introduction to the concept of sustainable development, the different perspectives involved and its implications for policymaking.

2. Course organization

The course consists of tutorial meetings and work sessions. Additionally lectures will be given.

3. Examination

The course will be examined by assignments and several exams

4. Staff

Coordinator: Maud Huynen (ICIS, Universiteit Maastricht)

Pim Martens (ICIS, Universiteit Maastricht)

5. Literature (selection)

- Robinson, J. (2002). Squaring the circle? Some thoughts on the idea of sustainable development. *Ecological Economics* 48, 369-384
- Hardin, G. (1968). The tragedy of the commons. *Science* 162, 1243-1248
- UNEP (2002) Integrating Environment and Development 1972-2002. In: UNEP. *Global Environmental Outlook 3*. London; Earthscan Publications Ltd.
- Burg, J. (2003). The World Summit on sustainable development: empty talk or Call to Action. *Journal of environment and development* 12, 111-120
- Speth, JG (2003) Perspectives on the Johannesburg Summit. *Environment* 45, 24-29.
- Rees, W. (2002). Globalization and sustainability: Conflict or Convergence? *Bulletin of science, technology and society*, 22, 249-268.
- Rennet, W. and Martens, P. (2003). The globalisation timeline. *Integrated Assessment*.
- Ostrom, E. et al. (Eds), (2002). *The drama of the commons*. Committee on the Human Dimensions of Global Change. National Academic Press, Washington, USA
- WRI (2003). *The world resources 2002-2004 Decisions for the earth: Balance, voice and power*. Chapter 7: International Environmental governance. World Resources Institute, Washington D.C.

Track three, core course 2: Implementing Sustainable Development – A Governance Perspective

1. Content and objectives

Implementing sustainable development implies the reconciliation of ecological, economic and social systems that operate at very different levels and speeds: the slow dynamics of many ecosystems, the daily need to generate income, and the long-term aspirations of societies. Good governance plays a pivotal role in this process. To be effective, international agreements need to be implemented in national and local policies, actions and mindsets. This course provides a governance perspective on sustainable development. Governance practices at the international, national, and local levels are examined, with an emphasis on the issues of power, process and enforcement. Students will learn that there are large differences between international, national and local governance arenas in terms of stakeholder involvement and relevant trade-offs.

2. Course organization

The course consists of PBL sessions, working sessions and lectures.

3. Examination

The course will be examined by a several assignments.

4. Staff

Coordinator: Bas Amelung

Annemarie van Zeijl-Rozema

5. Literature (selection)

- Barrett, S. (1998). On the Theory and Diplomacy of Environmental Treaty-Making. *Environmental and Resource Economics*, 11(3-4), 317-333.
- WRI. (2003). *World Resources 2002-2004: Decisions for the Earth: Balance, Voice, and Power*. Washington: World Resources Institute.
- Duffy, R. (2006). The potential and pitfalls of global environmental governance: The politics of transfrontier conservation areas in Southern Africa. *Political Geography*, 25(1), 89-112.
- Gupta, J. (2002). Global Sustainable Development Governance: Institutional Challenges from a Theoretical Perspective. *International Environmental Agreements: Politics, Law and Economics*, 2(4), 361-388.
- Aguilar Fernández, S. "Sustainability is cool": rhetorical participatory discourse in the Spanish strategy for sustainable development (2004). (pp128-161). In: W.M. Lafferty (Ed), *Governance for sustainable development; the challenge of adapting form to function*. Cheltenham, UK, Edward Elgar Publishing
- Bass, S. and B. Dalal-Clayton (2002). Bridging the knowledge gap in SD strategies: research partnerships for sustainable development. IIED WSSD Briefing paper
- UNDESA (2002). Guidance in preparing a national sustainable development strategy: managing sustainable development in the new millennium. Outcome of the international forum on national sustainable development strategies, Accra, Ghana, 7-9 November 2001. Background paper no. 13. DESA/DSD/PC2/BP13.
- Grant, R.W. and R.O. Keohane (2004). Accountability and abuses of power in world politics. *International Law and Justice (IILJ) Working Paper 2004/7*.
- Spaargaren, G. (2003). Sustainable Consumption: A Theoretical and Environmental Policy Perspective. *Society & Natural Resources* 16(8), 687-701.
- Spaargaren, G., & Martens, S. (2004). Globalization and the Role of Citizen-Consumers in Environmental Politics. In F. Wijen, K. Zoeteman & J. Pieters (Eds.), *A Handbook of Globalization and Environmental Policy*. Cheltenham Edward Elgar.
- Goodman, M. K. (2004). Reading fair trade: political ecological imaginary and the moral economy of fair trade foods. *Political Geography*, 23(7), 891-915.
- Renard, M.-C. (2003). Fair trade: quality, market and conventions. *Journal of Rural Studies*, 19(1), 87-96.
- Renard, M.-C. (2005). Quality certification, regulation and power in fair trade. *Journal of Rural Studies*, 21(4), 419-431
- IISD (1997). The Belagio Principles for Assessment. *Assessing sustainable development: principles in practice*. Hardi, P. and Zdan, T. (Eds.). Canada. pp 1-4.

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- Reed, M.S., E.D.G. Fraser, A.J. Dougill (2006). *An adaptive learning process for developing and applying sustainability indicators with local communities*. *Ecological Economics*. Vol 59. Issue 4. pp 406-418.

- UN (1993). Chapter 40. *Agenda 21 : programme of action for sustainable development. Rio declaration on environment and development. Statement of forest*. United Nations conference on environment and development (UNCED), 3-14 June 1992, Rio de Janeiro, Brazil. UNDPI, New York.

Track three, core course 3: Sustainability in a Globalising World

1. Content and objectives

Globalisation has led to a historically unprecedented situation in which human activities are affecting many parts of the global system. One of the results of globalisation is a range of unsustainable trends in the natural and social environment. Climate change, loss of biodiversity, global health problems, and fresh water scarcity are just a few examples of today's worldwide concerns. Based on these trends we can ask ourselves the question, how sustainable is the current trend in globalisation? To be able to answer this question, a good understanding of the underlying dynamics of globalisation is needed. This course provides that knowledge by deepening the understanding of the nature, processes and potentials impacts of globalisation. Special attention is given to what globalisation means within the context of sustainable development.

2. Course organization

The course will use problem-based learning (PBL) tutorial sessions, work sessions, lectures and movie discussions.

3. Examination

- The course will be examined by a writing assignment.

4. Staff

Coordinator: Pim Martens (ICIS, Universiteit Maastricht)

5. Literature (selection)

- Held, D., McGrew, A., Goldblatt, D. & Perraton, J. (1999). *Global Transformations*. Stanford University Press, Stanford.
- Rennen, W. and Martens, P. (2002). The globalisation timeline. *Integrated Assessment Integrated Assessment*, 4(3), 137-144.
- <http://www.globalisationguide.org/>
- Randolph, J. (2001). G-Index: 'globalisation measured ...' World Markets Research Centre.
- P. Martens and D. Zywiets (2004). Rethinking globalisation: a modified globalisation index. *Journal of International Development*, 18, 331-350
- Scholte, J. A. (2002). What is Globalization? The Definitional Issue - Again. CSGR Working Paper No. 109/02. Warwick, Centre for the Study of Globalisation and Regionalisation, University of Warwick.
- A.T. Kearney / Foreign Policy Globalization Index (2003). *Foreign Policy*. Washington, D.C., Carnegie Endowment for International Peace: 60-72.
- Martens, P. & Rotmans, J. (eds.) (2002) *Transitions in a globalising world*. Swets & Zeitlinger Publishers, Linne.
- Martens, P. & Rotmans, J. (2005). Transitions in a globalising world. *Futures*, 37, 1133-1144.

Track three, core course 4: Integrated Assessment

1. Content and objectives

Sustainable development problems are so complex that they can no longer be solved by answers provided by a single scientific discipline. Integrated solutions are needed to answer the current challenges. The discipline of integrated assessment offers a number of tools which can help structuring knowledge elements from various scientific disciplines in such a manner that all relevant aspects of a complex problem are considered in their mutual coherence for the benefit of decisionmaking.

Among these tools are participatory methods, modelling, scenario analysis and indicator analysis. This course will introduce students to the new scientific discipline of integrated assessment, make them acquainted with integrated assessment methodologies and learn how these can help in finding policy responses to the challenges originating from the need for sustainable development.

2. Course organization

The course will use 'problem-based learning (PBL)' as a leading principle, combined with lectures and an assignment.

3. Examination

The course will be examined by a number of written assignments.

4. Staff

Coordinator: Pieter Valkering (ICIS, Universiteit Maastricht)

Planning group: Pim Martens (ICIS, Universiteit Maastricht)

Claudia Pahl-Wostl (USF Institute, University of Osnabrück)

Jan Rotmans (ICIS, Universiteit Maastricht)

Darryn McEvoy (ICIS, Universiteit Maastricht)

5. Literature (selection)

- Rotmans, J. (1998), 'Methods for Integrated Assessment: the challenges and opportunities ahead', *Environmental Modelling and Assessment*, Vol. 3, no. 2, 155-179.
- van Asselt, M.B.A. and N. Rijkens-Klomp, *A Look in the Mirror: Reflection on participation in Integrated Assessment from a methodological perspective*, in *Global Environmental Change*. 2002.
- Van der Sluijs, J.P., *A way out of the credibility crisis of models used in integrated environmental assessment*. *Futures*, 2002. 34: p. 133-146
- Schneider, S., *Integrated Assessment Modelling of Climate Change: Transparent rational tool for policy making or opaque screen hiding value-laden assumptions?* *Environmental Modelling and Assessment*, 1997. 2(4): p. 229-250.
- Van Notten, P., Rotmans, J., van Asselt, M.B.A. and Rothman, D. (2003), 'An updated scenario typology', *Futures* 35, no. 5, 423-445, June 2003.

- *Morgan, M.G. and M. Henrion, The Nature and Sources of Uncertainty, in Uncertainty, M.G. Morgan and M. Henrion, Editors. 1990, Cambridge University Press: New York. p. 47-72.*
- Meadows, D (1998). Indicators and information systems for sustainable development. Published by the Sustainability Institute.
- Carmichael, J., Tansey, J., Robinson J. (2004) An Integrated assessment modelling tool. Global environmental change: human and policy dimension, vol 14, p. 171-184.
- Tansey, J., Carmichael, J., Vanwysberghe R, Robinson, J. (2002) The future is not what it used to be: participatory integrated assessment in the Georgia Basin. Global environmental change: human and policy dimension, vol 12, p. 97-104.