

ESEE News Letter ESEE Newsletter

Information from The European Society for Ecological Economics - Issue N°6 - October 1998

A Word from the President

Dear friends,

I am happy to be able to present to you the new edition of our Newsletter. It is full of interesting information, which, as I hope, will add to fruitful exchanges and progress of our common ideas!

I am particularly pleased to announce that on the international level, our efforts in the Mediterranean Area and in Africa begin to produce some promising results after the creation of an African regional network, for the moment linked to ESEE, and the initiative of Tunisia with its proposal to host a future Conference of the International Society for Ecological Economics. These developments go hand in hand with other actions inside the International Society for Ecological Economics aiming at the extension of the influence of the Ecological Economics to all the continents in a decentralised mode, taking into account the cultural specificities of each continent. Particularly, the Indian Society for Ecological Economics was launched at a meeting held in Delhi on September 24, 1998 in the presence of ISEE's president Richard Norgaard.

The participation of ESEE at the Fifth Biennial Meeting of the International Society of Ecological Economics in Santiago, Chile, on November 15-19, 1998 will be plentiful; indeed, officers and members of ESEE are well present in the different Plenary Sessions. You can find out more in the final conference program, which can be consulted on the following website: <http://www.uchile.cl/facultades/ISEE3.html>. Furthermore, the ESEE, with the support of the DGXII, European Commission proposes several sessions around the following three main topics:

- Decision support and Governance for Sustainable Development;
- Environmental Evaluation and Green National Accounting. Methodology and Practices
- Common Property Resources and Biodiversity.

The various publications coming from ESEE members, not only books but also leadership in two new journals (IJSD and IJEP), are expanding in quantity as in quality.

Finally, the influence of Ecological Economics on European decision making is now fundamental if we judge, for example, the involvement of Ecological Economics perspective and ESEE members in the elaboration of European green national accounting as well as in a large number of research programmes funded by the European Commission.

Inside the ESEE, the network is progressing exceptionally and I am happy to already announce that the next Biennial meeting of ESEE will most probably be hosted in Vienna in 2000, thanks to the efforts of Fritz Hinterberger.

Nevertheless we all still have a lot of efforts to furnish and I think that we can find a lot of opportunities. The fifth PCRD framework offers, for example, an important challenge to the members of ESEE, in view of its different topics but also because it is fundamentally pluridisciplinary (for further details, see the Official Journal C 260 of 18.08.1998). It is now our job to grasp the different opportunities! ■

Sylvie Faucheux

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Bioeconomics: a post-modern Science

By Mansour Mohammadian, Universidad Complutense, Madrid, Spain

The problems facing humankind are now multi-dimensional, accumulative and suffer from the element of uncertainty. They originate from non-linear interactions arising at the interface of nature's biological system and humanity's economic-technical activity system. The progress toward the resolution of these complex problems

requires more than disciplinary-reductionist investigative methods, it requires original synthesis and cross-disciplinary exchanges that would promote a post-disciplinary scientific culture. *Bioeconomics*, Biological Economics (Mohammadian, 1980) resulting from the synthesis of

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Biology and Economics is a step in that direction and is a discipline that endeavours to clarify these *non-linear interactions*.

Scientific investigation during the past couple of centuries has suffered from the Cartesian reductionism compartmentalising the biosphere and its contents to be studied in separate disciplines devoid of the real problems of life. These problems are the results of human achievement in spreading its fecundity throughout the length and breadth of this planet and also its achievement through its economic-technical activity system to feed and shelter this ever-increasing population. However, these problems, in addition to being interactive, are also complex and their investigation requires a new scientific method based on synthesis and co-operative research.

The dominant paradigm in both biology and economy has been one of self-preservation by competition for individual progress in the economic sphere and for collective survival in the biologic sphere. However, as humankind moves toward globalisation in all its endeavours co-operation rather than competition should become the norm and the first step ought to be taken by the scientific community. *Interdisciplinarity* is a concept that could prove very useful and *Bioeconomics* by combining the empirical investigative power of Biology with the subjective power of Economics is truly interdisciplinary (Mohammadian, 1997). As such Bioeconomics could help resolve the complex interactive problems and thus make possible our progress toward a sustainable lifestyle commensurate with the biospheric realities.

The modern scientism with its scientific methodology based on disciplinarity is no longer a valid concept nor a valid method for resolution of humankind's interactive problems. The modern socio-economic theory is faced with the great challenge of integrating this system with the biospheric system in order to satisfy the socio-economic and biological requirements of the present generation while acting as guardians of the biological inheritance for the future generations.

Therefore a post-modern science based on *interdisciplinarity*, rather than mere "multidisciplinarity" is required. This post-modern science having quality as one of its cornerstones would have to be proactive rather than reactive and should direct the scientific community away from an anthropocentric towards a biocentric

vision encouraging ethical concerns rather than selfish utilitarian ones. What I have been proposing for some time now is a comprehensive paradigmatic shift in the form of *Bioeconomics* because I believe that although Resource Economics, Environmental Economics and Ecological Economics have contributed to a certain extent to the clarification of the subject matter, they have not been encompassing enough to tackle the sweep of the many and varied problems facing humankind to-day. Furthermore, it would seem logical to continue also on our evolutionary path for the unification of Economics with a more comprehensive science, that is Biology of which ecology is after all a part. Uniting Economics with Biology in *Bioeconomics* results in a discipline with scientific rigour and investigative potential to be at the forefront of the post-modern scientific movement promoting biocentrism vs. anthropocentrism, interdisciplinarity vs. disciplinarity and synthesis vs. reductionism.

Bioeconomics, as a post-modern science is most appropriate because problems challenging our intelligence now require solutions that, in addition to domains of socio-economic and biological disciplines, require incorporation of ethical and value judgements too. If humankind is progressing towards economic globalisation then this process should also extend to the realm of scientific investigation in the sense that scientific activity should become interactive and participatory by involving scientists not only from different disciplines but also from different nations, thus eliminating the harmful dichotomy of 'developed' versus 'developing' science.

References:

Mohammadian, M. (1980), *Bioeconomics: An Interdisciplinary, problem-oriented Curriculum for Ecology*, in: *Iranian Journal of Ecology* 15 (2):50-59.

Mohammadian, M. (1997). *Bioeconomics: Interdisciplinarity Par Excellence*, presented at the Invitation of the *Int. Soc. for Interdisciplinary Studies, The Vienna Forum; Science and Social Interactions: Can Interdisciplinarity Bridge the Gap?* 16-17 November, 1997; Vienna, Austria.

For reactions, please write to: Mansour Mohammadian, Instituto Universitario de Ciencias Ambientales, Universidad Complutense, Madrid, E-mail: 3emess@mundivia.es

Input - oriented Environmental policy: new market-based incentives for Sustainable Development

By Friedrich Hinterberger, Maria J. Welfens, Daniel Bannasch, Tilmann Rave, Wuppertal Institute for Climate, Environment and Energy, Germany

1 Towards an input oriented ecological economic policy

Up until now environmental policy has adopted an output-oriented approach: it focuses on "cleaning up" material flows by the use of "end-of-the-pipe" technologies. This approach is motivated by aftercare. Policy makers only take action, if a causal connection between emission and effect can be determined. Due to time lags the causal connections are recognised only very late or the effects become evident only after decades (as in the case of the green house effect or the hole in the ozone layer). Therefore output oriented environmental policy is based on an informational gap that cannot be bridged. This is all the more unsettling, since we become more and more aware of the limited capacity of nature to counterbalance human intervention. Thus, a policy motivated by aftercare cannot be regarded as sufficient for sustainable development. More importantly conventional environmental policy does not take into account the huge flows of material and energy, which are set in motion by the economies of the highly industrialised countries, and many of the currently known and yet

What is needed from our point of view is an "eco-policy", which goes beyond traditional environmental policy. The main focus of environmental policy should shift on the input side of the economy. Such an input oriented ecological economic policy addresses the causes of the environmental crisis and is meant to have a preventive effect given the limited information we have about complex environmental processes. Furthermore such an input oriented policy creates incentives for resource-saving technical progress and creates an awareness to producers and consumers about the environmental implications of their choices. The input oriented approach presented in the following is not meant to be an alternative to the output oriented one, but rather complementary.

The input approach concentrates on the sources of matter-energy-flows, as opposed to the emphasis on emissions of the environmental policies currently in practice. Since the quantity of resource movement and the intensity of use of material, energy and area represents a hazard to the environment, the input oriented ecological economic policy advocates for „dematerialization“, that is a reduction of the

precautionary principle taking into account the interests of future generations, global aspects and the long term stability of the ecosphere. In order to apply this new ecological economic policy and maintain the level of wealth we currently enjoy efficiency- as well as sufficiency-strategies need to be adopted.

One of the ways to quantify the effectiveness of our approach is the MIPS (material intensity per unit of service) concept, which has been developed at the Wuppertal Institute. The material input (MI) is the total material and energy flow (in mass units like kg or tons) per unit of service, calculated from the extraction until the disposal of the material/energy inputs needed for the provision of any kind of service. These material flows are divided into movements of soils, water, air, abiotic and biotic raw material. The total material input is then related to the units of service available from the product to receive MIPS - the material input per unit of service.

The "material-intensity-analysis" (MAIA) is an instrument to calculate MIPS and relate MI to certain services. Units of service are units of use, which help to make different products (i.e. different kinds of satisfying needs) comparable. On the other hand MAIA has also been used to calculate the material flows of entire economies. A growing number of enterprises already commit themselves to reducing the material intensity per unit of service (or the increase of units of service with the same MI) by rethinking and reorganising their production process.

2 How can an input oriented ecological economic policy be implemented?

Even if there would be a common sense about the guideline "dematerialization", every entrepreneur and every consumer needs information as to how he /she can act according to the guiding principles. Governments can give this information directly or can indirectly support environmental-education and the further education of children and adults.

One way to give minimal information and induce consumers to buy products with low material intensity (MI), could be the material - input - values printed on a product, which focus on the total material and energy consumption in the product-life-cycle rather than ecological details. Therefore we need a uniform and controllable standard of calculation to secure comparability of products. On the company level there are good possibilities to integrate the MIPS concept into this system, because MIPS evaluates firms as well as their products (eco-audits). With support of the MAIA method it would be possible to create an ecological and economical efficient system of resource-management. Moreover could a firms mass-accounting be introduced according to the cost-accounting system. In contrast to the cost-accounting, the mass-accounting includes the external ecological costs, which are expressed through the ecological rucksacks.

In this context it is decisive that the information systems on the company as well as the national level will connect economic as

well as ecological data concerning material intensity. It is to be seen what companies could do and how these actions could be brought together on the level of the national statistics (the linking of GNP and MI data). Companies or their associations could commit themselves to achieving binding environmental goals, which contribute to the higher goal of dematerialization. The advantage to rules or prohibitions by the state is the preservation of a relative big entrepreneurial freedom of action. Beyond a pure commitment to reduction, it is possible to increase the integration of the citizens in the process of an ecological and competitive technological development. This way social interests are connected with those of the individual companies.

Beside these soft measures and instruments, which don't always turn out to be efficient, financial incentives are necessary supporting companies on their way to achieve sustainability and dematerialization. Subsidies often have a harmful effect on the environment and create social costs. Nevertheless fixed term subsidies can play an important role in setting an ecological structural change and redirect resources in an ecologically productive manner. The material intensity corresponding to the MAIA-method could be used as a general criterion for an ecological reduction and reorganisation of subsidies. Energy and material taxation is not tied to emissions or waste but concentrates on the materials entering the economic process. Both tax bases (energy and material input) provide an estimate for the environmental stress potential. A fundamental difference between material and energy taxes is the fact that the amount of substances, which have to be taken into account as material input in case of material input taxation, is much larger than the number of energy sources. So an energy tax could be administrated in an easier way. When introducing a energy taxes it is necessary to think about the reduction of those material flows which will not be affected by an energy tax in a sufficient extent. The introduction of tradable permits of material flows would allow firms to displace a certain quantity of primary material in exchange of a monetary payment. A national or international authority could determine the permissible extraction quantity as an ecological guard rail and issue certificates accordingly, while setting prices for resource use would be left up to the markets.

There is no "one and only" instrument to achieve the goal of dematerialization. A policy of dematerialization can not ignore the instruments put in place so far, but should be combined with the instruments mentioned above. It is important to co-ordinate the different instruments in order to create incentives to reduce all material flows by keeping at the same time the intensity of intervention in economical decisions on a low level. There is the chance that dematerialization - in comparison to the current environmental laws - provides a useful tool for deregulation of economic as well as environmental policy.

For reactions and discussion, please contact: Friedrich Hinterberger, Wuppertal Institut, Döppersberg 19, 42103 Wuppertal, Germany, Tel.: ++202-2492-162, E-mail: fritz.hinterberger@wupperinst.org, website: www.wupperinst.org

Ecological Economics and the Climate Change negotiations

By Sybille van den Hove, C3ED, Université de Versailles-Saint Quentin en Yvelines, France

From November 2nd to 13th, 1998, the fourth Conference of the Parties to the United Framework Convention on Climate Change (COP4) will convene in Buenos Aires. The outcome of last year's COP3 has been the adoption of the so-called Kyoto Protocol, in which industrialised countries agreed to legally binding greenhouse gases emissions reduction commitments. For the protocol to enter into force, ratification by a minimum number of parties is needed. The protocol shall enter into force when at least 55 parties, incorporating industrialised countries (Annex I parties) which

accounted for at least 55 percent of the total CO₂ emissions of the Annex I parties in 1990 will have ratified the protocol.

Negotiators are now preparing for the Buenos Aires talks. Major issues, which will most probably be at the core of the discussions in Argentina are:

- the definition of rules and modalities for the practical implementation of the so-called **flexibility instruments** (emissions trading, joint implementation and the clean

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development mechanism), including the discussion on how "supplemental" to domestic action these instruments should be;

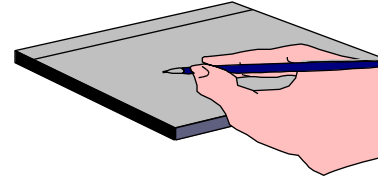
- the question of the **compliance and enforcement** mechanisms, which is of particular relevance for the organisation of a trading regime;
- issues relating to the inclusion of **carbon sequestration** (sinks) into a net system of emissions accounting, including very complex methodological issues;
- the question of increased **participation of developing countries**, strongly called for by the US, whose Senate stated it as a condition for ratification, and strongly opposed by most developing countries who, in the spirit of the Rio Climate Convention, want to see developed countries take the lead to tackle with a problem that they have created.

Buenos Aires is an important step in the negotiation, because the outcome of this round of talks could have a direct effect on the likelihood of ratification by some major player, in particular the US. However, now that the international community has to address the question of how to **practically** implement the commitments included in the Convention and the Protocol, the issues become even more complex, and in many cases, very uncertain. This will not facilitate the debate in Buenos Aires.

The EU for its part, has claimed - and often shown - international leadership on the climate change issue. It is now confronted with two problems. First, to maintain and reinforce its leadership, it should quickly move to domestic implementation of a strong climate policy, both showing its good-will to other Parties and providing a test-ground for climate policy that could be more convincing than any "grand rhetoric". Second, the EU could help build bridges between the diverging negotiation positions of different parties, with the aim of advancing the process of internationally addressing the climate change risk. This process which started a few years before the 1992 Rio conference, and reached another important stage in Kyoto in 1997, needs to keep momentum if it is to have any effectiveness for the climate system.

What can be the role of the European Ecological Economics community in this process?

At the European level, Ecological Economics analysis can bring original inputs into the policy design process. Ecological Economics claims to be a discipline capable of integrating natural



sciences, economics and other social sciences in its analysis of environmental problems. As such, Ecological Economics can help bridge the gap between different scientific viewpoints on the risks of climate change and possible solutions. Such integration of different perspectives is needed to design successful climate policies. Also at the European level, it is now widely recognised that the choice of policy should not only be based on (trans-disciplinary) scientific analysis but also on participative approaches which allow for the involvement of stakeholders in the different phases of the policy process*. Ecological Economics can propose methodologies for such participatory settings.

At the international level, and specifically for Buenos Aires, Ecological Economics analysis can be used to reflect on the design of the flexibility instruments. In particular, it can integrate dimensions that are too often left aside by more traditional economic approaches, such as equity issues and other social aspects, as well as the "real" environmental effectiveness of such instruments. Based on Ecological Economics approaches to sustainable development, the many questions relating to developing countries can be analysed in a more comprehensive framework, hopefully leading to solutions that are more acceptable to all actors, from an economic, social and environmental viewpoint.

Finally, Ecological Economics can help by providing original and practical tools for the treatment of the inherent complexity and irreducible uncertainties that are attached to the climate change issue. Such tools are urgently needed in the practical implementation phase that we are now entering.

Sybille van den Hove, researcher at C3ED (France), holds a European Commission DGXII Marie-Curie Research Training Grant in the Environment and Climate Programme. For further information or reactions, you can contact her by E-mail: sybille.vandenhove@c3ed.uvsq.fr ■

* See, notably, two forthcoming special issues of the IJEP devoted to documentation of European Climate policy - research interfaces and integrated analysis perspectives (next page).

News

International Co-operation between the ESEE and Africa

By Samir Allal, Université de Versailles-Saint Quentin en Yvelines and French National Institute for Nuclear Science and Technology, France

An ESEE delegation led by Sylvie Fauchoux, President of the ESEE, went to Tunisia from June 20th to 23rd, 1998 in order to present the ESEE objectives and activities in the field of Ecological Economics.

During its stay, the delegation had the honour to meet Mr. Moncef Ben Abdallah, the Tunisian Minister of Industry and Mr. Mongi Safra, Secretary of State near the Prime Minister in charge of Scientific Research and Technology. The delegation also met Mr. R. Ben Achour, President of the University of Tunis, Mr. A. Zbidi, President of the University of the Center and the Doven of the

Economics and Science Faculties of Monastir and Bizerte. Following these several meetings, the following was decided:

- to strengthen the relationship between Tunisia and the ESEE,
- to create a branch of Ecological Economics in the Maghreb and all French speaking African countries.

Mr. Samir Allal was charged with the interface between ESEE, the Maghreb and French-speaking African countries. Mr. Ben Abdallah issued the wish to host in Tunisia a future ISEE International Conference.

For further information and membership, please contact Dr. Samir Allal by E-mail: allal@ome.org

Special Issue of the International Journal of Environment and Pollution

(IJEP vol 10, number 4, 1998)

EU Climate Policy : The European Commission Policy/Research Interface for Kyoto and Beyond

Guest Editor: Sybille van den Hove

- Andrew SORS and Angela LIBERATORE, "*Preface*"
- Sybille VAN DEN HOVE, "*Introduction*"
- Martin O'CONNOR, Sylvie FAUCHEUX and Sybille VAN DEN HOVE, "*EU Climate Policy : Research Support for Kyoto and Beyond. Policy Research Interface Workshop Series : A Synthesis*"
- Kornelis BLOK and Diane PHYLIPSEN, "*Common and Coordinated Policies and Measures to Reduce Greenhouse Gas Emissions in the European Union*"
- Pantelis CAPROS, Takis GEORAKOPOULOS and Leonidas MANTZOS, "*Economic and Energy System Implications of European CO₂ Mitigation Strategy for 2010 : A Model Based Analysis*"
- Farhana YAMIN, "*The Kyoto Protocol : Origins, Assessment and Future Challenges*"
- Jim SKEA, "*The Role of Emissions Trading in Implementing the Climate Convention*"
- Tim JACKSON, Katie BEGG, Stuart PARKINSON and Peter BAILEY, "*The Language of Flexibility and the Flexibility of Language*"
- Catrinus JEPMA and Wytze VAN DER GAAST, "*On the Potential of Flexible Instruments Under the Kyoto Protocol*"
- Gunter STEPHAN and Georg MÜLLER-FÜRSTENBERGER, "*The Double Dividend of Carbon Rights*"
- Tim DENNE, "*The Inclusion of Absorption by Sinks within an Emission Trading Regime*"
- Richard S.J. TOL, "*Kyoto Mistakes*"
- Christian AZAR, "*The Timing of Emission Reduction - the Debate Revisited*"

Special Issue of IJEP

(in vol 11, 1999)

Methodologies and Issues for Integrated Environmental Assessment

Edited by Martin O'Connor

- Pierre MATARASSO, "*Integrated Assessment : Rhetoric of Models and Conceptions of World Future*"
- Clair GOUGH, "*Quality and Practice in IEA-Some User's Perspectives*"
- Bernd KASEMIR, Marjolein VAN ASSELT and Gregor DÜRRENBERGER, "*Integrated Assessment : Multiple Perspectives in Interaction*"
- Jean-Charles HOURCADE, Minh HA-DUONG and Franck LECOCQ, "*Dynamic Consistency Problems behind the Kyoto Protocol*"
- J. Peter CLINCH and Frank CONVERY, "*Climate Change Policy in the Peripheral Countries of Europe : Ireland as a Case Study*"
- Joyeeta GUPTA and Nicolien VAN DER GRIJP, "*Leadership in the Climate Change Regime : The European Union in the Looking Glass*"
- Christiaan VROLIJK and Michael GRUBB, "*Quantifying Flexibility in Combating Climate Change : Modeling the Implications of Flexibility Mechanisms in the Climate Change Negotiations*"
- Keimpe WIERINGA, "*Towards Integrated Environmental Assessment Supporting the Community's Environmental Action Programme Process*"
- Patrick SCHEMBRI, "*Adaptation Costs to Sustainable Development and Ecological Transitions. A Presentation of the Structural Model M3ED*"

News

Felicitations to the newly formed Indian Society for Ecological Economics (INSEE)

The Indian Society for Ecological Economics was launched at a meeting held in Delhi on September 24th, 1998. A cross section of economists, ecologists and senior policy analysts participated in the one day workshop-cum-inaugural. The Society shall comprise the Indian chapter of the International Society of Ecological Economics with a mandate to promote research on the integration of economics and ecology, to promote policy for sustainable development at the regional, national and global levels and to promote interdisciplinary discourse between and within the natural and social sciences.

Dr. Richard Norgaard, Professor of Energy and Resources at the University of California, Berkeley and President of the International Society for Ecological Economics set the stage for the day's deliberations with his keynote address on "The Challenges of

Ecological Economics". The proceedings included a panel discussion on "Agenda for Ecological Economics in India: Some Viewpoints" and an address by Professor P.S. Ramakrishnan on "Social, Economic and Cultural Interconnections in Ecology". An organising committee of fifteen members was constituted in the Business Session. Professor Kanchan Chopra of the Institute of Economic Growth, Delhi was also elected as President of the Society in this session.

For further information and membership details, contact: Prof. Kanchan Chopra, Institute of Economic Growth, University Enclave, Delhi 110007, India, Tel.: 91-11-7257288 91-11-7257570, Fax: 91-11-7257410, E-mail: kc@ieg.ernet.in

Call for proposals: European funding opportunities outside Framework Programme 5

Tender - Integrated Approach to Environment & Health

OJ S 172 (05/09/98) p33, Closing date for requesting tender documents: 12 October 1998

Closing date: 27 October 1998

DG XI intends to launch a study that aims at developing a new approach to the relation between environment and health. Instead of focusing on individual environmental factors, efforts should be made to identify the existing interactions between various environmental factors and their effects on human health. The study should therefore help in defining a more global and integrated approach of this topic and the methodology needed to implement such an approach at European level.

Tender documents are available from:

European Commission, Rue de la Loi 200, B-1049 Brussels

Mr B. Sinnott - DG XI/3, Budget, Finances and Contracts

Tel: 0032 2 296 00 08 (administrative and financial matters)

Fax: 0032 2 299 44 49

(Reference XI/ETU/980097 must be mentioned).

Tender - Measuring Urban Structures & Changes in Land Use

OJ S 172 (05/09/98) p. 32 Closing date for requesting tender documents: 22 October 1998, Closing date: 3 November 1998

Talks on Ecological Economics in Valencia, Spain

From October 1998 to June 1999 a series of talks on Ecological Economics will be given at Fundació Bancaixa, Plaza Tetuán 23, Valencia, usually on the first Tuesday of every month, at 7.30 pm. Phone ++ 34 96 3875864. The programme is as follows:

October 6th, **Luigi Fusco Girard**, Urban ecology and the value of cultural patrimony.

November 3rd, **Matthias Ruth**, Modelling the interactions between ecology and economy.

December 1st, **Mario Giampietro**, Population and food production (200 years after Malthus).

MURBANDY aims at measuring the urban structures of European cities and the changes in land use that occurred in the past 40 years both in the urban landscapes and in surrounding rural landscapes. In addition the study will evaluate the impact the urban areas have on the environment and produce scenarios for the future development of urban regions in a sustainable Europe. An initial set of European cities is currently under examination. It is now intended to extend the set to other cities and areas in Europe. This call refers to the following invitations to tender:

- RGC 30/98: Murbandy: Helsinki area (with option: Tallinn),
- RGC 31/98: Murbandy: Newcastle area;
- RGC 32/98: Murbandy: Ruhr area;
- RGC 33/98: Murbandy: Algarve area;
- RGC 34/98: Murbandy: Prague area;
- RGC 35/98: Murbandy: Vienna area (with option Bratislava).

Tender documents are available from:

The European Commission, Joint Research Centre

Mr P. Churchill, TP 261, I-21020 Ispra

Tel: 0039 332 78 54 25,

Fax: 0039 332 78 54 61,

E-mail: ceo.helpdesk@irc.it



January 12th, **Silvio Funtowicz**, Ecological Economics as post-normal science.

February 2nd, **Ramachandra Guha**, Gandhi and environmental movements.

March 2nd, **Gilberto Gallopin**, Environmental perspective for Latin America.

April 13th, **Robert Costanza**, Frontiers in Ecological Economics.

May 4th, **Mary Mellor**, Eco-feminist economics.

June 1st, **Richard Norgaard**, Vision and methods of Ecological Economics.

Ecological Economics Exposition in Uppsala

By Janice Jiggins, Swedish University of Agricultural Sciences (SLU), Uppsala, Sweden

An innovative Ecological Economics Exposition was held during the first two weeks of June 1998, hosted by the Departments of Economics and Rural Development Studies at the Swedish University of Agricultural Sciences (SLU), Uppsala, Sweden. The first part consisted of two courses for graduate students from America and a number of European countries, one on Ecological

Economic theory led by Professor Andrew Dragun, then at SLU, and Professor Martin O'Connor of the University of Versailles, and the other on agricultural sustainability led by Professor Niels Röling of the Agricultural University, Wageningen. The second part brought together some forty graduate students, professionals, government officials, and academics from Europe and America in an intensive

workshop, to consider applications of Ecological Economic theory to real world problems relating to the management of trade and agriculture in rapidly changing conditions. The third part was held as a public forum, to expose to wider debate some theoretical and practical problems in Ecological Economics. The speaker's panel comprised Professor Bina Agarwal (Economic Research Institute, Delhi University), Dr. Rekha Mehra (Director, International Center for Research on Women, Washington D.C.), Professor Martin O'Connor (C3ED, Université de Versailles-Saint Quentin en

Yvelines), and Professor Mark Sagoff (Institute of Philosophy and Public Policy, University of Maryland). The success of this initiative in taking forward understanding of key public policy issues, and of the contribution Ecological Economics might make to their resolution, has given rise to a book project, and a commitment to run a similar event in the first half of June 1999.

For further information please contact Professor Janice Jiggins by E-mail: janice.jiggins@lbutv.slu.se

GREENSTAMP approach : a EUROSTAT workshop on green accounting

By Patrick Schembri, C3ED, Université de Versailles-Saint Quentin en Yvelines, France

During the past few years it has become apparent that a key issue in green national accounting is to develop and ensure the inter-linkages between research, statistics and policy. Two years ago, the GREENSTAMP* project aiming at surveying methodological methods and problems encountered in that field has been achieved, which involved the Statistics Netherlands (CBS); Statistical office of the Federal Republic of Germany, the C3DE at the University of Versailles, France, the Wuppertal Institute for Climate, Environment and Energy in Germany and the Institut für Ökologische Wirtschaftsforschung, in Berlin, Germany. In a subsequent development, a pilot project for the Czech Republic is being initiated to address environmental information and macro-economic performance issues in the context of future integration of the Czech Republic to the European Union.

The European Commission (DG XI et DG XII) and EUROSTAT jointly organised a workshop in Luxembourg, on September 29th – 29th, 1998, entitled "From research to implementation: policy-driven methods for evaluating macro-economic environmental performance". This workshop aimed appraising and confirming this tendency to integration. In this framework, the C3ED proposes a valuation of macro-economic impacts of environmental policies based upon the M3ED model, as presented at the workshop by Martin O'Connor. A publication of the workshop proceedings will be forthcoming from the EC.

** R. Brouwer & M. O'Connor (eds.) (1997), Methodological problems in the calculation of environmentally adjusted national income figures, Report for DG XII, contract n° EV5V-CT94-0363. ◆*

Ongoing Research

Landscape ecology - a practical example of partnership between economy and ecology

By Eva Cudlínová, Institute of Landscape Ecology, Czech Republic

Economists often complain about resistance from many ecologists, who, with some notable exceptions, perpetuate a fantasy of a „natural world“ where human society can be ignored.

The Institute of Landscape Ecology (ILE) in the Czech Republic is one of these exceptions among ecologists. Founded in Prague in 1971, the work of the Institute is based on combining both biological and social approaches to understanding landscape. It is the belief of the members of the Institute that by applying the systems approach to landscape investigations, a common language can be found, bridging the natural and social sciences; this is a very different point of view than the more traditional one which views human society and economic activities as external influences perturbing the natural world.

A landscape is understood as having social, cultural and ecological dimensions. In the Czech Republic, the influence of the cultural on landscape patterns illustrates the mutual links between human and natural resources. We live in a landscape that was created by a rural tradition. It is the kind of landscape that we perceive as pleasant, a landscape that can be appreciated both ecologically and aesthetically.

The Department of Anthropeocology (similar to Human ecology) is a practical example of co-operation between biologists and social scientists. In some ways, the approach of the research conducted by members of the department is similar to that of Ecological Economics. While Ecological Economics tries to change a purely economic paradigm by incorporating ideas from the natural sciences, anthropeocology tries to enrich pure ecology by adding

goal: an interdisciplinary approach to our studying the surrounding environment.

Determining and understanding the relationships between human population and the surrounding landscape are the principal topics of interest in anthropoecological studies. This focus provides that the anthropoecological approach is interested in levels of integration of the landscape, rather than "clear social sciences".

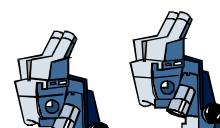
By applying this approach, the Department of Anthropeocology may be seen as a continuation of the Czech School of Anthropeocology established in the early seventies. The members study land-use planning of the rural landscape, which contributes to the development of the concept of sustainable development.

The most important themes of active research are:

- Mankind and Nature: The Phenomenon of Ecological Consciousness and Landscape
- Rural Community and Rural Landscape: Stewardship, Responsibility and Sustainability
- Landscape Abandonment
- Ecology and Democracy: The Challenge of the 21st Century

Permanent staff of the Department are: Miloslav Lapka, philosopher, Michael Barto, agrarian economist, Jan Tiitel, agrarian economist, Eva Cudlínová, economist, Irena Hanousková, biologist.

For further information, you are welcome to contact Eva Cudlínová by E-mail: evacu@dale.uek.cas.cz



Ongoing Research

Man and the Biosphere

By Sandrine Simon, Keele University, UK

The Environmental Change Unit of Oxford University organised recently the *UK UNESCO Workshop on Sustainable Development and Biological Diversity*. The workshop focused on the UK contribution to the Man and the Biosphere Programme (MAB). The roots of MAB lie in the International Biological Programme, and essentially anchor the ecological sciences programmes of UNESCO. However, the MAB approach seeks to reconcile conservation and the rational use of natural resources, and also the maintenance of cultural values. Hence, the contribution of social scientists in the MAB is now considered as necessary and more and more useful. Most work under MAB is articulated around the *World Network of Biosphere Reserves*. With a new legal status and a strategy developed through an international conference held in Seville in March 1995, this Network is now being improved through actions at several inter-related levels. Martin Price and Fraser MacDonald, at the Environmental Change unit in Oxford, are in charge of reviewing existing biosphere reserves in the UK, reviewing the concept, and coming up with guidelines to be used to designate new Biosphere Reserves. In the Seville Strategy, it was made clear that Biosphere Reserves are regarded not only as members of a global network for scientific co-operation and monitoring, but also as sites where models of sustainable development should be developed and implemented. Ecological Economists' contribution in the debate concerning the Biosphere Reserves is therefore promising; the possibilities to work more closely with natural scientists are extended, and lessons on sustainable development from Ecological Economists are also precious to natural scientists working on MAB and the biosphere reserves.

The debate is open, and these issues can be discussed with *Martin Price*: E-mail: martin.price@ecu.ox.ac.uk.

Biosphere Reserves:

Biosphere reserves are designated to deal with one of the most important questions the world faces today: How can we reconcile the conservation of biodiversity, the quest for economic and social development and the maintenance of associated cultural values? Biosphere reserves are areas of terrestrial and coastal/marine ecosystems which are internationally recognised under UNESCO's Man and the Biosphere (MAB) programme. In March 1995, an international conference of experts was organised by UNESCO in Seville. The strategy elaborated there, known as the 'Seville Strategy', recommends the action to be taken for future development of biosphere reserves in the 21st century. The Seville conference also helped to finalise a Statutory Framework setting out the conditions for the functioning of the World Network of Biosphere Reserves. Both these documents were adopted under 28 C/Resolution 2.4 of the UNESCO General Conference in November 1995. One of the highlights of these documents is the new role that biosphere reserves can play in serving to respond to some concerns of Agenda 21, which resulted from the United Nations Conference on Environment and Development (Rio, 1995). At the same time, they underline the important contribution that biosphere reserves can play in the implementation of the Convention on Biological Diversity.

References and additional information:

- UNESCO, 1996. *Biosphere reserves: the Seville Strategy and the Statutory Framework of the World Network*. UNESCO, Paris.
- *Biosphere Reserves; Bulletin of the World Network*. <http://www.unesco.org/mab>
- For more information about biosphere reserves contact UNESCO, World Network of Biosphere Reserves, Division of Ecological Sciences. 1 rue Miollis, 75732, Paris Cedex 15.

- A conference on the topic is held on 22-25 September 1998: *International Symposium on Natural Sacred Places, Cultural Diversity and Biological Diversity*, UNESCO, Paris. Contact mab@unesco.org
- Information concerning the MAB Young Scientists Awards Scheme as well as reviews and summaries of the work undertaken with a grant are available through the MAB internet homepage: <http://www.unesco.org/mab> or directly on the web page of the programme: <http://www.unesco.org/mab/capacity/mys/awarmab.htm>

Public Perceptions of Agricultural Biotechnology in Europe (PABE)

By Claire Marris, C3ED, Université de Versailles-Saint Quentin en Yvelines, France

Five European research organisations have begun a joint project to study and compare public perceptions of agricultural biotechnologies in their respective countries. The project is co-ordinated by the Centre for the Study of Environmental Change at Lancaster University and the team includes the C3ED (Centre d'Economie et d'Ethique pour l'Environnement et le Développement), the Istituto di Sociologia Internazionale di Gorizia, the Center of Technology Assessment in Baden-Württemberg and the Universitat Autònoma de Barcelona. The PABE project has been funded by the European Union under the ELSA (Ethical, Legal and Social Aspects of the Life Sciences) section of the FAIR (Food and Agro-Industries) research programme. The project started in June 1998 and runs for two years.

The aim is to provide intelligence on the social, ethical and cultural factors shaping public responses to genetically manipulated foods that will be useful to a wide range of social partners in the policy process, including national and local governments, industry, non-governmental organisations (NGOs), and EU officials and decision-makers. To ensure that the policy implications are adequately addressed and disseminated, these social partners will be involved directly in the project through a series of interviews, workshops and related networking activities.

For further information contact: Dr Claire Marris, Centre d'Economie et d'Ethique pour l'Environnement et le Développement (C3ED), Université de Versailles-Saint Quentin en Yvelines, 47 Boulevard Vauban, 78047 Guyancourt Cedex, France, Fax : ++ 33 1 39 25 53 00, Tel : ++ 33 1 39 25 53 75, E-mail: cmarris@worldnet.fr

Costs of Climate Change on Sylt

By Jürgen Meyerhoff, Technical University of Berlin, Germany

Sylt is a well-known barrier island in the German Wadden Sea in the Federal State of Schleswig-Holstein. In 1985, the region was designated as national park in recognition of the high ecological significance of the Wadden Sea. It serves, for example, as a place to feed and rest for migratory birds and is an important nursery for many fish and crustaceans. The island Sylt also provides many recreational opportunities. The long west coast with its sandy beaches attracts many tourists and has considerable economic importance not only for the island but also for the federal state. These and other values are threatened by climate change.

The purpose of the research project "Costs of Climate Change on Sylt" is to evaluate the potential impacts of climate change on the socio-economic and natural systems for the island Sylt in monetary terms. We use cost-benefit analysis to assess these impacts.

The economic damage will be appraised on the basis of scenarios describing the erosion of the coastline due to a rise in the sea level and an increase in the frequency of storms for the next 50 to 100 years. As a first stage of the analysis, the different impacts of the "with" and "without" project will be identified, with the first comprising the investment in coastal works for alleviating erosion of the land or

Ongoing Research

determining the physical amounts of damage flows. Thirdly, the measured physical impacts are to be valued in monetary terms using basic economic methods. The main categories to be monetarised are property loss, recreational loss and environmental loss.

Following the concept of total economic value, the benefit loss as listed above consists in both use and non-use values. The first category is generated in markets, given the relative values of traded goods and services as relative prices. The valuation techniques to be applied are market and shadow prices. To price the non-use values - existence and option values - provided by the island and the surrounding Wadden Sea, a contingent valuation will be carried out to assess the willingness-to-pay of Germany's inhabitants. Results are expected in April 2000.

This economic analysis, carried out at the Technical University Berlin, is an integral part of the interdisciplinary research project "Case Study Sylt" which is located at several German universities (see <http://soel.geographie.uni-kiel.de/sylt/>). The case study is one of the projects within the program "Climate Change and Coasts" funded by the Federal Ministry of Education, Science, Research and Technology.

For further information, please contact: Prof. Dr. Volkmar Hartje, Ina Meyer, Jürgen Meyerhoff, Technical University of Berlin, Institute for Management in Environmental Planning, FR 2-7, Franklinstr. 28/29, 10587 Berlin, Germany, Tel.: +49-30-314-73492, Fax.: +49-30-314-73517, E-mail: ina.meyer@imup.tu-berlin.de / meyerhoff@imup.tu-berlin.de

Structural Change and Environmental Protection in Selected Basic Industries

By Julia Haake, C3ED, Université de Versailles-Saint Quentin en Yvelines, France

This European Research project, now in its final phase, is dedicated to the question of how structural change in basic industries is linked to environmental structural change. The research groups involved in this project are: the Forschungsstelle für Umweltpolitik at the University of Berlin in Germany, the University of Tilburg in the Netherlands, the Institut für Ökologische Wirtschaftsforschung in Berlin, the Institut for Miljø, Teknologi og Samfund at the University of Roskilde in Denmark, the IFF at the University of Vienna in Austria, and the C3ED at the Université de Versailles-Saint Quentin en Yvelines in France.

These groups together realise a comparative study on a certain number of basic - and polluting - industrial sectors like steel production, petroleum refining or cement production. Every research group is carrying out a case study on one or more of these sectors, in order to identify the factors leading to environmental improvement. The case studies are carried out in two steps: first, a descriptive part, defining and characterising the structural change taking place in the sector. One of the main questions in this first part was to find out if environmental improvement in the studied sectors was due to the reduction of industrial activity, thus due to "classical" structural change, or if an implicit, ecological structural change had also taken place, like technological progress or dematerialization. Second, a multiactor analysis is now being realised, aiming at the identification of political decision making processes. Considered actors are for example the industrial corporations, industrial associations, environment or industry ministries, the European Commission, environmental organisations, consumers and so on. The final goal of the project is to design strategies for all involved actors on a European and international level, which might contribute to a more sustainable industrial development.

In addition to the case studies and their interpretation by the

several external contributions, which have lead to interesting discussions as well as explanations and analyses from different theoretical points of view. A wide range of theoretical fields have thus been taken into account, like network analysis, evolutionary theories, neo-classical economic theory, political sciences, business management science, governance approaches and so on. The results of the project will be published in a book in 1999.

For further information, please contact Manfred Binder, Forschungsstelle für Umweltpolitik, Ihmestr. 22, 14195 Berlin, Germany, Tel. +49-30-838 50 99, Fax +49-30-838 66 85, E-mail: mbinder@zedat.fu-berlin.de

Concerted Action on Environmental Valuation in Europe (EVE)

By Clive Spash, Department of Land Economy, University of Cambridge, England

EVE is a concerted action of 15 partners from 8 European countries co-ordinated by Dr. Clive L. Spash, Director of Cambridge Research for the Environment (CRE) based in the Department of Land Economy, University of Cambridge, England. This 30-month project started in June 1998 and is funded within Area 4, Human Dimensions, of the Environment and Climate RTD programme of Directorate General XII at the European Commission (EC).

The purpose of this concerted action is to analyse effective methods for expressing the values associated with environmental goods and services, ecosystem functions, and natural capital with a view to the achievement of the goals summarised in the concept of sustainable development. The EVE programme focuses on a series of workshops in which these issues will be debated and output of academic as well as immediate policy relevance produced. EVE encourages the networking of active researchers through workshops and aims to stimulate debate via the production of reports, articles and books. A website will provide up to date information on EVE and is currently being established. The EVE partners have chosen the following nine topics for the series of workshops:

- Ethics and Nature
- Natural Capital
- Sustainability: Valuation & Indicators
- National Accounting
- Distribution Issues & Property Rights
- Benefit Transfer
- Health & the Value of Life
- Participatory Decision Process
- Methodology & Approaches to Problems of High Complexity: Multi-Criteria-Decision Analysis & Environmental Impact Assessment

In recognising the importance of environmental valuation, EVE addresses the input of information to policy decisions and the diversity of research currently being undertaken. The appropriate role for decision makers and citizens in environmental policy formation takes on a central focus in the debate over how different values should be expressed. Environmental valuation is being approached by different disciplines and in different ways. EVE recognises that there is much to be gained by bringing together these disciplines rather than allowing fragmentation. The aim is to identify the current interactions between different disciplines with regard to environmental valuation and create circumstances in which productive reflection can occur. This interdisciplinary approach is built into the structure of EVE which includes key research groups in the areas of accountancy, economics, ecology, ethics and sociology.

For further information, please contact the EVE Project Co-ordinator: Claudia Carter, E-mail: cec29@cam.ac.uk, Cambridge Research for the Environment, University of Cambridge, Department of Land Economy, 19 Silver Street, Cambridge CB3 9EP, England

From the ESEE Secretariat

Publications from the ESEE Geneva Conference 1998...

At the March 1998 ESEE Conference "Environment and Development", held in Geneva, participants who presented papers were invited to advise the organisers if they wished their paper to be considered for post-Conference publication. About 50 papers are currently being considered. Some of these will be grouped in a book publication on energy modelling themes. A larger number are being referee-ed with a view to possible publication in future issues of the new **International Journal of Sustainable Development (IJSD)** or, in a few cases, the **International Journal of Environment and Pollution (IJEP)**. If you are not sure whether your paper is being considered and you wish it to be, contact Miquel Lopez (ESEE Publications Officer, esee@c3ed.uvsq.fr). The refereeing process should be completed before the end of 1998 and papers accepted for publication will appear during 1999.

Books from the Inaugural ESEE Conference (Versailles, May 1996)...

We are happy to announce that several of the books in preparation since 1996 are (finally!) now appearing. In this issue of the Newsletter we present **Life Sciences Dimensions** (published by Filander) and **Sustainability and Firms** (published by Edward Elgar). Purchase information has been circulated to all ESEE members. Two further books from the 1996 Conference are currently at the printers and should be on the shelves around Xmas or 1998/99 New Year.

ESEE Subscriptions for 1999...

The European Society for Ecological Economics has "Ordinary Members" and "Honorary Life Members". Subscriptions for **Ordinary ESEE Members** are paid annually and determined by income category (self-declared as Very Low, Medium or High). *Under the rules of the Society, a member of ESEE necessarily becomes also a fee-paying member of the International Society for Ecological Economics (ISEE)*. All ESEE/ISEE Members have special privileges for obtaining the ISEE's journal Ecological Economics at a very low annual subscription, and also are able to subscribe at special

rates to selected Inderscience journals under the Inderscience-Ecological Economics scientific publishing partnership.

Pay your 1999 ESEE Subscriptions in "euros"...

Starting from 1 January 1999 it will be possible to pay the ESEE/ISEE subscriptions by cheque, bank transfer or credit card in the new "euro" currency. See the **ESEE Subscriptions 1999** form for details of amounts and ways of payment (in euros or French francs).

ESEE Corresponding Members...

... are persons who live in regions outside Europe and who wish to be part of the permanent ESEE communications network. ESEE Corresponding Members pay a "Low Income" level of ESEE subscription (set at 18 euros or 115 FF for 1999), and receive the ESEE Newsletter and other information and ESEE publication-related privileges. (Note: They are *not* entitled to ISEE privileges, unless they are ISEE members separately).

ESEE Institutional Members...

... are organisations of any sort who have declared their support for ESEE objectives and who pay an ESEE Institutional Subscription which covers the ESEE Newsletter and regular information services, subscriptions to some or all of the Inderscience IJEP, IJSD, IJGEI and IJARGE journals, and options for establishing reciprocal links with ESEE for electronic communications and information-sharing. (For further details contact the ESEE Secretariat.)

Publications in European languages?

As teaching of ecological economics becomes more widespread in Europe and other parts of the world, books written in native languages are more and more important. Please send information - in any European language - about worthwhile new or existing publications in any European language (Portuguese, German, Spanish, Dutch, Greek, Swedish and so on - yes, even English!), and we will try to make a feature compilation in an issue of the 1999 ESEE Newsletter. ■

Social Processes for Environmental Valuation: The VALSE Project

The VALSE (*VALuation for Sustainable Environments*) research project, funded by the European Commission DG-XII and carried out during 1996-1998, was a demonstration study for social processes and analytical methods for valuation of environmental amenities and natural capitals for conservation and sustainability policy purposes. The case studies were:

- United Kingdom: Economic and environmental values of reconversion of agricultural land into wetland and fen.
- Spain: Institutional and ecological factors determining changes in water quality and quantity management in the Canary Islands.
- France: Social, ecological and economic valuation of forest pocket sites within farmland.
- Italy: Multiple criteria decision support analysis for identifying water resource use options for regional development in Trentino, Sicily.

Bringing together four different teams, the project addressed questions of valuation and choice "from the point of view of complexity" - that is, in a multi-dimensional perspective reflecting the variety of scales and perspectives in which a problem may be considered and the range of individual and collective interests that may be involved. It is demonstrated how different analytical methods and social processes for environmental valuation will tend to elicit qualitatively and quantitatively different evaluative responses. Valuation practices have a greater chance of social legitimacy and policy usefulness when implemented with awareness of these social and institutional dimensions of value formation.

The VALSE methodology and case studies are reported in:

Walking in the Garden(s) of Babylon: An Overview of the VALSE Project

compiled by Martin O'Connor

C3ED Rapport de Recherche, 48 pp., The 3^E Press, Paris, September 1998

Available from the C3ED at 100 FF per copy

contact email secretariat@c3ed.uvsq.fr or fax +33 1 39255300 or home page Presentation on <http://www.c3ed.uvsq.fr>

Sarah Dwyer, Udo Gansloßer and Martin O'Connor (eds.): *Life Science Dimensions of Ecological Economics and Sustainable Use, Filander Verlag, Fürth, Germany*

A volume of papers selected from the Inaugural Conference of the European Society for Ecological Economics (May 1996, Université de Versailles -St.-Quentin-en-Yvelines), centred on the life sciences dimensions of economic activity - evolutionary perspectives, biodiversity, biological and ecological systems, economic metabolism, sustainable resource use, and so on. Copies of this book may be ordered direct from the publisher: Filander Verlag, Bremer Strasse 21a, D-90765 Fürth, Germany; Fax: +49 911 790 5972. The contents are:

Part I: Biodiversity and Natural Systems Management

- Cristina SALVIONI and Davide MARINO, "EU Policy Measures to Control Crop Diversity Loss"
- Carl-Erik SCHULZ, "The Interface Between Trade and Bioeconomics"
- Olivier THEBAUD, "Searching for Common Ground: Economics, Ecology and the Management of Marine Living Resources".
- Martine ANTONA, Michel TROMMETER, Franck-Dominique VIVIEN, "Biodiversity: Social Construction of and Environment Convention".
- Jens B. AUNE, Solveig GLOMSROD, Vegard IVERSEN and Henrik WIIG, "Structural Adjustment and Land Degradation: An Integrated CGE Analysis for Tanzania".
- Jitendra DAS, "Temporal Impact of A Dynamic Forest Structure of a Wildlife Population: A Joint Production Function Approach for Integrated Forest Management".

Part II: Ecological Economics Concepts and Systems Analyses

- Werner HEDIGER, "Ecosystem Management and Sustainability: an Ecological-Economic Model."
- Peter EDER and Michael NARODOSLAWSKY, "Input-output Based Valuation of the Compatibility of Regional Activities with the Environmental Assimilation Capacities".
- Bernd KLAUER and Stephan BAUMGARTNER, "Operationalization of the Concept of Sustainable Development on Different Time Scales".
- Martin DIETRICH, "An Ecological Perspective on Sustainability".
- M.A.J. MULDER and W. BIESIOT, "Physical Constraints on Sustainable Development".
- Jacob J. KRABBE and Williem J.M. HEIJMAN, "Man's Alienation from Nature and its Reconciliation: and Ecological and Institutional Economic Approach"
- Paul JEFFREY and Mark LEMON, "Understanding the Dynamics of Sustainable Communities: Stochastics, Cartesians and Social Networks".
- Amédée MOLLARD, Christine LE ROCH, Anne LACROIX, François BEL and Corine GRAPPEY, "The Choice of Economic Instruments Applied to Non-Point Water Pollution".

Part III: Industrial / Ecological Metabolism

- Julia HAAKE and Fritz HINTERBERGER, "Product Durability: Economic and Ecological Aspects".
- Patricia KANDELAARS and Jeroen VAN DEN BERGH, "Integrated Chain Analysis of Materials and Product Flows Under Alternative Environmental Policy Packages".
- Mario GIAMPIETRO, "Energy Budget and Demographic Changes in Socioeconomic Systems".
- Klaus Jan NOORMAN, Wouter BIESIOT and Ton SCHOOT UTERKAMP, "Household Metabolism: a Perspective on the Environmental Impacts of Consumer Behaviour".
- Henrik VETTER, Jesper S. SHOU and Pia S. FOLKMANN, "Switching to Organic Farming -Assessing the Consequences Using and Historical/Statistical Approach".
- D. WIERSMA, "Towards a more Sustainable Use of Groundwater by Means of Economic Incentives".
- Kristina DAHLBERG and AnnMari JANSSON, "Sustainable Regional Food Supply -Analysis of Food Consumption Pattern, Local Production and External Dependence from the Perspective of Wholesalers and Retailers of Food."

Sylvie Faucheux, John Gowdy and Isabelle Nicolai (eds.): *Sustainability and Firms. Technological Change and the Changing Regulatory Environment, Edward Elgar (series in Ecological Economics), Cheltenham, 1998.*

This book addresses the prospects for reconciling economic competitiveness with sustainable development. It argues that it cannot be assumed that changes in public attitudes, business policies and government regulations vis à vis the protection of the environment will guarantee long term ecological, social and economic sustainability. Using case study examples, the contributors consider corporate environmental strategies, technological change and sustainability, and sustainable development as a social partnership between firms, citizens and government. They suggest that competitiveness must be considered as a dynamic process requiring proactive and reactive adjustments by business and government institutions all working towards sustainability. This book illustrates the diversity and the plurality of perspectives that were presented in this field during the International Conference at the University of Versailles in May 1996, during which ESEE has been created. For this reason the book also tries to underline the complementarity between these approaches and others, even if the main perspective is Ecological Economics. This is why it is referred to various theoretical fields as Ecological Economics, evolutionary dynamics and neo-classical tradition.

The contributors are the following : M.P. Antunes, S. Baumgärtner, F. Beckenbach, A. Castro Guerra, M. Diedrich, M. Faber, S. Faucheux, F. Ferrante, F. Garcia, M. Germain, M. Glachant, L. Jordao, R. Malaman, V. Martin, I. Nicolai, M. O'Connor, J.L.R. Proops, V. Santos, R.F. Santos Dos, P. Toint, M. Trommter, P. Tulkens, N. Videira, L. Viguier.

Diverse Publications



Sylvie Faucheux and Martin O'Connor (eds.): *Valuation for Sustainable Development. Methods and Policy Indicators*, Edward Elgar (series in Ecological Economics), Cheltenham, 1998

This book is the integrated product of research activities in Ecological Economics undertaken during 1992 to 1996 by the team of the C3ED of the University of Versailles-Saint Quentin en Yvelines under the leadership of Sylvie Faucheux. The book develops an Ecological Economics perspective on sustainability at the regional, national and international level. It seeks to demonstrate the practicality of real interdisciplinary analyses, in ways that unite theoretical rigour with explicit policy-process orientations. This approach is based on the construction of non monetary indicators for sustainability, and the application of cost-effectiveness analyses to identify robust alternatives for the achievement of specified policy norms. This book attaches importance to multiple criteria decision (MCDA) methods of analysis to evaluate the key components of sustainability. Case studies of water pollutants and greenhouse gas reduction in Europe are used to investigate resource allocation from this perspective. A structural economy-environment simulation model (the M3ED model) is used to explore feasible economic futures.

Sylvie Faucheux, Martin O'Connor and Jan van der Straaten (eds.): *Sustainable Development, Concepts, Rationalities and Strategies*, Kluwer Academic Publisher, Dordrecht, 1998

This book contains 17 chapters written by analysts coming from different continents. They develop the state of the art in Ecological Economics thinking on sustainable development. These contributions illustrated by empirical observations, highlights how a new generation of economists are confronting new problems of irreversible environmental change, uncertainty and social equity in the long term.

The contributors are: P. Ekins, M. Jacobs, J. Martinez Alier, F.D. Vivien, J.van der Straaten, P. Söderbaum, B. Olerup, G. Stephan, I. Röpke, J.W. Milon, J.L.R. Proops, G. Atkinson, P. Victor, S. Hanna, A. Kubursi, O. Godard, R. Seroa da Motta, G. Munda, P. Nijkamp, P. Rietveld, R.B. Howarth, A. Vercelli, G. Froger, E. Zyla.

INRA: Organismes génétiquement modifiés à l'INRA: *Environnement, agriculture et alimentation*, 1998, 152 p., ISBN 2-7380-0824-0, 70,- FF.

This recent publication (written in French) published by the INRA (French National Institute of Agricultural Research)

proposes answers to many questions on GMOs, concerning agriculture, environment, food and health.

To order contact by E-mail: INRA-Editions@versailles.inra.fr, or by ordinary mail: INRA Editions, Route de St. Cyr, 78026 VERSAILLES Cedex, France. Tel. ++ 33 1 30 83 34 06, Fax: ++ 33 1 30 83 34 49, or visit the website: <http://www.inra.fr/Editions/index.html>.

Marco Janssen: Modelling Global Change: The Art of Integrated Assessment Modelling. Advances in Ecological Economics, Edward Elgar, Cheltenham, 1998

Integrated assessment modelling is an active and rapidly developing field, triggered by the debate on climate change and sustainable development. This book provides an integrated approach to modelling, using a transdisciplinary approach. The author summarises the main issues involved in the changing global system, and gives an overview of the emerging field of integrated assessment. He then presents a general discussion of the methodological principles of a multidisciplinary integrated modelling approach. Existing tools are examined and new methodological approaches are applied to various aspects of the problem of global change. The case studies focus on optimising climate change mitigation policies, the allocation of emission rights and the adaptive behaviour of social and biological agents. Special attention is given to the role of uncertainty, especially the subjective interpretation of uncertainties (world views), and the role of adaptive multi-agent modelling. The book concludes with a discussion on future uses of integrated assessment models.

Paola MAIROTA, John B. Thornes, Nichola GEESON (eds.): *Atlas of Mediterranean Environments in Europe*, John Wiley and Sons Ltd., Chichester, UK, 1997

Based on the findings of a European Commission Research Project ("MEDALUS"), this Atlas brings to a wide audience the background to, and a contemporary understanding of the environmental crisis which is now facing the Mediterranean region of Europe, as well as future prospects for a solution.

Newsletter on Environment and Development in Latin America

This forthcoming 12-page newsletter is addressed to international NGOs, business, public agencies and academic institutions. Subscription rates will be about 200\$ per year. For further information write per E-mail to George Hatch: geohatch@email.msn.com.



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Contents: IJSD Volume 1

The four issues of Volume 1 for 1998, the inaugural year of the IJSD, feature:

- Stakeholder perspectives: science, risk and governance, energy technologies, corporate environmental strategy;
- Science for Sustainable Development - challenges for knowledge and North-South cooperation;
- Papers revised from the March 1998 Geneva ESEE Conference on ecological economics and development
- The European Consultative Forum for Environment and Sustainable Development - integration of environment in the Common Agricultural Policy; social and environmental challenges of EU enlargement; Employment and environment;
- Green National Accounting principles and practices: linking monetary and non-monetary evaluations in statistical and modelling procedures.

The inaugural issue Vol.1, No.1 of the IJSD includes:

- *S. Faucheux and A. Gheorghe (IJSD Coeditors)*, General Introduction
- *B. Garrod*, Are Economic Globalisation and Sustainable Development Compatible? Business Strategy and the Role of the Multinational Enterprise
- *G. Lescuyer*, Globalisation of Environmental Monetary Valuation and Sustainable Development. An Experience in the Tropical Forest of Cameroon
- *M. Gebhardt*, Sustainable Use of Biodiversity by the Pharmaceutical Industry?
- *K.M. Leisinger*, Sustainable Development at the Turn of the Century: Perceptions and Outlook
- *M. Lemon, P. Jeffrey and R.. Seaton*, Deconstructing the Orange: The Evolution of an Agricultural Milieu in Southern Greece
- *Michaelowa and M. Dutschke*, Interest Groups and Efficient Design of the Clean Development Mechanism Under the Kyoto Protocol
- *S. Funtowicz, J. Ravetz and M. O'Connor*, Challenges in the Utilisation of Science for Sustainable Development
- *M. Darras*, Integration of Environmental Decisions

Contacts

☞ Eco-Efficient Services - call for contributions

For a planned book or special issue of a scientific journal on Eco-Efficiency and Services, all those working in this area are invited to propose contributions before November 15th, 1998. The publication will be co-edited by an international team around Friedrich Hinterberger. Please inform him on your research work on Eco-Efficient Services (theoretical considerations, case studies, consulting experiences etc...) as well as on possible contributions. His E-mail address is: fritz.hinterberger@wupperinst.org.

☞ Encyclopaedia of Life Support Systems - call for contributions

In response to the Agenda 21, the UNESCO is undertaking to publish a major Encyclopaedia, which will be a multi-volume project. An open call for a various number of articles can be found on the following website: <http://spartan.ac.brocku.ca/~dore>. Click on "EOLSS".

☞ Forests Trees and People Programme and Network

Contacts in Sweden:

Elisabeth Wakeman-Byström and Daphne Thuveesson, SLU, Department of Rural Development Studies, P.O. Box 7005, SE-750 07 Uppsala, Sweden. Tel: ++ 46 18 672001, Fax: ++ 46 18 673420, E-mail: elisabeth.wakeman@lbutv.slu.se; Daphne.Thuveesson@lbutv.slu.se

Forests, Trees and People Newsletter - Editor: Daphne Thuveesson

Website: <http://www-trees.slu.se/>

Contacts in Francophone Africa:

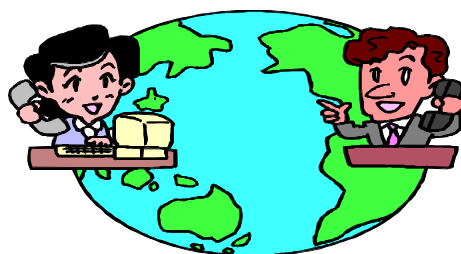
Arbres, Forêts et Communautés Rurales - Editor: Bernard Atamana Dabiré, FTTP/ASS - Institut Panafricain pour le Développement - Afrique Central, (IPD/AC) BP 4078, Douala, Cameroun, Tel: ++ 237 40 65 89 or 40 37 70 Fax: ++ 237 40 65 89 or 40 30 68 E-mail: ftppass@camnet.cm or ipd.ac@camnet.cm

☞ Eastern Europe ESEE Network

Contact: Josef Sejak, Czech Environmental Institute, Vrsovika 65, 100 10 Prague 10
Tel: ++ 4202 67122066 Fax: ++ 4202 71737721
E-mail: Josef.sejak@ceu.cz

☞ Institut de l'Energie et de l'Environnement de la Francophonie

Headquarters: IEPF, 56 rue Saint Pierre, 3ème étage, Québec G1K4A1, Canada, Tel: ++1 4186925727 Fax: ++1 4186925644 Email: iepf@iepf.org, Information in Europe: Samir Allal (E-mail: allal@ome.org)



On the Web

Agriculture, Environment and Society

An website providing information on agriculture, environment and society (in French, with some English translations) is: <http://www.inra.fr/dpenv/m2e.htm>.

Climate Change

The New York Times has all of its climate change articles on line on the website: <http://www.nytimes.com/library/national/warming-index.html>

Climate Change

The International Institute for Sustainable Development (IISD) offers a very informative website on climate change: <http://www.iisd.ca/linkages/climate/ba/>

Land Degradation and Water Resources in Southern Europe

The following website introduces the "MEDALUS" project in the framework of a research programme of the European Commission on land degradation and water resources in Southern Europe: <http://www.medalus.leeds.ac.uk>❖



Forthcoming Conferences and Workshops

International Seminar on Industrial Ecology and Curriculum, October 15th - 16th, 1998, Trondheim, Norway

This seminar on the development of sustainable technology and industry is organised by the Norwegian Academy of Technological Science in collaboration with NTNU, MIT and GeorgiaTech. For further information please contact:

Arne EIK, NTNU, SMU, Pav. B, 7034 Trondheim, Norway,
Tel.: ++ 47 73598957, Fax: ++ 47 73598943,
E-mail: Arne.Eik@smu.ntnu.no.

3rd International Conference "Towards Sustainable Product Design", October 26th - 27th, 1998, London, UK

For information on the conference programme, please visit the following website:

<http://www.cfsd.org.uk/tspd3.htm>

ISEE Conference on "Beyond Growth: Policies and Institutions for Sustainability", Santiago, Chile, November 15th - 19th, 1998

The International Society for Ecological Economics holds its Fifth Biennial International Conference, on the theme of "pathways toward sustainability". Topics for proposed papers are widespread, reaching from environmental indicators, over ecological-economic modelling, globalisation and environmental fairness, to political ecology and cultural identity.

For further information see the conference website: www.uchile.cl/facultades/isee3.html, or mail to: iseeconf@abello.dic.uchile.cl.

International NWO Conference "Beyond Sustainability. Integrating behavioural, economic and environmental research", November 19th and 20th, 1998, Amsterdam, The Netherlands

For further information contact:

Gerard Barendse or Helias Udo de Haes, CML, Leiden University, P.O. Box 9518, NL 2300 RA Leiden,
Tel. ++ 31 71 5277489, Fax ++ 31 71 5275587,
E-mail: barendse@rulcml.leidenuniv.nl.

Workshop on Voluntary Approaches - State of the Art and National Patterns, November 26th - 27th, 1998, Gent, Belgium

This workshop is organised by the Centre for Environmental Economics and Environmental Management of the University of Gent. The main themes are the following: case studies, national surveys, taxonomic papers, national patterns and international comparisons. Deadline for submissions is October 15th, 1998. For further information contact:

Steven BAEKE, Centre for Environmental Economics and Environmental Management, University of Gent, Bellevue 6, 9050 Gent - Ledeborg, Belgium, Tel.: ++ 3292109883, Fax: ++ 3292109700, E-mail: steven.baeke@rug.ac.be

First Open Science Meeting on Industrial Transformation as part of the Human Dimensions Programme on Global Environmental Change, February 25th - 26th, 1999, Amsterdam, Netherlands

This Meeting will discuss the Draft Science Plan developed by the Industrial Transformation Project of the IHDP from various scientific points of view. Criteria for participation and proposals can be viewed at the following website:

<http://www.vu.nl/ivm/hdp/hdp.htm>. Deadline for proposals is October 15th, 1998. For further information on the meeting please contact:

Pier Vellinga or Peter Mulder, IVM, Tel.: ++ 31 20 444-9515 or -9503, Fax: ++ 31 20 4449553, E-mail: pier.vellinga@ivm.vu.nl / peter.mulder@ivm.vu.nl.

"Planetary Garden 99", First International Symposium on Sustainable Ecosystem Management, March 14th - 18th, 1999, Chambéry (Savoie), France

This conference, uniting professionals and field workers from all over the world, deals with the main question: "will the accountants' logic of market economy, which has come about right across the planet, lead inevitably to the sacrifice of the biosphere's future, or will another logic be applied that is able, in accordance with the peoples' wish, to restore a sustainable coexistence between the human race and Nature?". The six main topics are: 1. Successful precursors of Planetary Gardening, 2. Forecasting of the principal land-based ecosystems, 3. Forecasting of needs and resources, 4. Sustainable development technologies, 5. Theories of sustainable development, 6. Summary: "Planetary Garden" plan of action.

For further information contact:

Planetary Garden Secretariat, Prospective 2100, 48 Rue de la Procession, 75724 Paris Cedex 15, France, Tel. ++ 33 1 44496004, Fax ++ 33 1 44496044, E-mail: deschamps_prospective_2100@wanadoo.fr.

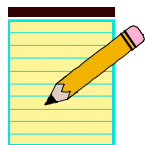
Workshop on Multiactor Perspectives on Energy Consumption, March 19th, 1998, Geneva, Switzerland

Traditionally, consumption has been analysed through the perspective of the personal consumer, whether in economic theory or in behavioural sciences. This consumer is, in this perspective, confronted to various choices, influences and obstacles. One speaks often, in this context, of rational choice and obstacles to rational choices, or also of limited rationality. One can analyse this situation by:

- refinements of the traditional economist's approach, including an improved discussion of the utility function;
- analysis of consumption patterns according to socio-economic variables;
- analysis based on attitudes, usually collected through survey instruments;
- traditional socio-economic and attitude based segmentation.

It is of course clear to many people that the consumer is in reality imbedded in a complex socio-cultural framework, that influences his choices and is also, in turn, influenced by him, and that the agents of this socio-cultural framework should be analysed on the same level as the ultimate consumer. This state of affairs calls of course for some kind of "System thinking" (not necessarily





Forthcoming Conferences and Workshops

After two initial workshops on the social and behavioural aspects of consumption held in Geneva in 1995 and 1996, and a special session on "Changing Consumption Patterns" in the ESEE Conference in Geneva in 1998, which contributed to the understanding of consumption as a complex phenomenon, the time seems ripe to the organisers of the first two workshops (the so-called Geneva group) to organise a workshop more precisely focused on "Multiactor perspectives on energy consumption", it has also been decided to try to focus on a specific area of consumption: "Spatial thermal comfort", which should make it easier to compare different methodologies and their results and perspectives.

The workshop should be of interest to behavioural scientists, sociologists, economists interested in non standard analysis (like Girardian economics, statistical mechanics approaches to socio-economic behaviour and so on) and energy modellers. The workshop will be devoted to both qualitative and quantitative types of analysis.

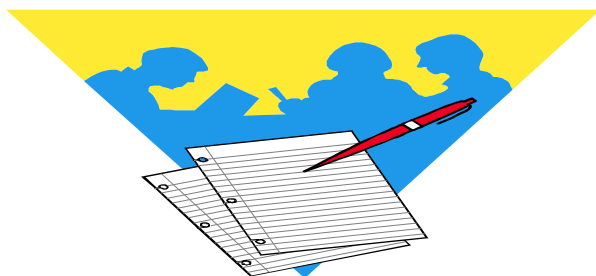
Interested persons are invited to answer by yes or no to the following two questions and E-mail the answers to Bernard Giovannini: (a) I plan to participate, and would like to receive the final announcement (to be sent in December 1998), (b) I plan to submit a paper to the workshop (submission of the definite title and the abstract: end of January 1999).

Contact: Prof. B. Giovannini, Section de Physique, University of Geneva, 24, quai Ernest Ansermet, 1211 Geneva 4, Tel.: ++ 41 22 702 6892, Fax ++ 41 22 702 6869, E-mail: bernard.giovannini@physics.unige.ch

International Conference on "Sustainable Development, problems of protected areas network and traditional nature use in the Lake Baikal Region", May 1999, Chita, Russia

The focus of the conference is interdisciplinary research based on the insight that environmental, economic and societal issues should be integrated. The important aspect of the conference will be the consideration of modern strategies of the conservation of environmental functions of the wild nature. Experience from different regions, models and results of scientific research and practices are welcome for discussion. The deadline for abstracts is December 31st, 1998. Abstracts can be sent by E-mail.

For further information contact: Dr. Gazhit Tsybekmitova, Scientific secretary of the Institute of Natural Resources of Siberian Branch of Russian Academy of Sciences, 16 Nedorezova street, Chita, 672014, Russia, Tel: +7-302-221-24-98, Fax: +7-302-221-25-82, E-mail: root@cinr.chita.ru.



International Congress "ECO 1999", June 7th - 9th, 1998, Paris, France

This international congress will be held to explore the role that the environment can play in industrial competitiveness. Abstracts can be proposed on the following subjects: financing/investment, insurance, product and service design, creation of value, resource management, plant and product design. The deadline is November 16th, 1998. For further information contact the congress office:

Convergences ECO 1999, 120 avenue Gambetta, 75020 Paris, France, Tel.: ++ 33 143647777, Fax: ++ 33 140310165

International Conference on Industrial Ecology and Society, University of Technology of Troyes France, September 22 - 25, 1999

The University of Technology of Troyes is holding one of the first international and multi-disciplinary conferences on Industrial Ecology on the theme of Industrial Ecology in Europe. Many of the contributions will involve engineering sciences; others will deal with other aspects of Industrial Ecology - economic, legal, social, town and country planning, geographical, political and ethical / philosophical... Plenary speakers include: B. Allenby, J. Ausubel, R. U. Ayres, P. Baccini, G. Billen, H.G. Danielmeyer, F. Hinterberger, P. Marzolf, M. Morency, U. Simonis, W. Stahel. The conference addresses not only scientific researchers from all possible disciplines, but also, and in particular, representatives from the industrial world. **Abstracts can be submitted until February 15, 1999** in English or French on one of the following subjects: Eco-Industrial Parks and Islands of Durability - Environmental Certification (EMAS, ISO 14.000) - Environmental Challenge and Degrees of Development - European Public Policies and Industrial Ecology - Implementation of Eco-Efficiency in Industry - Industrial Ecology and Energy - Industrial Ecology and Philosophy - Industrial Ecology and Scientific Ecology - Industrial Metabolism / Methods of Material Flow Analysis - Introduction of Ecology in Teaching of Engineering Sciences - Introduction of Industrial Ecology in Materials Conception - Life Cycle Analysis - Making Wastes Valuable - Materials Recycling - Pluri-disciplinary Approaches to Risk - Product and Service Design - Sustainable Consumption and Industrial Ecology - Territories and Material Flows - Textile Industry and Industrial Ecology - Use Concepts and Eco-Efficient Services - Water Cycle: Domestic Use / Industrial Use.

Address for the submission for abstracts or for further information:
Conference Secretariat, Université de Technologie de Troyes, Département TSH, 12 Rue Marie Curie, BP 2060, F- 10010 Troyes Cedex, Tel.: ++ 33 3 25.71.76.90, Fax: ++ 33 3 25.71.76.98, E-mail: conf.ecoindus@univ-troyes.fr. ■