

SERI ANNUAL REPORT | 2008

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Feedback welcome!

If you should have questions, points of critique or any other input in relation to our Annual Report or if you would like to know more about our work, please contact us:

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1 | FOREWORD

Dear Reader!



This report likes to inform you about our activities in our 9th year of existence as a network of private research institutions in Austria and Germany. For us it is always eye-opening to see on paper what we achieved last year (and it always takes us more time than expected to finally collect all the information).

Following numbers should give you a first impression on what and how much SERI has been working on in 2008: 17 finished projects. 12 ongoing projects. 18 new projects. 4 upcoming projects. 30 publications and many other activities.

We have again tried to make it as concise but also as informative as possible. If you wish to go into further detail, please contact our website or approach us directly. We are happy to broaden our view and to co-operate with others working on or at least interested in sustainable development.



Best regards,



Dr Friedrich Hinterberger

President SERI Verein zur Förderung eines Sustainable Europe Research Institute and Scientific Manager of SERI Nachhaltigkeitsforschungs und -kommunikations GmbH



Sylvia Lorek

Vice-President SERI Verein zur Förderung eines Sustainable Europe Research Institute and Chairwoman SERI Deutschland e.V.

Vienna, June 2009

2 | MISSION STATEMENT

The Sustainable Europe Research Institute (SERI) is a Pan-European think tank exploring sustainable development options for European societies. It was set up in September 1999.

Sustainability strategies must be integrated or they are not sustainable. SERI therefore takes a comprehensive view of sustainability both empirically and in its policy recommendations.

COMPREHENSIVE MEANS

- ⇒ SERI integrates the ecological objective to reduce environmental space use with elaborated economic, social and institutional sustainability strategies.
- ⇒ SERI develops strategies on the macro, meso, micro and meta levels of economies/societies.
- ⇒ SERI looks at the impact of activities and policies in Europe on other parts of the world.
- ⇒ SERI's work is based on methodological pluralism.

On the other hand we are far from working on everything important in the field of sustainable development. While integrating ecological, social, economic and institutional dimensions, SERI focuses the notion of environmental space (in terms of resources, energy and land-use) and the measurability of social and economic dimensions of SD. Indicator-based policies are therefore important for our recommendations.

HOW WE DO IT

We are a virtual internet based institute. From our pool of staff and members comprising a broad spectrum of qualifications we can select appropriate teams for each project.

The research carried out by members of SERI supports the dialogue within European civil society. It specifically aims to further develop the exchange of ideas between environmental citizens organisations, governments, trade unions and industry. SERI member offices are in Vienna, Austria and Cologne, Germany. The affiliated academics and researchers live throughout Europe. The policy dialogues that SERI initiates are supported by this webpage, conferences, meetings as well as publications.

THE SUSTAINABLE EUROPE RESEARCH INSTITUTE

- ⇒ investigates environmental, economic, social and institutional conditions for sustainable development
- ⇒ develops and disseminates information on through-put limits and makes possible steps towards sustainability apparent
- ⇒ develops scientifically accurate and practical policy solutions, which allow sustainable development to become a reality in Europe (and beyond). SERI addresses all relevant agents: businesses, households, civil society agents, administrators and politicians.

Highlights are topics of major interest which we wish to communicate to the broad public. They are published at irregular intervals on our website and in the SERI InfoMail. In 2008, we featured the following topics:

Sustainable Policy = Economic Policy!?



The concept of sustainable policy has reached a challenging level: besides combating increasing environmental problems and providing social justice and economic productivity, sustainable policy also has to comprise and incorporate adequate opportunities of development for future generations. This is a demanding task, considering that the main focus of current decisions is on increasing economic growth and coping with all appearing accompaniments. In response to this, SERI aims to identify alternative opportunities of thrusting quality of life into the spotlight. www.seri.at/sustainablepolicy

Development of Strategies for Sustainable Development



What to do about problems which have been known but have remained unsolved for decades? Why do we not succeed in solving these problems even though the facts seem to be crystal clear? And even though consistent and appealing propositions for a solution are available? Such persisting problems are often characterized by high complexity, uncertainties and missing structures.

SERI offers scientific support for processes which take a comprehensive (systemic) look at the respective problem to re-design the system as a whole instead of merely improving single parts of it. www.seri.at/ISA

Global Natural Resource Consumption



Concepts like the *Ecological Footprint* clearly demonstrate that the ever-increasing global consumption of natural resources is not sustainable from an ecological point of view. But it is also proven that our life styles, production and consumption are not manageable from a socio-economic point of view which is reflected in constantly increasing resource prices and worsening working conditions in many world regions. To make these interrelationships clearer, it is of key importance to quantify the real magnitude and distribution of worldwide resource use – a target set by the SERI working group "Sustainable Resource Use". www.seri.at/global_resource_use

Quality of Life Research



Why do we take higher quality of life or happiness for granted in relation to a higher (national) income? Why do we all too quickly push aside what is really important to us? What does a really good life mean at all? What about the great number of aspects beyond material wealth—family, friendships, freedom, acknowledgement, self-fulfillment? These are some of the questions SERI deals with under the name of quality of life research. www.seri.at/LQ-Forschung

International Trade and Environmental Impacts



In its current form, international trade is one of the key driving engines of global economic growth. It accelerates the extraction and use of natural resources such as raw materials, energy, water, and land. The main objective of a sustainable trade system is to balance disparities between different world regions in ecological, economic, and social terms. SERI is working on the quantification and illustration of global interrelations between the use of natural resources, transport, and environmental pressures. www.seri.at/internationaltrade

Chances for a greater share of renewable energy in Austria



Renewable energy plays an important role in Austria in order to reduce the dependency on imported fossil fuels and to support the reduction of greenhouse gases. This role will grow within the next years due to the fact that the current share of about 20% of the whole energy mix has to increase to 34% in the year 2020 in order to fulfill EU targets. Due to this situation, SERI has estimated and quantified the effects of an intensified use of renewable energy for the supply of heat and power on Austria's environment, economy and society. www.seri.at/energyscenario

Courage for Sustainability - 12 Books on the Future of the Planet



On April 21, 2008, the Foundation *Forum für Verantwortung*, together with the *ASKO EUROPA-STIFTUNG*, the *Europäische Akademie Otzenhausen* and the S. Fischer Verlag, presented the education initiative "Courage for Sustainability" at the *Austrian National Library*. The opening volume of the book series was written by SERI researcher Jill Jäger in cooperation with a number of other SERI colleagues: *How Much More Can Our Earth Take? Paths to Sustainability*. www.seri.at/muturnachhaltigkeit

Biodiversity and its linkage to human well-being via ecosystem services



Human life strongly depends on biodiversity and related ecosystem functions, because ecosystems provide food, timber, fibres, because they contribute to air quality or nutrient cycling or because it is of enormous cultural value. Therefore, a rich biodiversity influences human well-being to a crucial extent. However, biodiversity is very much threatened, mainly due to human interactions with natural systems, which cause a pressure on those systems and thus on biodiversity and its ability to maintain or increase human well-being. SERI currently works in three research projects that analyse how natural and socio-economic systems interact with and depend on each other. www.seri.at/ecosystems-services

Eco-Innovation



A central challenge of world-wide development arises out of the limited availability and, as a result, the dramatically rising prices of natural resources, the current oil price of 100\$ only being the tip of the iceberg. Due to its insufficient resource basis Europe is especially dependent on these developments. The competitiveness of the European economy will thus essentially depend on the effort towards production with a considerably lower resource input. In a number of projects SERI works on the chances for economy and politics to react to these challenges. www.seri.at/eco-innovation

New SERI office



A slightly different type of highlight is the new SERI office Vienna. In 2008 the SERI GmbH has moved into a more spacious office within the same building on Garnisongasse in Vienna's 9th district.

Our telephone and fax numbers have stayed the same: +43 (0)1 9690728-0 and +43 (0)1 9690728-17 respectively.

Our complete new address: SERI GmbH
 Garnisongasse 7/21
 1090 Vienna

4 | PROJECTS www.seri.at/projects

Our projects are the main part of our work. They cover a wide range of themes and approaches, and they have different aims. Some are mainly research projects to bring forward the state of knowledge, some try to bring the knowledge on sustainability directly to the public and decision makers.

To learn more about the themes and approaches that we follow in our projects, visit www.seri.at/themes and www.seri.at/approaches.

4.1 | NEW PROJECTS

CEECEC - Civil Society Engagement with Ecological Economics

04/2008 – 10/2010, European Commission, 7th Framework Program



The aim of CEECEC is to increase collaboration between ecological economists and civil society organisations (CSOs) with the overall focus not being on theory but on case study learning. CSOs and academics will thereby identify and explore key issues for research in areas such as water management, mining, energy, and forestry and agriculture, based on CSO needs and interests. The end result will be online materials and a handbook in several languages explaining the principles, the tools and the methods of Ecological Economics for CSOs and the general public.

Within the project SERI is mainly responsible for internal communication, the dissemination of project results on a public website and the generation of the online materials and the EE handbook. www.seri.at/ceecec

EIPOT – Environmental Impact of Trade

04/2008 – 03/2009, SKEP ERA-NET

The main objective of this project is to develop and specify an environmental accounting methodology which allows quantifying and assessing the trans-national environmental impacts of traded goods and services. The outcome of the project will be a detailed specification of the best suited methodology and recommendations for data acquisition and implementation of this methodology with global coverage. Furthermore, the project aims to improve the co-ordination of environmental research in Europe.

The consortium of EIPOT, consisting of SEI/UoY (UK), SERI (AT), MNP (NL), and SCB (SE), brings together four core institutions from SKEP countries with outstanding international recognition and long-term experiences in the field of environmental accounting, augmented by expertise provided by three external experts from non-SKEP countries. www.seri.at/EIPOT

EF Siemens – Ecological Footprint IT

08/2008 – 03/2009, Siemens IT Solutions and Services (Austria)

In August 2008 SERI has started the project “Ecological Footprint IT” in cooperation with Siemens IT Solutions and Services (Austria) and Plattform Footprint. The purpose of the project is the calculation, the analysis and the presentation of the ‘Ecological Footprint IT’ for the IT business organization of Siemens in the subsidiary Austria, called Siemens IT Solutions and Services. In addition the purpose is to develop the method further for a general application in the IT industry.

The result will be a specific IT industry Ecological Footprint concept, for Siemens IT Solutions and Services as well as for the clients of the company, which represents a meaningful performance figure

of the sustainability of IT service compartments respectively IT services. The project is expected to end in March 2009. www.seri.at/EFit

Styles of energy use - Database about energy consumption of Austrian households. Development and empirical validation

11/2008 – 12/2009, Climate and Energy Fonds within the program “Neue Energien 2020”



This project aims to develop a comprehensive database which relates the demand for energy services in Austrian households to socio-economic and cultural factors in order to provide a well-established set of information for public decision makers and politics. Styles of energy use

In order to provide well-established information for public decision making and energy policies, a database is required, which relates the demand of energy services in Austrian households to socio-economic and cultural factors, in particular to aspects of the individual lifestyle. In order to bridge this gap, the considered project defines so-called “styles of energy use” (SEU), which shall be verified by a representative public survey carried out in Austria. The study will include all main sectors of private (not work-related) energy use (heating, electricity) in households as well as the energy use for private mobility. www.seri.at/SEU

Visual mfa II – Updating and Upgrading of the MFA data on www.materialflows.net

12/2008 – 03/2009, Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management

The website www.materialflows.net was first published by SERI in 2006. It aimed at providing worldwide data on resource extraction, mainly generated in the EU-project MOSUS, for free download in order to achieve a wider application of the MFA approach. In the course of a follow-up project, starting in 2007, SERI updated the data and developed a tool for the website, which allows for the visualisation of the extraction data on worldmaps.

The objectives of the actual project are to upgrade the MFA data with the most actual data available (up to 2006) and also to create a new visualisation tool, which still increases the attractiveness and informative value of the website by additionally visualising the interrelations between different socio-economic parameters and environmental consumption indicators as well as changes in the performance of different countries. www.materialflows.net

Action Town – Partnering to Enhance Civil Society Organisations’ Contribution to Research in Sustainable Consumption & Production

11/2008 – 10/2010, European Commission, 7th Framework Program

The Action Town project is focused on concrete actions by creating partnerships between civil society organisations (CSOs) and research organisations to increase involvement of CSOs in research. Partnering CSOs are encouraged to provide new insights for increasing efficiency of policy strategies, assessment tools and indicators for sustainable consumption and production through small-scale exploratory actions.

SERI is writing a ‘guidelines paper’ about indicators in SCP, will support an exploratory action about using indicators and is responsible for managing the public website and the web-based internal communication. www.seri.at/action-town

Selbst & Wert – A training course with unemployed towards a holistic personnel development

04/2008 – 06/2008, AMS Niederösterreich



The project Selbst & Wert was designed as a training course and aimed at (re)employment for 15 unemployed people. The methods used were based on the integrated framework of mission coaching and included an evaluation of communication patterns (PCM) and social capital, training in internal & external communication, voice, body language, arts and concepts of mixed work and holistic development. 4 out of 15 participants found new employment already during the training.

SERI coordinated the consortium, contributed to the training concept and gave input in several training sessions. www.selbstundwert.org

EcoInnovation – Putting the EU on the path to a resource and energy efficient economy

08/2008 - 02/2009, European Parliament's committee on Industry, Research and Energy

Achieving resource efficiency and a low carbon society are key challenges for the future of EU's economy, its industrial and service sector, and its citizens. Increasing energy and resource efficiency will lead to lowering material purchasing costs throughout the industry. It thus enhances competitiveness and offers opportunities to innovate. Eco-innovation can be seen as a key to enhancing Europe's strategic position on world markets of tomorrow.

The objective of this study was to support the Committee on Industry, Research and Energy in its work on the EU's industrial and energy policy and to give advice on the following issues:

- What EU policies are needed for the EU to on the one hand reduce its needs for resources and energy and on the other hand through eco-innovation create solutions, which will also drive innovation in a large range of industrial sectors?
- Are existing measures delivering the set objectives and what improvements/ new instruments should be set forward?

To meet these objectives, the study provides an overview on resource scarcities, elaborates on eco-innovation, including potentials, trends and driving forces and develops proposals for EU policies.

SERI leads the first point, which will work out scenarios of possible resource scarcities, patterns of resource use in different sectors of the EU and pointing out the sectors affected by resource scarcity. www.seri.at/EP_Ecoinnovation

CO₂ balance of the Austrian foreign trade

12/2008 - 11/2009, Austrian Climate and Energy Fund

The project "Carbon balance of Austrian foreign trade", funded by the Austrian Climate and Energy Fund, aims at calculating the CO₂ emissions embodied in the Austrian foreign trade, so called carbon rucksacks, based on the MRIO model GRAM (see www.seri.at/GRAM).

National policy measures addressing the reduction of domestic CO₂ emissions may result in a relocation of production processes and therefore CO₂ emissions which undermine emission reduction efforts and may even offset them. This phenomenon is generally known as carbon leakage.

SERI will provide the first national data for Austria to enable considering this effect in national policy strategies. www.seri.at/GRAM_CO2

Friends of the Earth campaign: Natural Resource Use

11/2008 - 06/2009, Friends of the Earth-UK

SERI was invited to serve as scientific consultant in the design of an upcoming Friends of the Earth Campaign on Europe's Natural Resource Use. SERI wrote a background paper on "Measuring natural resource use", which provided background information for discussions at a Friends of the Earth seminar on "Measuring Europe's Resource Use" in Brussels, 5th November 2008. This background paper provides a summary of the current state-of-the-art in the development of measurement systems and indicators on natural resources as well as of current EU policy processes related to this issue.

SERI is also commissioned to draft a FoE Position Paper on this issue, which will be presented to EU policy makers in summer 2009. The background paper is available for download from www.seri.at/backgroundpapers.

GLOBAL 2000 Obst

11/2008 – 03/2009, GLOBAL 2000

The importance of implementing the principle of sustainability in companies is rising ("Sustainable corporate performance"). REWE, the biggest food business group in Austria, commissioned the Austrian environmental NGO Global 2000 (Friends of the Earth Austria) and Caritas Austria to develop a forward-looking and practicable method to assess the social and ecological sustainability of fruit and vegetables. The assessment method will enable REWE to better plan, control and communicate sustainability regarding fruit and vegetable products.

SERI serves as scientific consultant to Global 2000 for the environmental part in the developing process of this method. SERI works out an overview on sustainability standards and initiatives at European and national level and analyse input-orientated indicators as well as output-orientated ones, considering both the production phase as well as the whole life-cycle of fruits and vegetables.

SPAR – Improving Sustainability Performance of Retailers

09/2008 – 06/2009, SPAR Austria

In this project, SERI scientifically consults SPAR Austria on its way to extend and improve sustainability in their company. SERI assesses the sustainability performance of selected company divisions by a micro-indicator set, which evaluates the status quo of the ecological sustainability performance of SPAR. Based on the assessment results measures for improving the sustainability performance are elaborated.

Proregis II - Towards an International Data Base on Resource Intensity

04/2008 – 10/2008, Aachen Foundation Kathy Beys

The establishment of an international data base and data centre on the resource intensity of products and services is urgently needed, in order to monitor the success of strategies and measures to increase resource productivity, on the macro-economic level and the level of companies and product-service-systems including the customers and consumers activities. Such a data base could satisfy increasing demand by policy-makers, businesses and consumers on consistent and validated data, which enables directionally-safe decision-making towards a more sustainable development.

SERI, together with triple innova and Wuppertal Institute, set up a paper, which provides the framework for the establishment of such a data base and centre on resource intensity of raw materials, semi-manufactured goods, finished products and services. The centre will be able to

qualify people in using adequate data for optimizing their processes and deliver services that help SMEs to participate in the development of eco- efficient technologies and processes. Special chapters of this paper summarise the progress on national and international level since the publication of the study “PROREGIS” in 2000, analyse weaknesses and gaps, on what future work shall emphasize and which policy processes shall be influenced.

Nachhaltigkeit.at

01/2008 – 12/2010, Federal Ministry of Agriculture, Forestry, Environment and Water Management



SERI is responsible for editing and content of the website www.nachhaltigkeit.at which is one of the most important information platforms aimed at sustainable development in the German speaking countries. The platform contains weekly updated news and general informations such as events, websites and projects in the realm of sustainable development. Every month a specified „Topic of the month“ and related “Dialogue” with experts is published. The platform is dedicated to decision makers and interested lay people. www.nachhaltigkeit.at

FTI Kärnten - Technology policy concept for Carinthia 2020

03/2008 – 11/2008, Carinthian Economic Promotion Fund (KWF)

This project aimed to develop a political guidelines concept (research, technology and innovation based) for Carinthia (Austria) unto 2020. Amongst others, focal points were considered education, research sites and centers, IT, human resources and sustainability.

In cooperation with a feedback group, researchers compiled this concept conducting 4 workshops and several expert interviews. At the end of November project results were presented in Klagenfurt, Carinthia.

Seminars on Ecological Footprint

09/2008-12/2008, Federal States of Salzburg and Steiermark

In 2008, the Austrian province of Salzburg started an initiative to reduce the Ecological Footprint of the inhabitants of Salzburg. In the course of this initiative, a capacity-building seminar took place in Salzburg on September 10 and 11, where teachers and other interested persons were introduced to the Footprint concept in order to enable them to hold Footprint presentations in schools and other educational organizations. Stefan Giljum was invited to provide the scientific background for the seminar. In a half-day session, he presented and discussed the foundations of the Footprint concept, its strengths and weaknesses and how Footprints are calculated on the national as well as individual level. www.salzburg.gv.at/fussabdruck

A similar initiative has been hold by the Austrian province of Steiermark, where Stefan Giljum was invited to make a presentation on the scientific foundations of the Ecological Footprint on December 10 in Graz.

Ecological Footprint of the raw material producing industry in Austria

05/2008 – 03/2009, WKÖ - The Austrian Federal Economic Chamber

In cooperation with WWF Austria and the Forum of Mineral Raw-materials of the Austrian Federal Economic Chamber, SERI calculated the Ecological Footprint of the raw-material producing industry in Austria.

In order to apply the footprint concept for the raw-material producing industry, special adjustments are required, in order to include the positive environmental impacts of the branch into the calculation methodology. Such impacts are for example the biodiversity aspects and renatured areas.

The calculation is based on a new set of primary data collected with a large number of enterprises in this Austrian sector. Results highlight those areas of mineral extraction, which pose the biggest environmental pressure on nature. An Excel-based calculation tool is developed, which allows companies to calculate their own Ecological Footprint by simply adding the primary data of their enterprise. www.seri.at/EFminerals

UVSQ-C3ED

10/2008 - 4/2009 - University of Versailles Saint Quentin

From October 2008 SERI e.V. collaborated with the Equipe IACA at the University of Versailles in the development of communication tools for sustainability scenarios. The equipe is expert in visualization of scenario results, SERI provided input on sustainability and biodiversity scenarios. Contact: joachim.spangenberg@gmx.de

4.2 | ONGOING PROJECTS

ALARM - Assessing large scale environmental risks for biodiversity with tested methods

02/2004 – 01/2009, European Commission



ALARM is essentially a project to improve the instruments for assessing the threat to and the loss of biodiversity in Europe, and on this basis to derive suggestions how to stop the negative trends.

From 2004 to 2006 SERI was coordinating the socio-economic research in ALARM and still collaborates in analysing the relation of economic policies, climate change and biodiversity loss. In 2007 the work was dedicated to finalizing the socio-economic modelling of the scenarios and the development of a risk assessment toolkit that show the interested public and scientific world the size of the current risks on biodiversity. www.seri.at/alarm

ALTER-Net

04/2004 – 03/2009; European Commission, 6th Framework Program



ALTER-Net is a network of excellence (6th FP) consisting of 24 partner institutions of 17 European countries which aims at integrating existing research on biodiversity. ALTER-Net concentrates on two focal points: providing a network of ecological data and simultaneously establishing a network of long-term socio-ecological research. Thus, a pilot study is carried out in 10 European countries to collect people's attitudes related to nature and nature conservation.

In Austria this survey was conducted in 5 provinces of Upper Austria with the main focus on the Limestone National Park (Nationalpark Kalkalpen) region. Together with the Wegener Center for Climate and Global Change Graz, SERI was responsible for the execution and evaluation of the questionnaire, in particular for the qualitative data analysis. www.alter-net.info

petrE - Resource productivity, environmental tax reform and sustainable growth in Europe

07/2006 – 06/2009, Anglo-German Foundation Research Initiative "Creating Sustainable Growth in Europe"



petrE examines the economic and environmental implications and impacts of environmental tax reforms and assesses the effectiveness of these reforms to improve the use of resources, including labour, and to raise welfare.

SERI is responsible for the work package on "Global Dimensions of Sustainable Growth in Europe". This work package investigates world-wide consequences of a European transformation towards sustainable growth based on an environmental tax reform and significantly increased resource productivity. www.seri.at/petre

EXIOPOL - A New Environmental Accounting Framework Using Externality Data and Input-Output Tools for Policy Analysis

11/2006 – 10/2010, European Commission, 6th Framework Program

EXIOPOL sets up a detailed economy-environment model to estimate environmental impacts and external costs of different economic sectors and of the consumption of natural resources for countries in the European Union.

In the EXIOPOL project, SERI works in the area of environmental extensions of the detailed input-output model and is responsible for the categories of material flows, land use and water use. Data is collected for the EU-27 plus the major EU trading partners. In 2007, data collection for 4 testing countries was completed. Main partner in data collection is the Wuppertal Institute for Climate, Environment, Energy in Germany. www.seri.at/EXIOPOL

ECO-CHANGE - Challenges in assessing and forecasting biodiversity and ecosystem changes in Europe

01/2007 – 12/2011, European Commission, 6th Framework Program



The aim of EcoChange is to assess and forecast changes in terrestrial biodiversity and ecosystems and in the ability of biodiversity and ecosystems to supply goods and services and to buffer against climate and land use change.

SERI leads the socio-economic part of the project,, which develops and carries out an integrated sustainability assessment (ISA; see *Ongoing Projects: "MATISSE"*) of the impacts of environmental change on ecosystem goods and services in three case studies. In addition SERI leads the science-policy interface together with partners from France. www.seri.at/ecochange

INDI-LINK - Indicator-based evaluation of interlinkages between different sustainable development objectives

11/2006 – 04/2009, European Commission, 6th Framework Program



The INDI-LINK project further improves EU sustainable development indicators (SDI), assesses the interlinkages between the different priorities of the EU Sustainable Development Strategy (SDS) and derives conclusions for future SD policy making. SERI serves as scientific coordinator of this research project in the 6th Framework Program (sub-program Scientific Support to Policies).

In 2007, SERI elaborated state of the art reports for two selected EU SDI (Total Material Consumption, Environmentally weighted indicator of material consumption), on which further work in 2008 will be focused. Furthermore, SERI contributed three case study reports on the assessment of interlinkages (Environmental Space; Happy Planet Index; Input-Output Analysis). www.seri.at/indi-link

GoverNat - Multi-level Governance of Natural Resources: Tools and Processes for Water and Biodiversity Governance in Europe

10/2006 – 09/2010, European Commission, 6th Framework Program



The central research objective of GoverNat is to test the hypothesis that certain participatory processes and analytical decision tools are particularly useful for improving multi-level environmental governance. Specific research objectives therefore address the enhanced understanding of multi-level governance of natural resources, the development of methods of public and stakeholder participation to be used in such contexts, the effective utilisation of specific analytical decision tools in multi-level governance, and the reflective evaluation of such use.

SERI acts as a praxis affiliate and will host 1-2 fellows in internships in 2008 and 2009, where the fellows can experience from the "insider perspective" the challenges of making decisions on environmental governance at different spatial scales. In addition Ines Omann is teaching at the GoverNat schools about different issues in sustainability science (such as scenario development, multi-criteria decision aid). www.seri.at/governat

e-co - Effects of sustainable energy consumption for Austria

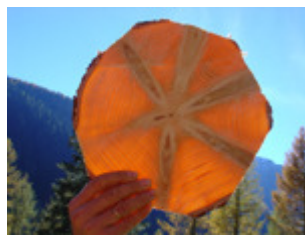
12/2007 – 12/2009, bmvit, BMWA



The project e-co analyses the effects of sustainable energy consumption on the economy, the environment and on society by following the Austrian goals in the fields of energy and climate policy until the year 2020. For this analysis scenarios focussing on renewable energy, an increase of energy efficiency and a reduction of energy consumption in private households are simulated and evaluated through an environment-energy-economy model. www.energiemodell.at

Sustainable Growth

12/ 2007 – 11/ 2009, Federal Ministry of Agriculture, Forestry, Environment and Water Management



Sustainable growth addresses the provision of services and utilities which increase human well-being without reducing a comprehensively defined capital stock. An increasing quality of life along with a positive subjective perception of the people should become the focus and the objective of an alternative, qualitative growth. In 2008, the main outcome of the project was a paper of about 30 pages easily readable by laypersons that compiles arguments of an “alternative growth”, whereby an emphasis was put on concepts of human quality of life and well-being. In March 2009 Mandelbaum Verlag will publish the “argumentary” together with contributions from stakeholders from practice and science. Furthermore, SERI organises a high-level international conference in Vienna in autumn 2009 in order to promote the debate on growth. In preparation for the conference SERI will arrange a workshop in Brussels and contribute to one in Vienna. For the Brussels workshop the argumentary will be translated into English, which could lead to a second publication in 2010. www.seri.at/sustainablegrowth

SCOPE² - Sustainable Consumption Policies Effectiveness Evaluation

2007 – 2009, European Commission, DG Research, 6th Framework Program

How can policy instruments lead to greening of the markets and stimulate more sustainable consumption patterns by individuals and households? Based on an Inventory and assessment of policy instruments, business initiatives, and an analysis of theories on (system) innovation the project developed a gap analysis. It identified sectoral and regional gaps but also gaps due to an emphasis on less effective informative instruments, and lacking packages of complementing instruments supporting each other. Our research results indicate that most instruments and bottom-up initiatives work out most effectively in terms of the environment when they are “guided” by clear and reliable administrative frameworks. www.seri.at/scope2

EACH-FOR - Environmental Change and Forced Migration Scenarios

01/2007 – 03/2009, European Commission, 6th Framework Program

EACH FOR investigates the contribution of environmental degradation to forced migration. The project analyzes direct and indirect environmental effects on livelihoods and develops scenarios for forced migration flows. Outcomes will include detailed sub-region or country level forced migration scenarios, a presentation of causes leading to forced migration, with focus on environmental concerns; and an online running "environment degradation caused forced migration" simulation model for demonstration and policy purposes.

SERI did the evaluation of environmental degradation for each case study and is now involved in developing the scenarios on regional and national level. www.seri.at/each-for

Luxembourg Sustainability Strategy

2/2007 – 9/2008, Ministère d'Environnement, Luxembourg

Since early 2007 SERI Germany has moderated the process of developing a new, ambitious sustainability strategy for Luxembourg. Based on an analysis of unsustainable trends, the interministerial group on SD developed the Luxembourg Vision, highlighting on alternative, sustainable future, priorities and conflicts of interest.

On this basis, a new NSDS was drafted, with input from public hearings. It contains 14 objectives, about 50 targets and more than 150 measures, all quantified and time bound. The NSDS was adopted by the Cabinet in spring 2008 and is now in the mandatory public hearing process. It will become law in 2009. Contact: Joachim.Spangenberg@gmx.de

4.3 | FINISHED PROJECTS

MATISSE - Methods and Tools for Integrated Sustainability Assessment

04/2005 – 03/2008, EU, 6th Framework Program



MATISSE aims to achieve a step-wise advance in the science and application of Integrated Sustainability Assessment (ISA) of EU policies. The core activity is to improve the tools available for conducting ISAs.

SERI is involved in all main project activities: a common conceptual framework for ISA development, implementation and evaluation, a future tool portfolio for ISA, the application of the new and improved ISA tool in four case studies, and as the workpackage leader the involvement and engagement of stakeholders and policy makers. www.seri.at/matisse

FORESCENE - Development of a Forecasting Framework and Scenarios to Support the EU Sustainable Development Strategy

12/2005 – 06/2008, European Commission, DG Research, 6th Framework Program



FORESCENE develops an analytical framework for consistent environmental sustainability scenario building (forecasting, backcasting, simulation) in areas such as water, soil, biodiversity, waste and natural resources.

Within FORESCENE, SERI was responsible for organising a high-level expert workshop for the activity field industry/economy, which took place on in October 2006 in Vienna. www.seri.at/forescene

PSS Strategies – Development of strategies for designing and implementing sustainable Product-Service Systems

2006 – 2008, bmvit (Federal Ministry of Transport, Innovation and Technology), Research Program "Factory of Tomorrow"



The aim of the project was to elaborate on innovations and strategies for product-service-systems (PSS) along product chains in defined demand areas. Company specific and demand area specific framework conditions (e.g. legal, financial and organizational) were examined, possible obstacles assessed and strategies on how to overcome them elaborated. About 5000 companies and other actors from research, policy and business organizations were contacted and informed about PSS and about 500 people participated in the strategy development process.

SERI was the project's coordinator and responsible for the organization of the workshop on the demand area "energy". Over 30 stakeholders from politics, economy and science attended the event "What You Always Wanted to Know About Product Service Innovation" on January 22, 2008, rounding up the project within the research and technology program "Factory of Tomorrow". The presentations held by Eva Burger, Christine Jasch, Ingrid Kaltenecker and Rainer Pamminer gave an overview of the project results for the defined demand areas (housing, energy, cleaning of buildings, containers, machines and facilities, chemicals-based processes, mobility and transport, reuse and recycling). www.seri.at/pdlstrategien

ESEE-Website

11/2005 – 11/2008, Austrian Ministry for Agriculture, Forestry, Environment and Water Management



Supported by the Austrian Ministry for Agriculture, Forestry, Environment and Water SERI maintains the website of the European Society for Ecological Economics (ESEE) and publishes the electronic ESEE newsletter. ESEE is a non-profit, member-governed, organisation dedicated to advancing understanding of the relationships among ecological, social and economic systems for the mutual well-being of nature and people. www.seri.at/ESEE

Wachstum – What kind of growth is sustainable?

12/2007 – 07/2008, Federal Ministry of Agriculture, Forestry, Environment and Water Management

Together with Karuna Consult SERI is working on a collection of arguments for a different kind of growth. Focal question: "What kind of growth is sustainable?"

Based on the so-called "Limits to Growth" (see www.seri.at/growth) especially economical arguments in relation to life styles, consumption and growth, employment and growth, as well as potential growth drivers like the international financial system are being identified. www.seri.at/wachstum

UNEP GRAME - Assessment of the Assessments of the Marine Environment

09/2007 – 06/2008, United Nations Environment Program (UNEP)

The United Nations General Assembly in 2005 endorsed the need for a Regular Process for global reporting and assessment of the state of the marine environment. The start-up phase is an assessment of assessments of the marine environment.

The Assessment of Assessments is being carried out by a Group of Experts. Its goal is to identify gaps in data availability, gaps in geographic coverage of existing assessments, gaps in the scope of existing assessments, critical knowledge uncertainties where future research is needed. In addition the Assessment should identify best practices and approaches including assessment methodologies and the best means to make the Regular Process relevant to policy without prescribing management or policy responses.

Jill Jäger was nominated by UNEP to the Group of Experts, together with Ines Omann she is evaluating the results of questionnaire to find examples of best practice in marine assessments. www.seri.at/unep-grame

Visual mfa.net - Developing a visualisation tool for the website www.materialflows.net

10/2007 – 03/2008, Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management



www.materialflows.net is an online portal for material flow data, providing access to material flow data sets on the national level in current time series from 1980 to 2005. In this project SERI developed a tool for the visualisation of the worldwide data on resource extraction.

In autumn 2007 SERI started a new project where the underlying database of www.materialflows.net was updated and a new feature was developed. The new feature is a tool for the visualisation of the worldwide MFA-data. Thereby, the extraction of the different aggregated resource groups is illustrated on a worldmap using different colouration. Users can choose resource (groups), type of extraction and year. On demand the

extraction values can be set into relation to economic performance (GDP), population, or land area of the different countries of the world. The data download-menu has been integrated into the visualisation tool – adjustments for the visualisation are maintained and can be specified by the user in terms of time (span) and country selection. The data can then be downloaded in Excel format. Additionally, also prefabricated maps in jpeg format can be downloaded. www.seri.at/visualMFA

Ökosoziale Marktwirtschaft - Redefining the eco-social market economy

12/2007 – 11/2008, Ökosoziales Forum

The "eco-social market economy" was formulated by the Austrian People's Party as part of their party programme in 1989. The main issue is the compatibility of ecological and social aims with the principles of a market economy. The crucial question is: which framework conditions have to be created so that the dynamics of a market economy move within borders that are imposed by ecological and social aspects.

The objective of the project is to update the concept of the eco-social market economy in the light of current challenges such as globalisation, European integration, climate change, demographic and cultural changes of the society etc.

The Austrian Institute of Economic Research and SERI developed two Input-papers for this reason. The papers define the conceptual framework, identify trade-offs between economy, ecology and social sphere, and discuss potential approaches. www.seri.at/oekosozialeMW

VAT diff - The use of differential VAT rates to promote changes in consumption and innovation

12/2007 – 05/2008, DG Environment

The European Commission wishes to obtain information and analysis on the likely impacts of changes in value added tax (VAT) for specific products on the sales of such products, on energy consumption over time and on the design of such products and thus the development of product characteristics.

Within this project SERI is responsible for a case study on reduced VAT rates for organic meat and dairy products. *Contact: Andrea Stocker (andrea.stocker@seri.at)*

AMA CO₂ Workshops - CO₂ labelling of food products

03/2007 – 03/2008, AMA - Agrarmarkt Austria

The organisation Agriculture Marketing Austria (AMA) has planned developing a CO₂ label of the transport of food products, which should help consumers to make better-informed decisions, provide an incentive to buy climate friendly products, sensitize consumers to the topic of „climate protection and transport“ and thus strengthen the demand for regional products.

In the course of the project, SERI ran three expert workshops (9.7.2007, 22.10.2007, 12.03.2008) on the CO₂ labelling of food products together with the Austrian Society for Environment and Technology (ÖGUT), the Factor Ten Institute Austria and the Austrian Ecology Institute. A detailed feasibility study for five selected product groups (appels, potatoes, eggs, milk, beef) was elaborated for AMA Marketing, informing about the possibilities and limits for such a labeling scheme.

ECR – Measurement and Assessment of Product's Quality of Sustainability

06/2007 – 12/2008, ECR Austria

ECR Austria (Efficient Consumer Response), an Austrian platform for producers and retailers with the aim of optimizing the whole value chain in order to satisfy customers needs faster and at lower costs,

decided to take the topic “sustainability” on their agenda. The company representatives within ECR Austria believe that aware costumers – on condition that well-grounded information on the sustainability performance of the product is given – “sustainable” products are preferred and so contribute to reaching the global objectives.

Since summer 2007 SERI has consulted the initiative ECR Austria on sustainability. In a number of workshops the basic conditions have been worked out to form a working team with the aim to develop a standardized comprehensive method to measure a product’s quality (or soundness) of sustainability on the basis of existing or currently being developed European norms. The information shall also serve as decision support for consumers. At the ECR Infoday 2008 (5th November) Dr. Friedrich Hinterberger and the task force representatives will presented the preliminary results of the ECR pilot study under the topic "Sustainability indicators for product assessment". The presentation sparked great interest among well-known companies and also met with big response in the media. www.seri.at/ecr and www.ecr-austria.at

Model for Austria’s Foreign Trade Policy

09/2007 – 04/2008, Austrian Federal Ministry of Economics and Labour

In fall 2007 the Austrian Federal Ministry of Economics and Labour initiated a process for the formulation of a model for Austria's foreign trade policy. An intense discussion process among a great number of stakeholders - with SERI among them - took place over several months before presenting the model to public in April 2008. In August 2008, it was brought to the Austrian Cabinet.

SERI contributed to the topic of "resource management" within the chapter "sustainability". It was emphasised that the increase of the world population and the dynamic economic development in China, India and other emerging markets is leading to a significantly higher demand for natural resources and a clear price increase of raw materials. Consequently, to avoid short supply and distribution conflicts because of limited availability of raw materials, resource efficiency will have to be increased. Furthermore, besides security of supply, also climate protection constitutes a key issue, as climate change can cause high costs and drastic changes in traditional habitats. Before this background, it was pointed out that the augmenting demand for sustainable, resource-efficient products, technologies and know-how is a chance for Austria’s economy.

Find more information and a download option for the model brochure on www.bmwa.at.

DEEDS (DEsign EDucation and Sustainability)

10/2006-12/2008, European Commission, DG RES, Leonardo da Vinci Program

The DEEDS project developed modules for teaching sustainability to be integrated into the curricula of design education, and for vocational training for professional designers. It started in November 2006 and finalized end of 2008. As the conceptual basis for the training modules DEEDS developed “Design for sustainability” principles which cover all what is there in the field of design and beyond. The complex sustainability concept the project is based on concepts developed and provided by SERI Germany. The results of the project were presented at the World Design Congress, Turin, in November 2008. For the final report contact: Joachim.Spangenberg@gmx.de
www.deedsproject.org

The projects listed below started and ended in 2008. Please find precise descriptions of each project in chapter 4.1 (New projects).

- FTI Kärnten - Technology policy concept for Carinthia 2020
- Selbst&Wert – A training course with unemployed towards a holistic personnel development

- Proregis II - Towards an International Data Base on Resource Intensity
- Seminars on Ecological Footprint

4.4 | UPCOMING PROJECTS

Eurostat Lot 1 - Data Centres for Natural Resources and Products - Lot 1: First versions of the Data Centres

02/2009 – 07/2010, Eurostat - Statistical office of the European Commission

The Sustainable Development Strategy and all other sustainability policies of the European Union need to be based on factual evidence and data. Eurostat, together with DG Environment (DG ENV), the European Environment Agency (EEA) and the Joint Research Centre (JRC), signed a Technical Arrangement (Group of Four -G04) establishing 10 Data Centres: Natural Resources, Products (IPP), Waste, Soil, Forestry, Air, Climate Change, Water, Biodiversity, and Land Use. Eurostat was given responsibility for the Data Centres for Natural Resources, Products and Waste. The main purpose of these Data Centres is to improve knowledge about the relationship between resource use, economic growth and environmental impacts. Eurostat, then, set a major call for tender divided in three lots aiming at the provision three major building blocks for operationalising the Data Centres for Natural Resources and Products. TNO (the Netherlands), CML (Leiden University, Netherlands) and SERI will work on Lot 1 „Developing first versions of the Data Centres“. Lot 1 will provide a basic, consistent architecture in which data and indicators are placed.

Within Lot 1, SERI will work on the task „Identification of modules“. SERI will describe the modules of the Data Centres from the macro (that is regional or national economy) perspective. The task consists of a review of approaches, methods and data sets that have been used in the past to answer policy questions related to sustainable use of natural resources, and note where the approaches are supporting or linking into each other, in order to identify potential elements of the Data Centres, and the potential sources of relevant data. Therefore, experiences with and literature on Environmental accounting, NAMEAs, extended Input-Output analysis, and Material Flow Analysis will be analysed. A special chapter will be devoted to the role of environmental expenditures and environmental taxes in these frameworks, and to separate frameworks for environmental expenditure statistics.

OPEN-EU - One Planet Economy Network: Europe

07/2009 - 06/2011

As the world's largest economy, Europe must embark upon an immediate and major transformation to avert dangerous climate change and prevent ecosystem collapse. It is clear that a new future for Europe must be achieved by building an economy that respects all environmental limits and is socially and financially sustainable. WWF-UK, the coordinator, of the OPEN-EU project, calls this a One Planet Economy.

The goal of the One Planet Economy Network project (OPEN: EU) is to develop an academically robust “footprint family” (ecological, carbon and water footprint) of sustainable development indicators, place these in a scenario modelling tool (EUREAP - European Resource and Energy Analysis Programme) for evidence-based policy, and create a new forum for the visions, knowledge and interests of different stakeholders (an online network of decision-makers, CSO's and business leaders) to help this transformation of the EU to a One Planet Economy by 2050.

Within the project, SERI works on policy integration and scenario prioritisation in order to establish the EUREAP forum and is responsible for the partial workpackage 6.2 "Scenario formulation and evaluation“, which will elaborate integrated story lines for the transformation of Europe towards a One Planet Economy with significant reduction in natural resource throughput. In cooperation with all project partners, it will identify key policy areas for action and related policy instruments and strategies. www.wwf.org.uk

BRIX – Business Resource Intensity Index

03/2009 – 08/2010, FFG – Österreichische Forschungsförderungsgesellschaft

The efficient use of natural resources is becoming more and more important for companies. This project aims at developing an index to measure and assess the resource intensity of products, services and companies – the Business Resource Intensity Index (BRIX). To realise that, the project consortia - SERI as coordinator, together with ÖIN, plenum, Faktor 10 Institut and Wuppertal Institut - is cooperating closely with three Austrian companies (Lenzing AG, Rhomberg Bau GmbH, Grüne Erde GmbH). The index will enable the companies to measure and optimize the resource use and ecological efficiency of their production sites. www.seri.at/BRIX

WeinKlim - Viniculture and Climate Change: Options for adaptation and mitigation. Case Study region Traisental

01/2009 – 03/2010, Federal Ministry of Agriculture, Forestry, Environment and Water Management; Cooperation between national and local governments

This project aims to develop actions and measures to obviate negative impacts of climate change on winegrowing and to reduce greenhouse gas emissions of grape- and wine production and marketing.

At the same time the case study region Traisental (situated in Lower Austria) intends to promote sustainable wine production techniques as a trademark for local winegrowing and as a role model for other winegrowing regions.

In this project, SERI is responsible for the analysis of the product life cycle of downstream processes (packing, storage, transport, sales) regarding their greenhouse gas emissions. In addition, SERI involves local winegrowers and other local stakeholders in the project via interviews and workshops and is responsible for the dissemination of the project results.

SERI strives to debate its research results with political and private sector decision makers and tries to include a broader public into the discussion around sustainable development by organizing conferences, workshops and other events.

"Courage for Sustainability – 12 Books on the Future of the Planet" ("Mut zur Nachhaltigkeit - 12 Bücher zur Zukunft der Erde"): Presentation of Education Initiative in Vienna



The Foundation *Forum für Verantwortung*, together with the *ASKO EUROPA-STIFTUNG*, the *Europäische Akademie Otzenhausen* and the S. Fischer Verlag, invited to the presentation of the education initiative "Courage for Sustainability" at the *Austrian National Library* on April 21, 2008.

The opening volume of the book series was written by SERI researcher Jill Jäger in cooperation with a number of other SERI colleagues: *How Much More Can Our Earth Take? Paths to Sustainability*.

The initiative was for the first time presented to the Austrian public. After some introductory words by the Austrian Chancellor Dr Alfred Gusenbauer, the authors of four books, including Jill Jäger, and Klaus Wiegandt, the founder of the Foundation Forum für Verantwortung, was available for Q&A.

Learn more about the initiative "Courage for Sustainability" also on www.mut-zur-nachhaltigkeit.de.

Book Presentation: "Fairness & Sustainability – National and International Strategies"



Organized by SERI and the European Support Center of the Club of Rome the presentation of the book "Zukunftsfähiges Deutschland in einer globalisierten Welt" was held by Wolfgang Sachs (lead author of the study) on November 6, 2008 at Welt Café in Vienna. Find more information about the event on www.clubofrome.at and about the study on www.zukunftsfahiges-deutschland.de.

Sustainable Consumption Conference 2008

Building on the success of the "Sustainable Consumption in Hungary 2007" conference organised last December, the Institute of Environmental Sciences at the Corvinus University of Budapest, the Department of Environmental Economics at the Budapest University of Technology and Economics, GreenDependent Sustainable Solutions Association, the HAS-ELTE Communication Research Group, the Association of Conscious Consumers, Central European University and SERI organised an international conference on sustainable consumption on October 8, 2008 in Budapest.

This year the conference focused on the Central and Eastern European region and had the following objectives:

- to review and summarise completed and ongoing research activities on sustainable consumption in the region;

- to create an academic forum that can serve as the basis for professional communication and development in the field; and
- to create an informal network of scientists who work and are interested in this field in order to share and promote knowledge about sustainable consumption.

During the one-day conference seventeen presentations were delivered in five conference sessions on such highly interesting topics as the state of sustainable consumption in Central and Eastern European countries, organic food consumption and agriculture, system archetypes to diagnose challenges of sustainable consumption, the consistency of sustainable lifestyles, actors and factors influencing sustainable consumption etc. The keynote speeches were on such challenging themes as overconsumption and frugality, and on supporting infrastructures and engagement. On the conference day there were over 130 registered visitors from academic institutions, civil organisations, governmental bodies and from the media. Presentations and the conference proceeding are available at www.greendependent.org.

Fairness and Sustainability: National and International Strategies

Presentation of the Book "Zukunftsfähiges Deutschland in einer globalisierten Welt"
November 6, 2008, 18.00 at **Welt Café** (Schwarzspanierstraße 15, 1090 Vienna)

Organized by SERI and the European Support Center of the Club of Rome

Presentation by Wolfgang Sachs, lead author of the Study; more on www.clubofrome.at

7 | CONFERENCES & LECTURES

The presentation of SERI projects at national and international conferences is an essential part of SERI's research work and helps to build up a network of partners which follow the same or similar ideas within sustainable development research. All event-presentations can be found at "Presentations" on www.seri.at/publications.

JANUARY

Lecture on Limits to Growth

In front of an audience of about 40 people Fritz Hinterberger talked about "Why limits to growth won't hurt. Sustainable economy within natural limits" on January 29 in Wien-Alsergrund.

Does economical growth solve our problems (like unemployment, poverty, resource use and environmental damage) or is it rather the source of all these problems? Under which conditions is reduced growth of material wealth for people of the "rich" parts of the world acceptable?

Sustainability Assessment Methodologies

On January 14-15. 2008, Fritz Hinterberger and Thomas Ruddy participated in a workshop on Sustainability Assessment Methodologies organized by OECD at the Royal Tropical Institute in Amsterdam. Fritz gave a presentation of insights from the MATISSE project, prepared with Jill Jäger, on "Methods and Tools for Integrated Sustainability Assessment". Thomas has recently co-authored a paper on these two IA processes, emphasizing the potential for policy learning. Thomas' paper is based on his fieldwork done on behalf of SERI in Brussels, which is documented on www.wsis.ethz.ch/seri.

Expert Workshop on Scenarios

SERI Germany was invited to participate in an expert workshop on scenarios initiated by the German Federal Environment Agency and held at the Center for Environmental Systems Research (CESR), Kassel University, January 25. Its purpose was to get a step closer to developing quality standards for scenarios to be applied by the Agency and beyond.

Already the introduction by Joseph Alcamo, scenario expert to the EEA and chief scenario developer for IPCC and the Millennium Ecosystem Assessment, demonstrated the difficulties: are scenarios to be developed towards more (natural) science quality criteria like reproducibility of results, or are they rather a part of social and cultural sciences requiring other criteria? The experts from different backgrounds (disciplines, traditions, business/consultancy/academics, including SERI's Joachim Spangenberg) contributed to a lively and substantial debate, and a very open result: there can be standards, but there cannot be a one-size-fits-all method.

SERI @ UNEP Expert Meeting on Trade and Climate Change



SERI researcher Stefan Giljum participated in an expert meeting on the interlinkages between international trade and climate change, organised by the UNEP Economics and Trade Branch from February 11-12 in Geneva, Switzerland.

Around 150 experts from international organisations (UN, WTO, IMF, OECD), civil society organisations (WWF, Oxfam) and academia discussed the various dimensions of interlinkages, including issues of transport, trade in environmental goods and services, and trade and the Kyoto instruments.

SERI was invited as co-author of the study on trade and climate change for the EU Parliament in 2007 (see www.seri.at/trade-and-climate), which was presented by the project coordinator Andreas Kraemer from Ecologic, Berlin.

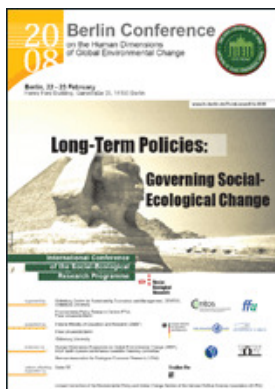
Lecture at the Marketing Club: Communicating Sustainability

Under the title "Nachhaltigkeit: Lippenbekenntnis, Chance oder Pflicht?" (Sustainability: Lip Service, Chance or Duty?) Fritz Hinterberger held a short introductory lecture for an eponymous event of the Austrian Marketing Club (www.marketingclub.at) on February 18 at the Erste Bank Vienna.

Under the moderation of Martin Weinand (www.weinand.at), the economics journalist Milan Frühbauer, Marianne Pretscher (in charge of sustainability at the Verbund trust) and Jürgen Schmücking from BIO Austria discussed the question of how sustainability may best be communicated. Resulting tenor: the terms "sustainability" and "CSR" are important but not very helpful for communication matters due to their inflationary usage.

More information on this expert meeting and a download of all presentations and related papers can be found on www.unep.ch/etb/events/2008TradeClimateChangeMtg11Feb.php.

Conference on Human Dimensions on Global Environmental Change



Jill Jäger and Ines Omann attended the 8th Berlin Conference on the Human Dimensions on Global Environmental Change, held in Berlin on February 22-23, 2008. Its aim was to bring together transdisciplinary research results on long-term policies from various fields.

The conference was organised by the International Human Dimensions Programme on Global Environmental Change (IHDP), by the Earth System Governance Scientific Planning Committee and the German Association for Ecological Economic Research (VÖW). To see the programme or download the papers go to web.fu-berlin.de/ffu/akumwelt/bc2008/index.htm.

Jill held a semi-plenary keynote speech about "Sustainability Science and the Challenges of Transdisciplinary Research", as well as a presentation on "Stakeholder Integration and Social Learning in Integrated Sustainability Assessment", based on a paper written by Lisa Bohunovsky and Jill Jaeger. Together with Felix Rauschmayer from the UFZ Leipzig Ines presented a paper on "European Governance of Natural Resources: Outcome-oriented vs. Procedural Governance Evaluation" in a special session featured by the Governat (www.governat.eu) project.

Effects of climate policy – Auswirkungen Klimapolitik

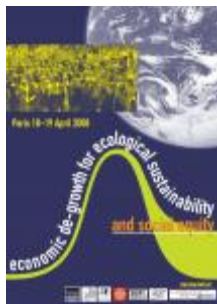
Presentation held in German about economic effects and costs of climate policy („Volkswirtschaftliche Auswirkungen und Kosten von Klimapolitik“) at the „Roundtable Nachhaltigkeit“, hosted by the Umweltbundesamt.

Workshop on Sustainable Development and Quality of Life

Although the concept of needs is central in the Brundtland definition of Sustainable Development (SD), this concept has hardly been taken up in sustainability science or policy making. And although SD is a concept that nobody really disagrees upon and that is heavily used by policy makers, a transition towards SD has not yet started. One reason might be that SD has not been explicitly connected to high quality of life. A first step for doing this was a twodays workshop in March 2008, hosted by SERI with about 15 participants from all over Europe. It was prepared and moderated by Ines Omann and Felix Rauschmayer.

Several presentations were held on topics as for instance well-being, happiness, participation, lifestyles, needs, capabilities, sustainability and discussions about the links between those issues. Presentations held at this workshop can be downloaded at www.seri.at/mode-3-workshop.

4 Presentations were held at the First International Degrowth conference, April 18-19, 2008 in Paris



- Presentation held within the panel "Complementarity of Degrowth and Steady-State?"
- "Measures for Collective Reduction Acquisition Capacities of Affluent Countries": Presentation held within the panel "Change of economic institutions?"
- "Economic Localisation": Presentation held within the panel "Socio-economic degrowth processes"
- "Keynote Background Panel Degrowth Conference": Keynote held within the Background Panel

SERI @ OECD/UNEP conference on "Resource Efficiency"

Stefan Giljum attended the OECD/UNEP conference on "Resource Efficiency" which was held in Paris from April 23-25. In the session on "Improving knowledge: material flow analysis and indicators" he presented the first results produced with the new "Global Resource Accounting Model (GRAM)", which was developed in a cooperation between SERI and GWS, Osnabrück in the course of the petrE project (see www.seri.at/petre).

GRAM is a global, multiregional input-output model extended by material extraction data in all countries of the world. The GRAM model allows quantifying the raw materials embodied in internationally traded products and thus calculating comprehensive material flow-based indicators of countries and world regions.

Nachhaltigkeit, Lebensqualität, Glück – Sustainability, Quality of Life, Happiness

Presentation "Nachhaltigkeit, Lebensqualität, Glück. Ein gutes Leben jenseits der Grenzen des Wachstums?" held on invitation of the *ESD* (European Foundation for Education and Sustainable Development) at Vienna's Café Museum on April 25.

Sustainability in the Austrian Foreign Trade Model

On April 24, 2008, the Austrian Foreign Trade Model was presented within the scope of the "Exporttag der Aussenwirtschaft Österreich (AWO)" (AUSTRIAN TRADE export day) under the title of "Globalisierung gestalten – Erfolg durch Offenheit und Innovation" ("Designing Globalisation – Success through openness and innovation"). The model is the result of an intense discussion process taking place among various stakeholders—with SERI among them—over several months. SERI took advantage of the interdisciplinary discussion round in order to stress the chances, risks and challenges of the ongoing internationalization of trade from a sustainability perspective. In the Model Brochure the topic of sustainability is treated separately in the list of "Chances and Challenges" for Austria's Foreign Trade Policy, clearly accounting for its significance in this context.

MAY

Lecture: USA – From Free to Fair Trade? Union Perspectives for a new Trade Policy in America and Europe

Trade Policy is gaining more and more weight in the current US presidential election campaign, especially on the democrats' side. Particularly the North American Free Trade Agreement (NAFTA) and the related job losses in the USA are at the centre of discussion in this respect.

On invitation of the Renner Institute Vienna Thea M. Lee, international chief economist and Assistant Director of Economics of the American Federation of Labor and Congress of Industrial Organizations (*AFL-CIO*) presented a comprehensive analysis of the current status quo of the ongoing discussions in the USA as well as the potential effects on Europe from a unionists' point of view within the scope of a public event on May 7, 2008. Thea M. Lee's analysis was commented and discussed by Austrian experts—among them Stephan Lutter from SERI.

Conference: "ECOSYSTEM SERVICES - Solution for problems or a problem that needs solutions?"

Valuing Biodiversity is a hot issue - in some SERI projects like ALARM, at the COP 9 (www.cbd.int/cop9/) Biodiversity Conference, and in the public domain. It was also the theme of the Conference "ECOSYSTEM SERVICES - Solution for problems or a problem that needs solutions?" held in Salzac Castle, Germany from May 13–15, organised by the German Chapter of the International Association for Landscape Ecology (IALE-D), the Working Group "Ecosystem Research" of the German Ecological Society (GfÖ), the University of Salento Lecce/Italy and the Ecology Centre of the University of Kiel/Germany.

Opening the conference, Bob Costanza highlighted the reasons for valuing biodiversity based on ecosystem services, since only economic value would make biodiversity count in political debates. In response, SERI Germany's Joachim Spangenberg warned against valuation, arguing that this would leave vast parts of biodiversity unprotected and instead would call for politically set targets plus economic incentives in their implementation. In this position he was supported by Walter Rademacher, head of Germany's statistical office.

4th Bridging the Gap Conference: Responding to Environmental Change – from Words to Deeds

The conference addressed five high priority areas to identify gaps in policy, research, technological development and capacities of society to respond to emerging issues and future uncertainties and to be better prepared for possible future surprises in order to move towards more sustainable development. It took place in Slovenia in Portorož from 14 to 16 May, 2008. Sylvia Lorek presented insights from the ongoing SCOPE² project in the priority area "Sustainable Consumption and Production". The other areas were Information gathering and sharing, energy and the environment, adaptation to climate change, and biodiversity and ecosystem services

Sustainable Companies of Tyrol

After passing a test referring to social, environmental and economic aspects of sustainable development, sustainable Tyrol companies were credited with a certificate and a trophy in Salzburg on Mai 8.

In his speech, Joachim Spangenberg highlighted the urgency and severity of the sustainability challenges we are facing, welcoming the contributions of the celebrated companies, but urging for more actors and more ambitious targets. In reaction, one entrepreneur, applauded by the participants from the business sector, suggested to change the successful motto of the Tyrolean business association "If business does well, so do people" and set the priorities right: "If people do well, so does business".

AUGUST

3 Presentations were held at the ISEE Conference, August 7-11, 2008 in Nairobi:



- Integrating Disciplines and Models by Means of Storyline Development: The ALARM Experience
- Instruments for Sustainable Consumption. Do current strategies miss the point?
- Sustainable Development Strategies, Reviews and Learning Processes: European Experiences

Fritz Hinterberger talks at "Lacus Felix Gückswochen"

In the course of the Lacus Felix summer academy (www.lacus-felix.at) under the title "Glückswochen" on August 8, Fritz Hinterberger held a lecture entitled "Glücklich leben in einer nachhaltigen Zukunft" ("Living happily in a sustainable future").

Why do the limits to growth not hurt? Is economic growth the solution to our problems (like unemployment, rising poverty, resource use and environmental pollution) or is it rather the source of them? Under which circumstances is fair growth of material wealth acceptable for people of the "rich" part of the world? A manuscript of the lecture is available from the author: fritz.hinterberger@seri.at

What about needs? Operationalising the Brundtland Definition of Sustainable Development



From August 21-22, 2008, the 2nd International Sustainability Conference under the motto "Creating Values for Sustainable Development" took place in Basel, Switzerland. Ines Omann was there.

From a socio-economic perspective creating values for Sustainable

Development is one of the major tasks and challenges with regard to the expected societal transformation processes toward sustainability.

The ISC 2008 provided a platform for both interdisciplinary and transdisciplinary oriented social scientists working in the field of sustainable development. The conference was committed to promoting dialogue, especially among economists and other social scientists. Moreover, the conference acted as a meeting point for committed individuals from the political, corporate and academic worlds as well as for representatives from civil society.

Ines Omann from SERI attended the conference to hold a presentation on "What about needs? Operationalising the Brundtland Definition of Sustainable Development" based on a paper written together with Felix Rauschmayer, Lisa Bohunovsky and Johannes Frühmann in Session 2.1 (Theories of Sustainable Development). For more information on the conference see www.isc2008.ch.

Ines Omann as key note speaker at the Summer Academy of the "Grüne Bildungswerkstatt". The 2008 Summer Academy of the "Grüne Bildungswerkstatt" was dedicated to the theme "climate change and justice". It took place from August 28-31 in Strobl/Wolfgangsee. Dennis Meadows started the conference with a speech about "Climate change and social justice – the future of the planet", followed by an introduction to the issues (material wealth, resource use, quality of life) by Marina Fischer-Kowalski. Ines Omann (SERI), Markus Marterbauer (WIFO), Daniel Hausknost (University of Keele) and Marina Fischer-Kowalski (IFF), held key notes the next days accompanied by political comments, discussions and workshop.

Ines Omann talked about the link between resource use and quality of life ("Consumption and quality of life: a sustainable couple?"). The slides, the abstracts, comments, background information can be downloaded at www.sak.gbw.at.

SEPTEMBER

Nachhaltiger Konsum in Zeiten der Klimakatastrophe – Sustainable consumption in times of climate crisis

Presentation held about sustainable consumption in times of climate crisis at the vzbz Tagung in Mainz.

Ökologischer Fußabdruck: Methode, Bewertung, Anwendung – Ecological Footprint: Method, Evaluation, Implementation



Lecture held by Stefan Giljum in the course of the Footprint initiative of the Austrian province of Salzburg (www.salzburg.gv.at/fussabdruck).

In 2008, the Austrian province of Salzburg started an initiative to reduce the Ecological Footprint of the inhabitants of Salzburg. In the course of this initiative, a capacity-building seminar took place in Salzburg on September 10 and 11, where teachers and other interested persons were introduced to the Footprint concept in order to enable them to hold Footprint presentations in schools and other educational organisations. Stefan Giljum was invited to provide the scientific background for the seminar. In a half-day session, he presented and discussed the foundations of the Footprint concept, its strengths and weaknesses and how Footprints are calculated on the national as well as individual level.

Dematerializing Cities: From measurement to action beyond the limits to growth



Presentation held at the Conaccount conference 2008, September 12, in Prague.

First Stakeholder Workshop within the Project "e-co"



Together with the Institute of Economic Structures Research (GWS) and the Chair of Energy Economics and Management, RWTH Aachen, SERI is working on the project e-co (Effects of sustainable energy consumption for Austria). The project analyses the effects of sustainable energy consumption on the economy, the environment and on society by following the Austrian goals in the fields of energy and climate policy until the year 2020.

For this analysis scenarios focussing on renewable energy, an increase of energy efficiency and a reduction of energy consumption in private households are simulated and evaluated through an environment-energy-economy model. Especially in the process of scenario development a selection of stakeholders (lobbyists, politicians and experts) in the fields of energy policy and energy provision is actively involved in the scientific work in order to enrich the scientists' and experts' research and decision process by their experiences, knowledge and preferences.

This stakeholder process started with a first workshop on September 23, where the project team presented the content of the project, the outline of the planned scenarios and the model used to simulate the scenarios. In several group discussions (organised as a "world café") the participants had the possibility to give suggestions and recommendations for the design of the scenarios. The lively discussion provided the project team with valuable inputs for the further work. For more information please visit www.seri.at/e-co.

Welches Wachstum ist nachhaltig? – What kind of growth is sustainable?



Presentation held at the ÖKOBÜRO-Veranstaltung "Ist weniger mehr? - Energieverbrauch und Wirtschaftswachstum" ("Is less more? - Energy consumption and economic growth"), September 25, in St.Pölten.

2 Presentations held at the 14th Annual International Sustainable Development Research Conference, New Delhi, India



- Target group specific metaphor selection. The case of design.
- A sustainable economy and the role of business: redefining the 'business case'

Water 2048 Workshop

From October 13-15 the workshop "WATER 2048 - Guaranteeing Aquatic Ecosystem Services in Urbanised Landscapes" was held at the Wassercluster in Lunz/See, organised by the Institute of Hydrobiology and Aquatic Ecosystem Management, BOKU, Vienna (IHG-BOKU) and sponsored by the the Austrian Federal Ministry of Science and Research.

Stephan Lutter, researcher in the SERI-group "Sustainable Resource Use", discussed this topic together with renowned international researchers – above all Manfred Max-Neef, holder of the Alternative Nobel Prize.

The main outcome of the workshop was that the water topic (distribution, provision, consumption, etc.) is closely related to the main questions that are going to decide the fate of our planet and for which transdisciplinary and sustainable solutions are urgently needed.

OCTOBER

EFMSV Conference

With around three hundred international participants, the EFMSV (Environment, Forced Migration and Social Vulnerability) Conference was held in Bonn (9 - 11 October). The Conference, co-organised by the EACH-FOR project, in which SERI is a partner, not only provided an opportunity to showcase the EACH FOR results but also to see a broad range of work on the topics. The high level representation from the International Organisation for Migration, the United Nations University and other United Nations organisations indicated the priority put on this topic at the international level. How many people will actually migrate as a result of climate change? What other forms of environmental degradation lead, at least partially, to decisions to migrate?

Johannes Frühmann presented a paper on using the GEO 4 scenarios to develop environmentally forced migration scenarios in EACH-FOR project. Jill Jäger gave a keynote speech reflecting the EACH-FOR project and addressing the need for more research and substantial funding in order to get more knowledge on future migration flows induced by environmental change. The good response by decision makers in the following discussion raises hope for more projects in this field to come. Prof. Bogardi (UN-U) concluded: 'EACH-FOR was the appetizer, now it gets time for the main course!' Find more informations about the outcomes of the conference on www.lemonde.fr, more on the project EACH-FOR on www.seri.at/each-for.

Fritz Hinterberger as "Denkwerker" for the future

The "Denkwerk Zukunft" founded by Meinhrad Miegel and Stefanie Wahl held its foundation symposium on October 10-11 near the Bavarian Tegernsee. Fritz Hinterberger took part as one of the new "Denkworkers". The goal of this group, which comprises about 100 eminent thinkers from all over the German speaking area, is summarized at the Denkwerk's website as follows: "Unsere westliche Kultur ist aus dem Gleichgewicht geraten. Materiellen Wohlstand zu mehren, ist zum höchsten Ziel geworden. Dem ist alles andere untergeordnet. Doch eine solche Kultur ist weder verallgemeinerungs- noch zukunftsfähig. Damit sie wieder ihre ganze Vielfalt, Tiefe und Schönheit entfalten kann, ist ein nachhaltiger Bewusstseinswandel erforderlich." Find out more at www.denkwerk-zukunft.de.

2nd European Regional Meeting towards a 10 Year Framework of Programmes for Sustainable Consumption and Production

To assess the role and elements of the EU-SCP Action Plan as a key European contribution to the 10YFP were the objectives of the meeting held in Prague (30 -31October 2008). Working groups provided comments for both the EU SCP Action Plan and the draft 10YFP, suggesting that the 10YFP should build on the experience of existing regional plans, such as the EU SCP Action Plan, which is a key regional plan under the Marrakech Process. The meeting stressed the need for a clear communication strategy on SCP and supported the development of targets and indicators to help implement SCP policies. SERI was represented in the conference by Sylvia Lorek.

Nachhaltigkeitskriterien für die Produktbewertung – Sustainable criteria for product assessment



Presentation held at the ECR Austria Infoday, November 5, in Vienna.

LandLoft

Presentation held about "Hochqualifizierte Arbeit als Chance für den Lebensraum Land" at the *Symposium LANDLOFT* on November 28 in Moosburg. Among other topics she talked about the concept of "mixed work" as opportunity to live and work in rural regions.

4th Austrian Development Conference

On November 14 to 16 the 4th Austrian development conference entitled "Growth – Environment – Development" was held in Innsbruck. The development conference is a platform of reflection for representatives of different backgrounds – environmental and development organisations, politics, students, and practitioners in development assistance.

Apart from diverse plenary sessions, one afternoon was dedicated to fora and workshops around the conference topic, in the course of which Stephan Lutter from SERI organised the workshop "Global responsibility – (environmental) impacts of growth and development". After a presentation of the topic and of various methodologies to quantify environmental impacts, the participants of the workshop discussed the possibilities of different actors (consumers, enterprises, civil society, politicians, etc.) to become proactive in the global system.

Find more information on the conference on the website of the *Paulo Freire Zentrum*.

"Growth" in Vorarlberg

Upon an invitation of the "Büro für Zukunftsfragen" (ZuB) of the Vorarlberg provincial government dedicated to the topics of sustainable development, civil engagement and social capital Fritz Hinterberger talked and discussed about "Growth and Sustainability" in the course of a one-day event on November 10 in Langenegg - one of Austria's landmark sustainability villages (www.langenegg.at).

8 | COMMUNICATING THE IDEA

We develop and compile knowledge, ideas and concepts relevant for decision-making in the context of environmental, economic and social policy. The results of our research activities are communicated to the broad public via various means.

8.1 SERI TEACHING

Two courses on sustainable development at the University of Natural Resources and Applied Life Sciences



Fritz Hinterberger, Stefan Giljum and Ines Omann are teaching two courses on sustainable development at the *University of Natural Resources and Applied Life Sciences*, Vienna.

The courses include a general introduction into the field of sustainable development ("*Nachhaltige Entwicklung I*") and evaluation of Sustainable Development ("*Bewertung nachhaltiger Entwicklung*"). More information is available in German on www.seri.at/BOKU.

Fritz Hinterberger teaches at the University of Hamburg

During the summer term 2008 Fritz Hinterberger was guest lecturing the course "Nachhaltige Entwicklung in Wirtschaft und Politik" ("Sustainable Development in Economy and Politics") at the Department for Economy and Policy of the *University of Hamburg*, Germany.

The lecture was held in 3 blocks in April, May and June and covered a great range of application possibilities of approaches worked upon at SERI in a broad interdisciplinary way: vulnerability, Integrated Sustainability Assessment, footprints, rucksacks, labour, economy, and happiness. For more information please contact Fritz Hinterberger at www.seri.at/FH.

"Growth" at 5 German Universities



The "Limits to Growth as a Challenge to Society and Economy" was presented by Fritz Hinterberger in the course of a lecture series on the topic of "globalisation and Sustainability" on December 5, 2008, 4-6p.m. at Ulm University. The presentation (in German language) could also be heard and seen at four other German universities (Mainz, Hildesheim, Bremen and Oldenburg) via video conference. More information is available on www.zawiw.de/ringvorlesung.

Interdisziplinäres Praktikum "Umweltverträglichkeitsprüfung, strategische Umweltprüfung und integrierte Nachhaltigkeitsbewertung" an der Karl Franzens Universität Graz [*Interdisciplinary Training „Assesment of environmental effects, strategic environmental audit and integrated sustainability assessment“ at the Karl-Franzens University Graz (held in German)*]

Sommersemester 2008, Umweltsystemwissenschaften, Karl-Franzens Universität Graz
Lehrende: Dr. Ralf Aschenmann, Dr. Gilbert Ahamer, Dr. Ines Omann

The Interdisciplinary Training dealt with Integrated Sustainability Assessment, assessment of environmental effects and its practical applications (methods, communication aspects, legal regulations etc.). In the process economic aspects, case studies, methods of assessment and international developments were addressed. SERI (Ines Omann) was responsible for the ISA part.

To operationalise the skills of assessment of environmental effects, various methods of Integrated Sustainability Assessment were demonstrated. Thus, students gained competences to critically deal with Sustainability Assessment and coverage of the assessment of environmental effects in the media as well as with legal texts and methods of evaluation.

8.2 SERI INFOMAIL

SERI's regularly published electronic news bulletin informs about SERI's past, current and future projects, about important project results, relevant events, new publications and the "Highlight of the Month" featuring a current topic of general interest. In 2008, 9 editions of SERI's electronic newsletter were published. All InfoMails can be found in an archive on www.seri.at/infomail.

8.3 SERI BROWNBAG SEMINARS



In 2008 the SERI Brownbag seminar series continued. In this loose series of lectures, we want to discuss our own work and that of our colleagues. All 4 Brownbags in 2008 were taking place at the SERI office in Vienna. An overview of all Brownbags can be found at www.seri.at/brownbag.

Brownbag: ISA and ABM in EcoChange

EcoChange examines the effects of climate change or altered land use on terrestrial biodiversity and ecosystems and what changes can be expected in the future. The project focuses on data and modeling work. The results shall further be related to socio-economic models and scenarios in three regional case studies. This part of the project is being coordinated by SERI and is based on integrated sustainability assessment (ISA). This method combines changes in biodiversity with the socio-economic system, i.e. SERI is looking at the interrelations between biodiversity and ecosystem services like the production of food, the supply with clean drinking water or the absorption of atmospheric CO₂. The experimental part of ISA will make use of Agent Base Modelling (ABM).

In this Brownbag the case studies and our approach to the project's task and challenge will be introduced and discussed. Find further information on EcoChange and ISA on www.seri.at/ecochange and www.seri.at/decisionsupport.

Brownbag: Integrated Water Management. Presentation of a promising group-connecting akquisition topic

The rising demand for renewable and non-renewable natural resources causes a rising struggle for territories with resource deposits, which are either geographically bound or limited in their accessibility due to climatic, geological or historical conditions. One example for such a critical natural resource is water, a resource running short for various reasons. In this respect the concept of the water rucksack, which asks nations of low water resources to import goods of high water demand (e.g. food) instead of producing them within the country, gives rise to several questions concerning independency, distribution, usage efficiency, environmental burden, etc. In this matter, technology plays an important role in a way that it either supports or prevents the (in)efficient use of the resource water and its distribution.

In this Brownbag a certain watering technology for the agricultural sector (HYDRIP) is introduced and this technology's potential for projects which treat (European) reflections on integrated water management, water efficiency, sustainable resource use and questions of local applicability of efficient water technologies in an international context is discussed.

Brownbag: MATISSE - Methods and Tools for Integrated Sustainability Assessment

Many problems of our society are "persistent" problems which cannot be dealt with by common methods. The EU project MATISSE developed a process (ISA) with the potential to support a radical turn towards sustainable development.

In this brownbag Jill Jäger and Lisa Bohunovsky presented aims and contents of the MATISSE project, talked about the challenges of a societal transformation to sustainability and described the process of Integrated Sustainability Assessment and experiences from the MATISSE case studies where the process was tested. More information on MATISSE is available on www.matisse-project.net.

Brownbag: Saamah Abdallah from the new economics foundation (nef)

This brownbag aimed at informing SERI staff about the work of nef which is a "independent think-and-do tank" based in London. Saamah's presentation particularly focused on the centre for well-being within nef.

The wellbeing-centre aims at promoting the concept of well-being as legitimate and useful aim of policy and to provide people with the understanding and tools to redefine wealth in terms of well-being. Saamah, who is a psychologist and has been working at the centre for well-being since its foundation in March 2006, gave an overview of current activities and projects such as the Happy Planet Index, time banking, Regional Indices of Sustainable Economic Welfare and National Accounts of Well-being which built the basis for an interesting discussion. For more information about nef's wellbeing centre click here: www.neweconomics.org/gen/hottopics_well-being.aspx.

9.1 SERI STUDIES

SERI Studies is a series of in-depth reports from our projects devoted to one of SERI's research fields.
www.seri.at/studies

Giljum, S., Lutz, C., Jungnitz, A., 2008. *The Global Resource Accounting Model (GRAM). A methodological concept paper.* SERI Studies 8. Sustainable Europe Research Institute, Vienna.



The Global Resource Accounting Model (GRAM)
A methodological concept paper

Stefan Giljum, Christian Lutz and Ariane Jungnitz



Abstract: In this SERI Study, we introduce the Global Resource Accounting Model (GRAM), a global, multi-regional, environmental input-output (MRIO) model designed to fill parts of the existing gaps with regard to data and empirical analysis of material flows. The basic intention of GRAM is to construct a MRIO model with a monetary core (i.e. through linking IO tables and bilateral trade data (both mainly from official OECD data sources). This monetary core model is extended by a global data set on material inputs in physical units, which is attached to the IO tables as an additional vector. The main objective of GRAM is to estimate indirect material flows of traded products (measured as their raw material equivalent) and thus being able to calculate and analyse material flow-based indicators in a global perspective, considering comprehensive material balances on the national level, which take into account all up-stream material requirements of imports and exports. We first provide a comprehensive description of the concept of indirect material flows and summarise different approaches for their calculation. The methodological framework of the GRAM model is described in detail, illustrating, in particular, the structure of the different data sets and how they are integrated and inter-linked. We describe how the technical implementation and the calculation algorithms of the model and outline shortcomings of the current model and envisaged improvements in the future. Finally, we summarise possible areas of application of this model in the petrE project and beyond.

9.2 SERI BACKGROUND PAPERS

Giljum, S., Hinterberger, F., Lutter., S. 2008. *Measuring natural resource use. Context, indicators and EU policy processes.* SERI Background Paper No. 14. Sustainable Europe Research Institute, Vienna.



Measuring natural resource use
Context, indicators and EU policy processes

Stefan Giljum, Friedrich Hinterberger and
Stephan Lutter



Abstract: This background paper provides a summary of the current state-of-the-art in the development of measurement systems and indicators on natural resources as well as of current EU policy processes related to this issue. The background paper aims at providing background information for the discussions at the Friends of the Earth seminar on "Measuring Europe's Resource Use". In academics and statistics, a large number of different approaches to measure human resource consumption have been developed. Some approaches, such as material flow analysis (MFA), are closely connected to the statistical system and were developed to integrate environmental information into the standard system of national economic accounts. These types of approaches are well suited to illustrate aspects such as total resource use and resource productivity of products, sectors or economies. Other approaches, such as the Ecological Footprint, were developed and advanced by academics and NGOs and so far applied primarily for education and communication purposes. However, also the Footprint is increasingly considered in national and European environmental reporting. These types of approaches are better suited to investigate the specific environmental impacts related to resource use.

These current activities in improvement of measurement systems and derived indicators are driven by a number of commitments the EU Commission has entered in several policy processes, which aim at increasing resource productivity and reducing the negative environmental impacts related to resource use.

9.3 SERI WORKING PAPERS

SERI Working Papers are the outcome of ongoing research activities at the Sustainable Europe Research Institute (SERI). They present preliminary results which are open for debate and improvement for publication in scientific journals. www.seri.at/workingpapers

Giljum, S., Lutz, C., Jungnitz, A., Bruckner, M., Hinterberger, F., 2008. *Global dimensions of European natural resource use. First results from the Global Resource Accounting Model (GRAM)*. SERI Working Paper No. 7. Sustainable Europe Research Institute, Vienna.



Global dimensions of European natural resource use

First results from the Global Resource Accounting Model (GRAM)

Stefan Giljum, Christian Lutz, Ariane Jungnitz, Martin Bruckner, Friedrich Hinterberger



Abstract: With increasing international trade in the world economy, the inclusion of indirect (or embodied) natural resources of traded products receives growing importance, when domestic production and consumption patterns are evaluated from the perspective of global sustainable development. In this paper, we present results of calculations with a newly constructed global, multi-regional, environmental input-output model, the Global Resource Accounting Model (GRAM). The model was developed to illustrate the physical dimension of Europe's economic interrelations with the rest of the world and to analyse European natural resource consumption and trade in a global perspective. GRAM disaggregates 52 countries and world regions, represented with input-output tables of 48 economic sectors and linked by bilateral trade flows in 25 product groups and 1 service sector. The model integrates the latest (2006) edition of IO tables published by the OECD with the OECD's Bilateral Trade Database and is extended by a global database on resource extraction in all countries of the world. We discuss the structure of the GRAM model, with a particular focus on the integration of the environmental data in physical units with the monetary core model and the technical implementation of the model system. We then present several types of results. First, we calculate aggregated indicators on material extraction versus consumption of raw materials of countries and world regions respectively. Even though the domestic extraction per capita in OECD countries is significantly above other world regions, consumption of raw materials is even higher. Production of products for final consumption in industrialized countries thus uses more resources than extracted within the regions themselves. Per capita material consumption in emerging and developing regions lies even below the already low level of domestic extraction. Second, we assess international trade flows to identify main net-importers and net-exporters of different categories of natural resources in the world economy. We illustrate that the region of the European Union has higher absolute net-imports than any single country in the world economy (including the US and Japan) and faces the highest share of net-imports compared to domestic resource extraction of all analysed world regions. The paper concludes with a discussion of planned extensions and improvements of the GRAM model future projects.

Rauschmayer, F., Omann, I., Frühmann, J., Bohunovsky, L., 2008. *What about needs? Re-conceptualising Sustainable Development*. SERI Working Paper No. 8. Sustainable Europe Research Institute, Vienna.



What about needs?
Re-conceptualising Sustainable Development

Felix Rauschmayer, Ines Omann, Johannes Frühmann, Lisa Bohunovsky



Abstract: Although the concept of needs is central in the Brundtland definition of Sustainable Development (SD), this concept has hardly been taken up in sustainability science or policy making. And although SD is a concept that nobody really disagrees upon and that is heavily used by policy makers, a transition towards SD has not yet started. Thus we could claim that the concept of SD has not really been successful so far.

In this paper we argue why a re-focus on needs and quality of life can make SD more appealing for politicians and citizens. This is done by describing concepts, such as needs, strategies, values, capabilities, well-being and quality of life and by explaining the links between these concepts and SD. We link the individual model of needs to the societal concept of sustainable development in the context of QOL. According to the Brundtland definition, meeting needs for current and future generations is the central element of SD. According to our framework, capabilities are central to need fulfilment, which triggers wellbeing. Capabilities and well-being are the constituents of quality of life. A high quality of life can be seen as being able to meet one's needs sufficiently and feel well about it. If a high quality of life is connected to SD, then SD policy should aim at a state where members of current and future generations are able to meet their needs sufficiently. This implies restrictions with regard to the choice of strategies to meet current needs. These restrictions, as we explain, translate into SD-oriented policies directed at strategies, values, agency, or resources. However, linking SD and quality of life

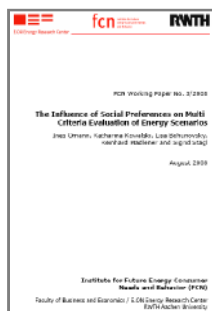
is not free of tensions. We found five tensions that have to be addressed when policies should lead to a transition to SD and increase/maintain the quality of life. One of them is the so called intra-societal tension: The same strategy or set of strategies which increases SD for a group in the society supports needs for this groups as well as inhibits them for another group.

However we believe that, in the long run, SD is a condition for high quality of life and we show a couple of examples where the two concepts are linked in a synergistic way. In the conclusions we show the advantages of our framework integrating capabilities, well-being, quality of life, and SD, and address the challenges such as the design of appropriate research and policy or the organisation of decision processes based on this concept.

Finally, we sketch two options to respond to those challenges: (1) a new form of science, called mode-3, which is based on mode-2 science AND integrates explicitly the subjective dimension and emotions; (2) an adapted version of the multi-criteria analysis.

9.4 OTHER WORKING PAPERS

Omann, I., Kowalski, K., Bohunovsky, L., Madlener, R., Stagl, S., 2008. *The Influence of Social Preferences on Multi-Criteria Evaluation of Energy Scenarios*. FCN Working Paper No. 3/2008, Institute for Future Energy Consumer Needs and Behaviour, RWTH Aachen University, August.



Abstract: Participatory multi-criteria evaluation (MCE) is increasingly used for the integrated assessment of future scenarios. Determining weights of the different criteria constitutes one of the biggest challenges of MCE. This paper investigates the influence of weights on the ranking of scenarios and reflects critically on the use of weights as representations of social preferences in participatory MCE. Conceptually, this exercise builds on the literature on integrated assessment and decision making under uncertainty; empirically, insights are drawn from two case studies of renewable energy scenario assessment for Austria at the national and local level. The analysis exhibits a robust ranking for the local level, especially for the highest ranked scenarios. In the national case study, the analysis finds two robust scenario clusters which never switch ranks, whereas the ranking of the scenarios within the clusters flips with minor alters in weights. This paper argues that in participatory MCE different sets of stakeholders' priorities can be taken into account in a transparent and robust manner. The discussion explores in how far weights represent social preferences better than direct ranking of alternative scenarios by stakeholders on the basis of scenario presentations.

Großmann, A., Stocker, A., Wolter M. I., 2008. *Das integrierte Umwelt-Energie-Wirtschaft-Modell e3.at (Environment – Energy – Economy – Austria)*. Working Paper Nr. 1 des EdZ-Projekts: Modellierung nachhaltiger Energieszenarien, Wien.



Working Paper published in German – Abstract: In diesem Working Paper wird das Simulationsmodell "e3.at" vorgestellt, das in Zusammenarbeit der Gesellschaft für Wirtschaftliche Strukturforschung (GWS) mit dem Sustainable Europe Research Institute (SERI) im Rahmen des EdZ-Projektes "Erneuerbare Energie in Österreich: Modellierung möglicher Entwicklungsszenarien bis 2020" entwickelt worden ist.

Spangenberg, J.H., 2008. *Growth and Sustainable Development*. Fabrice Flipo, Francois Schneider (Eds), Economic Degrowth for Ecological Sustainability and Social Equity, Proceedings of the First International Degrowth Conference, Paris, 18-19 April 2008. Paris, Research & Degrowth: 119-124.

Spangenberg, J.H., 2008. *Biodiversity and Sustainable Consumption. A qualified analysis and unqualified suggestions*. ANPED Working Paper Series.

Abstract: The major reasons of biodiversity loss have been analysed by the Millennium Ecosystem Assessment, and again, in more depth and with a focus on the role of politics, by the ALARM project. However, the role sustainable consumption can play is far from clear so far. This paper presents the risk analysis derived from ALARM and first ideas, not yet empirically validated and in this sense unqualified, what sustainable consumption could contribute.

9.5 BOOK CONTRIBUTIONS

Spangenberg, J.H. (ed), 2008. *Sustainable Development - Past Conflicts and Future Challenges. Taking Stock of the Sustainability Discourse*. Westfälisches Dampfboot, Münster.

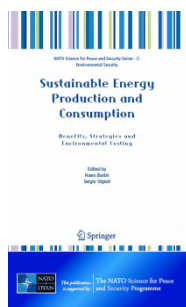


Abstract: This book covers a wide range of international contributions related to sustainable development – from historical analysis of sustainable development to prognosis and future challenges. Apart from discussing historical roots of sustainable strategies and policies, gender perspectives and global challenges for sustainable development are considered. The list of authors includes many of SERI's old friends and covers perspectives from three continents: Ulrich Grober, Jaqueline F. Roddick, Wolfgang Sachs, Joachim H. Spangenberg, Frieder Otto Wolf, Jill Jäger, Sabine Hofmeister, Ines Weller, Meike Spitzner, Joan Martinez-Alier, J.M.Jamil Brownson.

Giljum, S., Hubacek, K., 2008. *Conceptual foundations and applications of physical input-output tables*. In: Suh, S. (ed.), *Handbook of input-output economics for industrial ecology*. Springer: Dordrecht, The Netherlands.

Abstract: This chapter presents conceptual foundations and possible policy-oriented areas of application of physical input-output tables (PIOTs). We describe the basic accounting structure of PIOTs and discuss differences between physical and monetary IO tables. The chapter contains a review of the state of the art and analyses methodological differences between PIOTs published so far. Furthermore, we summarize main areas of applications of PIOT-based assessments. The chapter closes with an outlook on future work necessary to make PIOTs a more broadly applied tool for policy-oriented environmental-economic assessments.

Spangenberg, J.H., 2008. *Biomass or Biomess? The promises and limits of bioenergy*. F. Barbir, S. Ulgiati (eds.), *Sustainable Energy Production and Consumption*. NATO Science for Peace and Security Series – C: Environmental Security. Dordrecht, NL, Springer: 55-66.



Abstract: Energy security is a hot topic, not least due to oil prices going through the roof and severe and justified criticism of the EU's biofuel policy. So, at first glance another publication on the issue is not a surprise – but a critical assessment in a NATO publication is. The book includes contributions by Sergio Ulgiati (member of the ALARM Consultative Forum), Mario Giampetro, Joachim Spangenberg and other SERI friends and partners.

Giljum, S., Hinterberger, F., Lutz, C., Meyer, B., 2008. *Accounting and modelling global resource use: material flows, land use and input-output models*. In: Suh, S. (ed.), *Handbook of input-output economics for industrial ecology*. Springer: Dordrecht, The Netherlands.

Abstract: Material flow accounting and land use accounting are regarded as appropriate tools to provide a comprehensive picture of environmental pressures induced by and inter-linked with production and consumption activities. Due to accelerating globalisation processes, an evaluation of economic activities of one country or world region within a global context can only be carried out by extending the domestic physical accounts and including so-called indirect resource requirements associated with imports and exports. A promising method for calculating direct and indirect requirements with regard to both material flows and land use on the macro level is to apply input-output (IO) models. This chapter provides the methodological foundations for performing parallel accounting of material flows and land appropriation of economic activities in a framework of monetary input-output models extended by physical accounts. We describe necessary properties and the state of the art of global environmental-economy models and most important data sources for their construction and present policy applications of this integrated modelling approach with regard to sustainability scenarios and assessments on the global level.

Spangenberg, J.H., 2008. *Gerechter Zugang zu den Ressourcen – Beiträge zu einem nachhaltigen Klimaschutz*. In MOEWe Amt für Mission, Ökumene und Kirchliche Weltverantwortung, Institut Kirche und Gesellschaft, Institut Südwind, Vereinte Evangelische Mission (Hg.), *Kirche und Globalisierung*. Wuppertal, Foedus-Verlag: 35-60.

Abstract: "Justice in the Greenhouse" is an issue which has been topical in a series of discussions on the role of the German Reformed Church in the process of globalization (a similar discussion has taken place in the Catholic Church and several development organizations). The outcomes of one such seminar are now documented, including a contribution of Joachim Spangenberg, unfortunately in German only.

Spangenberg, J.H., 2008. *Globalisierung, Klima, Konflikte*. Ralph-M. Luedtke, Peter Strutynski (Eds), *Die Neuvermessung der Welt. Herrschafts- und Machtverhältnisse im globalisierten Kapitalismus*. Kassel, Jenior Verlag: 55-66.

Abstract: The conflicts arising from the combined effects of climate change, biodiversity loss and peak everything: avoiding the end of prosperity and peace requires a revolution of thinking – painful, disturbing, but look at the alternative ...

Spangenberg, J.H., 2008. *Sozialökologischer Umbau ist Umbau von (Re-) Produktivität. Oder: Anders leben, arbeiten und konsumieren*. In Judith Dellheim, Günter Krause (Hg.), *Für eine neue Alternative. Herausforderungen einer sozialökologischen Transformation*. RLS Manuskripte 77, Berlin, Karl Dietz Verlag: 47-62.

Abstract: Steps towards a comprehensive, theory based approach to sustainable development.

Spangenberg, J.H., 2008. *Globalisierung, Klima, Konflikte*. In R. Braun, F. Brickwedde, T. Held, E. Neugebohrn, O. von Uexküll (Hg.), *Kriege um Ressourcen: Herausforderungen für das 21. Jahrhundert* München: ökom. Verlag, 256 pp. ISBN-13: 978-3-86581-093-9

9.6 JOURNAL ARTICLES

Russi, D., Gonzales-Martinez, A., Silva-Macher, J., Giljum, S., Martínez-Alier J. Vallejo, M., 2008. *Material flows in Latin America. A Comparative Analysis of Chile, Ecuador, Mexico, and Peru, 1980-2000*. In: *Journal of Industrial Ecology* 12 (5/6), 704-720.



Abstract: In this article we compare the resource flows of Chile, Ecuador, Mexico, and Peru between 1980 and 2000. Our objective is to analyze the structure of social metabolism of extractive countries and the consequences of the neoliberal economic structural reforms on the use of natural resources.

Bohunovsky, L., Jäger, J., 2008. *Integrierte Nachhaltigkeitsbewertung. Unterstützung für den gesellschaftlichen Übergang in Richtung Nachhaltigkeit*. *Ökologisches Wirtschaften* 2/2008. S. 35-38



Article published in German - Abstract: Viele Probleme unserer Gesellschaft lassen sich mit herkömmlichen Methoden nicht in den Griff bekommen. Der Prozess der Integrierten Nachhaltigkeitsbewertung hilft, einen grundlegenden gesellschaftlichen Übergang zu Nachhaltigkeit einzuleiten und damit zukünftige Herausforderungen aktiv anzunehmen.

Dieser Artikel beschreibt Ziele und Inhalte des EU-Projektes MATISSE, geht auf die Herausforderung ein, einen gesellschaftlichen Übergang zur Nachhaltigkeit einzuleiten und beschreibt den Prozess der Integrierten Nachhaltigkeitsbewertung sowie ausgewählte Fallstudien, in denen der Prozess getestet wurde.

EACH-FOR Article in 'Klimabündnis' Magazine



Koko Warner (United Nations University, Bonn) and Johannes Frühmann (SERI) published an article about environmental migration in the magazine (2008/03) of the Austrian Klimabündnis Initiative. The article summarizes the EACH-FOR project, shows the dramatic trends in environmental forced migration and addresses the need to bring this topic into the policy agenda. The article (in German) can be downloaded at www.klimabuendnis.at. More about the project EACH-FOR on www.seri.at/each-for.

Giljum, S., Behrens, A., Hinterberger, F., Lutz, C., Meyer, B., 2008. *Modelling scenarios towards a sustainable use of natural resources in Europe*. In: *Environmental Science and Policy* 11 (3), 204-216.

Abstract: Issues related to the unsustainable use of natural resources are currently high on the policy agenda both in Europe and in other world regions. A large number of studies assessed past developments of material use and resource productivities. However, little effort has so far been devoted to forecasting future patterns of natural resource use and to provide ex-ante assessments of environmental and economic effects of different resource policies. This paper presents results from the international research project “MOSUS” (Modeling opportunities and limits for restructuring Europe towards sustainability), which was designed to fill some of these research gaps. In this project, a global economy–energy model system was extended by a worldwide database on material inputs, in order to run three scenarios for European development up to the year 2020: a baseline scenario without additional policy intervention and two so-called “sustainability scenarios”, simulating the implementation of six packages of policy measures geared towards decoupling economic activity from

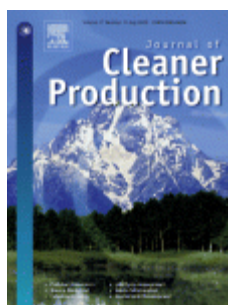
material and energy throughput. These measures included, amongst others, taxes on CO₂ emissions and transport, measures to increase metal recycling rates, and a consulting program to raise material productivity of industrial production. This paper presents the evaluation of the three scenarios with regard to the extraction of natural resources on the European and global level. In the baseline scenario, used domestic extraction within the EU remains roughly constant until 2020, while unused domestic extraction decreases (particularly overburden from mining activities). The stabilization of domestic extraction, however, is accompanied by growing imports of material intensive products. This indicates that the material requirements of the European economy will increasingly be met through imports from other world regions, causing shifts of environmental pressures related to material extraction and processing away from Europe towards resource-rich countries. The implementation of the six sustainability policy measures applied in the sustainability scenarios results in a slight absolute reduction of domestic extraction in all European countries and significantly increased resource productivities. The results suggest that policy instruments aimed at raising eco-efficiency on the micro level can be conducive to economic growth. To limit rebound effects on the macro level, these instruments must, however, be accompanied by other policies influencing the prices of energy and materials. With regard to global resource use trends, the baseline scenario forecasts a significant growth of resource extraction, particularly in developing countries, reflecting the growing demand for natural resources of emerging economies such as China and India.

Kowalski, K., Stagl, S., Madlener, R., Omann, I., 2008. *Sustainable energy futures: Methodological challenges in combining scenarios and participatory multi-criteria analysis*. In: *European Journal of Operational Research* (2008)



Abstract: This paper analyses the combined use of scenario building and participatory multi-criteria analysis (PMCA) in the context of renewable energy from a methodological point of view. Scenarios have been applied increasingly in decision-making about long-term consequences by projecting different possible pathways into the future. Scenario analysis accounts for a higher degree of complexity inherent in systems than the study of individual projects or technologies. MCA is a widely used appraisal method, which assesses options on the basis of a multi-dimensional criteria framework and calculates rankings of options. In our study, five renewable energy scenarios for Austria for 2020 were appraised against 17 sustainability criteria. A similar process was undertaken on the local level, where four renewable energy scenarios were developed and evaluated against 15 criteria. On both levels, the scenario development consisted of two stages: first an exploratory stage with stakeholder engagement and second a modeling stage with forecasting-type scenarios. Thus, the scenarios consist of a narrative part (storyline) and a modeled quantitative part. The preferences of national and local energy stakeholders were included in the form of criteria weights derived from interviews and participatory group processes, respectively. Especially in the case of renewable energy promotion in Austria, the paper systematically analyses the potentials and limitations of the methodology (1) for capturing the complexity of decision-making about the long-term consequences of changes in socio-economic and biophysical systems and (2) for appraising energy futures. The paper concludes that assessing scenarios with PMCA is resource intense, but this methodology captures successfully the context of technology deployment and allows decision-making based on a robust and democratic process, which addresses uncertainties, acknowledges multiple legitimate perspectives and encourages social learning.

O'Connor, M., Spangenberg, J.H., 2008. *A Methodology for CSR Reporting: Assuring a representative diversity of indicators across stakeholders, scales, sites and performance issues*. *Journal of Cleaner Production* 16(13): 1399-1415.



Abstract: CSR Reporting is spreading, yet in very uneven quality. The following paper introduces a methodology developed at the Université Versailles and applied at several sites in France, Germany, Italy and the UK. In a project funded by the European Aluminium Association EAA a participative approach was tested involving the local communities, labour force, management, authorities and business partners.

Settele, J., Spangenberg, J.H., Kühn, I., 2008. *Large projects can create useful partnerships*. Correspondence, *Nature* 453, 12 June 2008: 850.

Abstract: It is heavily disputed if the EU should spend its research funds more on a few large or more smaller projects. Based on the ALARM experience, we argue that a combination of both is most fruitful (like the same authors and colleagues did earlier in the Letters section of *Nature*).

Hinterberger, F., 2008. *Nach-Gedacht - Burnout und Klimawandel haben die gleiche Ursache: Wir arbeiten zu viel und zu intensiv*. In: *LO – Lernende Organisation*, No. 45. September/October. 28-35.



In his article Fritz Hinterberger throws a critical glance at "labour" like we create it today and comes up with some new ideas.

Hinterberger, F., 2008: *Grenzen des Wachstums als die Herausforderung gesellschaftlichen und unternehmerischen Handelns*. In: *Glocalist*, No. 29 July/August. 40-41.



A contribution about degrowth and distribution without growth.

Spangenberg, J.H., 2008. *Second Order Governance: Learning Processes to Identify Indicators*. *Corporate Social Responsibility and Environmental Management* 15(3): 125-139.

Spangenberg, J.H., 2008. *Background and development of our work, and the discussion on sustainable Degrowth*. *Conversaciones. Ecologia Politica* 35: 9-12.

9.7 SERI FACT SHEETS



SERI Fact Sheets concisely summarize the key results of several SERI projects. They are made for science, politics and the interested public. So far, the following fact sheets are available for download on www.seri.at/factsheets: ISA, ECR, The material basis of the global economy, CO2-Label für Lebensmittelprodukte, Das integrierte Modell "e3.at", Mindestbedingung, SDA, IOA and dematerialization, sufo:trop, RESA, ARTEMIS, NÖ-Mitte, MOSUS, Energiewende, Mischarbeit, e3.

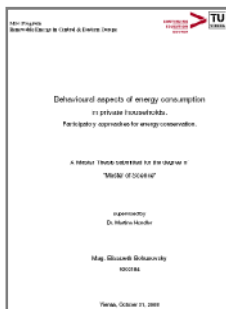
9.8 REPORTS

Best, A., Giljum, S., Simmons, C., Blobel, D., Lewis, K., Hammer, M., Cavalieri, S., Lutter, S., Maguire, C., 2008. *Potential of the Ecological Footprint for monitoring environmental impacts from natural resource use: Analysis of the potential of the Ecological Footprint and related assessment tools for use in the EU's Thematic Strategy on the Sustainable Use of Natural Resources*. Report to the European Commission, DG Environment. Brussels.

Final report of the project "Ecological Footprint and the EU Resource Strategy. Potential of the Ecological Footprint for a basket of indicators for monitoring environmental impact from natural resource use" www.seri.at/comfootprint.

9.9 SERI THESIS

Bohunovsky, L., 2008. *Behavioural aspects of energy consumption in private households. Participatory approaches towards energy conservation*.



Abstract: Within the last years, negative side-effects of increasing anthropogenic use of energy have been more and more recognised. Besides an enforced use of renewable energy sources and a more efficient use of energy, it will be necessary to reduce the level of energy consumption in industrialized societies in order to achieve a sustainable energy system. Although private households will play a crucial role in this transition, private energy consumption seems hard to tackle, as it results from highly complex patterns of decision making, life-styles, values, etc.

The thesis starts with a situation and problem analysis, and demonstrates the degree of energy conservation that can be reached by behavioural changes of private households.

The results of model calculations show the huge potential for energy savings through behavioural changes. The assumptions on an energy saving behaviour resulted in an energy demand of minus 32% in comparison to the average. Squandering behavioural patterns resulted in plus 74% compared to the average. The idea of participatory approaches for energy reduction is then discussed along the theoretical framework of a socio-technical approach. Effects of participatory processes are shown, and limiting as well as promoting factors for a successful implementation are identified.

The thesis concludes that participatory approaches allow people to try out new behavioural patterns under "laboratory" conditions. They can provide an additional incentive as well as the information and support that are necessary to enable people to change their energy behaviour towards sustainability. They cannot be the only solution to decrease energy demand of private households. But they should be part of a bigger strategy that includes other endeavours to lead the system towards sustainability, such as political and financial incentives or directives.

SERI aims to make the results of its work available to everyone - by contributing articles to various online and print media (see also the chapter *Publications*) as well as by providing its expertise for film documentaries, scientific reports and interviews. Find here a selection of SERI's media contributions in 2008.

FEATURING SERI EXPERTS

Die Handelszeitung, NO. 22, November 7, 2008

"Neue Standards für die Nachhaltigkeit": About the ECR task force sustainability and SERI's role in the project (www.seri.at/ECR).

Le Monde, October 23, 2008

"La crise écologique, facteur croissant de migrations": A report about the International Conference on Environment, Forced Migration and Social Vulnerability on October 9-11 in Bonn with a statement by Johannes Frühmann.

News, August 2008

"Sofort, nicht in 20 Jahren": A short interview with Jill Jäger about her book "Was verträgt unsere Erde noch?"

Salzburger Nachrichten, May 14, 2008

"Zukunfts:Dialoge": Announcement of the "Salzburger:Zukunfts:Dialoge" about the topic of the Ecological Footprint with Stefan Giljum.

Stadtnachrichten, May 9, 2008

"Leben auf großem Fuß": Announcement of the "Salzburger:Zukunfts:Dialoge" about the topic of the Ecological Footprint with Stefan Giljum.

BOOK REVIEWS: "OUR PLANET. HOW MUCH MORE CAN EARTH TAKE?"

Sustainable Austria, No. 45, 12/2008

"Nachhaltigkeit nachlesen": The SOL magazine has included Jill Jäger's "Our Planet. How Much More Can Earth Take" into a list of the 20 best books about sustainability.

REACTIONS TO THE PRESENTATION OF THE BOOK SERIES "MUT ZUR NACHHALTIGKEIT" ON APRIL 21, 2008 AT THE AUSTRIAN NATIONAL LIBRARY IN VIENNA

respACT - austrian business council for sustainable development, April 24, 2008

"Auftaktveranstaltung 'Mut zur Nachhaltigkeit'"

Glocalist - Tageszeitung für CSR & Wirtschaftsethik, Nachhaltigkeit & soziale Verantwortung, April 23, 2008

"Die Zukunft liegt in der Vernetzung"

Presseaussendung Bundeskanzleramt, April 22, 2008

"Gusenbauer: Klimaschutz ist auch eine soziale Frage"

oekonews.at - Tageszeitung für erneuerbare Energie und Nachhaltigkeit, April 22, 2008

"Klimastrategie soll ökologisch und sozial nachhaltig sein"