



UNITED NATIONS ENVIRONMENT PROGRAMME

Programme des Nations Unies pour l'environnement Programa de las Naciones Unidas para el Medio Ambiente

Программа Организации Объединенных Наций по окружающей среде برنامج الأمم المتحدة للبيئة

联合国环境规划署



## ***WORKSHOP REPORT***

---

*Workshop on the Green Economy Report*

*28, 29 and 30 April 2009*

**Rolle, Switzerland**

---

Division of Technology, Industry and Economics  
Economics and Trade Branch

11-13 Chemin des Anémones, CH-1219 Châtelaine, Geneva 10, Switzerland, Tel: +41.22.917.83.26; Fax: +41.22.917.80.76  
E-mail: [etb@unep.ch](mailto:etb@unep.ch) URL: <http://www.unep.ch/etb>

## 1. Workshop overview

In October 2008, UNEP launched a Green Economy Initiative (GEI) which seeks to mobilize the global economy towards investments in key sectors of the economy and in 'natural' infrastructure such as forests and soils – as the best bet for real growth, reducing ecological scarcity, combating climate change and triggering a high-quality employment boom in the 21st century. The GEI aims to contribute to the crafting of a global set of actions conducive to sustainable wealth creation and achievement of the Millennium Development Goals (MDGs).

The Green Economy Report (GER), a key component of the GEI, will seek to make a macroeconomic case for increasing public and private investments in “green sectors”. The report’s main objective is to motivate and enable policymakers, business executives, and stakeholders at large to invest in green sectors, to be supported by necessary policy and institutional reforms.

On 28-30 April 2009, over 60 public and private sectors experts gathered to shape the outlines and discussed the overall strategy of the report. The event was organized as follows:

- *On 28 April*, there were group discussions on seven chapters of the report<sup>1</sup>. The institutions that had been approached to coordinate individual chapters led these discussions, with a view to benefiting from the expertise and input from other participants, in terms of structuring the chapter, defining the outline, reviewing the proposed methodology, and identifying other relevant contributors.
- *On 29 April*, discussions continued in a plenary setting, allowing for cross-fertilization and streamlining of the chapters.
- *On 30 April*, the methodology for the whole exercise, the modeling component, editorial guidelines, and future steps in the process of producing the report were debated and decided upon during a plenary session.

All revised chapter outlines will be made available during the first week of June at <http://www.unep.org/greeneconomy>

## 2. Introduction

In his introductory remarks, Mr. Sheng Fulai from UNEP gave an update on the initiative, highlighting how the GEI, through its proposed Global Green New Deal (GGND), had focused over the last six months on the immediate response to the current financial and economic crises. Mr Sheng also identified the GEI as one of the nine proposed United Nations Joint Crisis Initiatives (UN-JCI):

1. Additional financing for the most vulnerable (Lead agencies: UNDP<sup>2</sup> and the World Bank)
2. Food Security (Lead agencies: FAO<sup>3</sup>, IFAD<sup>4</sup>, UN<sup>5</sup>, WFP<sup>6</sup>)
3. Trade (Lead Agencies: UNCTAD, WTO)
4. A Green Economy Initiative (Lead agency: UNEP<sup>7</sup>)
5. A Global Jobs Pact (Lead Agency: ILO<sup>8</sup>)

---

<sup>1</sup> It is envisaged that an additional workshop will be scheduled to discuss remaining chapters, including industry, fisheries and forests.

<sup>2</sup> United Nations Development Programme

<sup>3</sup> Food and Agriculture Organisation

<sup>4</sup> International Fund for Agricultural Development (IFAD)

<sup>5</sup> United Nations (Headquarters)

<sup>6</sup> World Food Programme

<sup>7</sup> United Nations Environment Programme

<sup>8</sup> International Labour Organisation

6. A Social Protection Floor (Lead agencies: ILO, WHO<sup>9</sup>)
7. Humanitarian, Security and Social Stability (Lead Agency: WFP)
8. Technology and Innovation (Lead Agencies: ITU<sup>10</sup>, UNIDO<sup>11</sup>, WIPO<sup>12</sup>)
9. Monitoring and Analysis (Lead agencies: IMF<sup>13</sup>, UN/DESA<sup>14</sup>)

Emphasizing that the GER was to look beyond the financial crisis, Sheng explained that its aim was twofold: (1) “making the case” for investing in green sectors and (2) providing guidance to governments for moving towards green economies.

He indicated that the workshop was to help:

- Provide an opportunity to generate feedback on the design of the overall report
- Agree on the objectives of the different chapters
- Reach broad consensus on the outlines of the more advanced chapters
- Develop common understanding of methodologies and analytical tools
- Clarify roles and responsibilities of the different partners
- Understand the needs of the target audiences
- Present and agree on the timeline, engagement and dissemination strategy of the report

Mr. Sheng stressed that the focus of the report was primarily on development gains, with important environmental benefits strategically presented as, in a sense, a “bonus”. He also invited participants to bear in mind the focus of the report: it is not the only and full solution to all environmental problems but rather should be regarded as part of the solution to some of the problems. He also described a so-called “deliberate redundancy” approach, which encourages overlaps across different chapters in order to gain different perspectives of a same issue.

He explained that an advanced draft of the GER is expected to be ready in December 2009 and that a 6 months international consultation process on the report will take place from January to June 2010, the final report being ready for publication in July 2010.

Finally, he indicated that the GEI team had begun collaborating with several regional economic bodies as well as individual countries on green economy. Some examples given were the ongoing collaboration between UNEP and the South Korean government on developing a Low Carbon Green Growth Roadmap for Developing Countries in East Asia<sup>15</sup> and a similar ongoing initiative with the governments of MENA and Gulf Arab countries<sup>16</sup>.

A number of general observations and recommendations from participants were made, including that:

- The current crisis is an opportunity for change but should be considered as an entry point only. The report should go beyond the crisis and aim to encourage systemic change in thinking and policy making;
- It would be important to recognize and address the transition period required before reaching a green economy as the cycle involved will be relatively long term, most audiences will be looking at short term issues such as what compensations are offered for potential job and economic loss in certain economic sectors. This issue need to be addressed upfront;
- There is a need to shift from examples to evidence and to examine implementation issues;

---

<sup>9</sup> World Health Organisation

<sup>10</sup> International Telecommunication Union

<sup>11</sup> United Nations Industrial Development Organisation

<sup>12</sup> World Intellectual Property Organisation

<sup>13</sup> International Monetary Fund

<sup>14</sup> United Nations Department of Economic and Social Affairs

<sup>15</sup> For further information contact Mr. Moustapha Kamal Gueye at [MoustaphaKamal.Gueye@unep.ch](mailto:MoustaphaKamal.Gueye@unep.ch)

<sup>16</sup> For further information contact Ms. Fatma Ben Fadhl at [fbenfadhl@unep.fr](mailto:fbenfadhl@unep.fr)

- During the second phase of the GER development, which consists of international consultations, there is a need to substantially involve research centres and public institutions, including government ministries in charge of key sectors covered in the report;
- Careful consideration should be given to country groupings, in order to reflect differences in circumstances and conditions in different parts of the world;
- In addition to the main report, a number of targeted products could be produced for specific audiences (e.g. trade negotiators, environmental ministers, financial ministers, other local governments and mayors, etc.);
- A parallel forum convening civil society and business to share views on a green economy may prove to be useful for developing the report;
- It was suggested that the labour dimensions of each chapter should have 3 components: an analysis of the labour markets in the sector; an analysis of the potential of green jobs and their implications for existing jobs; and an analysis of the policy and regulatory arrangements to manage the labour transition.

### 3. Sectoral discussions

#### *1.1. Cities and buildings*

Preliminary discussions were held prior to the workshop with the staff of the Urban Age Programme of the London School of Economics and Political Science (LSE) in the UK. A preliminary chapter outline covering both sustainable buildings and cities was presented at the workshop by Mr. Philip Rhodes from LSE (participating through conference call). During the discussions facilitated by Mr. Moustapha Kamal Gueye from UNEP, participants recommended reorganizing the draft outline into two distinctive chapters, one on sustainable cities and another on sustainable buildings.

The discussion focused on the “Cities” chapter, the “Sustainable Buildings” chapter to be developed post workshop. It was suggested that the outline for the chapter on “Cities” should be articulated around the following research areas:

On the chapter contents:

- Urbanization and climate change
- Social issues: access to basic needs, sanitation, sewage networks, and its economic impact
- Zoning and its impact
- Urban restructuring and urban design
- Job creation and economic growth, dealing with education and informal markets
- Transport/compact cities/connectivity
- Relocation and connectivity
- Waste minimization and sustainable waste management
- Focus on small and medium sized cities in developing countries, with an emphasis on cities as centres of production and consumption; the implication of urban expansions (rules, jurisdiction, regulations and plans for workforce mobility);
- Examples of successful approaches and urban planning reforms.

On the methodology:

- The chapter needs to provide socio-economic indicators on what we can learn from current practices in both industrialized and developing countries.
- Case studies for all country groups and scenarios to provide evidences of good and bad urbanization, using selected examples of sustainable urbanization, with regional and local macroeconomic benefits (projecting the future using 2 to 3 scenarios related to a time spectrum).
- Define inter-linkages with other GER chapters and approaches to build synergies
- Develop a separate chapter on green buildings, emphasizing the already known potential for energy and resource efficiency on the building and construction sectors
- Provide a better understanding of the economic, job-related and GHG-reduction potential of the building sector in a medium to long term scenario
- Using concrete examples of successful and unsuccessful cities

- In addition to the GER chapter, UNEP should consider developing studies on sustainable cities together with institutions such as UN-Habitat

### **1.2. Waste management**

A research proposal and outline for the waste management chapter was prepared ahead of the workshop by the Environmental Management Centre (EMC), in Mumbai, India, and was presented by Mr. Rahul Datar of EMC. The presentation introduced waste management in the context of a green economy, the business approach to the waste management sector, and financing, institutional and regulatory models. In following discussions facilitated by Mr. Moustapha Kamal Gueye from UNEP, workshop participants suggested that the chapter considers the following issues and questions:

On the chapter contents:

- Look at labor intensity versus capital intensity, backed with data
- Focus on the innovation side of the waste industry
- Demonstrate that recycling, from a macro-economic point of view, makes more sense than landfill incineration
- Given that the waste management industry appears to be among the worst affected sectors in the wake of the financial and economic crisis, examine in depth the economic and market vulnerabilities that may characterize the sector and how they could be addressed
- Key message should be that waste is a resource that can be valued and is an industry able to contribute to decent job creation, economic gains and poverty reduction, particularly in developing countries, while addressing environmental and health-related challenges

On the methodology:

- Need to use examples from specific industries, such as the leather industry, and give an indication of how they are operating
- Undertake a macro-economic assessment of waste – showing the costs and opportunities for the broad economy (e.g. in Europe 0.6 percent of GDP is spent on waste management)
- Consider waste management in the overall context of waste avoidance, waste minimization, recycling and disposal – drawing on existing initiatives such as the 3Rs (reduce, reuse, recycle)
- Assume that a green economy is supposed to be a zero waste economy, and indicate what it would mean for waste generation and management throughout the entire economy
- Two different approaches need to be considered:
  - o Discussing waste management; or
  - o Looking at waste as a resource and focusing on the economics.

### **1.3. Renewable energy**

A discussion was held within a group of workshop participants and facilitated by Ms. Fatma Ben Fadhl from UNEP, with the aim to define the objective and structure of the renewable energy chapter. A list of research areas was used as a basis for discussion.

The group debated on whether or not the chapter should also cover energy efficiency (EE). It was suggested that energy efficiency should be covered under a separate chapter – one possibility is to develop sub-TORs to be shared with the teams that will be covering EE under the Transport, Industry, Cities, and Buildings chapters.

Participants debated on the structure of the chapter and possible research areas; the following recommendations were made:

On the chapter contents:

- Climate change should not be the focus of the renewable energy chapter
- The chapter should focus on (i) the opportunities from renewable energy technologies, (ii) the macro-economic case for renewable energy investments, (iii) policy assessment and recommendations
- Assess the economic benefits of deploying renewable energy technologies within the context of:

- the implementation of climate policy measures to achieve deep greenhouse gas emission (large scale); and
- the creation of economic opportunities in low income zones (small scale)
- Analyze carbon price trends in light of both technology, energy needs and climate factors
- Link renewable energy to overall energy supply and examine trends in renewable energy in light of other alternative fuels such as nuclear energy
- Need to include scenarios of Energy Supply and Demand projections with and without renewable energy and measure GHG, economic and social indicators for the world and different country groups levels; (carbon price is to be used as one of the variables for the model)
- Identify required levels of renewable energy investment
- Timeframe: caution is needed when identifying a peak year for trend analyses (need to refer to UNFCCC discussions on climate change)
- Need to analyze renewable energy investment upward trends, challenges for growth and environmental barriers (sustainability criteria, technology specific and country groups analyses with specific examples)
- When assessing renewable energy policies (sustainable energy mix) and levels of investments required, there is a need to analyze:
  - The balance between public and private financing;
  - How are public funds leveraging private finance?
- Understand capacity building and training requirements
- Look at the elasticity between feed-in tariffs and renewable energy employment
- A discussion on sustainability criteria in renewable energy should look at issues related to issues such as small farmers job losses due to the conversion of land for biofuel production and health aspects of workers in the biofuels sector
- The chapter needs to establish links between renewable energy use and agriculture including with respect to irrigation and waste (e.g. use of solar pumps, farm waste as source of energy, etc).

#### On the methodology

- The focus of the chapter should be on the medium/long-term scenarios, thus not so much on the crisis (the GGND was for that)
- The country groups should be identified as follows:
  - Developed countries and transition economies.
  - Developing Countries and emphasis on the following country groups:
    - Six Asian Tigers (SAT)
    - Brazil, India, Mexico and China (BIMC)
    - South Africa and Indonesia
    - Major oil exporting countries (Russia and OPEC)
    - Least Developed Countries (LDCs)
    - Small Island Developing States (SIDs).
- The indicators to use when measuring the macroeconomic wide implications should include:
  - Employment (direct, indirect, and decent jobs)
  - Energy access, poverty, health
  - Energy security
  - GHG emissions reductions / Carbon Prices Scenarios / Investments
  - Technology transfer and needs (e.g. smart grid and power transmission improvements)
- The chapter should contain a policy impact assessment on policy implementation costs, avoided costs and payoff periods for policy measures (technology specific and country groups' approaches)

UNEP has circulated a request for proposals and the revised TORs with selected research institutions following the workshop<sup>17</sup>.

#### ***1.4. Transport***

Participants discussed the objective of the sustainable transport chapter and reviewed a proposal submitted by the Transport Research Laboratory (TRL). During the discussions facilitated by Ms. Jacquie Berry and

---

<sup>17</sup> For further information on the RFP and revised TORS contact Fatma Ben Fadhl at [fbenfadhl@unep.fr](mailto:fbenfadhl@unep.fr)

Mr. Ko Sakamoto from TRL and Ms. Fatma Ben Fadhl from UNEP, a number of recommendations were made including:

On the chapter contents:

- Need to define “sustainable transport”. This recommendation applies to all the chapters of the Green Economy Report, where the objective and scope of the chapter need to be well defined from the start.
- The recommended structure for the report was:
  1. Transport modes and access issues (opportunities)
  2. Transport decoupling / linking transport with other sectors (macro-economic case)
  3. Policy assessment
- Examine how increasing distances make transport unsustainable and include research on unsustainable transport cost in the supply chain
- Undertake an analysis of available transport capacity and inefficient use of transport (link to land-use management)
- The existing evaluation systems of transport sustainability need to be reviewed and analyzed: substantial sustainability benefits come from transport time saving.
- Need to look at enhanced use of sustainable transport in trade and predict patterns
- Financing: need to look at the content of green stimuli packages and how they will lead to long term investment for employment.
- Need to look at the impact of transport on biodiversity and ecosystem infrastructure
- Need to analyze the pricing of mobility by:
  - o Assessing the taxation system and its impact on private mobility
  - o Analyzing the investment continuum in transport infrastructure and identifying pitfalls and appropriate solutions
- Need to look at the regulation of monopolies and other key regulations of the market. When looking at issues associated with monopolies, one needs to assess the responses from SMEs in the transport sector in different country groups and in light of different economic conditions
- Need to distinguish between freight transport and rail
- A GER transport meeting could be held during the last week of May 2009 or in July 2009.
- There is a need to link the transport analysis to that of other chapters such as renewable energy, industry and cities.
- There is a need to look at short-term and long term prospects for sustainable transport (e.g. through the use of case studies) and include a cost-benefit modeling on sustainable transport infrastructure and its impact on other sectors.

On the methodology

- Transport needs to be presented through this chapter as a crucial element of the green economy transformation
- Need to disaggregate between goods and people
- Need to differentiate between long-term and short-term objectives
  - o Short-term objectives: decoupling of energy production from fossil fuels, construction of fuel efficient vehicles and reducing the transport share of energy consumption
- UNEP should not be calling for growth in the transport sector but for enhanced sustainability in transport practices
- Need to adopt a multimodal approach
- Undertake a cost-benefit analysis of investing in sustainable transport and examine the externalities of cheaper transport
- The chapter recommendations need to answer the question “How could change in the transport sector be achieved?”
- Build on ongoing international discussions such as the ones that have been taking place at the UNECE WP29 Roundtables for the development of strategies for green vehicles

### ***1.5. Industry***

During a side discussion at the workshop, it was suggested to replace the chapter on ‘clean technologies and material efficiency’ with one on ‘Industry’. A subsequent UNEP internal meeting took place on 4 May 2009

and was facilitated by Ms. Fatma Ben Fadhl from UNEP with the objective to define the scope of the chapter.

The Industry chapter of the Green Economy Report is expected to make the case for making the transition towards a more sustainable industry through maximum utilization of clean technologies and processes. The analysis to be carried out is envisaged to have the following key features:

- **A macro analysis** which will cover the fundamental factors that determine the process of unlocking (for industrialized countries) from existing infrastructures that propagate unsustainable production and consumption systems and the process of leapfrogging (for developing countries) towards a more sustainable industrial system by developing new forms of infrastructures that facilitate the development of a green economy/industry. Some of the fundamental factors to be looked at in terms of the supporting infrastructure are:
  - institutional (policy and financial)
  - environmentally sound technologies (hard and soft)
  - physical and natural (material and resource flow), and
  - market (provision of alternatives and consumer choice).

This analysis is expected to be carried out with respect to each of the economic groupings defined for the report.

- **A sectoral analysis** which will provide a more in depth insight as to what needs to be done with respect to the fundamental factors of transformation covered under the macro analysis in order to ensure the transition towards a more resource efficient and sustainable industrial processes that are based on application of cleaner technologies and processes. The selection of the sectors to be covered could be based on a set of criteria including:
  - socio-economic importance;
  - energy intensive industry;
  - resource intensity; and
  - existing potential for improvement/transformation.
- **Industrial cases** with selected examples of efficient application of sustainable industrial systems with quantitative presentation and analysis of the economic, environmental and social benefits. Such cases could be related to an industrial unit or cluster of industries.

UNEP has circulated a request for proposals following the workshop to identify a coordinating team, lead authors and develop a knowledge network.

### ***1.6. Agriculture***

A revised draft outline for the agriculture chapter had been prepared by Mr. Daniele Giovannucci (independent consultant). Mr. Ulrich Hoffman from UNCTAD and Nicholas Bertrand from UNEP moderated the discussions on agriculture during the workshop. The consensus from the group discussions was to maintain the proposed outline with some modifications. Comments and suggestions were made as follows:

On the chapter contents:

- One of the key messages should be that investing in “sustainable” agriculture will not slow down economic recovery
- The chapter should not refer to “sustainable” agriculture but “mainstream” agriculture in development policies
- Demonstrate how “sustainable” agriculture still offers a variety of new employment opportunities (value addition), e.g. in landscaping, ecological services, nature conservation
- The chapter needs to address the connection between agricultural growth and rural development
- Emphasis should be given to social issues
- Links with migration issues should be strengthened
- A thorough analysis need to be conducted on increased productivity/soil fertility issues
- Due consideration to be given to waste issues

- While negative externalities need to be reduced, there is a need to develop realistic and practical recommendation under still imperfect conditions
- Localization of agriculture is a big issue, notably in the US; there needs to be a well-balanced discussion of localization and globalization
- More attention needs to be paid to the implications of the global shift in crop patterns and yields caused by climate change and resulting trade/investment and social consequences (i.e. temperate zones stand to win)
- The chapter needs to address the importance/implications of WTO negotiations on agriculture in a well-balanced way
- Regarding GMOs and related issues – the authors need to check and duly reflect UNEP's position
- Additional consideration should be given to market conditions which influence consumption and production conditions – a handful of global corporations dominate input and output
- Reference needs to be made to infrastructure (roads, ports, railways)

On the methodology:

- The focus of the chapter may need to be sharpened, focusing on a limited range of key issues
- The analysis needs to be mindful of the great variety of practices within the agricultural world
- One needs to be conceptually clear on the key motivation for sustainable agriculture
- The value chain analysis should go beyond the agricultural sector proper (i.e. also include issues such as waste management, transport etc.) and a strong link with local resource use was required
- The chapter should pay more attention to key food value chain issues, including those linked to consumer demand
- The analysis should be linked to ongoing discussions in other forums, such as FAO, United Nations Commission on Sustainable Development (CSD) or at the United Nations General Assembly

### ***1.7. Water***

A preliminary document was prepared ahead of the meeting and was presented at the workshop by Prof. Mike Young from the Environment Institute of University of Adelaide, discussions were facilitated by Nicholas Bertrand from UNEP. Comments made included:

On the chapter contents:

- A common definition is needed for subsidies and subsidy removal. A number of questions would need to be addressed, including what is the impact of subsidies in practice? How are these subsidies standardized? Are subsidies compatible with a Green Economy? What is the difference between subsidies and Payments for Ecosystem Services?
- The analysis needs to be mindful of the different views concerning markets for water
- The report needs to address transition arrangements in a rapidly changing world, in particular the allocation of scarce resources within countries and at the global level
- The chapter should pay particular attention in addressing property rights
- Analysis is needed on governance issues - how does one deal with the difference between legislation and field reality?
- The chapter should emphasize the role of wetlands
- The chapter should also consider health impacts
- The need for encouraging greater dialogue between different groups within the water community (i.e. “utilities” and “environment” communities)

This received broad consensus and workshop participants proposed that the chapter outline focuses on:

- Context (including hydrological cycle; extractive use; non-consumptive use; business, investment, and technology)
- Challenges and opportunities (cycle use, jobs, market failures, changing demand)
- Allocation and management principles (deliver the right to water)
- Vision for water
- Options and way forward

#### 4. Enabling conditions

Mr. Peter Woods from the International Institute for Sustainable Development (IISD) made a presentation on a proposed approach to the section on ‘Enabling conditions’ of the Green Economy Report, which he stressed should be prepared by:

- a) Working with each sectoral team in addressing policy and institutional issues important to the particular sector; and
- b) Developing a chapter on policy and institutional issues at a cross-cutting level.

The objective of the report section on enabling conditions is to demonstrate to policy-makers and other stakeholders that GEI can be implemented and that there are no insurmountable barriers.

- Enabling Conditions were distinguished as:
  - “*Domestic*”: dissemination of best practice
  - “*International*”: constraints imposed e.g. by WTO

There was agreement that the ‘Enabling conditions’ section of the report must be practical and useful otherwise the GER will lose credibility if it follows a “wishful thinking”.

Seven enabling conditions areas were presented:

1. Legislation and standard setting
2. Fiscal policy
3. Financing and investment
4. Technology transfer and capacity building
5. Information monitoring and accountability
6. Transitional arrangements
7. Institutional capacity

The common themes that were identified for these 7 enabling conditions were:

- Trade and Market Access
  - Protectionism, subsidies (good and bad), anti-dumping, concern over domestic job losses and leakage, linking of economic greening with development of domestic (infant) industry, WTO rules, etc.
- Climate Change
- Security of Supply of energy, food, water, etc.

Mr. Wood presented the main issues per enabling condition and participants proposed to fold the 7 above enabling condition into 4 groups, namely: (1) Policy, (2) Finance, (3) Technology, (4) Capacity (skills, training, producers and consumer attitudes, behavior etc). These can be viewed as elements of a transformative process.

Another line of thought was to organize the enabling conditions along the roles of government: (1) Pass and enforce laws, (2) Collect taxes and spend revenues, (3) Abolish/establish institutions, (4) and reach international agreements.

Participants suggested that each chapter contains a sub-section on enabling condition for the sector.

The session also provided an opportunity to discuss some of the anticipated conclusions of the report, including the following points:

1. Much economic greening can be achieved with minor changes to existing policy and regulation
2. Importance of leveling the playing field to allow fair comparison between various policy options
3. Change is needed for a net gain to the economy, despite potential losses in some sectors:
  - Losers can be compensated or retrained
  - International experience indicates that structural changes can be manageable
4. Most enabling conditions for a green economy are domestic policy issues

- At the international level, issues related to trade, climate change and standard-setting are important
- 5. International solutions are cheaper than all countries doing it alone
- 6. Incentives are required for all actors
  - Public investment can gear private sector investment 5-20 times over
- 7. Need to seize policy windows and opportunities.

In addition, participants discussed key issues to enable a green economy:

- Role of G20 in greening the global economy
- The need to adopt one common country grouping throughout the report. It was recommended adopting the UN or WB classifications, or combining both.
- The need to separate equity from efficiency, otherwise it may lead to compromise
- Manage externalities separately from cost of production, through specific policy instruments
- Need to make a macro-economic case for an international agreement on environment and trade
- Revenue neutral growth-oriented tax reforms
- Set-up of environmental accounting systems and global and regional environmental economy related statistical databases

## 5. Modeling

Mr. John Shilling and Mr. Andrea Bassi from the Millennium Institute (MI) presented their proposed approach to modeling in the UNEP Green Economy Report.

Mr. Bassi explained that the main motivation of including modeling in the GER is the need for integrated simulation tools that could serve as a mean to close the gap between dynamic and all embracing thinking and static available models. Mr Bassi added that these integrated simulation tools are required when facing critical issues such as the upcoming energy transition and climate change, since conventional modeling tools do not examine their broad causes and impacts. Simulation models aim at understanding what are the main drivers for the behavior in the system.

Mr. Shilling presented the proposed structure of a chapter on Modeling in the GER. He explained that such a chapter would help communicate the impact of suggested policies and other data presented in the different chapters of the report for the different country groups. To do so input will be sought from the different chapter teams throughout the process.

It was recommended by participants that a T21 modeling component (MI model) is integrated in each chapter for global and sectoral scenarios with country examples. In that regard new variables may be needed and the MI Modeling team will develop a list of models to share with the sectoral chapters. To that effect, the chapter teams need to define:

- What they need from the model
- The main issues
- Policy interventions

The suggested sectors for the modeling exercise: transport, agriculture, waste, building, cities, renewable energy and industry and possibly fisheries and forestry. Water was excluded due to its unique spatial dimensions which may make it difficult to run models at a global level. For the renewable energy chapter, the IEA and IPCC projections could be integrated in the model.

Participants suggested that the main indicators that need to be measured include GDP, population, employment, CO<sub>2</sub> and GHG emissions, investment levels, depletion of natural resources, carbon footprint (national, global) and MDGs. It was also agreed that the results of the global modeling in terms of recommended level of investment, GHG emission reduction milestones and global GDP indicators could be integrated in the introduction.

## 6. Communication

“Putting it together” the final presentation of the meeting was made by Mr. Jay Dowle (UNEP). After stressing the need for a consistent style and way of working in order to bring the various GER chapters in a smooth coordinated way, a simple style sheet, outlining spellings, levels of headings and use of references was introduced and will be made available to all contributors.

Some advice on the sourcing of pictures and graphics was given along with guidelines. A request was also made that contributors mention the GER in their public interventions whenever possible, keep the UNEP communications team informed of any newsworthy or attention-grabbing information uncovered in their research, or of outreach opportunities in their various working environments and countries.

Finally, proposals were made for an on-line discussion group (GERdiscuss) through which attendees of the meeting and the larger GER contributors group could network, share ideas, build a calendar of events and work collaboratively.

The presentation closed by emphasizing its four key messages: i) use the style sheet, ii) keep to lengths and deadlines, iii) provide pictures and graphics early, and iv) regularly visit and use the ‘GERdiscuss’ group.

## 7. Next steps

Institutions that have been approached to coordinate sectoral chapters of the green economy report will review the proposed methodologies and analytical tools, outline of the chapters, and build a team of lead and contributing institutions, taking into account comments and suggestions made at the workshop.

During the months of May and June 2009, the revised chapter TORs and outlines will be shared with workshop participants as well as other institutions and individuals that expressed interest in the process but could not attend the workshop. Additional inputs will be considered in the finalisation of the research and workplan for the green economy report. A document presenting the structure of the overall green economy report will be reviewed, in light of discussions held at the workshop and shared with participants and other institutions involved in the process.

UNEP will continue seeking research teams for the chapters that have been added to the report recently. The workshop resulted in a number of good suggestions for building strategic partnerships, and developing a communication strategy on the green economy initiative that involves a broad range of national, regional and international agencies. The UNEP team will take on those suggestions when strengthening a global engagement for the green economy.

\*\_\*\_\*\_\*\_\*\_\*\_\*\_\*\_\*\_\*\_\*\_\*\_\*\_\*\_\*\*

### Participants List

**Altinger** Laura, UN Economic Commission for Europe (UNECE), Geneva

**Ayas** Tarek, United Nations Environment Programme, Division of Technology, Industry and Economics, Economics and Trade branch, Geneva

**Bassi** Andrea, Millennium Institute, USA

**Bellmann** Christophe, International Centre for Trade and Sustainable Development (ICTSD), Geneva

**Ben Fadhl** Fatma, United Nations Environment Programme, Division of Technology, Industry and



Economics, Economics and Trade branch, Geneva

**Berry** Jacquie, Centre for Sustainability of the Transport Research Laboratory (TRL), UK

**Bertrand** Nicolas, United Nations Environment Programme, Division of Technology, Industry and Economics, Economics and Trade branch, Geneva

**Bishop** Joshua, International Union for Conservation of Nature (IUCN), Gland

**Cadestin** Etienne, United Nations Environment Programme, Division of Technology, Industry and Economics, Economics and Trade branch, Geneva

**Charpe** Matthieu, International Labour Organisation (ILO), Geneva

**Deda** Paola, UN Economic Commission for Europe (UNECE), Geneva

**Deleuze** Olivier, United Nations Environment Programme, Division of Regional Cooperation, Major Groups and Stakeholders Branch, Nairobi

**Fischer** Remco, United Nations Environment Programme, Economics and Trade branch, UNEP Finance Initiative UNEP/FI

**Fullerton** John, Level 3 Capital Advisors, USA

**Datar** Rahul, Environmental Management Centre, India

**Hubert** Romain, UN Economic Commission for Europe (UNECE), Geneva

**Gallagher** Louise, United Nations Environment Programme, Division of Technology, Industry and Economics, Chemicals Branch, Geneva

**Givoni** Moshe, Transport Studies Unit, Oxford University, UK

**Gueye** Moustapha K., United Nations Environment Programme, Division of Technology, Industry and Economics, Economics and Trade branch, Geneva

**Hoffmann** Ulrich, United Nations Conference on Trade and Development (UNCTAD), Geneva

**Jean-Renard** Sally, International Union for Conservation of Nature (IUCN), Gland

**Jugault** Vincent, International Labour Organisation (ILO), Bangkok

**Kasterine** Alexander, International Trade Center (ITC), Geneva

**Kern** Matthias, United Nations Environment Programme, Basel Convention, Geneva

**Kibata** Cynthia, Ramsar Convention Secretariat, Gland

**Khan** Sharon, Geneva Institute for Water Environment and Health, Switzerland

**Kohler** Larry, Employment and Sustainable Development, Switzerland

**Krausing** Jarl, Climate Change, Sustainable Development Network, World Bank Group, Washington DC

**Kuppler** Sophie, United Nations Environment Programme, Division of Technology, Industry and Economics, Economics and Trade branch, Geneva



**Longley Sue**, International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco & Allied workers Associations, Geneva

**Leone Gaetano**, UNEP/Regional Office for Europe

**Litovsky Alejandro**, Volans Ventures Ltd, UK

**Lugt Cornis**, United Nations Environment Programme, Division of Technology, Industry and Economics, Sustainable Consumption and Production Branch, Paris

**LUvsan Nara**, United Nations Environment Programme (UNEP), Regional Office for Europe (ROE), Geneva

**Magallón Daniel**, Basel Agency for Sustainable Energy (BASE); Sustainable Energy Finance Initiative (SEFI), Basel

**Mcintire Donna**, United Nations Environment Programme, Division of Technology, Industry and Economics, Sustainable Consumption and Production Branch, Paris

**Mulder Ivo**, Triple E - Economy, Ecology and Experience, Netherlands

**Naqvi Asad**, United Nations Environment Programme, Division of Technology, Industry and Economics, Economics and Trade branch, Geneva

**Otto Matina**, United Nations Environment Programme, Division of Technology, Industry and Economics DTIE, Paris

**Poschen Peter**, International Labour Organisation (ILO), Geneva

**Racine Armand**, United Nations Environment Programme, Division of Technology, Industry and Economics, Economics and Trade branch, Geneva

**Ramsay Bob**, Building and woodworkers international, Geneva

**Rode Philipp**, London School of Economics (LSE), UK

**Rosemberg Anabella**, International Trade Union Confederation (ITUC), Geneva

**Sakamoto Ko**, Transport Research Laboratory (TRL), UK

**Sakyi Adwoa**, International Trade Union Confederation (ITUC), Geneva

**Salim Nidal**, Geneva Institute for Water Environment and Health, Switzerland

**Schaper Marianne**, United Nations Economic Commission for Latin America and the Caribbean (UNCEPAL), Santiago

**Semine Nikolai**, International Trade Centre (ITC), Geneva

**Sheng Fulai**, United Nations Environment Programme, Division of Technology, Industry and Economics, Economics and Trade branch, Geneva

**Shilling John**, Millennium Institute, USA

**Twarog Sophia**, Division on Trade Environment and Development Branch (UNCTAD/DITC), Geneva

**Simmons Ben**, United Nations Environment Programme, Division of Technology, Industry and Economics,



Economics and Trade branch, Geneva

**Sukhdev Pavan**, United Nations Environment Programme, Division of Technology, Industry and Economics, Economics and Trade branch, Geneva

**Van Berkel Rene**, United Nations Industrial Development Organization

**VonMoltke Anja**, United Nations Environment Programme, Division of Technology, Industry and Economics, Economics and Trade branch, Geneva

**Warley Philip**, Baldwin Bell Green, USA

**Weick Vera**, United Nations Environment Programme, Division of Technology, Industry and Economics, Economics and Trade branch, Geneva

**Werna Edmundo**, International Labor Organisation (ILO), Geneva

**Woods Peter**, International Institute for Sustainable Development (IISD), Canada

**Yemelin Valentin**, UNEP-GRID Norway

**Young Mike**, University of Adelaide Research Chair, Water Economics & Management, Australia

**Young Lew**, Ramsar Convention Secretariat, Gland