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## 4th UNECE Regional Implementation Meeting on Sustainable Development

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More than 220 delegates from the UNECE region met in Geneva to discuss progress made in achieving sustainable development goals in transport, chemicals and waste management as well as in changing unsustainable patterns of consumption and production. They addressed both breakthroughs and obstacles encountered in the region, as well as the policies and measures required for further progress. The meeting's key messages and policy recommendations will be sent to the Commission on Sustainable Development (CSD), which meets in May 2010 in New York.



### ▶ TRANSPORT

*Transport is a major contributor to the region's economic development (up to 10 % of GDP), supporting trade, employment and development. But the sector also has significant impacts on the environment: it is responsible for 23 % of CO<sub>2</sub> emissions, much consumption of fossil fuels (the sector is 95 % dependent on oil and accounts for 60 % of all oil consumption), air and noise pollution, and adverse effects on health and safety. The global target of making cars 50 % more fuel efficient by 2050, established by the Global Fuel Economy Initiative in March 2009, will remain an ambitious goal only unless far-reaching transport measures are taken at all levels: local, national and international.*



There has been some progress in "greening" road transport, with 95–97% of abatements in emission limits for passenger cars between 1970 and today, as well as more than 5 times lower particulate emissions than in 1990. However, much remains to be done, especially regarding emissions of nitrogen oxides – which contribute to ozone pollution – and of fine particulates.

Addressing these environmental and social challenges requires a holistic approach: transport should be avoided where possible (e.g. through better urban planning, with people living closer to their work, and using teleconferencing and other technical solutions). A shift to cleaner modes of transport is required (i.e. from cars to public or non-motorized transport), and the different transport modes need to become cleaner (i.e. cleaner cars and buses).

*How are these challenges being addressed?* Some UNECE countries have made advances towards sustainable urban transportation through innovative and successful policies that promote non-motorized and public transport. Examples include bicycle facilities in Denmark and the Netherlands, the bicycle plan in Paris, high car ownership combined with very high use of public transport in Vienna, and the congestion tax in London. However, many European cities are still struggling with this issue and could learn from existing good practices.

Voluntary initiatives are being undertaken by other stakeholders, for example the International Road Union recently adopted the "30-by-30" resolution, committing to reduce CO<sub>2</sub> emissions by 30% by 2030 through the use of innovative technologies and practices, including driver training.

The *Transport, Health and Environment Pan-European Programme (THE PEP)*, an intergovernmental programme managed jointly by the UNECE Environment and Transport subprogrammes and the WHO Regional Office for Europe, is helping to put sustainable mobility at the top of the international agenda. It addresses the key challenges to achieving sustainable transport patterns and is encouraging national and local governments to pursue an integrated approach to policymaking. At the High-level Meeting in Amsterdam (January 2009), Governments agreed on four priority goals for THE PEP: (i) to contribute to sustainable economic development and stimulate job creation through investment in environment- and health-friendly transport; (ii) to manage sustainable mobility and promote a more efficient transport system; (iii) to reduce emissions of transport-related greenhouse gases (GHGs), air pollutants and noise; and (iv) to promote policies and actions conducive to healthy and safe modes of transport.

## CHEMICALS



The sound management of chemicals is essential for the protection of human health and the environment. The World Summit on Sustainable Development (Johannesburg, 2002) requested that by 2020 chemicals be used and produced in ways that minimize significant adverse effects on human health and the environment. Increasing chemical manufacturing and use, product development and production, combined with food production and corresponding increases in chemical fertilizer and pesticide usage, all pose challenges for sound chemicals management. The ongoing development of new chemicals and products (e.g. nanomaterials), as well as legacy chemicals (e.g. leaded paint, asbestos) and hazardous waste sites, need to be addressed through science, technology and policy.

To support accomplishment of the 2020 target, a number of international legally binding instruments and mechanisms have been established. The global framework includes instruments such as the *Basel, Rotterdam* and *Stockholm Conventions*\* and the *Montreal Protocol*. In addition, a “*Globally harmonized system of classification and labelling of chemicals (GHS)*” was agreed in 2001 and is now being implemented worldwide, and the *Strategic Approach to International Chemicals Management (SAICM)* – a voluntary global policy framework to promote chemical safety – has been developed.

\* Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade and Stockholm Convention on Persistent Organic Pollutants. Montreal Protocol on Substances that Deplete the Ozone Layer.

## WASTE MANAGEMENT

Waste and hazardous waste have numerous impacts on environment, human health and security. The amount of waste continues to grow in the UNECE region, although the rate of increase differs from country to country. Based on the data available, annual waste generation in the EU-25 + EFTA is estimated at between 1.75 and 1.9 billion tons, or 3.8–4.1 tons of waste per capita. The East European, Caucasian and Central Asian countries are estimated to generate about 3.45 billion tons of waste annually, i.e. 14 tons per capita on average, but there are marked differences between countries, from half a ton per capita in the Republic of Moldova to 18 tons in the Russian Federation. The SEE countries are estimated to have an average total waste generation ranging from 5 to 20 tons per capita per year.

The chemical industry has significant economic importance for many UNECE countries: Western Europe, Russian Federation, United States of America and Canada are among the world's biggest chemical producers in the world. The demand for chemicals is increasing in East European, Caucasian and Central Asian and South-East European (SEE) countries, leading to rising imports.

European countries contribute significantly to the global trade in chemicals, which increased by an average of 14% a year between 2000 and 2005. The EU-25 and Switzerland have a 59% share of world exports and 49% of world imports. Although the countries of Eastern Europe, Caucasus and Central Asia account for just 1.8% of world exports and 2.1% of world imports, Russian exports have grown by 13% since 2000. In 2005 its trade in chemicals was valued at \$13.2 billion. Exports from Belarus, Kazakhstan and Ukraine are also increasing.

The trade in chemicals in Armenia, Azerbaijan, Georgia, Kyrgyzstan and the Republic of Moldova is characterized by higher imports than exports, with demand increasing, e.g. for agrochemicals and consumer products. In SEE, there is a similar trend, with increasing imports and, to a lesser extent, exports between 2001 and 2005.\* US production of the top 100 chemicals exceeded 500 million tons in 2000 and the annual growth in US chemicals shipments for 1998–2008 was 5.2%. In Canada, chemical manufacturing rose 5% annually in the decade 1998–2008.

\* Europe's Environment: the fourth assessment, European Environment Agency, 2007

At the regional level, the *UNECE Convention on Long-range Transboundary Air Pollution* and its *protocols on persistent organic pollutants (POPs) and heavy metals*, the *Convention on the Transboundary Effects of Industrial Accidents*, and the *Aarhus Convention's Protocol on Pollutants Release and Transfer Registers (PRTRs)* support countries' efforts to achieve the 2020 goal.

While the basic legal framework exists, implementation needs to be strengthened, as does the cooperation and coordination of activities involving existing chemicals-related international instruments. Considering the continuing large volume of production and use of chemicals, as well as the introduction of new ones, it is likely that global regulation of other chemicals of concern will also be needed in the future.

All countries need to reinforce their capacities in managing risks posed by chemicals and hazardous waste. SAICM provides an important international framework for strengthening such capacity and narrowing the capacity gap between the developing and developed worlds. Use of chemicals in agriculture should be decreased through sustainable agriculture practices, especially organic farming, and by better using, transporting and storing them. Public access to information on chemicals is crucial. Companies should make publicly available their data on the health and environmental effects of chemicals produced or imported.



*A rough estimate of the total annual waste generation in the pan-European region is 6-8 billion tons. More than 250 million tons of hazardous waste, 3-4 % of the total waste, is generated annually in the pan-European region.\* According to the US EPA, 46 million tons of hazardous waste and 254 million tons of municipal solid waste were generated in 2007 in the US. The total non-hazardous waste disposed of in Canada in 2007 was about 27 million tons and hazardous and liquid industrial waste produced annually amounts to about 6 million tons.*

\* Europe's Environment: the fourth assessment, European Environment Agency, 2007.

The sustainable management of waste should lead to reducing health risk and emissions to the environment and utilizing the resources in waste. Both the main challenges and the solutions to achieving these objectives differ between subregions.

While waste policies both in the EU and in individual EU Member States have been progressively put in place since the 1970s, countries in SEE and Eastern Europe, Caucasus and Central Asia face significantly greater challenges. Some progress has been made in these countries in terms of developing national legislation and setting up information systems for different waste streams; however, overall there has been little improvement since 2000.

In addition, there is an urgent need to deal with specific types of waste: The ever-increasing generation of electronic waste poses special problems. Long-term strategies are also needed to deal with radioactive wastes from different uses. Plastic waste disposal, including in oceans, poses a very significant problem not only for human health but also for the food chain and wildlife.

Waste management policy should implement the "3R approach" (reduce, reuse and recycle), with waste prevention as the first and optimal solution. Waste that cannot be prevented should be recycled; to facilitate this approach, waste separation should take place. Energy recovery in the waste recycling process could be another means of effective resource use. Disposal should be restricted to waste that cannot be reused or recycled. Legislative and regulatory measures are required to restrict landfill of recyclable, particularly biodegradable, waste and to limit waste combustion. Ultimately, a policy shift is required towards a resource-efficient economy, with a move from waste management to sustainable material management.



## ▶ MINING



Mining is an important economic sector for a number of UNECE countries. However, its impacts on the environment and society are considerable. The main environmental concerns are related to water use and quality, waste rock dumps, tailings storage areas, and hazardous materials. The main social concerns are related to land acquisition, indigenous peoples, cultural heritage, and labour and working conditions. The principal challenges are the need to transform mineral resource potential while at the same time creating sustainable benefits, addressing social needs and protecting the environment.

Mining can contribute to sustainable development, provided that it addresses environmental considerations, social concerns and promotes measures that create lasting benefits. Good practice in mining requires multi-stakeholder consultation and dialogue, making information accessible to decision-makers and the broader public, and

*The US and Canada are major mineral-producing countries with good to excellent geological prospectivity. The US is a net importer of minerals while Canada is a net exporter. Mining continues to provide a substantial contribution to the economy of Canada. In the two countries, an increasingly large area of land is being closed to mineral claim-staking. The largest of these areas are places of significant natural beauty that are particularly environmentally sensitive. There has been a clear trend over the past decade to accord mining a lower land-use priority. Furthermore, environmental policies developed over the past two decades have led to regulations, permitting procedures, and controls (such as effluent standards) that impose significant costs on industry. In some instances, these costs have acted as an incentive for companies to develop new, more environmentally sound technologies that have significantly lower costs than previous technologies (e.g. in the recovery of copper).\**

*While the share of mining has tended to drop over the last two decades in Central European countries, it has increased (e.g. production of petrochemicals and minerals) in several countries of Eastern Europe, the Caucasus and Central Asia. Over the past 10 to 15 years, Western as well as Central and Eastern European economies have increasingly imported raw materials, moving the environmental burden associated with their extraction to other parts of the world. At the same time, the East European, Caucasian and Central Asian countries have become major exporters of raw materials to the EU and have had mixed success in bringing about a shift towards less resource-demanding industrial sectors.*

\* J.M. Otto, Mining, environment and development, 4. Mineral policy, legislation and regulation, UNCTAD.

committing to corporate social responsibility. The development of effective and efficient approaches for mine closure is required, especially ensuring environmental safety of closed mines. In this regard, the *UNECE Safety Guidelines and Good Practices for Tailings Management Facilities* are supporting Governments' efforts, with a view to limiting the number of accidents and their consequences for human health and the environment.

A number of international initiatives have been taken to enhance the sustainability of mining, such as the establishment of an *Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development* in 2005. The Forum is working to develop a policy framework for mining to be delivered to CSD in 2011. The *International Council of Mining and Minerals* (ICMM) was established as a platform for industry and other key stakeholders to share information and experience and to develop solutions based on sound science and sustainable development principles. Its work aims at a respectable mining and metals industry that is widely recognized as essential for society and a key contributor to sustainable development. Under the auspices of ICMM, a *European Technology Platform on Sustainable Mineral Resources* was established to strengthen technology in the sector and to minimize its footprint.



## ► SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS



*How can current unsustainable patterns of production and consumption be modified?*

The challenge is to *do more and better with less* by reducing pollution and resource use. A global framework of policies and actions on SCP is being developed under the auspices of CSD (the *"10-Year Framework of Programmes on SCP"*). A preparatory meeting on SCP, held back-to-back with the Regional Implementation Meeting, brought together experts and officials to consider the possible elements for such a programme.

Discussions identified the approach required as well as priority areas and sectors. A balanced mix of instruments and incentives (regulatory, voluntary, economic, fiscal, etc.) is necessary. Priority areas for SCP are sustainable production processes, environmentally sound products, education for sustainable development (ESD), financial frameworks, and strategies at the different governmental and intergovernmental levels. The goal should be to integrate SCP policies into sustainable development strategies at all levels. Key sectors to make more sustainable include transport, housing and construction, food, waste management, cities and tourism.

Consumption and production patterns have a direct impact on a range of environmental concerns, for example:

- (a) climate change and air pollution (projections of a 50% increase in GHG emissions by 2050 will result in a global temperature rise of 1.5°–3.4°C);
- (b) sustainable use of natural resources (the extraction of natural resources has increased by 36% since 1980 and at this rate by 2050 will increase 2–3 times more); and
- (c) sustainable consumption and production (SCP) as well as the conservation of biodiversity (globally, 1.7 billion "consumers" are responsible for 70–80% of the environmental impacts related to transport, food and housing).

There are two divergent trends in current consumption patterns: overconsumption (e.g. \$18 billion is spent yearly on beauty products; 122 kg of meat is annually consumed per capita in the US; in the US and Europe \$17 billion are spent yearly on perfumes and the same for maintaining domestic animals, \$14 billion are spent on ocean cruises and \$11 billion on ice cream) and underconsumption (e.g. 1.4 billion people live on less than \$1.25 a day and 2.8 billion on less than \$2 a day, one fourth of children living in developing regions are underweight, and 20.7 % of the world's population lives in extreme poverty). Globally, it is projected that in 2009 humankind will use about 40% more than nature can regenerate during the year (ecological footprint).

Overall, subregional and regional cooperation continue to be of major importance for advancing national and regional progress in sustainable development. Awareness-raising and education are essential.

The *UNECE Strategy for ESD* provides countries with the tools for this challenging task. The collection and analysis of good practices in addressing sustainable consumption, production and transportation through ESD is helping stakeholders to share experiences.



The documents and materials for the Regional Implementation Meeting are available online at: [http://www.unece.org/env/SustainableDevelopment/4Session/RIM\\_4.Dec2009.htm](http://www.unece.org/env/SustainableDevelopment/4Session/RIM_4.Dec2009.htm).

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