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Waste Management, Chemicals, Sustainable Production and Consumption, Mining and Transport

Summary from Thematic Seminar Series

Background Paper
CSD18/2010/BP/13

Introduction

The focus of the two-year cycle of CSD-18 and CSD-19 is on reviewing progress and fostering implementation of sustainable development in the areas of transport, chemicals, waste management, mining, and the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns.

In preparation for the CSD-18 Review Session, the CSD Secretariat has launched a new and innovative Thematic Seminar Series that have presented scientific and technical information on the issues under review by the Commission. The CSD Thematic Seminar Series featured presentations by technical experts, video documentaries highlighting challenges and successes, and interactive discussions. It was designed to add value to the CSD process by preparing CSD-18 participants to be informed about the latest research, data, case studies and challenges that will underpin the discussions during the CSD-18 Review Session.

Each three-hour seminar focused on one of the five thematic issue areas and was chaired by a member of the CSD-18 Bureau. Expert speakers representing the UN system, governments, major groups, inter-governmental organizations, partnerships and inter-agency networks served as panelists and lead the discussions.

This Background paper, intended for thematic discussions during the CSD-18, sums up the discussions held during these Thematic Seminar Series as well as e-discussions launched afterwards.

Chapter 1 – Waste management

Topic overview

The priority objectives in the field of waste management are to promote waste prevention and minimization by focusing on the 3Rs (reduce, reuse, recycle) and recovery of useful materials for energy generation. The importance of transferring and diffusing appropriate technologies and know-how for waste treatment and disposal in this regard cannot be overemphasized. Efforts must be backed with proper technical training and capacity building supported by international and bilateral development agencies. Innovative programs that will enable small-scale entrepreneurs to play a significant role in waste collection and treatment should also be encouraged. Research and information exchange among countries is vital, yet studies have revealed a lack of quality data for waste monitoring as a significant problem to the management of global waste.

Summary of the seminar

The CSD Thematic Seminar on Waste Management was held at UN Headquarters on 12 January 2010. The event was moderated by H.E. Hilario G. Davide, Jr., Permanent Representative of Philippines to the United Nations. An introductory statement was also

made by Tariq Banuri, Director, Division for Sustainable Development highlighting key features of the thematic seminar series.

A film produced by Consumers International and DanWatch entitled *Hidden Flow: The Rising Tide of European E-waste in West Africa* was shown as a lead-in to the panel presentation by Allen Hershkowitz, who discussed the problem of e-waste. As the fastest-growing waste stream component, more than 90% of discarded computers from the developed world are exported to China, Ghana, Pakistan, India, and other countries under the guise of recycling, but most end up channeled into toxic wastelands. Their contents of lead, cadmium, mercury, chromium, and polyvinyl chlorides are released into the soil, atmosphere and water supply, and where children and others are exposed with damaging results to their health and development. Increased production of computers, cell phones, and other electronics are not being regulated adequately by governments, and environmentally harmful activities are being subsidized so that the competitive advantage of recycling is minimized and compromised.

Paul Connett precluded his presentation on the theory of Zero Waste and the practice around the world with a video highlighting the activities of household hazardous waste depots and residual sorting facilities in Nova Scotia. The Zero Waste strategy seeks to find a way to use community responsibility at the back end to drive industrial responsibility at the front end, outlining a series of steps to ensure that nearly 100% of discarded community waste can be diverted away from landfills and incinerators by 2020.

A regional perspective on waste management in the Caribbean was presented by Ianthe Smith, who examined its strengths and weaknesses and identified potential opportunities for improvement. Although English-speaking Caribbean countries have made significant efforts to address waste management problems in the past 15 years, the focus has been on municipal solid waste, urban sewage and industrial wastewater and less on rural, peri-urban and inner city communities. Good initiatives have included new legislation, policies and institutional arrangements; as well as public education and improved collection and disposal operations. However, lack of long-term political vision and overlapping agency responsibilities have contributed to an overall lack of integrated waste management planning in the region.

Munyaradzi Chenje outlined UNEP's involvement in global initiatives for solid waste management, noting that The UN Green Economy Initiative identifies waste management as a key area of intervention with strong potential for job creation. In partnership with international, national and local organizations, UNEP's waste management programme, led by UNEP's International Environmental Technology Centre in Japan, is intensifying its activities in the field of waste management and focusing on capacity building and support for technology identification, assessment and implementation at national and local levels. Japan's 3R initiative was discussed as an example of a successful approach to legislation and policy for sustainable waste management.

Following the panel presentations, the interactive discussion revolved around several key topics. On e-waste, it was emphasized that adopting extended producer responsibility is one of the most important legislative options available to both developed and developing countries to reduce all kinds of waste. While some participants called for increased technology transfer from North to South, others noted that low technologies are equally important for enabling the separation of residuals and composting in developing countries. There was general agreement on the potential for waste to be converted into profitable materials, but concerns were raised over industry cooperation and collaboration with community-level NGOs, where organization and education of communities is essential for success. Many of the approaches discussed by the panelists were recognized to be forward-looking in terms of minimizing waste, but concerns were expressed as how to deal with different form of waste generated and accumulated over a period of years. Finally, questions on how to deal with the management of nuclear and other hazardous wastes were also raised by several participants, and it was noted that these important issues would be carried forward to an online e-discussion format to be launched by the Division for Sustainable Development following the close of the seminar.

Summary of the E-Discussion

The E-discussion was launched after the seminar in order to gain broader insight and gather valuable suggestions regarding the theme. It was put on Linked-in and was started with a set of questions. This is a summary of the comments.

How can we improve public waste management utilities in developing countries?

Developed countries can assist developing countries in building their capacity and investing and transferring technology to these countries in order to enable them to dispose waste properly. Developing countries, on the other hand, should provide legal frameworks for recycling companies to operate in their country, as well as proper implementation, checks, rechecks and supervision systems.

Education of reuse and recycle, introduction of the Pay-As-You-Throw programme (that is, the more you throw, the more you pay), financing and other support from communities, NGOs, private sectors and other stakeholders as well as establishment of inventory and records update will help in curtailing indiscriminating waste disposal.

Suggestions are made that in order to reduce the built-in toxicity in products, small island developing States should introduce stricter import measures, labeling, custom programmes, extended producer responsibilities, and other ways to track imports of products containing hazardous chemicals. They should also recycle them, or disassemble partially in order to lower freight costs and group the various levels of hazardous waste and then ship them with proper Basel Convention documentation.

There are suggestions that by having public works for sewer conveyance of waste and Anaerobic Digester sewage treatment plants, more people would have a job and would spend earnings that would be stimulating for the economy. Some argue that most

developing countries implement waste recycle only in urban cities and rely on end-of-pipe solutions which focus on collecting and disposing of wastes once they have been generated. Some think that landfills should be banned as it is just moving the problems to another generation.

How can we prevent illegal dumping of e-waste?

Countries should be urged to ratify and implement and enforce the provisions of the Basel Convention (including the Ban amendment). It is assumed that the EPR also includes the 'consumer's responsibility' principle, by raising a recycling fee when purchasing a new product. This fee is used for the environmental sound management (ESM) of dismantling used and waste electrical and electronic equipment (UEEE/WEEE). Another idea is to set up collection schemes and ESM facilities in the countries of destination, or to return the hazardous parts/waste streams of the collected WEEE to the countries of dispatch for a proper recycling, or even to make new electrical and electronic equipment (EEE) available in the developing countries, reducing the need to (illegally) import UEEE/WEEE.

What new and emerging technologies can be used to convert waste to energy?

Much still needs to be done to meet the following challenges, such as implementation of national policies for the long-term management of spent fuel, including disposal of high level waste and/or spent fuel; siting, construction and operation of spent fuel and radioactive waste disposal facilities; management of legacy wastes; monitoring of disused sealed sources and recovery of orphan sources; knowledge management and human resources; and financial resources for liabilities.

What new and emerging technologies can be used to convert waste to energy?

The technology which provides green power can be profitable as a traditional power source as well. The keys to making these projects profitable are the site, power purchase agreement, fuel supply and power technology. Thus, some argue that by increasing options for power production equipment at various levels of electrical output, the gasification technology becomes the most flexible and economical of currently available systems worldwide.

When it comes to technologies converting waste to energy and resources, certain wastes are very suitable for energy recovery when further recycling is not possible. In this respect, biological and thermal waste treatments are alternative sources of energy to fossil fuel resources.

Whilst recycling can limit the use of resources or at least postpone it, prevention is the most sustainable answer to the waste management issue. More research is thus needed on new technologies and on traditional practices able to reduce waste production. Appropriate legislation and Best Available Techniques (BAT) to reduce the polluting emissions of waste treatments are therefore particularly helpful. One of the key objectives

should be to improve the overall environmental performance of products throughout their life-cycle so as to move towards an energy and resource efficient economy.

Way forward

Effective and environmentally sound waste management requires immediate attention from national and local governments, particularly in developing countries. The following elements are indicative of the way forward:

- Comprehensive national and local policies on waste management covering all types of waste and all aspects of waste management need to be formulated and rigorously enforced. Policy frameworks to support resource recovery from waste need to be strengthened as well. The economic, environmental and social benefits, as well as the local applicability, of an integrated solid waste management approach with a focus on the 3Rs have been demonstrated, but need to be more widely disseminated.
- Priority objectives are waste prevention and minimization, followed by the effective and efficient management of remaining solid and hazardous waste, focusing on reuse and recycling and on recovery of useful materials and energy. In the future, waste has to be valued as a resource. One successful approach is based on life-cycle analysis, for example, through the application of extended producer responsibility and linking of the waste agenda with that of sustainable consumption and production.
- Significant obstacle to effective waste management is cost. There is a need for investment in the development of low-cost options suitable for poor communities, which could be upgraded as incomes rise. This will require long-term technical cooperation between developed and developing countries. Governments will need to tap the resources and expertise resulting from north-south and south-south cooperation and partnerships. Donor countries can assist developing countries by allocating higher portions of official development assistance (ODA) to waste management programmes, providing a higher proportion of financial assistance in the form of grants and improving donor coordination in implementation efforts.
- The importance of transferring and diffusing appropriate technologies and know-how for waste treatment, recycling and reuse and disposal cannot be overemphasized. This should be backed with proper technical training supported by international and bilateral development agencies. In this context, small-scale entrepreneurs can play a significant role in waste collection and treatment. Ways need to be found of integrating informal waste collection and recycling into formal, better regulated systems. Current international partnerships promoting cleaner production and life-cycle management therefore need to be strengthened.
- Intensive efforts are needed in capacity-building of the relevant stakeholders, including for developing and implementing integrated solid waste management at the local level, and providing policymakers in developing and transition countries with tools for financing waste management. Local authorities, often at the

forefront of solid waste management, need institutional capacity building and the delegation of responsibilities and of financial resources from Governments.

- It is vital to engage communities and NGOs and other partners in the development of public awareness campaigns and education on waste prevention, waste treatment and health hazards from waste. It is a major challenge to reach the poorest segments of the population such as scavengers and rag-pickers.
- Public-private partnerships can also play a role in financing and developing waste infrastructure and management systems.
- Emerging waste streams as electronic waste, waste plastics, and used oils and chemicals require special attention aiming at a high rate of recovery worldwide. Therefore, an assessment of the quantities and characteristics of waste streams needs to be carried out so as to identify programmes and appropriate environmentally sound technologies to promote material and energy recovery. This will help to augment resources, while substantially reducing the final volumes and the toxicity of waste. For this to happen, a comprehensive programme for the transfer of know-how and technologies has to be developed.
- Quality of global data needs to be improved, not only with respect to the current amount of different types of waste generated, but also with respect to the expected future amounts, in order to develop projections that will allow adequate planning for resource recovery and substitution of virgin materials. Scientifically sound waste characterization and quantification for all waste streams and in all high-waste-generating areas need to be carried out.
- The International Panel for Sustainable Resource Management has started work on estimating the benefits of metal recycling now and in the future, as the basis for more efficient urban mining practices. However, similar work has to be carried out for a number of other materials and eventually for the global material flows. An important first step in that direction is support for the improvement of regulatory frameworks and infrastructures, monitoring and data-collection capabilities for the effective monitoring of waste generation, treatment and disposal, and the establishment of criteria for waste treatment and disposal quality. This should be supported by effective national institutions with the necessary backstopping from the international community.
- Under the Green Economy Initiative, research is being conducted on win-win options in waste recycling, namely those that lead to improved public health, poverty alleviation, creation of decent jobs, improvements in living standards, the reduction of greenhouse gas emissions and other pollutants, and the extended life of resources. The results would be available for consideration of decision makers, in particular in developing countries and countries with economies in transition.

Chapter 2 – Chemicals

Topic overview

Chemicals are essential in meeting the social and economic goals of the world. With total output of over \$3 trillion in 2008, the chemical industry provides employment for 7 million people and supports 20 million additional jobs. The Johannesburg Plan of Implementation defined the “2020 goal: to achieve that chemicals are managed in ways that minimize adverse effects on human health and the environment”. There has been significant progress against this general commitment, in particular after the adoption of the Strategic Approach to International Chemicals Management (SAICM) in 2006 and through implementation of other multilateral mechanisms and legal instruments on chemicals, the most important ones being the Basel, Rotterdam, and Stockholm Conventions, the Montreal Protocol on the Ozone Layer, and the Globally Harmonized System of Classification and Labeling of Chemicals. However, the implementation of the commitments has been uneven and insufficient globally. Mercury and some emerging issues—nanomaterials, electronic waste, chemicals in products, and lead in paint—may also require attention.

Summary of the seminar

The CSD Thematic Seminar on Chemicals was held at UN Headquarters on 23 February 2010. The event was moderated by Ms. Tania Valerie Raguz, Vice Chair of CSD-18. An introductory statement was made by Mr. Tariq Banuri, Director of Division for Sustainable Development (DSD). Mr. Banuri put “Chemicals” in the broader sustainable development perspective, highlighting the value of CSD for strengthening coherence at the national, institutional and international levels on the work of sound management of chemicals.

A film entitled “*Management of Ozone Depleting Substances*” was shown as a lead-in to the panel presentation by Mr. Klaus Tyrkko of UNDP. He focused his presentation on governance and means of implementation on chemicals management. He emphasized that the implementation needs differentiate from country to country. The resources for implementation may include both the public and private. Mainstreaming the sound management of chemicals with the development planning processes is important to ensure a broader financial basis for chemicals management by fostering national budget commitments as well as bi-lateral support. Capacity building and technology transfer should be strengthened at both national and international levels. He also introduced the Inter-Organization Programme for the Sound Management of Chemicals (IOMC) and the work by its member organizations on sound chemicals management.

Ms. Kei Ohno of the Secretariat of the Stockholm Convention in her presentation provided a comprehensive picture of the global action towards the risk reduction of POPs, including the history of the negotiation, the overview of the Stockholm Convention, as well as the achievements and challenges on the management of POPs. She conveyed the message of Mr. Donald Cooper, Executive Secretary of the Stockholm Convention who emphasized that there are still a lot of challenges around the world on achieving the sound management of chemicals and a world free of POPs.

Another film entitled “*ICCA: Looking to the Future*” was shown before the last presentation by Mr. Phil Snyder, the representative of Royal Dutch Shell and the member of the International Council of Chemicals Associations (ICCA). Mr. Snyder introduced the work of ICCA and its partnership initiatives, such as “Responsible Care” and the “Global Product Strategy”, in helping to meet the 2020 goal on sound management of chemicals. He highlighted that the challenges on sound chemicals management include lack of appropriate expertise and resources, lack of data and scientific information, lack of mature risk management models, lack of compliance infrastructure, and lack of regulatory harmonization. The future actions should include regulatory initiatives, voluntary initiatives and cooperation among intergovernmental organizations, business sector and NGOs.

Following the panel presentations, the interactive discussion revolved around several key issues, including:

- The concept of “mainstreaming chemicals management into development process” is important in understanding the linkages between chemicals and poverty reduction by translating chemicals management into a language understood by development and finance ministries;
- Partnerships among Governments, intergovernmental organizations, the private sector and other stakeholders on the ground are essential for implementation of the Strategic Approach to International Chemicals Management (SAICM) and the legal instruments on chemicals;
- The CSD can add value to the existing chemicals processes by mainstreaming these issues into the broader context of sustainable development, linking chemicals to climate change, energy, health and other issues, raising awareness and prioritizing chemicals management in the national development plan, enhancing synergy among existing mechanisms and legal instruments, and promoting life cycle approach;
- One of the challenges faced in development and use of chemicals is how to foresee problems and hazards in their application. Industrial research and development and scientific risk assessment must be partnered with sound political decision-making and policy coherence at all levels;
- Resources for capacity building in developing countries must be increased and technologies must be scaled-up in order to meet the agreed goals and targets related to the sound management of chemicals. Need assessment is essential in utilizing financial mechanisms available, for example, through the Stockholm Convention;
- The complexity of chemicals management demands a high level of information sharing through regulatory framework and voluntary initiatives. The existing information sharing platforms should be used more effectively and visibly.

Way forward

The lack of adequate financial resources, including for the funding of activities concerning the remediation of contaminated sites, and the lack of prioritization of sound management of

chemicals, which continues to be perceived principally as an environmental issue without regard to broader implications for sustainable development, are two major obstacles to achieving the 2020 goal. The following elements are indicative of the way forward to effectively mainstream sound chemicals management throughout relevant sectors and into development strategies and plans:

- Countries need to make greater efforts to integrate fully the objectives of sound management of chemicals into national budgets and development cooperation. The link between chemical safety and sustainable development needs to be fully reflected in the funding decisions of bilateral development cooperation agencies.
- National legislation and policies on chemicals need to be reviewed, updated and strengthened. Where appropriate legislation is in place, there is a need to reinforce coordination mechanisms with international support and training on enforcement and compliance.
- Fulfill the need for information-sharing, especially on chemical safety and the potential hazardous chemicals in products. Strengthen the engagement of multiple stakeholders in sound chemicals management. Promote synergies to achieve the goals of the national and international chemicals agendas. Enhance the coordination and cooperation among existing mechanisms, instruments and processes on chemicals management.
- Strengthen the implementation of systems for the prevention of major industrial accidents and for emergency preparedness and response. Develop indicators and metrics, possibly with targets and timetables to assess progress on implementation of decisions.
- Environment and health sector managers need to become more effective partners in the policymaking process by providing timely information and converting technical data into useable forms of information for effective decision-making on chemical safety.
- Strengthen cooperative action on emerging policy issues such as nanotechnology, biotechnology, and e-waste.

Chapter 3 – Sustainable Consumption and Production

Topic Overview

Despite improvement in eco-efficiency, absolute consumption of resources continues to increase, driven in the first instance by consumption in the richest countries and in the second by rising consumption of growing upper and middle classes in emerging economies. At the same time, the gap between the haves and have-nots continues to widen. The challenge of the 10-Year Framework of Programmes (10YFP) on SCP is to support a quick shift toward sustainable consumption and production patterns coupled with upward convergence of living standards across the planet. Taking a life-cycle approach to consumption and production and using tools and innovative techniques such as industrial ecology and supply chain governance, product life-cycle analysis, and labeling and other schemes that signal to consumers the social and environmental impacts of their consumption can all be effective in

delinking economic growth from natural resource extraction and environmental degradation while ensuring broad social benefits.

Summary of the Seminar

The CSD Thematic Seminar on Sustainable Consumption and Production Patterns (SCP) was held at UN Headquarters on 30 March 2010. The event was moderated by Mr. Ulf Jaeckel, Vice Chair (Germany) of CSD-18. An introductory statement was also made by Mr. Tariq Banuri, Director of the Division for Sustainable Development (DSD), who presented a slide from a recent article from the scientific journal *Nature* that defines nine earth biophysical services and carrying capacities for each that should not be exceeded, to ensure stability.

A video entitled "Living Outside The Box - Sustainable Lifestyles" produced by the Ministry of the Environment (Sweden) and the United Nations Environment Programme (UNEP) was presented to highlight differences in lifestyles across the planet and outcomes of the Marrakech Task Force on Sustainable Lifestyles.

Thomas Graedel focused his presentation on the exponential increase in use of virgin materials over the last century, using metals such as chromium, aluminum and nickel as examples. Catherine Nicholson presented the work done by consumers' groups around the world and supported by Consumer International to help raise awareness on consumers' rights and how the power of their purchases (or lack thereof) support procurement of materials to schools, facilitate investigation of supermarkets and whole supply chains, and provide information and assurance of certified goods and services. Gemma Adaba talked about necessity for more cooperation between consumers and workers to insure that standards, certifications, and international regulations are enforced. Jim Fava discussed the difference between a life cycle assessment as developed by the international standard organization (ISO), and a life cycle approach or perspective. Al Iannuzzi presented the example of Johnson & Johnson, a company that uses life cycle thinking in developing a continuous improvement program to provide greener products and create business value by meeting customers' needs and demand for sustainable products at the same price.

Following the panel presentations, the interactive discussion revolved around several key issues. While many tools are now available to support sustainable production, their use must be expanded in both developed and developing countries, something UNIDO and UNEP have been doing through the cleaner production centers. Sustainable production is a continuum—once companies have implemented cleaner production methods, they advance to designing for the environment, and once completed, they move to cooperation among companies to change the whole life-cycle of the products. This last step requires support. Also, more needs to be done to reach small and medium enterprises (SMEs). Leading companies are actually ahead of governments in terms of traceability and applying life-cycle approaches, but there is definitely a role for governments in cooperation with other stakeholders to ensure that entire production and consumption systems are transformed. Governments can also support transformation through greener procurement policies and by agreeing on international definitions of greener products.

Though it is commonplace for people to think that sustainable is costly, this does not have to be true. With the right incentives, designers can bring better products to markets inexpensively. The market is increasingly demanding sustainable attributes at no costs to consumers, and this should be encouraged. There is also a need to address the challenge of developing standards and labels that are both comprehensive and informative and yet simple.

Similar progress is needed on the consumption side, which remains in the shadow of sustainable production. The role of consumer and consumer groups is very important. Existing networks can be strengthened to educate consumers and workers so companies are compelled to use proper manufacturing practices and design more sustainable products and services at the same prices for the consumers. The Marrakech Process has developed an umbrella 10YFP that summarizes lessons learned and regional consultations over the last 7 years that will be submitted to CSD for input to this CSD cycle.

Summary of the E-Discussion

The E-discussion was launched after the seminar in order to gain broader insight and gather valuable suggestions regarding the theme. It was put on Linked-in and was started with a set of questions. Here is a summary of the comments to the questions.

CSD SCP: If voluntary initiatives for SCP are not delivering rapid and consistent progress, then what is the mix of regulation, incentives and education needed to achieve SCP?

Since government regulation is driven most powerfully by consumer demand, more attention should be given to catalyzing a shift in consciousness in the public sphere. Specifically, conception of incentives should focus on "quality of life incentives" rather than consumer-based incentives. Research suggests that appealing to people through their values and their idealistic self works better than small steps incentives for them to embrace voluntary initiatives. A frame of values and quality of life should be included in education, and public sphere consumer participation should be emphasized.

CSD SCP: What carrot and sticks are needed so that designers in companies systematically respond to the rising demand for sustainable products, with no additional costs to consumers?

Embarking on a comprehensive and bold effort to inform the consumer public about sustainability issues in a way that is meaningful to their lives could be an effective way to induce the consumer to behave in a sustainable manner. Moreover, reusable/recyclable products and materials which reduce supply costs can be an incentive, and regulatory intervention to tax goods with a waste/energy/carbon value per item can be used to deter them from that path. License and patent are also important elements.

CSD SCP: So far, most of the work has focused on "green". What is the best way to mainstream social aspects into SCP issues?

Social aspects are crucial for SCP issues. The best way forward may be building sustainable communities relying on people instead of simply increasing production and consumption. Construal Level Theory (CLT) which studies major psychological barriers to public participation partially explain why consumers seem to be more interested in Global Warming than in the working conditions of the production chain. A values-based communication frame would be more successful than consumer frame in raising awareness on sustainability as a whole. Control of population growth, efficient use of the resources by the population and a basic level of products for an existence are important.

Way Forward

The goal for CSD-18 is to identify challenges and obstacles that hinder the shift towards sustainable patterns of consumption and production, and that of CSD-19 is for the international community to agree on a framework of programmes in support of sustainable consumption and production.

One possible starting point for differentiating goals across countries at different development levels is to set regional priorities and strategies identified through regional implementation meetings of the CSD as well as under the umbrella of the Marrakech Process.

Obstacles relevant to all regions include:

- Poor education and lack of awareness of the benefits of sustainable consumption and production among all stakeholders.
- Lack of legislation and/or enforcement; weak recognition of sustainable consumption and production in many government policies.
- Under-pricing of natural resources and non-pricing of pollution.

Obstacles relevant to developing countries include:

- Inadequate data on resource use efficiency and pollution; weak monitoring of economic activities which deplete resources and degrade the environment.
- Reliance on obsolete and inefficient technologies; lack of information and knowledge about sustainable management practices in various economic sectors.
- Lack of technical capacity for product development and formulating bankable cleaner production projects, for design of effective and equitable sustainable consumption and production policies by Governments, and for implementation of sustainable public procurement policies.
- Economic factors such as lack of appropriate financing mechanisms for sustainable consumption and production investments, lack of financial incentives, and widespread poverty.
- Organizational factors such as weak institutions for designing and implementing policies and regulations, as well as absence of collaborative projects and exchange programmes to facilitate knowledge-sharing at the regional level.

The following elements are indicative of the way forward:

- Institutionalize sustainable consumption and production concerns into education systems as well as systems of local, national, corporate and international governance.
- Identify priority actions and initiatives at different levels; support peer-to-peer learning; mobilize support for scaling up successful initiatives and programmes; encourage economic and financial policies and public and private investments which promote sustainability.
- Provide an enabling environment for and supporting research, innovation and development in critical areas.
- Ensure the objectives of 10YFP remains the same as in Johannesburg

Chapter 4 – Mining

Topic Overview

While mining provides a livelihood for millions of people in developing countries, its activities have been associated with serious environmental and social impacts on communities living near extraction sites, while generating few or limited benefits to producing countries in terms of economic growth and poverty reduction.

Since 2002, major international multi-stakeholder initiatives have been launched, targeting more transparency over the revenues generated by mining activities by both companies and governments. The mining industry has also stepped up their engagement in social issues arising in mining or neighbouring communities and in corporate social and environmental responsibility (CSER) activities.

However, absence of Prior and Informed Consent (PIC) with indigenous communities, resettlements and conflicts between the mining communities and other actors are still an issue in many countries. Adequate capacities at the national and sub-national government levels for planning, dealing with companies, enforcing regulations relating to health and working safety and the environment are often lacking.

Summary of the Seminar

The CSD Thematic Seminar on Mining was held at UN Headquarters on 9 April 2010. The event was moderated by Mr. H.E. Mohamed A. A. Alahraf, Vice Chair (Libyan Arab Jamahiriya) of CSD-18. An introductory statement was made by Mr. Tariq Banuri, Director of the Division for Sustainable Development (DSD).

Mr. Tony Hodge discussed how the changes in conditions facing the mining industry since the 1990s, which included higher publicity about the impacts of mining activities as well as increased pressures stemming from civil society and governments, have caused a shift in attitude from major mining companies. He noted that mining companies face on a day-to-day basis questions of sustainability that are dealt with theoretically in other domains. Globally, there are some 6000 companies in the formal mining sector. Major companies represented in ICMM have felt the need to respond by engaging in proactive

measures that include voluntary principles, guidelines and best practices. While there is a long way to go in order to improve the sustainability of mining operations, ICMC's position is that all actors have to cooperate in this direction. Major issues to be addressed include: improving indigenous peoples' and local communities' involvement in decisions related to mining; improving governments' capacities to negotiate with companies on equal terms; integrating the whole implications of mining life-cycle, including de-commissioning, more fully into regulation; and improving the distribution of costs, benefits and risks from mining activities among stakeholders.

Mr. Manuel Pino focused his presentation on indigenous rights relating to mining, with an illustration from the case of uranium mining in the Navajo nation in the USA. While national and international instruments allowing indigenous peoples to gain control over the use of their native lands have developed in the last decades, enforcement is often an issue, and stepped-up dialogue and other efforts are necessary to address issues related to the impact of mining operation on land, water and livelihoods of indigenous people. He highlighted the provisions of the United Nations Declaration on Indigenous Peoples. In the Navajo nation, the legacy of past uranium mining operations with high costs on the health and availability of resources of indigenous peoples has yet to be adequately addressed. Toxic and hazardous remains from orphan mines have contaminated watersheds beyond local mining operation sites, and caused cancers and other diseases among former mines and local residents.

Mr. Patrick Chevalier presented the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF). The IGF aims at providing a global forum for governments interested in mining issues and in particular in following up on the issues raised at the World Summit on Sustainable Development in 2002. The IGF was set up as a CSD Partnership in 2005 that governments can join on a voluntary basis; the Forum currently comprises 43 members. UN agencies participate as observers. Partnerships are seen as the key to making progress, because government and industry cannot act alone. The Forum promotes the sharing of best practices among mines ministries and industry does not supplant national decision-making. So far the Forum has reviewed issues such as: the generation and distribution of economic benefits from mining; community engagement; and environmental best practice – life cycle approach. A policy framework based on a survey of members will be presented at CSD-19.

Delegates and others raised issues related to, *inter alia*, the balanced distribution of benefits from mining activities; the existence of an oversight agency for the industry; the enforcement of international law relating to the rights of indigenous people and other social and environmental issues; the extent to which progress made over the last 40 years was sufficient for local populations to feel more confident about mining activities; possible paths for developing countries which depend on their natural resources; how to ensure that countries negotiate with companies on an equal basis; how to mitigate local conflicts arising from mining activities; and how the industry principles were concretely turned into practices.

Summary of the E-Discussion

The E-discussion was launched after the seminar in order to gain broader insight and gather valuable suggestions regarding the theme. It was put on Linked-in and was started with a set of questions. Here is a summary of the comments.

CSD Mining: What should be done to ensure that mining contributes to long-term prosperity and greater economic diversification?

If growth is related to sustainability we will have new economic model that mining sector would follow. The long term prosperity for minerals as a whole could be achieved if we maximize the minerals recycled and minimize the losses, while controlling the exploitation and use which is the market demand. The environmental and safety regulations during exploitation and after are crucial for minimizing the adverse impacts on local and global scale.

Way Forward

Increase the positive economic impacts of mining in producing countries, and minimizing the negative social and environmental impacts on affected communities have to rely on aggressive government actions in four broad directions.

- Increase the share of recycling of metals. Apart from removing implicit and explicit subsidies to mining, which negatively affect the incentives for recycling metals, increasing reuse and recycling of metals depends on addressing a number of bottlenecks, a few of which have been highlighted in this report.
- Improve the basic building blocks of governance required for extractive industries to contribute effectively to sustainable development, including: promoting transparency in revenue flows; promoting disclosure of mining projects; developing the capacity of Governments to manage fluctuating revenues; helping Governments develop modern policy and regulatory frameworks; and integrating the public in decision-making processes at the local and national levels. A key element of local sustainable development is ensuring that the rights and interests of indigenous peoples and other local communities are recognized and respected by States and companies.
- Help Governments in producing countries make the most of their mineral resources by ensuring productive investment and other uses of mining revenues, and creating stronger forward linkages between mining and the rest of their economies, allowing for the creation of dynamic industrial sectors.
- Ensure increased efforts be made by Governments, with support from the international community, to minimize the negative social and environmental impacts of mining. There is an urgent need for action in order to integrate environmental and social management systems in the full mining life cycle and to

enhance the use and reach of integrated environmental and social impact assessments. Capacity-building is needed at many levels to allow Governments to reap the benefits of mining activities while avoiding or limiting their adverse impacts.

Chapter 5 – Transport

Topic Overview

Significant new challenges have emerged since the Commission on Sustainable Development last reviewed transport, together with energy, at its ninth and at its fourteenth and fifteenth sessions (2001 and 2006-2007).

- For the past two years global energy markets have been highly volatile with significant impacts on the transport sector.
- The global financial crisis, with its impacts on employment and disposable incomes, has led to significant negative economic impacts on many transport businesses and service providers.
- Further recent scientific evidence of the negative impacts of anthropogenic greenhouse gas emissions requires urgent global action to curb the projected growth of emissions, including emissions in the transport sector.

Sustainable development requires both very substantial investments in transport infrastructure as well as an accelerated transition towards low-carbon transport systems.

Summary of the Seminar

The CSD Thematic Seminar on Transport was held at UN Headquarters on 13 April 2010. The event was moderated by Ms. Tania Valerie Raguz, Vice Chair of CSD18. An introductory statement was made by Mr. Aslam Chaudhry, Chief of the Global Policy Branch of the Division for Sustainable Development (DSD) of the United Nations Department of Economic and Social Affairs (UNDESA).

A film entitled “*Connecting Development - Roads in Peru - The World Bank*” was shown prior to the first panel presentation by Mr. Peter O’Neill, Lead Infrastructure Adviser, World Bank. His presentation focused on the financing and management of rural roads.

Two short films entitled “*The world is your home-look after it*” and “*A Breath of Air- What Pollution is Doing to Our Children*” were shown before the presentation of panelist Mr. Sergio Sanchez, Executive Director for the new center of the Clean Air Initiative for Latin American Cities. Mr. Sanchez spoke about the co-benefits of public transport systems in urban centers.

Ms. Jennifer Ewing Thiel, Director, Tools and Technical Innovation Division, International Council for Local Environmental Initiatives (ICLEI) provided information on “hidden subsidies” for car transportation. She presented a study made by ICLEI identifying those “hidden subsidies” by subtracting the expenditures of cities for car transportation (e.g. for

road construction, traffic management etc.) from their income in this area (e.g. through parking fee collection, fines etc.).

Mr. Michael Replogle, Global Policy Director and Founder of the Institute for Transportation and Development Policy (ITDP), presented the role of international partnerships in promoting sustainable transport solutions. He noted several CSD partnerships that were addressing both sustainable transport and climate change issues.

Following the panel presentations, the interactive discussion revolved around several key issues, including:

- The access to basic services in rural areas through the establishment and/or expansion of adequate transport infrastructure and environmentally benign and affordable transport services should remain a main goal.
- Especially in the context of increased global urbanization, particular attention has to be given to adequate integration of non-motorized transport in multi-modal, all-inclusive transport and urban planning strategies.
- There is a need for a change in the global consumer preferences away from the wish of car ownership (“the American dream”) towards the use of low carbon and public transport systems. Raising public awareness and the implementation of adequate policies and programmes can hereby play an important role.
- Capacity-building at the local level is required in order to make rural road projects sustainable. A particular focus should hereby be given to road maintenance in the long-term.
- The effects of global tourism have to be taken into consideration. Attractive travel alternatives using low-carbon and public transport modes have to be promoted while involving all stakeholders in the process.
- There is a need for a more comprehensive data collection on transport activities, especially in developing countries. Furthermore better measuring mechanisms identifying the impacts of transport on climate change, but also the co-benefits of low carbon and public transport systems (reduction of air pollution etc.) have to be implemented.
- Global best practices should be exchanged in an attempt to adapt and/or duplicate them in other countries.

Way Forward

The systematic integration of economic, social and environmental considerations in all aspects of transport policymaking and land-use planning remains a key principal objective. The following elements are indicative of the way forward:

- In developing countries, expansion of adequate transport infrastructure and environmentally benign and affordable transport services is urgently in need to facilitate and enhance the attainment of the Millennium Development Goals, including reduction of poverty and improvement of physical access to public services, such as health care, education and markets. Safety, and social and gender concerns need to be better integrated into transport policies for development to be sustainable.

- In industrialized countries, while continued and effective temporary government intervention and support remain urgently needed to cope with the social impacts, the financial crisis of 2008-2009 also offers policymakers many opportunities to provide incentives for a “greener” and more sustainable transport economy as a part of their economic recovery and stimulus packages.
- Greater international financial support for investment in sustainable low-carbon public transport systems could significantly enhance the mitigation of the climate change process.
- Greater public awareness and promotion of eco-tourism could prevent increased resource use, environmental impacts and unsustainable patterns of consumption in tourism.
- Enhancing active public participation of all stakeholders and the identification of possible “win-win-win” approaches are essential prerequisites for mobilizing public support.

Appendix

Waste management

Chaired by:

H.E. Mr. Hilario G. Davide, Jr., Permanent Representative of Philippines to the United Nations

List of panelists:

Mr. Tariq Banuri, Director, Division for Sustainable Development – Opening remarks

Mr. Munyaradzi Chenje, Head of Policy Coordination & Inter-Agency Affairs
UNEP - Converting Waste Management Problems into Opportunities

Mr. Paul Connett, Executive Director American Environmental Health Studies Project
(AEHSP) - Zero Waste: Theory & Practice Around the World

Mr. Allen Hershkowitz, Senior Scientist, Natural Resources Defense Council – E-waste

Mr. Ianthe Smith, Environmental Engineer & Consultant, Jamaica Institute of Engineers
& Jamaica Institution of Environmental Professionals - Waste Management in the
Caribbean: Strengths, Weaknesses, Opportunities & Threats

Chemicals

Chaired by:

Ms. Tania Valerie Raguž, Vice Chair (Croatia) of CSD-18

List of panelists:

Kei Ohno, Programme Officer, Stockholm Convention Secretariat – Global Action
Towards The Risk Reduction Of POPs

Phil Snyder, Global Manager for Product Stewardship, Shell Member of the
International Council of Chemical Associations (ICCA) Chemical Product & Health
Steering Team – Partnerships in Achieving the Sound Management of Chemicals

Klaus Tyrkko, Policy Specialist, Montreal Protocol & Chemicals Unit, UNDP – Means
of Implementation: Financial resources, Technology and Capacity Building

Sustainable Production and Consumption

Chaired by:

Dr. Ulf Jaeckel, Vice Chair (Germany) of CSD-18

Mr. Tariq Banuri, Director, Division for Sustainable Development – Opening remarks

List of panelists:

Mr. Jim Fava, Managing Director, Five Winds International and Chair of UNEP/SETAC Life Cycle Initiative – Sustainable Consumption and Production Patterns - Value of life cycle perspective

Mr. Thomas E. Graedel, Director, Center for Industrial Ecology, Yale School of Forestry and Environmental Studies – Industrial Ecology, Resource Decoupling, and the "Master Equation"

Mr. Al Iannuzzi, Senior Director, Worldwide Environment, Health and Safety, Johnson & Johnson – Designing Greener products: Sustainable Consumption at Our Company

Ms. Catherine Nicholson, Senior Project Coordinator, Consumers International – Affecting Sustainable Consumption - Some key issues and challenges

Mining

Chaired by:

H.E. Mohamed A. A. Alahraf, Vice Chair (Libyan Arab Jamahiriya) of CSD-18

List of panelists:

Patrick Chevalier, Director, Strategic Outreach and Partnerships Division, Minerals & Metals Sector Department of Natural Resources, Government of Canada Intergovernmental Forum Secretariat – A Story of Partnerships: The Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF)

R. Anthony (Tony) Hodge, President, International Council on Mining and Metals (ICMM) – Mining and Sustainability – Working Together

Manuel F. Pino, Professor of Sociology and American Indian Studies, Scottsdale Community College, Arizona Board of Directors, Indigenous Environmental Network (IEN) – DiNEH Project - Diné Network for Environmental Health - Navajo Uranium Assessment and Kidney Health Project, Phase I Presentation for Becenti Chapter Meeting

Transport

Chaired by:

Ms. Tania Valerie Raguž, Vice Chair (Croatia) of CSD-18

List of panelists:

Peter O'Neill, Lead Infrastructure Specialist, World Bank – Financing of rural infrastructure and services trends, achievements and challenges

Michael Replege, Global Policy Director and Founder Institute for Transportation and Development Policy (ITDP) – The Role of International Partnerships in Promoting Sustainable Transport Solutions

Sergio Sanchez, Director, The Clean Air Institute (CAI) – Co-benefits of Public Transport in Urban Centers: Experiences from industrialized and developing countries

Jennifer Ewing Thiel, U.S. Tools and Technical Innovation Director, ICLEI-Local Governments for Sustainability – Hidden Subsidies for Urban Car Transportation - Public Funds for Private Transport