



Economic and Social Council

Distr.: General
3 February 2010
Original: English

Commission on Sustainable Development

Eighteenth session

3-14 May 2010

Item 3 of the provisional agenda*

Thematic cluster for the implementation cycle

2010-2011– review session

Discussion papers submitted by Major Groups

Note by the Secretariat

Addendum

Contribution by business and industry**

* E/CN.17/2010/1.

** The views and opinions expressed do not necessarily represent those of the United Nations.

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I. Introduction

1. Business is a central stakeholder and key player in bringing forward solutions across all of the issues to be considered in the 18th and 19th cycle of the United Nations Commission on Sustainable Development (CSD). The cluster of issues in this cycle have a particularly broad multi-sectoral and multidisciplinary significance for business and industry, and as such present challenges to capture, integrate and prioritize both past experience and necessary cooperative action. Moreover, there are also connections with previous issue cycles; and these should be captured and explored.

II. Role of Business and Industry

2. Business and industry supports responsible approaches to these diverse areas, each of which generate different environmental impacts but all of which involve many stakeholders. Sustainability in these areas requires shared responsibility among all those involved along the life-cycle. The relationships among these players are complex and require the strong engagement, partnerships and contributions of all involved.

3. Responsible behaviour by companies on environmental and social matters in these (and other) areas is both a citizenship imperative and a matter of self-interest. Healthy and developing societies create new business opportunities and new markets. Companies need to and can help make possible a healthy and educated workforce; prosperous

consumers; well-functioning infrastructure; societies free from ethnic strife or conflict; sound environmental management; and enabling environments conducive to enterprise.

III. Role of Governments

4. Governments can promote and enable investments in these areas by leveraging official development assistance, promoting technological cooperation and exploring innovative financing arrangements. Additional financial resources to replace and expand transport and other key infrastructures are imperative. Donors, multilateral agencies and investments will all have to provide additional funds, particularly in developing countries.

5. Governments and donor agencies should assist innovative partnerships between local governments, local & international private sector and local & international non-governmental organizations (NGO), that use various sources of funding to jump-start and test shared-risk models.

IV. Impact from Global Economic Crisis

6. The fallout from the global economic downturn has undoubtedly changed the complexion of implementation of Agenda 21 and the Johannesburg Plan of Implementation (JPOI). As financing becomes more constrained, and both public and private sector resources encounter limitations, it is more critical than ever to set priorities,

and determine how resources can be leveraged and most cost effectively deployed. At the same time, green stimulus and other governmental effort to provide resources towards job creation and investment in green sectors has been promising, and from a business standpoint, we encourage countries to ensure that these efforts strengthen the entire economy, and do not choose among “winners and losers”.

7. The chemicals, transport and mining sectors each face clear challenges arising from the economic downturn, but in spite of these recent difficult circumstances, they have made solid progress towards improved performance, particularly in environmental areas. For transport, climate change, energy, supply chain and security issues all have central bearing on sustainability challenges in these areas. For mining, natural resource management, worker and community issues have been at the forefront. In the chemicals area, sustainable chemistry, product stewardship and the ongoing broader deployment and sound practice of Responsible Care. And of course, each of these sectors are key players in numerous ways in the supply and value chains of nearly every other business sector.

8. Special purpose sectoral groups exist within the transport, mining and chemicals sectors with particular focused expertise to offer, and will contribute more targeted views and input throughout the CSD cycle. Please see the appendix to this paper for more detailed views from specific sectors.

9. The CSD18/19 cycle is particularly timely, in light of current developments in key relevant treaties and initiatives, such as International Conferences on Chemicals Management (ICCM) 2, the Basel Convention COP9 and the ex-COPs of the three main chemicals and hazardous waste treaties. The approaching anniversaries of UNCED and World Summit on Sustainable Development (WSSD) suggest a particular focus on cost-effectiveness of implementation and priorities across the broad range of Agenda 21 and the JPOI. The need to re-examine issues and experiences in light of economic and political changes is real. We welcome the decision to pursue planning for an Earth Summit in 2012, and look forward to joining the dialogue.

V. Broad Approaches

10. Although the span of issues are quite broad, business and industry can point to some broad approaches that have been successful and relevant to the sectors at hand. There is no one single policy that will ensure sustainability, and markets, policy frameworks, the pace of technological innovation and consumer demand all play a role, as does implementation and the institutions and resources that support this implementation. For this reason, we wish to emphasize integrated policymaking, ongoing implementation and international cooperative approaches.

11. Trade restrictive policies that hamper innovation and market access for products that are deemed not to satisfy arbitrary criteria for their production and components have a

particularly negative impact on developing countries. These are matters of concern in the sectors under consideration, and we encourage the CSD to consider policies that work in synergy with open trade and investment to promote economic development and sustainability.

12. This paper will focus on broader multi-sectoral perspectives and linkages that will complement sectoral views. The appendix contains specific input from several of the key sectors presented.

13. For business, the key areas for focus during this CSD session are:

- (a) Enabling Frameworks and Integrated Multisectoral Approaches
- (b) Capacity Building for Eco- and Resource-efficiency
- (c) Supply and Value Chains working Together through Life Cycle Approaches
- (d) Technology Innovation and Deployment through Partnerships

A. Enabling Frameworks and Integrated Multisectoral Approaches -

14. Although each is unique, and requires tailored assessment to understand its challenges and circumstances, it is also to bear in mind that the transport, mining, and chemicals sectors do not operate in a vacuum. Market (Commodity, Energy) and regulatory conditions matter in promoting eco- and resource efficiency in these industries.

15. Sound enforced regulation and good governance that relies to the extent possible on sound science, risk management, the market and voluntary approaches that supplement legal requirements are critical elements of enabling frameworks for sustainability. Creating an enabling environment within which enterprises of all sizes and sectors can develop, create jobs, invest and pursue technological innovation and cooperation, coupled with sound governance and policies to reduce barriers to international trade and FDI, traces a significant route out of poverty.

16. In this regard, we wish to underscore the importance of keeping a diverse range of energy options open – the need to maintain options open matters as society and business work in partnership to pursue more sustainable mobility options.

B. Capacity building for implementation of eco- and resource- efficiency

17. Business and industry strongly supports integrated policymaking and international cooperative approaches in these areas. In this regard, support continued business-to-business capacity building and dialogue on eco- and resource- efficiency, environmental management systems, and cleaner production. Any “one size fits all” approach is incompatible with the great diversity that exists within business. Indeed, the great variety of principles and other voluntary initiatives of individual companies attest to this diversity, are a resource of successful approaches, and should be encouraged.

18. Efficiency is a bottom-line consideration that lends itself very well to the pursuit of sustainability, and which has been integrated by many companies with other considerations of cleaner production, life-cycle thinking and waste minimization. These practices can make good business sense in keeping costs down and in enhancing competitiveness. Existing market drivers and competition already offer powerful incentives to improve performance in these areas and promote innovation. Technology solutions, management systems and policy frameworks exist today that support efficiency and better environmental practices, and technological innovation will add its solutions over time. Both demand- and supply- oriented policies and approaches will be necessary, and business will continue to play a role in both.

C. Supply and Value Chains Working Together Through Life Cycle Approaches

19. Business supports global efforts to assure proper management of materials and products throughout their life cycle, through collective and cooperative market-based efforts of governments, industry and consumers at each of the multiple stages of resource extraction, manufacturing, distribution, use, recycling, ultimate disposal, etc.

20. More needs to be done to communicate the business advantage of doing so, particularly in developing countries and to small and medium sized enterprises (SME). Global efforts of institutions such as the United Nations Environment Programme (UNEP), UNCSD and others should be aimed at capacity building to enable each country

to put in place and implement initiatives to, 1) meet obligations under relevant internationally agreed standards and 2) address the environmental, social and economic problems they each deem to be relevant priorities for their societies and ecosystems.

D. Stimulating and Deploying Innovation Through Partnerships–

21. The most economically feasible ways to address the long-term sustainability challenges will require the development, commercialization and widespread dissemination of both efficient existing technologies and new, currently non-commercial technologies. Moreover, innovation will substantially improve the future performance of current and proposed technologies. Environmental management practices and systems are indispensable in taking practical steps to implement best technologies and pursue continuous improvement.

22. Infrastructure development is a priority concrete area where public and private sectors can work together through public private sector partnerships (PPP). For such partnerships (PPPs) to succeed:

- Legal frameworks should enable private entity entrance and operation in what are often state-controlled industries;
- The coordination of preparatory measures for efficient PPP start-up and implementation is necessary;

- The allocation of risks through contractual agreements should be addressed.

Project profitability is a vital prerequisite for private sector involvement, especially if the project requires long-term engagement.

VI. Cross Sectoral Synergies with Sustainable Consumption and Production (SCP)

23. Business and industry has worked in support of the Marrakesh Process, through the two UN partner organizations (UNEP and UNDESA), in regional meetings, with national governments, through business groups and in partnerships with other stakeholders.

24. In our view, the Ten Year Framework of Programmes should recognize the fundamental and diverse roles that business plays in innovation, production, distribution/transport and marketing of products & services. It shares with consumers and public authorities the responsibility for fostering environmentally and economically sound production and consumption. Business itself is not just a producer, but also a consumer.

25. Business embraces a flexible lifecycle approach to SCP, enabled by fair, open and equitable markets at national and international levels. From a business perspective, SCP relies in large part on making the market work for the environment by producing more

efficiently and consuming differently, thereby generating economic prosperity, reduced environmental footprint, and increased societal well-being.

26. In experience of business, SCP efforts have been most successful when they make markets work for sustainable development, and we wish to emphasize this dynamic relation as a core theme in the CSD18 review. While attempting to reduce the potential negative impacts of consumption and production, the SCP review should also address how to provide benefits as well - better products at better price to more consumers, so that they can meet their needs and aspirations.

27. SCP is a flexible and living concept. The CSD18 review should avoid a single “one size fits all” idea of either a sustainable product or of SCP as a whole. Growing population, equity issues and the diversity of the business community, which is made up of wide range of enterprises of many nationalities, sectors and sizes, underscore the importance of an adaptable approach.

28. Key objectives looking ahead to further developing and implementing SCP and the 10 Year Framework of Programmes are innovation, information and integration. Business and industry has found that sustainable consumption and production are advanced through:

- innovative products and production methods with reduced material and energy intensity,

- informing consumers about products and services in support of eco-aware consumption choices,
- integrating and mutually reinforcing programs and policies in a wide range of markets.

29. Enacting enabling policies, and removing impeding policies should be the overarching goal in defining and carrying out a set of frameworks in support of SCP.

Policy and implementation frameworks should seek to take into account all stages in the lifecycle of production and consumption by:

- encouraging innovation and eco-design, and facilitating market introduction of environmentally preferred products, technologies and techniques;
- fostering cleaner and leaner production, including industrial ecology, dematerialization, and eco-efficiency;
- removing barriers to gaining market acceptance for environmentally preferred products and solutions;
- facilitating eco-aware consumption, including eco-labeling, ingredient disclosure, lifecycle analysis, and comparative risk analysis;
- minimizing footprint associated with post consumer waste by deploying integrated post consumer waste management systems and policies.

30. Consideration of policies and their implementation should also seek to understand the contribution of business. National governments, authorities, and international government organizations should involve business and civil society expertise in advancing sustainable consumption and production, and more specifically in developing the 10-year framework of programmes for SCP (Marrakesh process). Business and industry plays a key role in innovation, production, and marketing of products & services, and it shares with consumers and public authorities the responsibility for fostering environmentally and economically sound production and consumption.

31. In the course of the 10 year framework of programmes on SCP (Marrakesh process) should align with the following principles, in support of robust market place responses to SCP by businesses – both as consumers and producers to:

- engage producers and consumers in creating policies and programmes to make markets work efficiently for the environment, the economy and society; ensure that product information, including price, reflects the shared objectives of moving markets to adopt sustainable consumption and production patterns;
- enable business, across all sectors, and by engaging supply and value chains, to contribute to SCP solutions through research and development, technological and commercial innovation, investment and technology diffusion, product and performance standards development, and codes of practice;

- ensure that policies and programmes do not close technology options as knowledge improve and innovation creates breakthrough opportunities;
- enable and implement a broad range of cooperative policies harnessing complementary regulatory, voluntary and market based approaches;
- identify and deploy targeted incentives supporting SCP market adoption;
- identify and remove policies that act as disincentives and impediments to SCP market adoption;
- mobilize global commercial markets and value chains, in compliance with trade and investment rules, and other fundamental international frameworks; avoid barriers to trade associated with market introduction of environmentally preferred products, technologies and techniques;
- recognize and align with national priorities and circumstances while promoting international cooperation to achieve sustainable consumption and production patterns;
- foster synergy with other critical priorities, notably carbon emissions, energy and material supply and use, water usage, and access for development, job creation, economic growth and other pressing challenges facing producers and consumers worldwide;
- avoid duplicating or undermining existing global, regional, and national policies and programmes in advancing the 10 year framework of programmes on SCP

32. There are numerous success stories and actions which business groups will present in CSD18: for example material and energy content of products has seen steady improvements over time. Key industries from a range of sectors, as well as retailers, have taken major steps forward. Recently the International Chamber of Commerce produced a new global Framework for Responsible Environmental Marketing Communications to help marketers and advertisers avoid the mistakes of vague, non-specific or misleading environmental claims. There have also been learning experiences in regulatory settings, such as the European Union (EU), which bear closer examination, in terms of their effectiveness and impacts on other countries and markets.

33. Business and industry look forward to participating with CSD, governments and other major groups in contributing to a better understanding to how to continue progress in the cycle ahead, and to focus implementation and resources where they will bring the greatest benefit.

APPENDIX

I. Transport

1. All modes of transport are proactively developing and implementing industry-driven solutions to improve their environmental performance generally, and to reduce their emissions in particular.
2. While for all the modes of transport technology has a key role for reducing emissions, also fundamental is investment in the development of infrastructure and better use of existing infrastructure.
3. For air transport, the industry is making great advances into the opportunities offered by technology such as revolutionary new plane designs, new composite lightweight materials, radical new engine advances, and the development of sustainable biofuels for aviation. Airlines will spend \$1.5 trillion on new aircraft by 2020. Some 5,500 aircraft will be replaced by 2020, or 27% of the total fleet, resulting in a 21% reduction in CO₂ emissions compared to business as usual.
4. Sustainable biofuel for aviation could reduce CO₂ emissions by 80% on a full carbon life-cycle basis. The focus is on biofuels sourced from second or new generation (e.g. algae, jatropha,

camelina) biomass. These fuels can be produced sustainably to minimize impacts on food crops and fresh water usage.

5. More efficient operations can also save fuel and CO₂ emissions. Green Teams from IATA (International Air Transport Association) visit airlines and advise them on fuel and emissions savings measures and best practice. Improved operational practices, including APU (auxiliary power unit) usage, more efficient flight procedures and weight reduction measures will achieve 3% emissions reductions by 2020.

6. The road transport industry – recognizing the role that road transport plays in economic, social and environmental progress and in accordance with the IRU's 3 "i" strategy for achieving sustainable development based on innovation, incentives and infrastructure – has taken up its responsibilities by significantly reducing toxic and non-toxic emissions by up to 98% which helped to significantly improve air quality.

7. The globalization process has led to an increase in tourism and trade and thus transport, and therefore to an increase in fuel use and consequently CO₂ emissions but it must be recognized that road transport is the only mode of transport that can provide door-to-door service and that apart from urban distribution and short-distance road passenger transport, commercial road transport is and will remain dependent on oil, with no economically viable alternative in sight.

8. Finally, overall transport accounts for 30% of CO₂ emissions while the commercial road transport industry is responsible for 3% of total CO₂ emissions. However, inadequate road infrastructure can easily triple the fuel consumption of a heavy commercial vehicle;

9. Taking into account the above, the road transport industry, represented by the IRU and its Member Associations in fact have adopted a voluntarily commitment, on the basis of innovative technologies and practices, to reduce CO₂ emissions by 30% by 2030 - calculated as transport performance in tkm and pkm and related to the base year 2007 - through means such as:

- investments in innovative engine and latest vehicle technology, which can contribute to a reduction in fuel consumption and consequently CO₂ emissions of more than 10%;
- driver training, as provided by the IRU Academy and others, which can reduce fuel consumption and consequently CO₂ emissions by up to 10%;
- innovative logistic concepts, such as ITS and optimized weights and dimensions of heavy commercial vehicles, which can equally reduce fuel consumption and CO₂ emissions of more than 10%.

10. With regard to maritime transport, the international shipping industry is firmly committed to playing its part in reducing emissions of carbon dioxide and greenhouse gases. One challenge is that shipping, like all modes of transport, is a servant of world trade. The total emissions from shipping is thus determined to some extent by the expected growth of the world economy (and population) between now and 2050.

11. The consensus of opinion within the global shipping industry is that it may be possible for shipping to reduce CO₂ emitted per tonne of cargo transported one kilometer (ton/km) by perhaps 15-20% between 2007 and 2020, through a combination, again, of technological and operational developments, as well as through the introduction of newer and bigger ships designed to the new Energy Efficiency Design Index of the IMO (the International Maritime Organization). In the longer term, also the shipping industry is also exploring a number of alternative fuel sources to help reduce CO₂ emissions. For shipping, it is important to note already at this stage the importance of the IMO 's agreement on MARPOL Annex VI, which will regulate emissions of nitrous oxides and significantly reduce the amount of sulphur and volatile organic compounds emitted by ships and hence the associated health hazards. Also important is the Hong Kong Convention on Ship Recycling, adopted at a diplomatic conference in May, which will help ensure that ships which have reached the end of their life are disposed of safely.

12. In sum, the transport industry as a whole is committed to a process of continuous improvement of its environmental performance.

II. Chemicals

A. Views from the chemical industry

13. The global chemical industry has been an active participant in international sustainable development processes dating back to the 1992 Rio Earth Summit. The International Council of

Chemical Associations (ICCA) – the worldwide voice of the industry – has held Special Consultative Status with ECOSOC since 1998, coordinating the industry’s participation in major summit meetings, such as the 2002 World Summit on Sustainable Development (WSSD), and at regular sessions of the Commission on Sustainable Development.

14. The chemical industry has a unique role to play in promoting sustainable development. It is committed to preserving our resources for future generations through reducing emissions, conserving energy, and developing sustainable materials, technologies and business practices. In addition to being committed to achieving sustainable outcomes, the industry helps to provide sustainable development solutions for other industry sectors, including energy, information technology, construction, and the waste sector. Chemistry is also instrumental in meeting human needs, including food and clothing, housing, transport, and communications.

B. Progress Made

15. In 2002, the chemical industry joined with other stakeholders and governments at WSSD in Johannesburg in establishing a goal that, by the year 2020, chemicals will be used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment. The industry continues to embrace this goal and work actively towards its fulfillment.

16. As part of efforts to reach the 2020 goal, ICCA participated in the formulation and adoption of the Strategic Approach to International Chemicals Management (SAICM) at International Conferences on Chemicals Management in 2006 (ICCM-1) and 2009 (ICCM-2). SAICM both acknowledges the essential contribution made by chemicals to modern society and recognizes that there is room for improvement in the management and sustainable use of chemicals. The global chemicals industry is committed to the successful implementation of SAICM. Indeed, SAICM's core policy objectives – relating to risk reduction, knowledge and information, governance, capacity-building, and illegal traffic – have directly shaped the industry's efforts to achieve the WSSD goal.

17. The chemical industry's efforts towards achieving the 2020 goal have been primarily directed through two industry-led initiatives. The Responsible Care® Global Charter and the Global Product Strategy, introduced at ICCM-1 in 2006, reflect the industry's commitment to elevate the global standard of product safety, harmonize the safe management of chemicals, and promote sustainable outcomes.

18. The Responsible Care® Global Charter addresses sustainable development and public health issues with respect to the use of chemical products. It highlights the industry's commitment to continuous improvement and greater transparency in environmental, health and safety performance. Responsible Care, which is currently implemented by 53 associations, has been widely lauded for its achievements. Former UN Secretary General Kofi Annan described it as an “inspiring model of self-regulation that other industries should consider following.” The

Responsible Care program is the centerpiece of the chemical industry's global commitment to sustainability, and the Responsible Care ethic is also being spread across the supply chain through partnerships with upstream and downstream suppliers and customers. More information on Responsible Care and the Responsible Care Global Charter can be found at www.icca-chem.org/Home/ICCA-initiatives/Responsible-care/.

19. The Global Product Strategy is designed to advance the industry's product stewardship performance, measure that performance, and improve communication and transparency about chemical hazards, risks, and appropriate safe handling along the value chain. It aims to develop tools to address public concerns regarding chemicals in commerce. It is also designed to support national, regional, and international chemicals management policy expectations. The Global Product Strategy works hand-in-hand with the Responsible Care® Global Charter in the improvement of product stewardship throughout the supply chain. For more information on GPS, visit www.icca-chem.org/Home/ICCA-initiatives/Global-product-strategy/.

20. ICCA's implementation of these two programs has resulted in measurable success across the full spectrum of policy objectives since 2006. To take just a few examples, the industry has:

- Defined best practices for a base set of hazard and exposure information adequate for conducting chemical safety assessments.

- Developed a set of global product stewardship guidelines for use by member associations and companies to accelerate the implementation of their chemical management programs.
- Adopted a global Responsible Care® Governance Process to assure greater accountability for performance and the upholding of the Responsible Care ethic.
- Provided capacity building projects in a number of developing countries in Africa, Asia-Pacific, Latin America, and in countries with economies in transition.
- Secured support from more than 75 additional global company CEOs for the Responsible Care Global Charter and Global Product Strategy. These companies join the list of 79 companies presented at ICCM-1.
- Extended the Responsible Care network to include Russia, and other countries in Eastern Europe; established a pilot project with Chinese national companies; and is exploring an initiative in the Persian Gulf region.
- Established new partnerships with governments in developing countries.
- Participated in scientific inquiry to address new and emerging health and environmental concerns under the Long-Range Research Initiative.
- Reported global industry progress in a transparent manner through Responsible Care.

21. The chemical industry has also made important contributions to sustainable development in the areas of energy efficiency and reducing greenhouse gas emissions. The industry is the principle supplier of energy efficient materials worldwide, from insulation to materials for wind

and solar power. Through Responsible Care®, the industry has also improved energy efficiency and reduced greenhouse gas emissions in our own operations.

22. Chemical industry technologies also make alternative energy possible, protect and clean the world's drinking water and other natural resources, and help lower GHG emissions. An ICCA life-cycle analysis study released in 2009 (based on independent analytical work by the consulting firm McKinsey and Associates, and validated by the Öko Institute) reveals that GHG emission savings enabled by the chemical industry are more than double the industry's emissions, i.e. products of the chemical industry enabled GHG savings 2-3 times greater than their emissions.

23. Finally, ICCA members partnered with governments and other stakeholders during the negotiation of key international treaties such as the Stockholm Convention on Persistent Organic Pollutants (POPs) and the Rotterdam Convention on Prior Informed Consent, and members have played an active role in their implementation. ICCA members were also active leaders and partners in transforming the Chemical Weapons Convention from concept to reality.

C. Constraints and Obstacles

24. ICCA's commitment to enhancing the sustainability of the global chemical industry through Responsible Care® and pursuing the WSSD 2020 goal has also identified several obstacles and constraints to achieving those objectives. Perhaps the most significant constraint is the lack of

capacity in certain parts of the developing world to effectively manage chemicals. This lack of capacity can take several forms, e.g. lack of appropriate expertise, lack of data and scientific information, lack of resources, and lack of infrastructure. ICCA is working with other SAICM stakeholders to address these gaps through capacity building and other relevant initiatives, but while important progress has been made, significant challenges remain in this area.

25. A further obstacle is ensuring that mechanisms are in place to ensure effective chemicals management across the supply chain and throughout the product lifecycle. This means ensuring that producers, suppliers, and end-users have access to relevant product safety information and incorporate that information in their business operations. The chemical industry has made important progress in strengthening product stewardship and developing sustainable business practices through Responsible Care and the Global Product Strategy, but more remains to be done both within the industry and through additional cooperation with other industry sectors, governments, and IGO and NGO stakeholders, in order to reach the 2020 goal.

D. Lessons Learned and Best Practices for Further Implementation

26. The chemical industry's experience in seeking to advance sustainable development and chemicals management objectives in a range of international forums has facilitated new assessments of challenges faced and possible ways to address them. For example, the capability gaps in chemicals management regimes in certain countries identified above have highlighted the need to promote transparent, science-based and cost-effective regulatory regimes around the

world, leading ICCA to develop a set of principles for chemicals management systems (available at http://www.icca-chem.org/ICCADocs/2006_10_ICCA%20advocacy%20principles.pdf) based on a combination of regulation and industry-led initiatives.

27. ICCA has also developed and made publicly available a set of product stewardship guidelines (<http://www.icca-chem.org/ICCADocs/Product%20Stewardship%20Guidelines%20-%20Final.doc>) to help improve chemicals management and product stewardship throughout the supply chain. An important adjunct to this is putting these guidelines into action, and ICCA member companies have been active in delivering and supporting activities to build capacity in the developing world. For examples of these activities, see http://www.icca-chem.org/ICCADocs/Capacity_Building_2009.pdf and http://www.icca-chem.org/ICCADocs/ICCA_Progress_Report09_final.pdf.

28. While significant progress has been made towards reaching the WSSD 2020 goal, there is still much to be done. SAICM remains the primary vehicle for efforts to reach the 2020 goal, and ICCM-2 resulted in agreement on a strengthened framework (agreement on Rules of Procedure, creation of a subsidiary body, a stronger role for regional processes) to help facilitate these efforts. Going forward, the chemical industry supports the further strengthening of SAICM, including through adequate resourcing, to enable it to effectively monitor progress and encourage national efforts towards reaching the 2020 goal.

E. Further Planned Actions

29. The chemical industry is committed to continued progress on sustainable development and safer chemicals management in the coming years. The Global Product Strategy includes a 2018 target date for companies to have fully assessed the safety of their chemicals in commerce and an interim 2012 target for companies to report on and discuss their progress in making these assessments. In addition, ICCA is committed to reporting on approximately 15-20 more product stewardship performance metrics in the future.

30. By 2020, ICCA member companies aim to have:

- Established a base set of hazard and exposure information adequate to conduct safety assessments for chemicals in commerce;
- Enhanced the global capacity to implement safety assessment practices and safe management procedures, especially in developing countries;
- Shared relevant product safety information with co-producers, governments, and the public;
- Worked across the value chain so that suppliers and customers can effectively evaluate the safety of their products and enhance their performance;
- Made product safety summaries on chemicals publicly available; and
- Extended their monitoring and reporting structure by including additional metrics to quantitatively track progress and support continuous improvement in the sound global management of chemicals.

1. Views on chemical issues from the mining sector

31. Robust and integrated chemicals management policies are a vital component of the commitment of the International Council on Mining and Metals (ICMM) to a more sustainable future. Indeed, we understand that managing chemicals, including minerals and metals throughout their life cycles in a responsible way is an important aspect of sustainable development. The challenge was recognized in Agenda 21 at the Rio Earth Summit and was reaffirmed in the Plan of Implementation of the World Summit on Sustainable Development (WSSD).

32. The WSSD in 2002 recognized that minerals and metals are essential for modern living. Many of these chemicals perform essential roles such as providing shelter or nutrition. Indeed there are few aspects of modern society that do not rely on the use of minerals and metals to some extent.

2. Commitment to Sound Chemicals Management

33. On 11 May in Geneva ICMM unveiled *Minerals and Metals Management 2020* – an action plan for chemicals management in our sector. (<http://www.icmm.com/page/13781/icmm-launches-minerals-and-metals-management-2020-strategy->) The plan, launched at the Second International Conference on Chemicals Management (ICCM2), is the fulfilment of a commitment

made by ICMM at the first ICCM in Dubai in 2006 in support of implementation of the United Nations' Strategic Approach to International Chemicals Management (SAICM). The significance of 2020 is the aspiration that chemicals, including minerals and metals, be "used and produced in ways that minimize significant adverse effects on human health and the environment by 2020" and is enshrined as the overall goal of the SAICM.

34. For ICMM members, a global approach to chemicals management is essential. However, it is also important to note that SAICM must be based on a broad, life cycle approach embedded within the context of sustainable development. At the heart of Minerals and Metals Management 2020 are 23 actions, grouped into four themes which correlate with four of the overarching objectives of SAICM: risk reduction; governance; capacity-building and technical assistance; and, knowledge and information. Approved by our Council of CEOs, the action plan requires ICMM to develop policy, deliver action and partner more broadly than ever before with others involved in the life cycle of minerals and metals. While challenging, this approach will not be unfamiliar to our members as our action plan is built upon the principles and operating platform of our Sustainable Development Framework and our Materials Stewardship program.

35. The *ICMM Sustainable Development Framework* (see www.icmm.com) is based largely around tackling the issues identified in the landmark Mining, Minerals and Sustainable Development (MMSD) project. The Framework comprises three key components; (1) a set of 10 principles and a corresponding commitment by Member Companies to their implementation; (2) a commitment to report progress in implementation of the principles and other high-level

commitments in accordance with the guidelines of the Global Reporting Initiative; and (3) a commitment to third party assurance of Members reporting.

36. An integrated approach to the responsible production and use of the minerals and metals (chemicals) produced by ICMM member companies is an important element of the ICMM Sustainable Development Framework.

37. The Materials Stewardship Concept involves caring for and managing the production and use of minerals and metals along the value chain to maximize net benefit, minimize losses and conserve resources to actively contribute to sustainable development. For ICMM members, materials stewardship is about:

- *Understanding* the social, environmental and economic impacts of a material as it moves through its life cycle from mining to use and through to the end of its life.
- *Developing relationships/partnerships* with other actors along the life cycle to help ensure beneficial and appropriate use of material and to minimize or eliminate risks to human health and the environment.
- *Taking action* to ensure that, for the part of the life cycle they control, appropriate and effective stewardship activities are undertaken, and for the areas where they are not in direct control but have influence, they work with other actors in the life cycle to ensure they also do their part.

38. ICMM has published a guidance document to support implementation of Materials Stewardship in the minerals and metals supply chain and is in the process of developing a complementary toolkit. (<http://www.icmm.com/page/1183/maximizing-value-guidance-on-implementing-materials-stewardship-in-the-minerals-and-metals-value-chain>)

3. Chemicals management through the framework of materials stewardship

39. The ICMM SD Framework and the materials stewardship concept provide a robust policy platform that recognises the specific properties and characteristics of minerals and metals as well as the important role they play in society (see case study 1 in Annex). Chemicals management is seen as a vital component of materials stewardship and developing sound practices in this arena is a key mechanism for the industry to support sustainable development.

40. Accordingly, work is ongoing in a number of key areas outlined below.

Mercury

41. One of the principal chemicals management issues for the industry to address at the international level is the stewardship of mercury. Mercury is ubiquitous among metalliferous sulfide ores and the processing of these ores is known to constitute one of the primary anthropogenic sources of environmental mercury pollution. Control of such emissions and the

subsequent management of mercury-containing waste is therefore a key challenge for parts of the mining and metals sector.

42. ICMM has expressed support for a global strategy on mercury risk management at the level of the United Nations and has published a Position Statement that advocates actions for its own members under a mercury stewardship program. (<http://www.icmm.com/page/12173/icmm-commits-to-mercury-stewardship>)

43. ICMM will enhance its contribution to the global effort by sharing information and expertise and by encouraging reciprocal public and private sector mercury management activities at the local and national level in countries where our members have a significant presence. An example of this type of approach can be found in the support already provided by some ICMM member companies towards implementation of low- to no-mercury technologies in the artisanal and small-scale mining (ASM) sector.

44. Our members' willingness to contribute to international efforts to reduce mercury risks through implementation of materials stewardship demonstrates that ICMM is committed to tackling health and environmental issues on a broader basis than site-specific measures while seeking to promote sustainable uses of minerals and metals across the globe.

Metals risk assessment

45. Metals are natural inorganic components of the earth with specific chemical characteristics that often differ markedly from those of organic chemicals. Understanding these characteristics is a key factor in ensuring that potential health and environmental risks are adequately assessed and managed. With cross-commodity collaboration, ICMM is facilitating the development and sharing of leading-edge technical concepts through the Metals Risk Assessment Guidance projects (MERAG and HERAG). These collaborative projects aim to provide the regulatory community at regional and international level with scientific and regulatory guidance on the most advanced status of environmental (MERAG) and human health (HERAG) risk assessment concepts for metals. The projects have consolidated existing experience and recent progress made with environmental risk assessment methods, concepts and methodologies for use in Chemicals Management programs and standard setting processes. (<http://www.icmm.com/page/1185/metals-environmental-risk-assessment-guidance-merag>) (<http://www.icmm.com/page/1213/health-risk-assessment-guidance-for-metals-herag>)

46. This multi-stakeholder approach to documenting the ‘state of the science’ has facilitated broad acceptance of the outputs and the MERAG guidance has for example been used by the European Commission in drafting metals-specific guidance for its new chemicals regulation – REACH. It was also recognised as a valuable source of information for the US Environmental Protection Agency’s (EPA) recently published Framework for Metals Risk Assessment.

47. The publications are considered to be ‘living documents’ which will be supplemented and updated as new challenges emerge and the science progresses.

Capacity building for implementation of new chemicals management systems

48. Implementing new regulatory systems creates a significant challenge for the mining and metals industry, but offers significant opportunity for setting the right basis for future conditions and marketing, use and control of our products challenges for industry as well as governments. Through the collaboration of leading companies, commodity and national association the industry has been building capacity for implementation of two new systems in particular.

49. The New EU Chemicals Management Policy (REACH) and the United Nations Globally harmonised system of classification and labelling (GHS). The industry is preparing the necessary steps to ensure that both REACH and GHS can be implemented in a cost-efficient and timely manner. This has included a series of training seminars hosted in major cities around the world as well as the publication of specific guidance for industry. The latest guidance document published in November 2009 focuses on the classification of ores and concentrates the raw materials for the production of minerals and metals.

[\(<http://www.icmm.com/library/oresandconcentrates>\)](http://www.icmm.com/library/oresandconcentrates)

50. This capacity building is naturally an ongoing initiative. The latest such workshop on Chemicals Management took place in Beijing in November 2009. This brought together industry and policy-makers from within China, a country where chemicals management policy is rapidly evolving in response to the domestic and international challenges therein.

51. The industry has also been active in dialogue with governments and policy makers, including work at the level of the United Nations towards the development of the Strategic Approach to International Chemicals Management (SAICM), with the European Commission in support of technical policy development under REACH and with the United Nations as well as many national governments regarding the Globally Harmonised System of Classification and Labelling

Life cycle thinking

52. Life cycle approaches are vital to managing chemicals and there is important business, environmental and regulatory benefits to be gained through their use. We want to see the development of generic life cycle tools and protocols for metals which work across a number of different industries and foster acceptance that minerals and metals can contribute to sustainable products. We are aiming for common thinking amongst producers of metal commodities and practitioners of life cycle assessment in order to establish a basis for enhanced reputation and credibility for the relevant approaches for metals and minerals. ICMM is partnering with organisations such as UNEP and SETAC to improve life cycle assessment methodologies.

End-of-life management

53. Metals can be recycled with no inherent degradation in properties and exploiting this is a key component of their sustainable use. For ICMM, engaging in recycling activity is an important aspect of the commitment to materials stewardship, whereby companies extend their interest beyond the plant gate and consider the whole life cycle.

54. Within the metals industry, the extent to which metals are recycled and the properties which make them recyclable are well known. However, the facts surrounding them and their recyclability are not well known or appreciated in decision-making circles, the media, and the public in general. While current public opinion strongly favours recycling, most attention is given to paper and plastics. Possibly because data and information on the recycling of metals are lacking, society's perception can be that metals are environmentally less attractive than other materials.

55. Additionally we recognise that wastes and by-products need to be managed in a sustainable way – the mercury management program established by Newmont Mining is a good example of stewardship that encompasses not only products but potentially hazardous waste streams too.

<http://www.beyondthemine.com/2006/?l=2&pid=5&parent=19&id=171>

56. Ultimately, we need to create increased awareness and encourage implementation of appropriate policies amongst member companies and other stakeholders. In all three areas ICMM is working to ensure that companies, scientists and policy makers have access to the most robust and appropriate concepts and tools for assessing minerals and metals.

E. Contribution of Metals to Sustainable Development

57. Metals are well suited to the sustainable development agenda as they are durable materials that, in theory, can be recycled infinitely. Indeed, metals share many characteristics that favour their continued and expanded use by society in pursuit of sustainable development, for example:

- Aluminium offers a combination of strength with exceptional lightness
- Copper is valuable for its electrical and thermal conductivity, great tensile strength and resistance to corrosion
- Zinc has a low melting point so it can easily be cast into intricate shapes. It is used in large amounts as a surface coating that protects iron and steel from corrosion and rusting
- Nickel in steel provides toughness, strength and ductility over a wide range of temperatures
- Lead is heavy, dense and very malleable; it can be used as a shield against radiation and has useful electrochemical properties
- Iron goes mainly into steel, which is used in building construction, shipbuilding and automobile bodies.

(<http://www.icmm.com/page/1355/a-world-of-metals-finding-making-and-using-metals-second-edition>).

F. The Challenge

58. For the mining and metals industry the challenge is to ensure that materials (chemicals) are produced and used in a way that minimizes impact to the environment and society while maximizing their positive contribution. This is no longer a challenge that stops at the factory or mine-site gate. As suppliers of essential materials, our industry is by its very nature tied to value chains and life cycles that we do not always control. Impacts can occur anywhere in the life cycle of a chemical or material and we therefore share the responsibility to act with others.

59. It is a commitment that starts at the highest level and permeates down to individual countries, companies and organizations. It requires robust chemicals management policies at all levels, based on sound science and supported by all stakeholders from government to industry to civil society.

III. WASTE MANAGEMENT

60. Business and industry supports flexible, socially acceptable, environmentally sound and cost effective integrated waste management, based on sound scientific data, including risk and cost-benefit analyses. In recent years, industry has made considerable efforts to improve the recyclability, design, standards and properties of its products to reduce and manage waste. Industry will continue to improve production methods and the standards of its products. Governments should assure that policies encourage industry to make further progress.

61. A sound and harmonised definition of waste/non-waste should be in use. Global trade in recyclable materials and the access to recycling facilities worldwide is essential to economic development and reduction in final disposal. The expanding restrictions for transfrontier movements of secondary raw materials and trade-disruptive measures in the context of the Basel Convention have hampered the essential trade of recyclable materials and the reasonable and integrated use of recycling facilities. At the same time, we have seen that sound recycling can be a component of "green economy" efforts, and as such should be encouraged.

62. One example of both the challenge and opportunity in this regard concerns "e-waste." As rapid innovation and changing fashions make products quickly obsolete, the amount of waste electrical and electronic equipment (e-waste) is growing. Between 20 and 50 million tonnes of e-waste are produced worldwide every year. Business and multi-stakeholder initiatives and partnerships have been established to address these issues. One example is the Global e-Sustainability Initiative (GeSI), which aims to ensure these products are disposed of responsibly and material is reused or recycled wherever possible.

63. The objective for all sectors is to move from managing risks to encouraging waste minimization, more efficient use and more extensive re-use of materials by viewing recyclable wastes -- such as e-waste -- as valuable resources. For example, recycling more of the materials in used equipment -- including precious metals -- reduces environmental impacts from its disposal and reduces the need to extract more raw materials from the

ground. This, in turn, reduces the associated environmental and social impacts of mining, tying in with addressing supply chain issues.

64. In the case of ICT, the industry does not have direct control over a lot of equipment – such as computers and mobile phones – when they reach the end of their useful lives. Some companies already have take-back schemes in place, but there needs to be a wider perception and implementation of shared responsibility along the entire supply chain. For example, users should return products for recycling.

65. E-TASC (Electronics -Tool for Accountable Supply Chains) is a web based system for Information and Communications Technology (ICT) companies to manage their supply chains in an efficient manner. In 2008 GeSI developed an end-of-life management tool that will be integrated into its existing E-TASC self-assessment questionnaire for suppliers. Specific criteria cover collection, recycling, reuse and disposal. This will help GeSI member companies ensure e-waste from their own operations is handled responsibly.

66. Waste can be an important source of energy. The practical and reasonable use of alternative and environmentally recommended fuels, e.g. biomass resulting from pulp and paper industry, should not be restricted. Increased landfilling of valuable fuel resources can by no means be considered to be environmentally effective. It is important that high standards of waste management are achieved and that the range of options available is kept as wide and flexible as possible.