
Resource and Materials Management

Global Business Alliance for Post-2015 Position Paper

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DISCLAIMER

The Global Business Alliance represents business from every region of the world, with global, regional, national and sectoral business organizations and associations, involving companies from multinational corporations (MNCs) to small and medium enterprises (SMEs). Our objective is to make effective, concrete and long-term contributions to the formation of the United Nations Post-2015 Development Agenda.

This diversity of perspectives, experience and views is a resource for the wide horizon of inter-disciplinary topics that the SDGs and Post 2015 Development Agenda will address, and should be seen as a resource for those involved in the deliberations.

While this paper may not necessarily express views shared by all GBA partners and does not bind them, it does offer an informed private sector perspective reflecting a particular constituency and expertise which we believe enriches the discussion.

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1- Executive Summary

As populations grow and lifestyles develop, the consumption of materials and natural resources is increasing, in many cases exponentially. This means that there will be increasing stress on the supply of many of the natural resources and substances that are required to sustain societies, the economy and the environment. In some regions and for some substances, the lack of materials or resources is already, or will shortly, constrain Green Growth and Poverty Alleviation efforts. A variety of existing concepts seeks to minimise this problem and extend the “carrying capacity” of the earth sustainably into the future. These include; sustainable consumption and production, sustainable value chains, the circular economy, and sustainable materials management. Each of these approaches has advantages, but individually none provide a unique or complete solution, because each has real and practical limits. A more productive way forward is to address all of these lifecycle approaches together so as to combine the strengths of each.

2-Introduction

Escalating public and governmental concerns about poverty, climate change and biodiversity loss are linked in many ways to how we use natural resources. Society as a whole uses vast amounts of materials that come from and return to the Earth such as wood, water, minerals, fuels, chemicals, agricultural plants and animals, soil and rock. The scale of this use is such that associated impacts are beginning to pose serious threats to the health of ecosystems and to overdraw Earth’s natural capital.

3-Analysis

A central objective of Green Growth and establishing Green Economies is the decoupling of development from the depletion of natural capital and resources. Decoupling has two aspects that must be implemented together to be successful. Absolute, decoupling restrains the growth in total consumption of raw materials, while relative decoupling reduces the share of primary (virgin) resources in the total consumption of materials. This objective drives the three R’ approach, —ReduceI (the amount of natural resources required – Absolute decoupling), —Reusel (extend the life or the number of times a product or service is used – Relative decoupling), —RecycleII, (turn materials that would otherwise become waste into valuable resources – Relative decoupling).

Currently governments and the private sector are tackling these challenges through a number of common but often independent policy and operating frameworks. These include natural resource management policies, product policies and waste management policies. Within each of these areas, decision-makers have a variety of options for exercising economic, physical, or operational influence upon material flow patterns. However to manage and reduce negative impacts successfully and maximize benefits a more integrated, lifecycle-based approach is required. Governments in the developed world are beginning to consider this as seen in the

emerging policy discussions on Sustainable Materials Management at the OECD. Emerging economies are also well suited to rapid assimilation of integrated materials management approaches (e.g. China's policy on the circular economy).

The production and use of materials involves energy and water inputs at key stages in the materials lifecycle. This interrelationship is at the root of the ecological footprint associated with industrial economies. However, this also denotes that any changes in material usage may inadvertently trigger changes in the consumption of energy, water, or other critical resources in other parts of a materials lifecycle. It is therefore imperative that an integrated materials management approach is taken at the global level to ensure that natural resources are used/reused productively and sustainably throughout their lifecycles.

Increased competition for raw materials and markets coupled with sustained growth in emerging economies has given rise to two major materials sustainability issues: access to raw materials and resource efficiency. Part of the answer is to move progressively towards a circular economy. This is an economy in which today's primary resource is tomorrow's secondary resource. To achieve this in today's global economy a fuller lifecycle-based understanding of material flows within and between economic domains is vital. This is necessary to manage system-wide impacts effectively and to ensure net positive outcomes for man and the environment.

Materials are the building blocks of industrial society from which products are manufactured and services derived. Products, including both goods and services are developed and created to serve societal needs. Society obtains the materials it needs from natural resources. The interdependence between resources, materials and products needs more detailed understanding and differentiated, yet integrated management approaches. Different materials need different management approaches to build a more sustainable resource base for society. To focus on the source of resources without acknowledging the role that society plays in extracting, refining, utilizing and re-utilizing materials from natural resources is short-sighted. It diminishes the opportunity for policy makers, businesses and users to maximize the eco-efficiency of goods and services.

Lifecycle thinking is essential to sustainable development. The main goal of lifecycle thinking is to ensure consideration of socio-economic and environmental impacts associated with goods and services throughout their lifecycles and to improve performance of resources and materials. This requires effective links between the economic, social and environmental dimensions of the entire value chain. To achieve these linkages the principles of sustainable development need to be applied to the conception of products and services and to supply chain management. All business levels need to identify opportunities, manage risks and determine responsibilities throughout the value chain.

4-Recommendations

1. Develop policies to decouple development from resource use, recognising the need to employ both absolute decoupling and relative decoupling.

2. Encourage a shift in society towards norms of sustainable consumption and production.
3. Develop social and economic incentives to reduce the demand for natural resources.
4. Develop regulation to improve the management of supply and demand for natural resources.
5. Build an integrated lifecycle-based approach to materials management at the local, national, regional and global level.
6. Promote lifecycle thinking within supply chains to improve economic, social and environmental performance of resources and materials.
7. Recovering value from and creating markets for the materials and energy produced from used products and waste have to become key policy targets.
8. Develop macro-economic models and indicators that incorporate and advance knowledge on the magnitude and effect of policies aimed at the 3R's (Reduce, Reuse and Recycle).
9. Establish at both global and national level a system of materials/resource accounting to track the sustainability of prime resources against the three measures of: i) total consumption growth rate (recycled and primary materials), ii) rate of growth of net additional stock, iii) recycling rate.
10. Create a fuller lifecycle-based understanding of material flows and seek to develop closed- loop systems.
11. Develop integrated planning for significant levels of recycling of materials and resources
12. Address the need for restoration of ecosystem resources as part of sustainable consumption and production efforts

5-Means of Implementation

New business models and societal expectations with corresponding products and services need to be defined that decouple growth and material consumption. Recognising this, increased knowledge of the magnitude and effect of the strategy of the 3R's (reduce, reuse, recycle) needs to be incorporated into macro-economic models and indicators, to guide consumer, industrial and government behaviour, decisions and actions.

Integrated materials management policy frameworks are required at all levels to ensure that natural resources are used/reused productively and sustainably throughout their lifecycles. This requires a holistic lifecycle approach to the design, production, use, and recycling of products and services. In addition, different materials will require different management approaches to ensure a sustainable resource base for society.

Collaboration between businesses, consumers, policy makers and civil organizations can help create the enabling environment necessary to support a more sustainable consumption and production model. To facilitate this, standards for measuring and assessing the sustainability impacts of material use in value chains are required.

Policy makers can accelerate progress toward more sustainable consumption and production models, by focusing on specific areas: market-based mechanisms and economic instruments, regulatory structures, encouraging development of technology and innovation, promoting and supporting efficient use and recycling of materials, collection and sharing of information on materials and material flows, and promoting research into human behaviour to encourage sustainable consumption and production.

6-Conclusion

Promoting Green Growth and establishing Green Economies requires action by all stakeholders throughout the lifecycle of materials and products, including consumers, producers, and governments. A combination of behaviour and regulatory policy changes will be required.