

Towards SDG implementation: The role of global resource policy and resource targets

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Introduction

Environmental problems, which at its worst can lead, for example, to the collapse of agricultural systems in a country or region, usually stem from several factors. One decisive aspect within the interaction of economic, social, climatic and environmental changes is the extensive use of resources in production processes and consumption patterns (Dittrich, Giljum, Lutter, & Polzin, 2012). At the same time, resource policy and resource protection measures show quite different stages of advancement for different resource categories. A recently completed scientific project aimed at the development of targets in the areas of biotic and abiotic resources, water and land (Buczko, Hinterberger, & Stricks, 2014) (Giljum, Hartwig, Hinterberger, & de Schutter, 2014) and at the elaboration of policy recommendations for improving resource policies.¹

At the political level, the processes of the implementation of the Sustainable Development Goals (SDGs) as part of the 2030 Development Agenda is considered as one promising window of opportunity to anchor the issue of resource targets and the need for an improved resources governance at the global level – in order to guarantee the sustainable, fair and safe use of the natural resources on our planet. As there are multifold relations and inter-linkages between and among resources, it will be crucial to not only focus on the climate-related goals and targets, but equally address the whole framework as part of a holistic political agenda towards a sustainable future.

A plea for applying the precautionary principle

Natural resources by themselves as well as their availability are manifold², and so are the respective impacts of their extraction and consumption. Hence, the amount of used resources does only allow a rough approximation of the environmental impacts which can be traced back to their extraction.

For water and land, targets can be derived relatively directly from existing frameworks like the “planetary boundaries” concept (Biermann, 2012) and the correlating "Safe Operating Space" for humanity (Rockström, et al., 2009). Regarding biotic and abiotic materials, however, the relation is more indirect. Nevertheless, using the indicator of Total Material Consumption (TMC) as a comprehensive material category allows for the assessment of the entire impact of human resource extraction and consumption. The general rule is: The lower TMC, the lower are pressures on the environment.

From an environmental perspective, the year 1970 can be taken as the baseline (Wiedenhofer, Rovenskaya, Haas, Krausmann, Irene, & Fischer-Kowalski, 2013). At that time, the average TMC at the global level was at about 45 billion tonnes, encompassing used as well as estimated unused extraction.³ In 2010, global annual extraction of used resources has already reached about 78 billion tons (SERI & WU, 2016). When adding the estimated amount of 40 billion tons of unused

² comprising metals, minerals, fossil fuels, land, water, biomass etc.

³ Other researchers propose the year 1950 as the baseline, due to the decrease of fossil fuel prices (with respect to the price of labor and capital) as the most significant trigger for increased resource and energy consumption in the industrialized countries - and its related environmental burden (Pfister, 1996).

¹ www.intress.info

extraction, the result is a TMC of 118 billion tons. As an example, in 2000, an estimated 40 to 50 billion tons of soil and earth were excavated worldwide for the construction of infrastructure. An additional 25 to 50 billion tons result of eroded soils by agricultural activity, added up to a total of 145-180 billion tons of primary material that is taken from the environment (Bringezu, 2014).

Following the precautionary principle, a global TMC of 45 billion tonnes, or five tonnes per capita, completed by socioeconomic indicators would allow for avoiding the exceeding of the planetary boundaries – taking into consideration the need for further differentiation into sub-categories or along regional circumstances. Generally speaking, this would mean a reduction in material consumption by a factor 2 at the global level and by a factor 10 for the industrialized countries (Stricks, Hinterberger, & Moussa, 2015).

In the case of (biotic and abiotic) material, the proposed reduction can only be achieved through an effective reduction of extraction, e.g. by redefining (economic) growth, significantly raising recycling rates and promoting circular economy such as infrastructure development based on existing stocks. This means a stepwise shift in the consumption of primary towards secondary resources leading to an end of the extraction of primary raw materials. Therefore, resource productivity needs to be enhanced at least by a factor 5. For the category of freshwater, the proposed focus is the watershed level, and for the category of land surface a more detailed examination distinguishing farmland, woods and biomes / biodiversity is recommended. However, resource targets are considered as a fundamental element of sustainable and resilient societies (Stafford Smith & Steffen, 2013).

Resource targets and sustainable development

Two aspects are crucial for the further discussion of resource targets and their contribution to the political goal of a sustainable, inclusive and auto-determined development at the global level: Firstly, the

existing limitations in the access to or availability of natural resources, and secondly, the internationally recognized minimum standards for basic human, social and economic needs. Global equity and quality of life are central aspects within the discussion of resource targets and resource policy.

Other relevant topics for resource policy and target setting in view of sustainable development include:

- resource scarcities, price volatilities and resource efficiency issues as possible economic drivers,
- the role of trade and finance policy on current resource extraction and future resource standard or target setting,
- and the high degree of interdependence of all countries through international raw material trade and supply chains, which reveals the international dimension of resource targeting and the need for future collaboration and political coordination.

Reduced resource dependency may equally contribute to an increase in economic resilience at the local, national and/or regional levels. The in September 2015 accorded SDG-framework provides several links to an ambitious resource policy and the implementation of resource targets. Table 1 provides a selection of resource-related goals and targets to be achieved, if not indicated otherwise, by 2030.

Table 1: Selected resource-related SDGs and targets

Goal 1: End poverty:

Target 1.4: equal rights to economic resources, access to basic services, ownership and control over land and other forms of property, inheritance, natural resources etc.

Target 1.5: enhance the resilience of the poor and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters

Goal 2: End hunger, achieve food security, promote sustainable agriculture

Target 2.3: secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets etc.

Target 2.4: ensure sustainable food production systems and implement resilient agricultural practices

Goal 5: Achieve gender equality and empower all women and girls

Target 5.a: give women equal rights to economic resources, as well as access to ownership and

control over land and other forms of property, financial services, inheritance and natural resources

Goal 6: Ensure availability and sustainable management of water and sanitation for all

Target 6.4: substantially increase water-use efficiency and reduce the number of people suffering from water scarcity

Target 6.5: implement integrated water resources management at all levels

Target 6.6: protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes (by 2020)

Goal 8: Promote sustained, inclusive and sustainable economic growth

Target 8.4: Improve progressively global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation

Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable

Goal 12: Ensure sustainable consumption and production patterns

Goal 13: Take urgent action to combat climate change and its impacts

Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems (combat desertification, land degradation and biodiversity loss)

Policy space and governance responses

The current Global Governance system can be characterized as highly fragmented and unstable. So far, there is no international organization providing a platform for promoting the resource use issue on the political agenda within multilateral processes as well as at the regional level. Furthermore, the future development of global policy frameworks for a sustainable use of natural resources will also depend on the particular conditions at the local or national level.

The here proposed approach of quantified resource targets may form the basis for overcoming existing "lock-ins", encouraging ambitious policies and therefore for supporting the coherent implementation of the SDG framework. The first steps will have to include: creating a common understanding, improving data quality and achieving consensus on appropriate methods, tools and indicator systems that serve to clear targets which are related to the sustainable use of materials, water or land/ soil, and to further inform and assess national and international policies. Therefore, the results of the ongoing

process on the global SDG indicator framework are a significant intermediate step. Linking the resource issue with other relevant policy areas, such as economic, financial, fiscal or industrial policy, and linking the policy debate intensively with actors from research and civil society will have to follow. Putting more focus on the resource issue within SDG implementation process will provide a valuable opportunity for reducing pressure on the environment and enhancing social welfare and sustainable development at the global scale.

Key challenges

- Further development, refinement and differentiation of global resource targets
- Integration and further specification of resource targets into SDG implementation processes
- Radical reduction of resource consumption levels and transformation of production processes towards circular economy
- Development and application of common tools and indicators

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