



WRF Declaration

Resource Governance – our Challenge, our Opportunity

Draft WRF Declaration on Resource Productivity for Comment

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Preamble

The financial crisis has shown how fast an economy built around expectations of future growth can lose contact with reality. It had demonstrated that the economy can become destabilized when focused primarily on rapid growth. Many causes that triggered the financial crisis are identical to those responsible for the continuously declining eco-systemic functions and services: Insufficient controls and accounting methods, incomplete early warning systems, missing competence in systems analysis and management, short term profit maximization, toxic products, wrong prices of products, and the failure by governments to implement precautionary policies.

Growth and material wealth are constrained by a limited planet earth, and also by the ecological consequences of mobilizing and using natural resources for the benefit of humankind.

We, the supporters of this declaration, strongly believe that economic stability in a finite world is only possible to the extent that resource productivity is increased sharply by eco-innovation, the creation of novel and competitively



priced goods, processes, systems, services and procedures that can satisfy human needs and bring quality of life to all people with a lifecycle-wide minimal use of natural resources (material including energy carriers and surface area) per unit output and a minimal release of toxic substances (EUROPE INNOVA, 2008).

This statement suggests that continued reliance on traditional environmental technologies will no longer be enough. Decoupling production and consumption to a large extent from the consumption of nature will require radically new systems, goods, services, processes, procedures, and business models for meeting human needs. Technically this is possible without any loss of end use satisfaction. But it will only happen once it becomes economically attractive. A policy shift of such magnitude will also require institutional innovations.

Wellbeing is more than material consumption. It includes factors such as education, health, safety, freedom from violence, environmental quality, social security, leisure, and equity. Many factors that constitute wellbeing have not increased in industrialized countries since the mid 1970s - or are even declining - despite technological progress, which has often just served to accelerate material flows.

We call for a political strategy of resource governance which combines efficiency targets in the use of natural resources and an increase in resource productivity with sufficiency targets of the per capita use of natural resources. This combination can circumvent the problem that efficiency gains are wasted by merely accelerating the traditional type of growth rebound effect, and instead can ensure that efficiency is invoked for qualitative development.



To restructure the global economy so it becomes ecologically, economically, and socially sustainable is the greatest investment opportunity in human history.

Alarming Signs

Rising global over-use of natural resources (metal ores, fossil energy carriers, biomass, non-metallic minerals, water, and land surface) is beginning to affect the life sustaining ecosystemic services of the earth, which are pre-requisite for human life, and are not replaceable by technical means. Climate change, widespread water shortages, desertification, massive erosion and increasing natural disasters show that the environmental safety threshold has already been surpassed. And yet, only some 20 percent of humankind enjoy the full benefits of the mainstream economic model, while all people – in particular the poor – have begun to suffer the consequences of its flaws.

There is observational evidence from all continents - and most oceans - that natural systems are being affected by regional climate changes (IPCC 2007). Climate change is only one example demonstrating how inordinate resource flow (in this case of fossil fuels transformed to CO₂) can affect human quality of life on earth. Other alarming signs are the loss of the global forest area, which shrank at an annual rate of 0.2 percent between 1990 and 2005 (UNEP 2007) and species extinction rates increasing 50 to 500 times the natural rate (World Watch Institute 2008).

To some degree, different world regions face specific problems resulting from global over-use of natural resources (UNEP 2007): In Africa, land degradation is the main issue of concern; in Asia and the Pacific urban air quality, fresh water stresses, degraded ecosystems, agricultural land



use, and increased waste are priority issues; in Europe the still increasing emission of green house gases, biodiversity loss, land-use change, and fresh water stresses are issues of concern. In Latin America and the Caribbean, growing

cities create threats to bio-diversity and eco-systems, degraded coasts and polluted seas are threatening signs, as is regional vulnerability to climate change.

North America, consuming over 24 % of global primary energy with 5.1% of world population, faces urban sprawl and fast growing freshwater stresses. In West Asia, land degradation, freshwater stresses, degradation of coastal and marine eco-systems, urban management, peace and security are priority issues.

Global resource extraction grew from 40 billion tons in 1980 to 58 billion tons in 2005. If one also takes into account the materials displaced from their natural settings, but not used to create commercial value, this number more than doubles. World-wide, the average resource mobilization and use per person amounts to nearly 14 tons per year (SERI 2009). If we continue with *business as usual*, and the world population rises as expected, global resource use will also continue to grow.

Today one of the most fundamental flaws in human activity is the enormous input of material resources per unit output of value or service.

Respecting Physical Limits

Satisfying the needs of an ever-growing world population within physical limits is a challenge to economic and environmental policymakers. Globalizing the traditional model



of economic growth is rapidly increasing the use of limited natural resources, thus augmenting ecological disruption. Current economic and environmental policies have not stopped these trends. As a consequence, we are losing ever more the freedom to shape the future of humanity.

Moreover, key technologies that we will need for the transition to a more sustainable economy depend on chemical elements that are currently being dissipated regardless of their geochemical scarcity. These include antimony, copper, gallium, germanium, indium, lithium, niobium, platinum, ruthenium, selenium, and tellurium, which are particularly important for emerging energy supply technologies as well as for information and communication technologies.

Technology cannot replace the life-sustaining services of nature. But we can improve the productivity with which we use natural resources. We can create quality of life for more people with less strain on nature. Eco-Innovation is capable of achieving this goal without loss of end-use satisfaction, but only if economic incentives support such a development (gws Discussion Paper 2009/5 of Prof B. Meyer et al, ISSN 1867-7290; www.worldresourcesforum.org).

Accepting this challenge means that the *per capita* yearly material resource use should be dramatically reduced. One proposal is not to exceed 6 tons of non-renewables, including fossil energy carriers. Given the speed with which the ecological crisis and the world population are advancing today, a conceivable target could be that this goal should be reached no later than 2050 in order to prevent serious consequences on the *real* economy. Both assumptions are but best estimates at this time and should be researched intensively further in order to obtain a better founded and better differentiated picture so as to optimize



ecologically sustainable welfare generation for all people.

The Political Challenge

Traditionally environmental policies have focussed on specific problems. In certain respects this approach has been quite successful. For instance, this strategy has cleaned up water pollution in rich countries, taken dangerous goods off the market, recycled certain products, and slowed the acceleration of climate change to some degree.

However, these policies are toothless against the problem of increasing global resource consumption. What we urgently need is economic policies that make the global economic system take into account the inherent limitations and the value of the cost-free life sustaining services of nature. The politically defined economic framework conditions have to be adjusted to protect the global ecosystems, and to preserve resources for future generations – while lowering the cost of labor.

These conditions must include incentives to make planned transitions now, rather than being forced later to change suddenly. Major increases in resource productivity would occur if all relevant markets operated perfectly instead of being blind to the environmental costs of growth, and if there were no barriers to entrepreneurial innovation. However the markets are not operating perfectly, market prices are wrong due to discounted externalities, and relevant information is not available to the actors, and innovation barriers exist. No incentives or policies currently exist for a sufficiently resource efficient economy. Adjusting the fiscal framework is therefore the most fundamental and urgent pre-requisite for approaching a sustainable future. Subsidies that increase the consumption of natural resources



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must be eliminated, and economic instruments should be deployed such as a shift away from overheads

on labor and toward taxing raw materials - with the side effect of creating new jobs - and market creation policies including tradable permits. Instead of applying value added taxation to final goods it may be more effective to tax natural resources at the point at which they are removed from nature or where they enter the industrial metabolism.

However, because of market failures, economic instruments may not work in all cases. Therefore other instruments and measures should be considered too - such as information and coordination instruments, and command and control mechanisms as, for instance, adapting standards. The choice of policy options should depend on the relative desirability of dematerializing goods and services while maximizing employment opportunities and *per capita* welfare.



Call for Action

For the reasons stated above we urge political leaders to adopt a strategy of resource governance consisting of the following elements:

1. Seek international agreements on world-wide *per-capita* targets for natural resource consumption to be effective by 2050 at the latest, and the methodology needed to define and monitor them.

This includes targets for the emission of greenhouse gases, the consumption of non-renewable materials, and land use.

2. Focus research and technological development with the goal of increasing resource productivity.

The resulting innovation will create space for economic growth and social development. As a side-effect, national economies will become less dependent on resource imports, in particular fossil energy carriers.

3. Seek societal consensus by 2015 on ecological and economic indicators (on micro-, meso-, and macro-levels) in tune with the laws of nature and beyond GDP.

These indicators must be applied by industry and governments when reporting on the progress attained toward sustainability, and they must become the subject of learning processes at all levels of education.

4. Reshape the framework conditions for the economy to account for the scarcity of natural resources.



Remark:

A final call for action will be formulated as a result of the WRF event on September 16, 2009, in Davos.

References

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More information: <http://www.worldresourcesforum.org>.