

## Short Communication

### TARDIS Workshop Growth and/or Sustainable Development Oct. 19-21 2016, Schloss Seggau, Austria

#### Objective of the workshop

The 2016 TARDIS workshop focussed on one of the most crucial questions in the sustainability discourse: Is sustainable development compatible with economic growth? It was clear from the outset that this question is fraught with disagreement within and across scientific disciplines as well as tensions on the emotional level. Following the tradition of previous TARDIS workshops, this event provided a platform for rational discourse about this topic that was not aiming at quick solutions but at providing solid planks for further discourse. The current short communication systematises and summarises the rich discussion at the workshop. It intends to provide decision makers the most important results that emerged from the interdisciplinary discourse about this controversial topic. In order to make these results more amenable as a basis for future work and decisions as well as inspiration for taking the arguments further, the short communication is structured along generic topics rather than the timeline of presentations and discussions at the workshop. The main parts of the short communication are dedicated to aspects of growth seen from the vantage point of sustainable development, common ground in the discourse about growth or de-growth and the implication for sustainable development that emerges from the discrepancies in this discourse.

#### Growth and sustainable development

##### *Growth vs. development*

Sustainability and economy are based on different visions for human society's progress: While sustainability emphasises "development" as a balanced process of growth, destruction and system evolution, from the purely economic point of view progress is linked to "growth" in the meaning of increase and expansion. The discussions made it clear that economy centred perception of progress has cultural, ecological and social collateral impacts while a sustainability centred perception of progress strives for balanced development across the social, economic, environmental and cultural sphere. It became clear from the discussions, that there is no dichotomy between "growth" and "sustainability" as growing is an inherent part of any balanced process. There is however an intrinsic tension between "sustainable development" and "economic growth".

##### *GDP: an inappropriate measure*

There was consensus among the participants that growth in GDP in its current form is not compatible with sustainable development. This does however not mean that there was agreement about compatibility between sustainable development and a more generic form of economic growth. The historic basis for measuring economic performance of a nation with the GDP lays in the desire to establish a measure to gauge the capacity of the American economy to sustain (and win) a war when the US entered World War II. Thus, GDP is overstretched and over-rated when applied to measuring the right economic path of modern societies and certainly inappropriate to measure well-being on a national level. Its focus on (industrial) production and purely monetarised economic activity does neither allow accounting for "externalised" social and environmental costs nor for basic aspects of

the wellbeing of citizens. The participants, regardless of whether they came from the “growth” or “de-growth” camp, agreed therefore that conventional GDP growth and sustainable development are not compatible.

#### *Many fields of “growth” and “de-growth” for sustainability*

The concept of growth in its most generic connotation must be treated in a differentiated manner with regard to sustainability. The participants pointed to a number of fields, where growth is essential for achieving sustainable development. Unanimously the participants agreed that a growth in education on a global scale is necessary. They also pleaded for growth in justice, both on the local as well as the global level.

Among the fields that should grow according to the participants were also meaningful (free) lifetime, the cultural awareness of nature, the cultural content of goods and services. The share of protected areas as well as restored ecosystems and the overall resilience of natural and societal systems should also grow. As well, the share of renewable resources as the basis of energy and industry and the share of recycled/repaired goods in economy (“closed cycle economy”) should grow. Growth in innovation and investment in alternative sustainable technologies and business models was also seen as necessary. This is only a summary of the “growth areas” for sustainable development most often cited during the workshop.

#### *Critical aspects of growth from the view point of sustainability*

There were also fields for which participants unanimously demanded de-growth as a condition for sustainable development. Chief among these were the ecological impact of human activities as well as economic and social disparity on a global as well as a societal level.

Growth has a tendency to beget growth. This is particularly true for infrastructure as securing, maintaining and improving existing infrastructure is a considerable motor of economic growth. The same is true for growth in material assets and social status. Securing assets and status, but also the aspirations towards “climbing the social ladder” from the rung already achieved drives a universal request for economic growth. Combined with (unabated) global population growth this “growth begets growth” tendency results in non-linear economic dynamics that in their current form have collateral impacts on culture, society and environment that the participants saw as unsustainable.

Another critical aspect of economic growth in particular identified at the workshop was disparity of both the socio-economic and environmental impacts of growth. Rather than “raising all boats”, growth associated with a globalised economy created winners and losers. While one undisputed result of globalised economic growth was raising a large number of the very poor out of their misery, another is that it benefited the very rich at a disproportionate rate. The global middle class tended to lose in this process (the so called “elephant curve”).

In addition to disparity in economic effects, global economic growth resulted in geographic hotspots of environmental degradation. On top of truly global environmental challenges, most obviously climate change, a large number of fragile eco-systems (e.g. the rain forests) have experienced a degree of devastation that is far beyond the global average ecological impact of human activities.

The participants agreed that these socio-economic and ecological disparities constitute a major factor for instability and are certainly non-sustainable.

#### *Common ground in the discourse*

There was a striking accordance between representatives from the “growth” and “de-growth” camp at the workshop: Sustainable development as well as any form of economic growth has to obey

limits, in particular limited impacts on eco-systems. There was also unanimous agreement that neither innovation nor cultural development are subject to limitations.

#### *The meaning of limits*

The discussions identified two emanations of limits: Limits seen as “hard limits or walls” and limits seen as “borders or interfaces”. Approaches differ markedly for these two emanations. When limits are seen as interfaces, the approach is more often than not the attempt to “reach across the border” and to engage with what is beyond. This applies to some degree to the borders between different cultures as well as to perceived borders between humanity and nature.

When limits are seen as walls, the approach is often to look for the “hidden gate” to overcome the limitation. This is very often the approach towards natural limitations to economic activities, in particular eco-service limits. Sustainability however requires a precautionary dealing with such limits, which is nothing else than to assume that these limits are indeed “hard” until proven otherwise.

Accepting limits to be hard means accepting that innovation and cultural development have to take these limits as boundary conditions. This requires the establishment of constraints as cultural/political constructs that keep human activities at a safe distance from accepted hard limits.

There was consensus at the workshop however, that limits are inherent properties of culture, defined by the worldview resulting from a certain culture. As such, limits are the daughters of time and space and are relative to the development stage. This also means that limits vary between different cultures and may not be easily transferable from one culture to another.

This cultural property of limits raised some critical interventions. If there is a solid link between cultures and limits, may there be any globally acceptable limits? In addition, if so, who decides what these limits are, and who defines the constraints necessary to keep development within those globally accepted limits? How could conflicting systems of limits be resolved on a global level?

The questions raised led some participants to call for a global culture enabling equal access to political debate as a precondition to globally accepted limits and constraints. Such a culture must be based on accepting human rights and acknowledging the existence of universal human needs.

#### *Upper and lower limits*

A major concern voiced by participants was that eco-systems on the regional and local level must not be pushed to failure by human activities. Participants pointed to water and nutrients like nitrogen and phosphor that may either be depleted or emitted locally in amounts that lead to the breakdown of eco-systems. Likewise, humus in soil can be severely depleted by current agricultural practices, adding to global climate change but reducing fertility and water retention in local eco-systems.

There are however truly planetary limitations to human ecological impact linked to an ever growing economy. The classical example of this is global climate change caused by excessive utilisation of fossil resources. The participants also pointed to the problem of biological migration of pathogens, caused by either climate change or traffic of goods and persons as an additional concern.

On the social aspect, participants voiced concern that further growth of the demarcation between social groups, either racial, ethnical or defined by class. The concept of group identity was critically appraised and interventions warned about its unabated “growth” towards tribalism. Future societal development must be characterised by a suitable balance of individualism versus collectivism.

Sustainable social development however also requires lower limits to a number of critical factors. Above all, this applies to global justice. Without a basic level of global justice, a thriving global society is unthinkable. Justice must however not fall below a certain limit on the local level as well.

Another major factor that needs to be kept above a lower limit is education. There was consensus that a sufficient level of education is a necessary precondition for keeping other factors within their necessary limits.

## Transition towards sustainable development in the light of the “growth/de-growth” debate

### *De-coupling economy and ecological impact?*

The workshop did not find an answer to the question, if economic growth and sustainable development are compatible or not. This was however not the intention of this TARDIS 2016. Although there was common agreement, that a growth in GDP as it is conventionally calculated does not conform with sustainable development in many aspects, and there was a heated if unresolved discussion on whether de-coupling of economic development and ecological impact is possible.

The discussions at the workshop provided a number of good arguments for this approach. Besides the most obvious (but most controversial) approach to increase efficiency at a higher rate than economic growth, thus reducing at least ecological impacts, other more fundamental ideas were raised: Economy is primarily built on societal value systems. A change in the underlying value system of society rating immaterial properties of goods and services higher, growth in monetary value may be de-coupled from ecological impact. Information and social media, cultural content of goods and services as well as increased human interaction within society were named as candidates for low impact/high growth potential economic factors.

### *The basis of the controversy*

In the course of the workshop, it became increasingly clear, that the “growth/de-growth” debate is fundamentally a debate about the way the driving force for individual behaviour is perceived. There is no notable difference between the two camps as they see the necessity for a change in the general societal value system: Sustainable development will only be achieved, if immaterial properties of goods and services are assigned considerable economic value. This also applies to eco-services. For the “growth” camp, this change in the societal value system is at the core of the transition. This camp sees ambition to gain economic profit as an ingrained human feature and competition for economic status a fundamental (and unchangeable) organising principle for human societies.

In contrast to that, the “de-growth” camp doubts that the change in economic valuation of goods and services, even if it disproportionally favours immaterial properties, will lead to sustainable development by the force of the “invisible hand” guiding every person by her ambition. The “ethos of growth” itself, with focus on individual (and to some degree tribal) ambition is seen at the core of the resistance to transition. An individual perception as being “part of the whole” and an “ethos of common good” is the necessary basis for successfully achieving sustainable development as a completely new paradigm for human progress.

### *The consequence for the transition*

The workshop established that deep societal change is necessary for the transition towards sustainable development. Although the workshop did not (and did not want to) resolve the growth/de-growth controversy, the discussions made clear the pivotal importance of the change in worldview and ethical position of individual persons. Although the depth of the change is disputed between the two camps, the general approach to achieve it is not: It requires new narratives about the relation within a holistic world, about successful pathways to sustainability on the individual, local and regional level and visions for a society that lives the new sustainability paradigm for human progress. Research, collection and dissemination of these narratives and visions is a priority for science and policy alike.