

From MDGs to SDGs:

Transition to a Development paradigm of human prosperity within a safe operating space on Earth

Input to 11th Session of the UN OWG

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Brief main messages

1. Humanity has become a global force of change on the planet, we are in the Anthropocene, implying that development now needs to occur within a safe and fair operating space of the planet. Human prosperity and economic growth must occur within planetary boundaries.
2. The SDGs must address the current institutional failure and aim to transform governance and institutions at all levels, to be effective, accountable and transparent, for sustainable development. Policy and legal frameworks and institutions must be cohesive, well-designed effective, including facing out of harmful subsidies and redesign fiscal reforms and financial instruments, with appropriate safeguards and taking into account distributional effects, that work in favor of a sustainable development. There must be coherence and synergies between policies and goals. There is also a strong need for sector integration, implying that the SDGs, should be formulated as true sustainability goals, that link social and ecological systems explicitly.
3. The current urgency in the Anthropocene, has lead us into suggesting an operational thinking framework through which the SDGs can be assessed. Availability of many capitals - human, social, physical and natural - form the basis for sustainable development. Simultaneously, progress can be defined along three axes of performance – Productivity, Security and Inclusion. We have done a rapid assessment of apparent “gaps” attempting to enrich further the focal areas and targets. Our conclusion is that essentially all Focus Areas can be further improved by integrating aspects of performance - Productivity, Security and Inclusion - and the need to invest in all capitals in order to build human wealth.
4. SDGs need to be embedded in an adaptive governance context that allows for recursive adjustments of goals and strategies. Adaptive governance is characterized by collaborative, flexible and learning based mechanisms, which recognize and value the diversity of knowledge, legal systems and institutional richness – that persist among indigenous, traditional and local communities – as a source of cultural resilience. Information underpins resilient and adaptive institutions. Institutions that foster learning and allow rapid feedback to decision makers, alongside investments in improved data collecting and reporting systems for SDGs, can provide further adaptive capacity, in the light of potentially rapid or abrupt global changes.

A new strategic framework for sustainable development

As pointed out by science (Planet under Pressure Statement 2012, IPCC 5th Assessment report 2014), key agencies such as the World Bank (4 degree report), OECD, UNEP (GEO5), and global business

(World Business Council for Sustainable Development, Action 2020), nations of the world must now recognize that development, at all scales, hinges on our ability to meet global sustainability goals.

We define 'development' as the ultimate objective of the SDGs, as ***"Progressing Well Being for All..."***, which leads to a development paradigm that integrates the need for enhanced capacities, access and delivery of assets and sustainable incomes, more inclusion and better distribution, with the requirement to build sustainable and resilient societies and ensure all human beings' access to all capitals (human, social, physical and natural).

Sustainable development, while still including the three pillars of social, environmental and economic development, has changed face. Humanity has become a global force of change on the planet, which means that development now needs to occur within a safe operating space of the planet. This calls for development with a safe and fair operating space of planetary boundaries (SDSN 2nd proposed Sustainable Development Goal), which means ensuring a stable and thriving environmental floor for human development through a stable climate system and resilient ecosystems that can provide food, energy, water, health and the foundation for human prosperity and economic growth.

This necessity, of meeting global sustainability goals in pursuit of human development in the 21st century, and thus a cornerstone in the transition from MDGs to SDGs, was clearly emphasized in the Ban Ki-moon Global Sustainability Panel (HLP-GSP, 2012) which formed the UN input to the Rio+20 Earth summit, resulting in the Rio declaration calling for Sustainable Development Goals.

Science is clear on the need to transition towards a development paradigm where meeting global sustainability goals is a prerequisite to ensure future economic development and human wellbeing. Whether it's the climate system (where the IPCC now clearly shows we only have a global carbon budget of 1000 Gt CO₂ left to burn if we are serious about meeting a 2 °C target), or sustainable management of marine and terrestrial ecosystems (where science shows the need to avoid further loss of biodiversity as it erodes ecosystem resilience), the message is the same. In a world where not only the social and economic pillars of development are globalized, but also the environmental pillar, it is imperative that the world adopts an SDG framework that ensures world development on a stable planet (Griggs et al., 2013). Without such a transition, rising global environmental risks potentially resulting in catastrophic outcomes, will undermine social commitments on poverty alleviation, food security and health.

The 16 proposed Focus Areas (FA) of the Open Working Group (OWG) do, by and large, cover the most important domains of a world agenda for sustainable development. However, in the light of the above, it appears essential to organize the focus areas systematically within a strategic framework that is aligned with the new challenge for humanity in the 21st century, of safeguarding a resilient and stable Earth system as the basis for human development. This is a different vision to the MDG framework, which was largely organized along sectoral lines, and never emphasized the necessity of a sustainable development framework where the twin objectives of World development and Earth sustainability go hand in hand. The SDG process is the only, and probably last, opportunity for the nations of the world to agree on a new vision for human prosperity on Earth, which recognizes the integrated and globalized nature of Earth resilience and sustainability.

Building on the scientific advancements over the past decades¹ we propose a framework for the SDGs that matches the scientific evidence of the global challenges and opportunities facing humanity in the Anthropocene (see Figure 1). This strategic framework distinguishes between three different categories of Focal areas that need to be integrated in order to be accomplished:

- The goals that provide the fundamental Earth preconditions for human development (the stable planetary floor upon which all development can occur)

¹ from the recognition of the need for green economic development, biophysical economics, to adapting development to risks of global tipping elements and the evidence in support of development within planetary boundaries meeting global sustainability criteria) (Hall and Kitgaard, 2006; Schellnhuber 2009; Rockström et al., 2009; Steffen and ...),

- The world's social commitments to ambitious and aspirational development goals
- Goals defining key means for delivery

Among the 16 proposed Focal areas, three goals (12,13, and 14) provide the safe operating space on a stable planet (Figure 1). Even though these goals only address three of the nine planetary boundaries proposed by scientists as critical for safeguarding a resilient planet, we conclude that the proposed focal areas on a safe climate system (FA 12), sustainable oceans and marine systems (FA 13) and sustainable terrestrial ecosystems and halt all biodiversity loss (FA 14), constitute the absolutely most essential ones².

The “planetary must haves” provide the necessary basis to enable all the social goals to be met (2nd layer in the framework, Figure 1). This means that the proposed Focus Areas on (1) Poverty eradication, (2) Food security, (3) Healthy life for all, (4) Education for all, (5) Gender equality, (6) Water security and safe sanitation, (7) Energy for all, (8) Sustainable cities and (9) Peaceful societies and capable institutions, can, on the long-term only be met as long as the Earth floor is stable.

These development and global sustainability goals can only be met, by adopting strategic means of delivery, represented at the top layer in Figure 1, by the Focus Areas on (8) Economic growth, (9) Industrialization, (11) Sustainable consumption and production, (15) Global partnerships, as well as (2) Sustainable agriculture, (6) Access to water and sanitation, and (7) Access to sustainable energy³

We believe this way of framing the SDGs provides a development framework “fit for purpose” in addressing the complex global challenges of world development in the coming decades.

² The following Earth preconditions are lacking: safeguarding a protective ozone layer; avoiding damaging air pollution; sustainable management of the global nitrogen and phosphorus cycles; a stable global hydrological cycle; sustainable land use; sustainable use of novel entities created by humans – essentially chemical compounds, and avoid ocean acidification

³ These last three – sustainable agriculture, water and sanitation and energy include both social goals (e.g., energy for all) and means of delivery (ensure access).

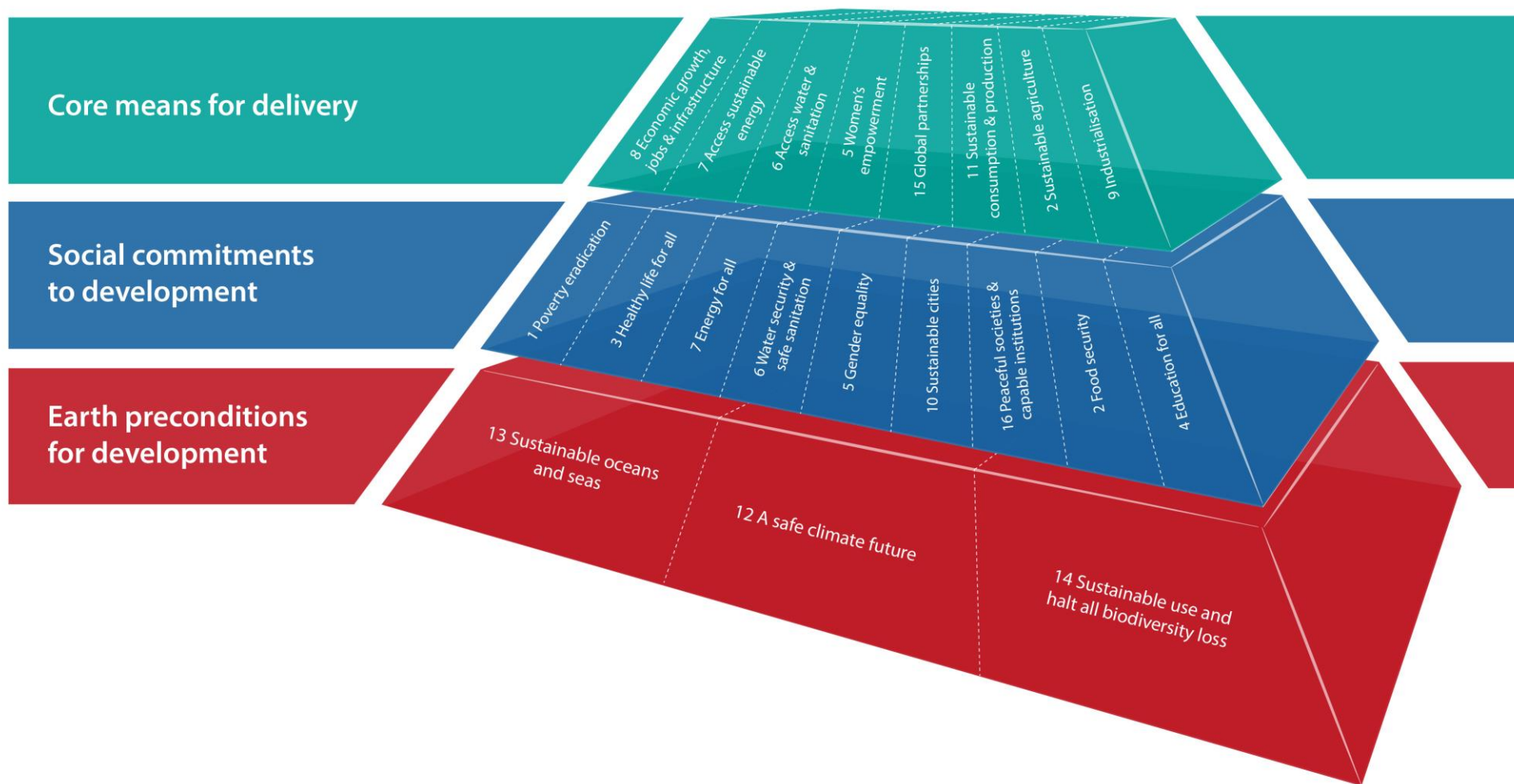


Figure 1. A strategic framework illustrating the relationship between the suggested current focal areas in OWG working document for 5-9 May

Are the proposed Focal Areas and targets the right mix?

Our assessment is that most of the required components are there (see gap analysis in the following sections below). We are concerned though of the risk of adopting an incoherent list of goals that “live their own isolated lives”, when in fact they are highly interconnected (as shown above). It is essential to recognize the need to ensure that all goals include environmental, as well as social and economic sustainability dimensions. Our conclusion is that the proposed goal structure by UNEP and SDSN provides an inspiring way of designing such an integrated framework (Figure 2, proposed UNEP and SDSN goals).

UNEP	SDSN
1. Sustainably eradicate extreme poverty, hunger and inequality in all forms.	1. End Extreme Poverty
2. Achieve long term prosperity and inter-generational equity that is respectful of the earth's capacity	2. Achieve Development within Planetary Boundaries
3. Maintain, manage, protect and restore social and ecological life support systems.	3. Achieve Gender Equality, Human Rights and the Rule of Law
4. Achieve universal social protection and empowerment, gender equality, rule of law, and peaceful and resilient societies.	4. Achieve Food Security and Rural Prosperity
5. Ensure universal access to long-lasting and sustainable energy, water, sanitation, roads and other infrastructure.	5. Empower Inclusive, Productive and Resilient Cities
6. Ensure universal coverage of sustainable and high quality health and education services.	6. Achieve Health and Wellbeing at all Ages
7. Achieve sustainable food systems, long term food security, robust rural economies, and healthy and productive ecosystems.	7. Ensure Effective Learning for Every Child for Life and Livelihood
8. Achieve inclusive and sustainable cities and industries, and viable rural to urban connectivity	8. Curb Human-Induced Climate Change
9. Transform governance and effective institutions at all levels for sustainable development.	9. Secure Ecosystem Services and Biodiversity
10. Commit, mobilize and hold accountable all stakeholders for sufficient political incentives, partnerships, and financial resources from all sources to achieve these goals.	10. Transform Governance for Sustainable Development

Figure 2. Proposed Sustainable Development goals by SDSN (left) and UNEP (right)

Gap analysis of the 16 proposed Focal Areas and targets

With our definition of 'development' as *Progressing Well Being for All, and the need to do this in a way that ensures resilience against shocks and an equitable access to capitals for current and future generations*, means that ensured access to public assets and community assets, and the opportunity to make a decent living, are all aspects of 'well being' which any development planner will address.

There is now a realization that availability of many capitals (human, social, physical, natural) form the basis for sustainable development. However, whilst social, physical and natural *productivity* and *inclusion* are generally well addressed, systemic risks that would jeopardize availability and delivery *altogether* need to be taken more seriously by planners. Thus we see progress defined along three axes of performance, with Security as the important third axis (leading to more attention to resilience aspects) and we see progress required across four broad domains of capital⁴.

In other words, our operational thinking framework may be summarized as seen in Figure 3.

⁴ (these are consistent with Environmental Economics literature and with IIRC, who separates our Financial and Manufactured capitals as components of Physical capital) and adds 'intellectual capital' which is also a human capital)

OWG Operational Thinking Framework for SDG's:

"Development" = Progressing Well Being for All

- Progress is needed along Three Axes of performance
 - **Greater Security:** *Resilience* against shocks; *Avoidance* of shocks
 - **Better Inclusion:** *Resource sufficiency* (i.e., avoid over-eating, over-consumption); Improved *resource access*; Improving *Distributional equity* as aspects of inclusion
 - **Higher Productivity:** *Agricultural & Industrial productivity*; *Resource efficiency*
- Progress is needed across Four Domains of Wealth
 - **Human Capital:** e.g., Health; Education; Skills
 - **Social Capital:** e.g., Norms & Customs; Law & Order; Taxation systems
 - **Physical Capital:** e.g., Energy; public infrastructure; housing; finance
 - **Natural Capital:** e.g., Ecological infrastructure; Agricultural Land; Freshwater availability; Soil Fertility

Figure 3. OWG operational thinking framework for the SDGs

This operational framework allows us to assess the proposed Focal Areas and targets along these key dimensions for development progress. We have carried out a rapid assessment of apparent “gaps” in the current proposed set of focal areas and targets (Table 1). This has been done particularly with a resilience, security and equity lens, and can thus be seen as an attempt to enrich further the focal areas and targets that have been developed by the OWG (to make them even more adapted to the realities of rising social-ecological turbulence in the decades ahead).

Our conclusion is that essentially all Focus Areas can be further improved by integrating aspects of performance (security, inclusion and productivity) and the need to invest in all capitals in order to build human wealth.

In the following section we provide some specific comments related to a few of the Focal areas.

Raising key opportunities of improvement within specific Focal Areas

On sustainable use and management of ecosystems and halt loss of biodiversity

These Focal Areas (now 13 and 14) should build on the agreed goals within the UN Conventional for Biological Diversity (CBD), reflected in the CBD strategic plan including the Aichi Targets (<http://www.cbd.int/sp/elements/>)⁵

Transition to sustainable and healthy food systems

The key *issue* that seemed really weak is agriculture: the entire eco-agri-food systems complex is not well captured, neither in its *ecological* reality (critical ecosystem service inputs) nor or its *social* significance (employment for a billion small farmers; 80% of food for food-insecure populations; opportunity for improving small-farm productivity hugely using sustainable farming method playing a significant role for solutions to both hunger and rural poverty).

⁵ The CBD mission statement captures well the strategic priorities: “take effective and urgent action to halt the loss of biodiversity in order to ensure that by 2020 ecosystems are resilient and continue to provide essential services, thereby securing the planet's variety of life, and contributing to human well-being, and poverty eradication. To ensure this, pressures on biodiversity are reduced, ecosystems are restored, biological resources are sustainably used and benefits arising out of utilization of genetic resources are shared in a fair and equitable manner; adequate financial resources are provided, capacities are enhanced, biodiversity issues and values mainstreamed, appropriate policies are effectively implemented, and decision-making is based on sound science and the precautionary approach.”

We strongly believe that the following paragraph somehow be force-fed (through UNEP's note) into the SDG's text, otherwise they will miss a key plank of change:

“The *economic* environment in which farmers operate is distorted by significant externalities, both negative and positive, flowing from natural ecosystems to agricultural systems and *vice-versa*, and from agricultural and food systems to human health and livelihoods. The economic invisibility of many of the impacts of our 'eco-agri-food systems' complex and its inadequate reflection at the heart of development policy are root causes of increasing fragility and lower resilience to shocks in both ecosystems and human food and health systems. Alongside this problem of a severely distorted economic environment lies a lack of appreciation of the social and ecological significance of small farming. Small-scale farming provides over a billion rural employments, and provides significant opportunity for interventions that can increase yields sustainably – targeting increased income in the hands of the poor whilst reducing damage impacts on biodiversity and human health. Overall we need a transition to an agricultural paradigm of sustainable agriculture aimed at alleviating poverty and ensuring equitable sharing of natural and physical capitals.”

Decisive aspects related to implementation, governance and policy coherence

The goals must address the current institutional failure and aim to transform governance and institutions at all levels, to be effective, accountable and transparent, for sustainable development (SDSN Goal 10; och UNEP proposed Goal:9 and partly 10).

This can be done by:

- Promoting coherence and synergies between policies and goals: Lack of coherence across policy areas poses a risk that measures or decisions in a given sphere will counteract or nullify the outcome in another sphere. Preferably, each Sustainable Development Goals should be formulated as true sustainability goals, that link human and environmental systems explicitly and thus reflect a social-ecological perspective rather than representing different silos. Such goals may also pave the way for policy coherence.
- Developing and operationalizing cohesive, well-designed effective policy and legal frameworks and institutions, including facing out of harmful subsidies and design of green incentives such as installing fiscal reforms and financial instruments, with appropriate safeguards and taking into account distributional effects, that work in favor of a sustainable development; [this links to Focus area 15].
- Assess environment values, such as mapping ecosystem services, and integrate them into national and local development and poverty reduction strategies and planning processes, and budget processes, and incorporate the value into national accounting, as appropriate, and reporting systems.
- SDGs need to be embedded in an adaptive governance context that allows for recursive adjustments of goals and strategies⁶. Adaptive governance is characterized by collaborative, flexible and learning based mechanisms, which recognize and value the diversity of knowledge, legal systems and institutional richness – that persist among indigenous, traditional and local communities – as a source of cultural resilience. Information underpins resilient and adaptive institutions. Institutions that foster learning and allow rapid feedback to decision makers, alongside investments in improved data collecting and reporting systems for SDGs, can provide further adaptive capacity, in the light of potentially rapid or abrupt global changes.

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Table 1. Gap Analysis of the 16 proposed SDG Focus Areas (shaded are generic gaps across all dimensions)

		SECURITY	INCLUSION	PRODUCTIVITY
Human capital		(1) (2) 80 % of the food in food insecure regions produced by small farms (UNEP) - source of nutrition, health	(5) Training skills targeting women with focus on sustainable solutions	(3) Sustainable diets key, high nutrition food, avoid NCDs...
		(3) Avoidance of pandemics	(7) Develop human capital on renewable energy	
		(8) Making economic development green and equitable, which delivers jobs and wellbeing while building resilience. In the developed world, this needs reducing ecological footprint by changing models of consumerism towards sustainable consumption & production; in the developing world this is about greening development planning	(8) Making economic development green and equitable, which delivers jobs and wellbeing while building resilience. In the developed world, this needs reducing ecological footprint by changing models of consumerism towards sustainable consumption & production; in the developing world this is about greening development planning	(8) Making economic development green and equitable, which delivers jobs and wellbeing while building resilience. In the developed world, this needs reducing ecological footprint by changing models of consumerism towards sustainable consumption & production; in the developing world this is about greening development planning
			(9) Ensuring high health and safety standards during industrialisation	
		(10) Resilient and sustainable urban development required to deliver human wellbeing; new and developing cities need progress in ALL dimensions of wealth, across ALL axes of performance	(10) Resilient and sustainable urban development required to deliver human wellbeing; new and developing cities need progress in ALL dimensions of wealth, across ALL axes of performance	(10) Resilient and sustainable urban development required to deliver human wellbeing; new and developing cities need progress in ALL dimensions of wealth, across ALL axes of performance
		(14) Urban residents health (physical & mental) suffers in the absence of city biodiversity / conservation zones	(11) Fair and equitable distribution of resources; resource sufficiency; lifestyle changes in the affluent countries	
			(12) A fair sharing of a finite global carbon budget of no more than 1000 Gt CO2 (IPCC AR5 WG1)	
			(15) Income opportunity for all requires a focus on avoiding 'governance failure'	
Social capital		(1) Small farms provide 1 billion jobs: how to sustain rural employment, prevent dislocating migration, in the face of conventional/industrial farming taking over, w/much fewer jobs	(1) Promoting fair pricing arrangements to improve small farm incomes	(1) (2) 1 billion jobs in small jobs, how to sustain
		(8) Making economic development green and equitable, which delivers jobs and wellbeing while building resilience. In the developed world, this needs reducing ecological footprint by changing models of consumerism towards sustainable consumption & production; in the developing world this is about greening development planning	(8) Making economic development green and equitable, which delivers jobs and wellbeing while building resilience. In the developed world, this needs reducing ecological footprint by changing models of consumerism towards sustainable consumption & production; in the developing world this is about greening development planning	(8) Making economic development green and equitable, which delivers jobs and wellbeing while building resilience. In the developed world, this needs reducing ecological footprint by changing models of consumerism towards sustainable consumption & production; in the developing world this is about greening development planning
			(9) Ensuring green and decent jobs during industrialisation	
		(10) Resilient and sustainable urban development required to deliver human wellbeing; new and developing cities need progress in ALL dimensions of wealth, across ALL axes of performance	(10) Resilient and sustainable urban development required to deliver human wellbeing; new and developing cities need progress in ALL dimensions of wealth, across ALL axes of performance	(10) Resilient and sustainable urban development required to deliver human wellbeing; new and developing cities need progress in ALL dimensions of wealth, across ALL axes of performance
		(16) Communal harmony needs active encouragement through communications & other policy interventions	(14) GDP of the Poor will be lost or sub- optimized if policy interventions do not measure and focus increases in ecosystem benefits to poor rural communities	
			(15) Governance for Equitable sharing of natural resources, climate space and ecosystems	
Physical capital			(1) Communications & information networks, & microfinance, to assist small farmers in getting market access, fair prices	(7) The resilience of renewable and non-renewable energy resources
			(2) Distribution systems that reach the poor	
			(3) Physical capital to ensure basic health services to all..	
		(8) Making economic development green and equitable, which delivers jobs and wellbeing while building resilience. In the developed world, this needs reducing ecological footprint by changing models of consumerism towards sustainable consumption & production; in the developing world this is about greening development planning	(8) Making economic development green and equitable, which delivers jobs and wellbeing while building resilience. In the developed world, this needs reducing ecological footprint by changing models of consumerism towards sustainable consumption & production; in the developing world this is about greening development planning	(8) Making economic development green and equitable, which delivers jobs and wellbeing while building resilience. In the developed world, this needs reducing ecological footprint by changing models of consumerism towards sustainable consumption & production; in the developing world this is about greening development planning
			(9) Safeguard access to resources	
		(10) Resilient and sustainable urban development required to deliver human wellbeing; new and developing cities need progress in ALL dimensions of wealth, across ALL axes of performance	(10) Resilient and sustainable urban development required to deliver human wellbeing; new and developing cities need progress in ALL dimensions of wealth, across ALL axes of performance	(10) Resilient and sustainable urban development required to deliver human wellbeing; new and developing cities need progress in ALL dimensions of wealth, across ALL axes of performance
Natural capital		(2) Ensure enough water, soil, and biodiversity; and avoid dangerous climate change		(1) (2) productivity of small farms not addressed (J Pretty et al. 2006 79 % productivity increase sust agric; FAO 2009, Prod increase Sust farming);
		(3) Avoid abrupt environmental change, and transition to clean societies (air, water)		(4) Vocational training on sustainable living
		(4) Vocational training on sustainable living; educating next generation professional (economists, engineering etc)		(6) Need a stronger focus on the role of ecosystem based management to safeguard freshwater sources (from rainfall to runoff); requires safe climate and sustainable ecosystems
		(5) Womens access and right to natural capital key for equity and resilience; Fair sharing of natural resources and ecological space (e.g., global carbon budget)		(7) Shifting rapidly from non-renewable to renewable energy resources; massive investments in R&D and technology
		(6) Resilience of freshwater supply; requires safe climate and sustainable ecosystems		
		(7) (9) Industrial development that builds resilience in supply of natural capital (pricing upstream resource adequately and taxation of resources)		
		(8) Making economic development green and equitable, which delivers jobs and wellbeing while building resilience. In the developed world, this needs reducing ecological footprint by changing models of consumerism towards sustainable consumption & production; in the developing world this is about greening development planning	(8) Making economic development green and equitable, which delivers jobs and wellbeing while building resilience. In the developed world, this needs reducing ecological footprint by changing models of consumerism towards sustainable consumption & production; in the developing world this is about greening development planning	(8) Making economic development green and equitable, which delivers jobs and wellbeing while building resilience. In the developed world, this needs reducing ecological footprint by changing models of consumerism towards sustainable consumption & production; in the developing world this is about greening development planning
		(10) Resilient and sustainable urban development required to deliver human wellbeing; new and developing cities need progress in ALL dimensions of wealth, across ALL axes of performance	(10) Resilient and sustainable urban development required to deliver human wellbeing; new and developing cities need progress in ALL dimensions of wealth, across ALL axes of performance	(10) Resilient and sustainable urban development required to deliver human wellbeing; new and developing cities need progress in ALL dimensions of wealth, across ALL axes of performance
		(11) Resource taxation	(14) Productivity of access to upstream resources (e.g., freshwater)	(13) (14) (16) Productivity and resilience is hampered by lack of conservation of resources; Strategies put in place that enhance ocean and terrestrial ecosystem productivity
		(13) (14) Resilience is hampered by lack of conservation of resources; Strategies put in place that enhance ocean resilience (Aichi Targets +)		(14) Productivity of upstream resources (e.g., freshwater provisioning/ cycling by ecosystems) is ignored, leading to agri-productivity losses
		(16) The role of a stable biosphere and climate system for peace and security (stable water, climate, land and ecosystems for peace)		