

Preliminary Benefit-Cost Assessment of the Final OWG Outcome

In a world of limited resources, we can't do everything, so **which goals should we prioritize?** The Copenhagen Consensus Center provides information on which targets will do the most social good, relative to their costs. More than 30 of the world's top economists have assessed the 169 targets from the Final Outcome of the Open Working Group (OWG) document into one of five categories, based on evidence of the economic, social and environmental costs and benefits:

Phenomenal, Good, Fair, Poor and **not enough knowledge**

While costs and benefits were considered in dollars, this is not just about economics. All three pillars of Rio+20 were assessed: economic, social and environmental – and final ratings were based on the monetized conversion of these factors. The results should be considered informative, but preliminary. The Copenhagen Consensus will present full, peer-reviewed economic evidence over the coming half year (2014).

Just think: if we could prioritize a goal that saves 10 lives for every \$250,000 spent, over another goal that saves 1 life for the same amount, we could do much more good over the next 15 years!

This report builds upon the similar analysis Copenhagen Consensus Center conducted on the 11th and 12th OWG documents.

The list of participating academics can be seen on the back. This report, like its predecessors, is available from www.copenhagenconsensus.com.

	MDGs	High Level Panel	11 th OWG	12 th OWG	Final
# total targets	18	54	139 →	212 →	169
# Phenomenal			13 →	27 →	13*
# Poor			10 →	23 →	9*
# words in all targets [^]	374	889	2360 →	4389 →	4369

*Measures only targets which were **completely** rated as PHENOMENAL or POOR. Part of the reason for the decline in both PHENOMENAL and POOR targets between 12th OWG document and the Final, is that many targets were combined, and were thus not **completely** green nor red.

[^] Words in target statements only. This count excludes words in goal statements, footnotes, sub-headings, target numbering, and pre-ambles.

Additional Background Notes to this Document

This report assesses the targets in the OWG's Final Outcome Document from 19 July 2014. This builds upon the information presented in similar documents Copenhagen Consensus Center released in the lead up to the 11th and 12th session of the OWG. From the first report to this one, we have updated ratings as the targets have been reformulated, and we have added new explanation and suggestions for better wording. The assessments should be considered preliminary, and much nuance explaining the rationales has been omitted. Nevertheless, we hope that the assessments are informative and will help focus the international development community on the targets that will yield the most social benefit relative to cost.

The number of targets suggested by the Final OWG document is 169, substantially down from the 212 targets for the 12th session. However, the text is only 20 words shorter, from a total word count of 4389 to one of 4369. Thus, while the number of targets has decreased, the number of words within each target has increased almost as much. Overall, it is unlikely we can implement all these proposed interventions to reach all of these targets simultaneously, and completely. Therefore, the international development community will need to prioritize which targets to strive for first, or to devote more resources towards. This decision will rest on a number of factors, not just economics - but knowing the costs and benefits provides an important piece of information. Of course, the Post-2015 goals have yet to be finalized, and it is our hope this document will help UN representatives prioritize the final list of targets for replacing the Millennium Development Goals.

The assessments were put together by interviewing 32 of the world's top economists in their respective fields. They were asked to provide an informed estimate of the economic costs and benefits associated with the strategies that would be available to implement the targets. As much as possible non-economic considerations such as rights based arguments and political considerations were ignored. This is not to imply that these other considerations are not important – only that the intention of this document is to focus purely on the costs and benefits. In many cases, it was hard to assess benefits and costs to the targets. However we urged the economists to provide a recommendation, while the detailed description in the back elaborates how different assumptions and interpretations could lead to lower or higher recommendations, along with how a better wording would make the target more effective.

It should be noted that the benefits and costs do NOT solely reflect money. In line with standard welfare economics principles, all benefits and costs have been considered (such as improved health and improved environmental impacts) – which have subsequently been converted into a dollar value.

The key for assessments are:

PHENOMENAL – Robust evidence for benefits more than 15 times higher than costs

GOOD – Robust evidence of benefits between 5 to 15 times higher than costs

FAIR – Robust evidence of benefits between 1 to 5 times higher than costs

POOR – The benefits are smaller than costs or target poorly specified (e.g. internally inconsistent, incentivizes wrong activity)

UNCERTAIN – There is not enough knowledge of the policy options that could reach the target OR the costs and benefits of the actions to reach the target are not well known

We thank the participating economists for their valuable input, and we hope that the international development community finds these assessments useful as they begin implementation of the Sustainable Development Goals.

Summary of Phenomenal and Poor Targets

PHENOMENAL TARGETS

Due to the fact that many phenomenal *initiatives* were subsumed within targets that also contained GOOD, FAIR and POOR components, there were not as many targets that could be labeled completely PHENOMENAL. Below, we highlight both PHENOMENAL and ALMOST PHENOMENAL targets.

- 2.b. correct and prevent trade restrictions and distortions in world agricultural markets including the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round – see [page 30](#) for explanation
- 3.7 by 2030 ensure universal access to sexual and reproductive health care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes – see [page 32](#) for explanation
- 3.a strengthen implementation of the Framework Convention on Tobacco Control in all countries as appropriate – see [page 33](#) for explanation
- 3.d strengthen the capacity of all countries, particularly developing countries, for early warning, risk reduction, and management of national and global health risks – see [page 33](#) for explanation
- 4.2 by 2030 ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education – see [page 34](#) for explanation
- 5.6 ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the ICPD and the Beijing Platform for Action and the outcome documents of their review conferences – see [page 38](#) for explanation
- 6.a by 2030, expand international cooperation and capacity-building support to developing countries in water and sanitation related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies – see [page 41](#) for explanation
- 8.10 strengthen the capacity of domestic financial institutions to encourage and to expand access to banking, insurance and financial services for all – see [page 47](#) for explanation
- 8.a increase Aid for Trade support for developing countries, particularly LDCs, including through the Enhanced Integrated Framework for LDCs – see [page 47](#) for explanation
- 9.3 increase the access of small-scale industrial and other enterprises, particularly in developing countries, to financial services including affordable credit and their integration into value chains and markets – see [page 49](#) for explanation
- 14.4 by 2020, effectively regulate harvesting, and end overfishing, illegal, unreported and unregulated (IUU) fishing and destructive fishing practices and implement science-based management plans, to restore fish stocks in the shortest time feasible at least to levels that can produce maximum sustainable yield as determined by their biological characteristics – see [page 59](#) for explanation
- 14.6 by 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, and eliminate subsidies that contribute to IUU fishing, and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the WTO fisheries subsidies negotiation – see [page 59](#) for explanation

- 17.10 promote a universal, rules-based, open, non-discriminatory and equitable multilateral trading system under the WTO including through the conclusion of negotiations within its Doha Development Agenda – see [page 67](#) for explanation

ALMOST PHENOMENAL TARGETS

- 2.2 by 2030 end all forms of malnutrition, including achieving by 2025 the internationally agreed targets on stunting and wasting in children under five years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women, and older persons – see [page 29](#) for explanation
- 3.3 by 2030 end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases – see [page 31](#) for explanation
- 3.4 by 2030 reduce by one-third pre-mature mortality from non-communicable diseases (NCDs) through prevention and treatment, and promote mental health and wellbeing – see [page 31](#) for explanation
- 3.8 achieve universal health coverage (UHC), including financial risk protection, access to quality essential health care services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all – see [page 32](#) for explanation
- 3.b support research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration which affirms the right of developing countries to use to the full the provisions in the TRIPS agreement regarding flexibilities to protect public health and, in particular, provide access to medicines for all – see [page 33](#) for explanation
- 7.1 by 2030 ensure universal access to affordable, reliable, and modern energy services – see [page 42](#) for explanation
- 7.b by 2030 expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, particularly LDCs and SIDS – see [page 43](#) for explanation
- 10.b encourage ODA and financial flows, including foreign direct investment, to states where the need is greatest, in particular LDCs, African countries, SIDS, and LLDCs, in accordance with their national plans and programmes – see [page 52](#) for explanation
- 12.c rationalize inefficient fossil fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities – see [page 57](#) for explanation
- 14.7 by 2030 increase the economic benefits to SIDS and LDCs from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism – see [page 60](#) for explanation
- 17.6 enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation, and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, particularly at UN level, and through a global technology facilitation mechanism when agreed – see [page 66](#) for explanation

POOR TARGETS

- 1.3 implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable – see [page 27](#) for explanation

- 2.4 by 2030 ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters, and that progressively improve land and soil quality – see [page 29](#) for explanation
- 4.3 by 2030 ensure equal access for all women and men to affordable quality technical, vocational and tertiary education, including university – see [page 34](#) for explanation
- 4.7 by 2030 ensure all learners acquire knowledge and skills needed to promote sustainable development, including among others through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship, and appreciation of cultural diversity and of culture's contribution to sustainable development – see [page 35](#) for explanation
- 7.2 increase substantially the share of renewable energy in the global energy mix by 2030 – see [page 42](#) for explanation
- 8.9 by 2030 devise and implement policies to promote sustainable tourism which creates jobs, promotes local culture and products – see [page 47](#) for explanation
- 9.2 promote inclusive and sustainable industrialization, and by 2030 raise significantly industry's share of employment and GDP in line with national circumstances, and double its share in LDCs – see [page 49](#) for explanation
- 12.b develop and implement tools to monitor sustainable development impacts for sustainable tourism which creates jobs, promotes local culture and products – see [page 57](#) for explanation
- 17.18 by 2020, enhance capacity building support to developing countries, including for LDCs and SIDS, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts – see [page 68](#) for explanation

MOSTLY POOR TARGETS

- 3.5 strengthen prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol – see [page 32](#) for explanation
- 4.4 by 2030, increase by x% the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship – see [page 35](#) for explanation
- 8.5 by 2030 achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value – see [page 46](#) for explanation
- 10.4 adopt policies especially fiscal, wage, and social protection policies and progressively achieve greater equality – see [page 51](#) for explanation
- 17.8 fully operationalize the Technology Bank and STI (Science, Technology and Innovation) capacity building mechanism for LDCs by 2017, and enhance the use of enabling technologies in particular ICT – see [page 67](#) for explanation

For more information on the Post 2015 Consensus project, including the content of this report, ways to be involved in this project and methods to support or donate to the work of the Copenhagen Consensus Center, please contact the project manager Brad Wong at brad@copenhagenconsensus.com.

INTRODUCTION TO THE PROPOSAL OF THE OPEN WORKING GROUP FOR SUSTAINABLE DEVELOPMENT GOALS

1. The Rio+20 outcome document, *The future we want*, inter alia, set out a mandate to establish an Open Working Group to develop a set of sustainable development goals for consideration and appropriate action by the General Assembly at its 68th session. It also provided the basis for their conceptualization. The Rio outcome gave the mandate that the SDGs should be coherent with and integrated into the UN development agenda beyond 2015.
2. Poverty eradication is the greatest global challenge facing the world today and an indispensable requirement for sustainable development. The Rio+20 outcome reiterated the commitment to freeing humanity from poverty and hunger as a matter of urgency.
3. Poverty eradication, changing unsustainable and promoting sustainable patterns of consumption and production and protecting and managing the natural resource base of economic and social development are the overarching objectives of and essential requirements for sustainable development.
4. People are at the centre of sustainable development and, in this regard, Rio+20 promised to strive for a world that is just, equitable and inclusive, and committed to work together to promote sustained and inclusive economic growth, social development and environmental protection and thereby to benefit all, in particular the children of the world, youth and future generations of the world without distinction of any kind such as age, sex, disability, culture, race, ethnicity, origin, migratory status, religion, economic or other status.
5. Rio+20 also reaffirmed all the principles of the Rio Declaration on Environment and Development, including, inter alia, the principle of common but differentiated responsibilities, as set out in principle 7 thereof.
6. It also reaffirmed the commitment to fully implement the Rio Declaration, Agenda 21, the Programme for the Further Implementation of Agenda 21, the Plan of Implementation of the World Summit on Sustainable Development (Johannesburg Plan of Implementation) and the Johannesburg Declaration on Sustainable Development, the Programme of Action for the Sustainable Development of Small Island Developing States (Barbados Programme of Action) and the Mauritius Strategy for the Further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States. It also reaffirmed the commitment to the full implementation of the Programme of Action for the Least Developed Countries for the Decade 2011–2020 (Istanbul Programme of Action), the Almaty Programme of Action: Addressing the Special Needs of Landlocked Developing Countries within a New Global Framework for Transit Transport Cooperation for Landlocked and Transit Developing Countries, the political declaration on Africa's development needs and the New Partnership for Africa's Development. It reaffirmed the commitments in the outcomes of all the major United Nations conferences and summits in the economic, social and environmental fields, including the United Nations Millennium Declaration, the 2005 World Summit Outcome, the Monterrey Consensus of the International Conference on Financing for Development, the Doha Declaration on Financing for Development, the outcome

document of the High-level Plenary Meeting of the General Assembly on the Millennium Development Goals, the Programme of Action of the International Conference on Population and Development, the key actions for the further implementation of the Programme of Action of the International Conference on Population and Development and the Beijing Declaration and Platform for Action, and the outcome documents of their review conferences. The Outcome document of the September 2013 special event to follow up efforts made towards achieving the Millennium Development Goals reaffirmed, *inter alia*, the determination to craft a strong post-2015 development agenda. The commitment to migration and development was reaffirmed in the Declaration of the High-Level Dialogue on International Migration and Development.

7. Rio+20 outcome reaffirmed the need to be guided by the purposes and principles of the Charter of the United Nations, with full respect for international law and its principles. It reaffirmed the importance of freedom, peace and security, respect for all human rights, including the right to development and the right to an adequate standard of living, including the right to food and water, the rule of law, good governance, gender equality, women's empowerment and the overall commitment to just and democratic societies for development. It also reaffirmed the importance of the Universal Declaration of Human Rights, as well as other international instruments relating to human rights and international law.
8. The OWG underscored that the global nature of climate change calls for the widest possible cooperation by all countries and their participation in an effective and appropriate international response, with a view to accelerating the reduction of global greenhouse gas emissions. It recalled that the United Nations Framework Convention on Climate Change provides that parties should protect the climate system for the benefit of present and future generations of humankind on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. It noted with grave concern the significant gap between the aggregate effect of mitigation pledges by parties in terms of global annual emissions of greenhouse gases by 2020 and aggregate emission pathways consistent with having a likely chance of holding the increase in global average temperature below 2° C, or 1.5° C above pre-industrial levels and it reaffirmed that the ultimate objective under the UNFCCC is to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.
9. Planet Earth and its ecosystems are our home and that “Mother Earth” is a common expression in a number of countries and regions, and Rio+20 noted that some countries recognize the rights of nature in the context of the promotion of sustainable development. Rio+20 affirmed the conviction that in order to achieve a just balance among the economic, social and environmental needs of present and future generations, it is necessary to promote harmony with nature. It acknowledged the natural and cultural diversity of the world, and recognized that all cultures and civilizations can contribute to sustainable development.
10. Each country faces specific challenges to achieve sustainable development. The most vulnerable countries and, in particular, African countries, least developed countries, landlocked developing countries and small island developing States face special challenges. Countries in situations of conflict also need special attention.

11. Rio+20 reaffirmed the commitment to strengthen international cooperation to address the persistent challenges related to sustainable development for all, in particular in developing countries. In this regard, it reaffirmed the need to achieve economic stability, sustained economic growth, the promotion of social equity and the protection of the environment, while enhancing gender equality, women's empowerment and equal employment for all, and the protection, survival and development of children to their full potential, including through education.
12. Each country has primary responsibility for its own economic and social development and the role of national policies, domestic resources and development strategies cannot be overemphasized. Developing countries need additional resources for sustainable development. There is a need for significant mobilization of resources from a variety of sources and the effective use of financing, in order to promote sustainable development. Rio+20 affirms the commitment to reinvigorating the global partnership for sustainable development and to mobilizing the necessary resources for its implementation. The report of the Intergovernmental Committee of Experts on Sustainable Development Financing will propose options for a sustainable development financing strategy. The substantive outcome of the third International Conference on Financing for Development in July 2015 will assess the progress made in the implementation of the Monterrey Consensus and the Doha Declaration. Good governance and the rule of law at the national and international levels are essential for sustained, inclusive and equitable economic growth, sustainable development and the eradication of poverty and hunger
13. Rio+20 reaffirmed that there are different approaches, visions, models and tools available to each country, in accordance with its national circumstances and priorities, to achieve sustainable development in its three dimensions which is our overarching goal.
14. The implementation of sustainable development goals will depend on a global partnership for sustainable development with the active engagement of governments, as well as civil society, the private sector, and the United Nations system. A robust mechanism of implementation review will be essential for the success of the SDGs. The General Assembly, the ECOSOC system and the High Level Political Forum will play a key role in this regard.
15. Rio+20 reiterated the commitment to take further effective measures and actions, in conformity with international law, to remove the obstacles to the full realization of the right of self-determination of peoples living under colonial and foreign occupation, which continue to adversely affect their economic and social development as well as their environment, are incompatible with the dignity and worth of the human person and must be combated and eliminated.
16. Rio+20 reaffirmed that, in accordance with the Charter, this shall not be construed as authorizing or encouraging any action against the territorial integrity or political independence of any State. It resolved to take further effective measures and actions, in conformity with international law, to remove obstacles and constraints, strengthen support

and meet the special needs of people living in areas affected by complex humanitarian emergencies and in areas affected by terrorism.

17. In order to monitor the implementation of the SDGs, it will be important to improve the availability of and access to data and statistics disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts to support the support the monitoring of the implementation of the SDGs. There s a need to take urgent steps to improve the quality, coverage and availability of disaggregated data to ensure that no one is left behind.
18. Sustainable Development Goals are accompanied by targets and will be further elaborated through indicators focused on measurable outcomes. They are action oriented, global in nature and universally applicable. They take into account different national realities, capacities and levels of development and respect national policies and priorities. They build on the foundation laid by the MDGs, seek to complete the unfinished business of the MDGs, and respond to new challenges. These goals constitute an integrated, indivisible set of global priorities for sustainable development. Targets are defined as aspirational global targets, with each government setting its own national targets guided by the global level of ambition but taking into account national circumstances. The goals and targets integrate economic, social and environmental aspects and recognize their interlinkages in achieving sustainable development in all its dimensions.

Sustainable Development Goals

Goal 1. End poverty in all its forms everywhere

Goal 2. End hunger, achieve food security and improved nutrition, and promote sustainable agriculture

Goal 3. Ensure healthy lives and promote well-being for all at all ages

Goal 4. Ensure inclusive and equitable quality education and promote life-long learning opportunities for all

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

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

Goal 7. Ensure access to affordable, reliable, sustainable, and modern energy for all

Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Goal 10. Reduce inequality within and among countries

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*

*Acknowledging that the UNFCCC is the primary international, intergovernmental forum for negotiating the global response to climate change.

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, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

Proposal for Sustainable Development Goals

Proposed goal 1. End poverty in all its forms everywhere

- 1.1 by 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day
 - 1.2 by 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions
 - 1.3 implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable
 - 1.4 by 2030 ensure that all men and women, particularly the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership, and control over land and other forms of property, inheritance, natural resources, appropriate new technology, and financial services including microfinance
 - 1.5 by 2030 build the resilience of the poor and those in vulnerable situations, and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters
- 1.a ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation to provide adequate and predictable means for developing countries, in particular LDCs, to implement programmes and policies to end poverty in all its dimensions
 - 1.b create sound policy frameworks, at national, regional and international levels, based on pro-poor and gender-sensitive development strategies to support accelerated investments in poverty eradication actions

Proposed goal 2. End hunger, achieve food security and improved nutrition, and promote sustainable agriculture

- 2.1 by 2030 end hunger and ensure access by all people, in particular the poor and people in vulnerable situations including infants, to safe, nutritious and sufficient food all year round
- 2.2 by 2030 end all forms of malnutrition, including achieving by 2025 the internationally agreed targets on stunting and wasting in children under five years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women, and older persons
- 2.3 by 2030 double the agricultural productivity and the incomes of small-scale food producers, particularly women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets, and opportunities for value addition and non-farm employment

- 2.4 by 2030 ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters, and that progressively improve land and soil quality
- 2.5 by 2020 maintain genetic diversity of seeds, cultivated plants, farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at national, regional and international levels, and ensure access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge as internationally agreed
- 2.a increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development, and plant and livestock gene banks to enhance agricultural productive capacity in developing countries, in particular in least developed countries
- 2.b correct and prevent trade restrictions and distortions in world agricultural markets including the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round
- 2.c adopt measures to ensure the proper functioning of food commodity markets and their derivatives, and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility

Proposed goal 3. Ensure healthy lives and promote well-being for all at all ages

- 3.1 by 2030 reduce the global maternal mortality ratio to less than 70 per 100,000 live births
- 3.2 by 2030 end preventable deaths of newborns and under-five children
- 3.3 by 2030 end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases
- 3.4 by 2030 reduce by one-third pre-mature mortality from non-communicable diseases (NCDs) through prevention and treatment, and promote mental health and wellbeing
- 3.5 strengthen prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol
- 3.6 by 2020 halve global deaths and injuries from road traffic accidents
- 3.7 by 2030 ensure universal access to sexual and reproductive health care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes

- 3.8 achieve universal health coverage (UHC), including financial risk protection, access to quality essential health care services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all
- 3.9 by 2030 substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water, and soil pollution and contamination
- 3.a strengthen implementation of the Framework Convention on Tobacco Control in all countries as appropriate
- 3.b support research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration which affirms the right of developing countries to use to the full the provisions in the TRIPS agreement regarding flexibilities to protect public health and, in particular, provide access to medicines for all
- 3.c increase substantially health financing and the recruitment, development and training and retention of the health workforce in developing countries, especially in LDCs and SIDS
- 3.d strengthen the capacity of all countries, particularly developing countries, for early warning, risk reduction, and management of national and global health risks

Proposed goal 4. Ensure inclusive and equitable quality education and promote life-long learning opportunities for all

- 4.1 by 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes
- 4.2 by 2030 ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education
- 4.3 by 2030 ensure equal access for all women and men to affordable quality technical, vocational and tertiary education, including university
- 4.4 by 2030, increase by x% the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship
- 4.5 by 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples, and children in vulnerable situations
- 4.6 by 2030 ensure that all youth and at least x% of adults, both men and women, achieve literacy and numeracy

- 4.7 by 2030 ensure all learners acquire knowledge and skills needed to promote sustainable development, including among others through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship, and appreciation of cultural diversity and of culture's contribution to sustainable development
- 4.a build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all
- 4.b by 2020 expand by x% globally the number of scholarships for developing countries in particular LDCs, SIDS and African countries to enrol in higher education, including vocational training, ICT, technical, engineering and scientific programmes in developed countries and other developing countries
- 4.c by 2030 increase by x% the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially LDCs and SIDS

Proposed goal 5. Achieve gender equality and empower all women and girls

- 5.1 end all forms of discrimination against all women and girls everywhere
- 5.2 eliminate all forms of violence against all women and girls in public and private spheres, including trafficking and sexual and other types of exploitation
- 5.3 eliminate all harmful practices, such as child, early and forced marriage and female genital mutilations
- 5.4 recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies, and the promotion of shared responsibility within the household and the family as nationally appropriate
- 5.5 ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic, and public life
- 5.6 ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the ICPD and the Beijing Platform for Action and the outcome documents of their review conferences
- 5.a undertake reforms to 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 in accordance with national laws

- 5.b enhance the use of enabling technologies, in particular ICT, to promote women's empowerment
- 5.c adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels

Proposed goal 6. Ensure availability and sustainable management of water and sanitation for all

- 6.1 by 2030, achieve universal and equitable access to safe and affordable drinking water for all
- 6.2 by 2030, achieve access to adequate and equitable sanitation and hygiene for all, and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
- 6.3 by 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater, and increasing recycling and safe reuse by x% globally
- 6.4 by 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity, and substantially reduce the number of people suffering from water scarcity
- 6.5 by 2030 implement integrated water resources management at all levels, including through transboundary cooperation as appropriate
- 6.6 by 2020 protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes
- 6.a by 2030, expand international cooperation and capacity-building support to developing countries in water and sanitation related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies
- 6.b support and strengthen the participation of local communities for improving water and sanitation management

Proposed goal 7. Ensure access to affordable, reliable, sustainable, and modern energy for all

- 7.1 by 2030 ensure universal access to affordable, reliable, and modern energy services
- 7.2 increase substantially the share of renewable energy in the global energy mix by 2030

- 7.3 double the global rate of improvement in energy efficiency by 2030
- 7.a by 2030 enhance international cooperation to facilitate access to clean energy research and technologies, including renewable energy, energy efficiency, and advanced and cleaner fossil fuel technologies, and promote investment in energy infrastructure and clean energy technologies
- 7.b by 2030 expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, particularly LDCs and SIDS

Proposed goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

- 8.1 sustain per capita economic growth in accordance with national circumstances, and in particular at least 7% per annum GDP growth in the least-developed countries
- 8.2 achieve higher levels of productivity of economies through diversification, technological upgrading and innovation, including through a focus on high value added and labour-intensive sectors
- 8.3 promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage formalization and growth of micro-, small- and medium-sized enterprises including through access to financial services
- 8.4 improve progressively through 2030 global resource efficiency in consumption and production, and endeavour to decouple economic growth from environmental degradation in accordance with the 10-year framework of programmes on sustainable consumption and production with developed countries taking the lead
- 8.5 by 2030 achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value
- 8.6 by 2020 substantially reduce the proportion of youth not in employment, education or training
- 8.7 take immediate and effective measures to secure the prohibition and elimination of the worst forms of child labour, eradicate forced labour, and by 2025 end child labour in all its forms including recruitment and use of child soldiers
- 8.8 protect labour rights and promote safe and secure working environments of all workers, including migrant workers, particularly women migrants, and those in precarious employment

- 8.9 by 2030 devise and implement policies to promote sustainable tourism which creates jobs, promotes local culture and products
- 8.10 strengthen the capacity of domestic financial institutions to encourage and to expand access to banking, insurance and financial services for all
- 8.a increase Aid for Trade support for developing countries, particularly LDCs, including through the Enhanced Integrated Framework for LDCs
- 8.b by 2020 develop and operationalize a global strategy for youth employment and implement the ILO Global Jobs Pact

Proposed goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

- 9.1 develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all
- 9.2 promote inclusive and sustainable industrialization, and by 2030 raise significantly industry's share of employment and GDP in line with national circumstances, and double its share in LDCs
- 9.3 increase the access of small-scale industrial and other enterprises, particularly in developing countries, to financial services including affordable credit and their integration into value chains and markets
- 9.4 by 2030 upgrade infrastructure and retrofit industries to make them sustainable, with increased resource use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, all countries taking action in accordance with their respective capabilities
- 9.5 enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, particularly developing countries, including by 2030 encouraging innovation and increasing the number of R&D workers per one million people by x% and public and private R&D spending
- 9.a facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, LDCs, LLDCs and SIDS

- 9.b support domestic technology development, research and innovation in developing countries including by ensuring a conducive policy environment for inter alia industrial diversification and value addition to commodities
- 9.c significantly increase access to ICT and strive to provide universal and affordable access to internet in LDCs by 2020

Proposed goal 10. Reduce inequality within and among countries

- 10.1 by 2030 progressively achieve and sustain income growth of the bottom 40% of the population at a rate higher than the national average
- 10.2 by 2030 empower and promote the social, economic and political inclusion of all irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status
- 10.3 ensure equal opportunity and reduce inequalities of outcome, including through eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and actions in this regard
- 10.4 adopt policies especially fiscal, wage, and social protection policies and progressively achieve greater equality
- 10.5 improve regulation and monitoring of global financial markets and institutions and strengthen implementation of such regulations
- 10.6 ensure enhanced representation and voice of developing countries in decision making in global international economic and financial institutions in order to deliver more effective, credible, accountable and legitimate institutions
- 10.7 facilitate orderly, safe, regular and responsible migration and mobility of people, including through implementation of planned and well-managed migration policies
- 10.a implement the principle of special and differential treatment for developing countries, in particular least developed countries, in accordance with WTO agreements
- 10.b encourage ODA and financial flows, including foreign direct investment, to states where the need is greatest, in particular LDCs, African countries, SIDS, and LLDCs, in accordance with their national plans and programmes
- 10.c by 2030, reduce to less than 3% the transaction costs of migrant remittances and eliminate remittance corridors with costs higher than 5%

Proposed goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable

- 11.1 by 2030, ensure access for all to adequate, safe and affordable housing and basic services, and upgrade slums
- 11.2 by 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons
- 11.3 by 2030 enhance inclusive and sustainable urbanization and capacities for participatory, integrated and sustainable human settlement planning and management in all countries
- 11.4 strengthen efforts to protect and safeguard the world's cultural and natural heritage
- 11.5 by 2030 significantly reduce the number of deaths and the number of affected people and decrease by y% the economic losses relative to GDP caused by disasters, including water-related disasters, with the focus on protecting the poor and people in vulnerable situations
- 11.6 by 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality, municipal and other waste management
- 11.7 by 2030, provide universal access to safe, inclusive and accessible, green and public spaces, particularly for women and children, older persons and persons with disabilities
- 11.a support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning
- 11.b by 2020, increase by x% the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, develop and implement in line with the forthcoming Hyogo Framework holistic disaster risk management at all levels
- 11.c support least developed countries, including through financial and technical assistance, for sustainable and resilient buildings utilizing local materials

Proposed goal 12. Ensure sustainable consumption and production patterns

- 12.1 implement the 10-Year Framework of Programmes on sustainable consumption and production (10YFP), all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries
- 12.2 by 2030 achieve sustainable management and efficient use of natural resources
- 12.3 by 2030 halve per capita global food waste at the retail and consumer level, and reduce food losses along production and supply chains including post-harvest losses
- 12.4 by 2020 achieve environmentally sound management of chemicals and all wastes throughout their life cycle in accordance with agreed international frameworks and significantly reduce their release to air, water and soil to minimize their adverse impacts on human health and the environment
- 12.5 by 2030, substantially reduce waste generation through prevention, reduction, recycling, and reuse
- 12.6 encourage companies, especially large and trans-national companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle
- 12.7 promote public procurement practices that are sustainable in accordance with national policies and priorities
- 12.8 by 2030 ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature
- 12.a support developing countries to strengthen their scientific and technological capacities to move towards more sustainable patterns of consumption and production
- 12.b develop and implement tools to monitor sustainable development impacts for sustainable tourism which creates jobs, promotes local culture and products
- 12.c rationalize inefficient fossil fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities

Proposed goal 13. Take urgent action to combat climate change and its impacts*

*Acknowledging that the UNFCCC is the primary international, intergovernmental forum for negotiating the global response to climate change.

- 13.1 strengthen resilience and adaptive capacity to climate related hazards and natural disasters in all countries
- 13.2 integrate climate change measures into national policies, strategies, and planning
- 13.3 improve education, awareness raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction, and early warning
- 13.a implement the commitment undertaken by developed country Parties to the UNFCCC to a goal of mobilizing jointly USD100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible
- 13.b Promote mechanisms for raising capacities for effective climate change related planning and management, in LDCs, including focusing on women, youth, local and marginalized communities

Proposed goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development

- 14.1 by 2025, prevent and significantly reduce marine pollution of all kinds, particularly from land-based activities, including marine debris and nutrient pollution
- 14.2 by 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration, to achieve healthy and productive oceans
- 14.3 minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels
- 14.4 by 2020, effectively regulate harvesting, and end overfishing, illegal, unreported and unregulated (IUU) fishing and destructive fishing practices and implement science-based management plans, to restore fish stocks in the shortest time feasible at least to levels that can produce maximum sustainable yield as determined by their biological characteristics
- 14.5 by 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on best available scientific information

- 14.6 **by 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, and eliminate subsidies that contribute to IUU fishing, and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the WTO fisheries subsidies negotiation***
- 14.7 **by 2030 increase the economic benefits to SIDS and LDCs from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism**
- 14.a increase scientific knowledge, develop research capacities and transfer marine technology taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular SIDS and LDCs
- 14.b **provide access of small-scale artisanal fishers to marine resources and markets**
- 14.c **ensure the full implementation of international law, as reflected in UNCLOS for states parties to it, including, where applicable, existing regional and international regimes for the conservation and sustainable use of oceans and their resources by their parties**

Proposed goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

- 15.1 **by 2020 ensure conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements**
- 15.2 **by 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests, and increase afforestation and reforestation by x% globally**
- 15.3 **by 2020, combat desertification, and restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land-degradation neutral world**
- 15.4 **by 2030 ensure the conservation of mountain ecosystems, including their biodiversity, to enhance their capacity to provide benefits which are essential for sustainable development**

* Taking into account ongoing WTO negotiations and WTO Doha Development Agenda and Hong Kong Ministerial Mandate.

- 15.5 take urgent and significant action to reduce degradation of natural habitat, halt the loss of biodiversity, and by 2020 protect and prevent the extinction of threatened species
- 15.6 ensure fair and equitable sharing of the benefits arising from the utilization of genetic resources, and promote appropriate access to genetic resources
- 15.7 take urgent action to end poaching and trafficking of protected species of flora and fauna, and address both demand and supply of illegal wildlife products
- 15.8 by 2020 introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems, and control or eradicate the priority species
- 15.9 by 2020, integrate ecosystems and biodiversity values into national and local planning, development processes and poverty reduction strategies, and accounts
- 15.a mobilize and significantly increase from all sources financial resources to conserve and sustainably use biodiversity and ecosystems
- 15.b mobilize significantly resources from all sources and at all levels to finance sustainable forest management, and provide adequate incentives to developing countries to advance sustainable forest management, including for conservation and reforestation
- 15.c enhance global support to efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities

Proposed Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

- 16.1 significantly reduce all forms of violence and related death rates everywhere
- 16.2 end abuse, exploitation, trafficking and all forms of violence and torture against children
- 16.3 promote the rule of law at the national and international levels, and ensure equal access to justice for all
- 16.4 by 2030 significantly reduce illicit financial and arms flows, strengthen recovery and return of stolen assets, and combat all forms of organized crime
- 16.5 substantially reduce corruption and bribery in all its forms

- 16.6 develop effective, accountable and transparent institutions at all levels
- 16.7 ensure responsive, inclusive, participatory and representative decision-making at all levels
- 16.8 broaden and strengthen the participation of developing countries in the institutions of global governance
- 16.9 by 2030 provide legal identity for all including birth registration
- 16.10 ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements
- 16.a strengthen relevant national institutions, including through international cooperation, for building capacities at all levels, in particular in developing countries, for preventing violence and combating terrorism and crime
- 16.b promote and enforce non-discriminatory laws and policies for sustainable development

Proposed goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

Finance

- 17.1 strengthen domestic resource mobilization, including through international support to developing countries to improve domestic capacity for tax and other revenue collection
- 17.2 developed countries to implement fully their ODA commitments, including to provide 0.7% of GNI in ODA to developing countries of which 0.15-0.20% to least-developed countries
- 17.3 mobilize additional financial resources for developing countries from multiple sources
- 17.4 assist developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring, as appropriate, and address the external debt of highly indebted poor countries (HIPC) to reduce debt distress
- 17.5 adopt and implement investment promotion regimes for LDCs

Technology

- 17.6 enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation, and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mecha-

nisms, particularly at UN level, and through a global technology facilitation mechanism when agreed

- 17.7 promote development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed
- 17.8 fully operationalize the Technology Bank and STI (Science, Technology and Innovation) capacity building mechanism for LDCs by 2017, and enhance the use of enabling technologies in particular ICT

Capacity building

- 17.9 enhance international support for implementing effective and targeted capacity building in developing countries to support national plans to implement all sustainable development goals, including through North-South, South-South, and triangular cooperation

Trade

- 17.10 promote a universal, rules-based, open, non-discriminatory and equitable multilateral trading system under the WTO including through the conclusion of negotiations within its Doha Development Agenda
- 17.11 increase significantly the exports of developing countries, in particular with a view to doubling the LDC share of global exports by 2020
- 17.12 realize timely implementation of duty-free, quota-free market access on a lasting basis for all least developed countries consistent with WTO decisions, including through ensuring that preferential rules of origin applicable to imports from LDCs are transparent and simple, and contribute to facilitating market access

Systemic issues

Policy and institutional coherence

- 17.13 enhance global macroeconomic stability including through policy coordination and policy coherence
- 17.14 enhance policy coherence for sustainable development
- 17.15 respect each country's policy space and leadership to establish and implement policies for poverty eradication and sustainable development

Multi-stakeholder partnerships

- 17.16 enhance the global partnership for sustainable development complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technologies and financial resources to support the achievement of sustainable development goals in all countries, particularly developing countries
- 17.17 encourage and promote effective public, public-private, and civil society partnerships, building on the experience and resourcing strategies of partnerships

Data, monitoring and accountability

- 17.18 by 2020, enhance capacity building support to developing countries, including for LDCs and SIDS, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts
- 17.19 by 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement GDP, and support statistical capacity building in developing countries

Explanation of Ratings

Proposed goal 1. End poverty in all its forms everywhere

1.1 by 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day

RATING: As written this is **POOR (UNREALISTIC)** but if amended to an achievable, realistic stretch target then the rating is **GOOD**. There is evidence to suggest that the alleviation of extreme poverty will not proceed as successfully as it did from 1990 to present, based on historical growth rates and distributions of wealth in countries with current populations of extreme poor (Yoshia et al, 2014; Chandy, Ledlie and Pencinakova, 2013; Ravalliion, 2013; Karver, Kenny and Sumner 2011). Previous policies have tended to lift those at the margin of extreme poverty and as such, sustained progress against extreme poverty will be more difficult. For example, in Uganda there is evidence that the attainment of at least 5 years of primary education helps lift individuals out of extreme poverty. Going forward, however it will be more difficult (and costly) than in the past to target and lift the remaining extreme poor who may lack basic primary education.

Additionally, some or many of the extreme poor are not necessarily from the poorest countries. As countries move from mass poverty to much lower poverty rates the residual poverty is often in pockets of geographic or ethnic differences. The growth elasticity of poverty falls sharply as countries move from mass poverty to much lower poverty, so a range of other tools are needed. This makes the process of poverty alleviation not only an economic issue, but also a complex socio-economic and potentially political issue.

Notwithstanding the costs, the benefits of poverty alleviation are large both for the individual in question, as well as society in general. For example, rising wealth within a society is correlated with better health outcomes and lower crime. Additionally, non-poor individuals are less likely to regress to poverty, if surrounded by other non-poor.

Better wording: by 2030, reduce the proportion of people living on less than \$1.25 a day (PPP) to 3%

1.2 by 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions

RATING: FAIR For those at the cusp of national poverty lines, the costs are relatively low compared to benefits. However, pushing for very large reductions in nationally defined poverty rates would be more costly, with uncertain economic benefits.

Another issue with this target is that the setting of national poverty lines is not standard across countries. This makes it difficult to know precisely where to prioritize poverty reduction efforts. If a country X exhibits a larger % of its pop. below the national poverty line, relative to country Y – it is not straightforward to assert that country X has more relatively poor. The difference could partly arise from different definitions of national poverty lines.

For the other elements of poverty (health, education and living standards consult the relevant part of this document).

Better wording: By 2030, reduce by at least 50% the proportion of people living below national poverty lines “based on standardized, internationally consistent methodology to construct poverty lines”

1.3 implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable

RATING: POOR The introduction of a social protection floor, while laudable, is difficult to achieve well (properly targeted at low cost). Additionally, the resources required to implement full social protection are large and it risks creating very large (even 100%) effective marginal tax rates for the poor with disincentives to increase income. Moreover, the emerging evidence from studies that account for the full, general equilibrium effects of social protection and cash transfer programs is that unintended consequences can harm non-target groups either because local prices are raised (Lehmann, 2013) or because of the distortion in employment choices with expanded social protection leading to more informal employment (Camacho et al, 2013).

1.4 by 2030 ensure that all men and women, particularly the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership, and control over land and other forms of property, inheritance, natural resources, appropriate new technology, and financial services including microfinance

RATING: GOOD While the costs are not trivial, there are large, personal benefits through increasing economic opportunity for marginalized groups such as women particularly in rural settings (in urban settings the limited evidence suggests otherwise).

For **basic services**, the rating depends on the nature of the services. Modern energy services are **PHENOMENAL**, water services are **FAIR**, housing services are **FAIR** and transport services are **FAIR**.

For **inheritance**, the benefit-cost ratio is difficult to calculate, since inheritance of goods and property is a zero-sum event. Enforcing inheritance rights for one individual, naturally diminishes the inheritance rights of another party. Distribution of inheritance is an important consideration, but not one that is easily subjectable to cost-benefit analysis. **UNCERTAIN** rating. Similar argument and rating is applicable to (finite) **natural resources**.

Enforcement of **property rights** is an important enabler of economic growth – with again larger benefits for women. For example, there is evidence that if women were able to better enforce property rights they would have more incentives to increase the value and productivity of land they manage (if a crop or plot of land becomes valuable, there is the risk of appropriation by men in the household). **GOOD** rating.

With respect to **new technology**, the benefit-cost ratio depends on the technology involved. One good example of how this can be attained is mobile phones, where coverage is large even in remote parts of developing countries. Computers, on the other hand, would be more expensive and difficult to maintain. **FAIR** rating.

Regarding **microfinance**, in theory the empowerment potential offered by credit is good for the poor. However, the evidence is still ambiguous. Karlan and Zinman (2011), however, show that in an experiment in the Philippines microfinance may not be as beneficial as it was always thought because entrepreneurs shrank their businesses instead of growing them, their subjective wellbeing was reduced, and women did not benefit from the program more than men, if anything, the treatment effect for men and women was the same. The rating

is **UNCERTAIN**. For broader **financial services** such as general credit, bank services, etc... the rating is **PHENOMENAL**.

1.5 by 2030 build the resilience of the poor and those in vulnerable situations, and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters

RATING: GOOD Building resilience to **environmental shocks and disasters** through early warning systems have low absolute costs (around \$1B globally), and can provide benefits in terms of lives saved and economic losses avoided between 4 and 36 times the investment, depending on the assumptions (Hallegate, 2012). Poverty-reduction is a clear way to improve vulnerability to **social and economic shocks**, which as stated in [1.1](#) and [1.2](#) has a **GOOD** or **FAIR** rating. For others, the provision of humanitarian aid during food emergencies has a **PHENOMENAL** rating. However, The window for prevention of humanitarian food disasters is small and this needs to be explicitly measured in a target.

1.a ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation to provide adequate and predictable means for developing countries, in particular LDCs, to implement programmes and policies to end poverty in all its dimensions

RATING: UNCERTAIN This is an issue of financing and cannot be subject to cost-benefit analysis (how the funds will be used determines the cost-benefit ratio, not the source of them).

1.b create sound policy frameworks, at national, regional and international levels, based on pro-poor and gender-sensitive development strategies to support accelerated investments in poverty eradication actions

RATING: GOOD This supports the achievement of target [1.1](#), so shares the same rating.

Proposed goal 2. End hunger, achieve food security and improved nutrition, and promote sustainable agriculture

2.1 by 2030 end hunger and ensure access by all people, in particular the poor and people in vulnerable situations including infants, to safe, nutritious and sufficient food all year round

RATING: The ambition to end hunger by 2030 is unrealistic. This is a **GOOD** target if it is directed at a subset of the population who could be reached but are currently lacking sufficient calorific and micronutrient intake.

Better wording: Reduce the proportion of people suffering from hunger to x% (x set on realistic stretch target based on current conditions)

2.2 by 2030 end all forms of malnutrition, including achieving by 2025 the internationally agreed targets on stunting and wasting in children under five years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women, and older persons

RATING: PHENOMENAL for targets related to children under 5. There is robust evidence that reducing stunting leads to lifetime of ongoing benefits, at very little cost (Hoddinott et al, 2012). Complete elimination of malnutrition by 2030 is optimistic.

There is robust evidence that addressing the needs of pregnant and lactating women is a **GOOD** target.

For adolescent girls and older persons, the evidence is **UNCERTAIN**, though likely to be in the **FAIR** range, mainly because the costs of providing micronutrients is inexpensive. Focus should be on children under 2 years of age, since this is the critical window where cognitive function is crystallized.

Better wording: By 2030, reduce stunting by x% and wasting by y% through the provision of micronutrients and nutrients to 0-2 year olds

2.3 by 2030 double the agricultural productivity and the incomes of small-scale food producers, particularly women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets, and opportunities for value addition and non-farm employment

RATING: GOOD, though benefits and costs are driven by context specific factors. Generally, costs to increase small scale food productivity and income are modest (particularly with improved seed varieties) while benefits can be long and sustained. Increasing small-scale food producer income would benefit women in particular. Doubling agricultural productivity, does not necessarily equate to doubling of income.

2.4 by 2030 ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters, and that progressively improve land and soil quality

RATING: POOR This goal is poorly specified and calls for outcomes that are unrealistic and internally inconsistent. It would be improved by focusing on key aspects where interventions are known to be effective. For example, improving resilience of crops through agricultural research and development has a **GOOD** rat-

ing. Other policies to improve resilience to disasters include weather-based crop insurance (**FAIR**, but likely need significant financial subsidies), integrated fertility management and water quality improvements. These have a **FAIR** rating.

Better wording: Increase spending on agricultural R&D by x% to promote resilient crop varieties

2.5 by 2020 maintain genetic diversity of seeds, cultivated plants, farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at national, regional and international levels

RATING: FAIR There is evidence that maintaining genetic diversity of farmed species is beneficial, particularly in valuable industries e.g. maintaining diversity in grape varieties to prevent disease – and the costs of doing so are likely to be low. Maintaining genetic diversity of wild species is an **UNCERTAIN** proposition: estimated values for pharmaceutical uses for example do not come up with large benefit cost ratios.

..., and ensure access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge as internationally agreed

RATING: UNCERTAIN Equitable sharing does not necessarily increase aggregate benefits unless there is value placed on distribution of benefits or unless the beneficiaries of equitable sharing are more inclined to protect natural assets. The latter may be the case but is not always clear. The target is difficult to assess.

2.a increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development, and plant and livestock gene banks to enhance agricultural productive capacity in developing countries, in particular in least developed countries

RATING: GOOD A notable problem in agricultural research in LDCs is lack of local institutions that are able to modify varieties to local conditions. Increased investment in this area would have significantly higher benefits than costs.

2.b correct and prevent trade restrictions and distortions in world agricultural markets including the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round

RATING: PHENOMENAL 60% of the gains from liberalizing merchandise trade globally from the Doha development round, would come from agricultural policy reforms, particularly reducing import restrictions and agricultural subsidies (but also, in the case of countries such as Argentina, from reducing agricultural export taxes).

2.c adopt measures to ensure the proper functioning of food commodity markets and their derivatives, and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility

RATING: FAIR There is some evidence that food price volatility can contribute to food insecurity, especially for poor people

Better wording: Reduce food price volatility by x% through proper stockholding

Proposed goal 3. Ensure healthy lives and promote well-being for all at all ages

3.1 *by 2030 reduce the global maternal mortality ratio to less than 70 per 100,000 live births*

RATING: As written this is an **unrealistic** target. The Commission for Investing in Health, 2013 (CIH) recommends a target of 94 maternal deaths per 100,000 live births by 2030 as a realistic, but ambitious stretch target for MMR. With more realistic targets for MMR this target would be rated **FAIR**. It is relatively cost-effective to reduce MMR in lower income countries through spread of basic health interventions. To reduce MMR beyond this requires more costly interventions such as improved health facilities and registered attendants at birth.

Better wording: by 2030 reduce the maternal mortality ratio to less than 94 per 100,000 live births

3.2 *by 2030 end preventable deaths of newborns and under-five children*

RATING: It is very **unrealistic** to expect an end to preventable new-born, and under-five deaths in wealthy, developed nations, let alone lower and middle income countries by 2030. With realistic targets for reduction in child and newborn death rates (say 20 per 1,000 live births as recommended by CIH), the rating is **GOOD**. For children between 1-59 months, interventions are relatively cheap (e.g. basic health, vaccines, micronutrients) and have lifetime benefits. For neo-natal infants (less than 1 month), the rate of decline in deaths can continue in low and middle-income countries with relatively inexpensive interventions. However, at some point sustained reduction in neo-natal mortality rates will only occur with costly intensive care facilities.

Better wording: reduce under 5-mortality rate to 20 per 1,000 live births and neo-natal mortality rate to 11 per 1,000 live births

3.3 *by 2030 end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases*

RATING: As written this target is **POOR**, because the ambition of ending these diseases by 2030 is unrealistic. However, achieving realistic reductions in the burden of these diseases is possible, and has the following ratings: HIV/AIDS **FAIR**, tuberculosis **PHENOMENAL**, malaria **PHENOMENAL** (Jamison et al, 2012) and neglected tropic diseases, **PHENOMENAL** (Musgrove and Hotez, 2009) hepatitis **UNCERTAIN** (potentially even **POOR**) because the studies are old (Tepakdee et al. 2002), water-borne diseases is **GOOD** (Hutton and Haller, 2004) and other communicable diseases is **UNCERTAIN** because the concept is too broad to be sure.

Better wordings (from CIH, 2013):

- Reverse the spread of HIV / AIDS and reduce annual AIDS deaths to 3 per 100,000 persons by 2030 – **FAIR**
- Reverse the spread of TB and reduce annual TB deaths to 4 per 100,000 persons by 2030 - **PHENOMENAL**
- Reverse the spread of malaria and reduce annual malaria deaths by 95% from 2010 to 2030 – **PHENOMENAL**

3.4 *by 2030 reduce by one-third pre-mature mortality from non-communicable diseases (NCDs) through prevention and treatment, and promote mental health and wellbeing*

RATING: Assuming targeted interventions against specific NCDs where there are known means to reduce

the burden of disease the rating is **PHENOMENAL** – for example, a tripling in tobacco tax worldwide is a highly effective intervention to prevent various NCDs including lung cancer (Jha and Peto, 2014). For older generations, reducing burden of NCDs is rated as **FAIR** - managing the health of older people will be net benefit and particularly so for countries where population is ageing. However, older generation have less time to benefit from improved health outcomes. For reducing mental health problems the rating is **FAIR**. Some good benefit-to-cost interventions to ameliorate mental health related suicide, include restricting access to guns and pesticides.

3.5 strengthen prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol

RATING: For prevention of substance abuse the rating is **POOR** - The costs of policing substance abuse are very high while success has been limited.

3.6 by 2020 halve global deaths and injuries from road traffic accidents

RATING: For halving road deaths and injuries, the rating is **FAIR**. The costs of preventing road traffic deaths are relatively high (for example significantly improved road infrastructure).

3.7 by 2030 ensure universal access to sexual and reproductive health care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes

RATING: PHENOMENAL Family planning interventions are inexpensive with clear benefits. Kohler, 2012 shows that this has a very high BCR (\$150 back on every dollar).

3.8 achieve universal health coverage (UHC), including financial risk protection, access to quality essential health care services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all

RATING: For **UHC** the rating is **PHENOMENAL**, assuming a gradual increase in coverage over time, focusing first on diseases where interventions have high benefits-to-costs. For **financial risk protection** the rating is **UNCERTAIN**. For **affordable essential medicines**, since much depends on what is meant by “affordable” and “essential”, the rating is **UNCERTAIN**. The cost structure of vaccines is typically cheaper with known benefits. The rating for these is therefore, **GOOD**.

3.9 by 2030 substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water, and soil pollution and contamination

RATING: GOOD While it can be costly to manage **hazardous chemicals**, the release of these substances into the environment can create significant health problems. There is a solid economic case to restrict the release of such substances into air, water and soil.

For **air pollution** the rating is **FAIR**, but with uncertainty. Previous research suggests interventions reducing indoor air pollution have a **FAIR** rating (e.g. Hutton et al, 2008). However, recently updated Global Burden of Disease figures suggest that deaths from indoor air pollution are much higher than expected. There are certain nuances within the exposure function that must be considered when assessing cost and benefits. Regarding outdoor air pollution there again is evidence that reduction in outdoor air pollution through improved vehicle fuel standards, filtering of pollution at the source can have **GOOD** benefits.

The main causes of death and illness from water pollution relate to water availability and sanitation. Interventions to improve this have a **GOOD** rating (see target [6.2](#)).

For soil pollution the rating is **UNCERTAIN**, since there is not enough available evidence.

3.a strengthen implementation of the Framework Convention on Tobacco Control in all countries as appropriate

RATING: PHENOMENAL Increasing tobacco tax worldwide (a core requirement of the Convention) is a highly effective intervention to prevent various NCDs including lung cancer (Jha and Peto, 2014)

3.b support research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration which affirms the right of developing countries to use to the full the provisions in the TRIPS agreement regarding flexibilities to protect public health and, in particular, provide access to medicines for all

For R&D into vaccines and medicines the rating is **PHENOMENAL** – there are considerable costs to undertake this research but the benefits are enormous. For the rest of the target the rating is **FAIR** – pharmaceutical companies have provided concessional price access for diseases in developing countries (e.g. HIV) which are not as prevalent as in the developed world. Additionally, pharmaceutical companies have not been readily willing to commit to patent pools. In the absence of pharmaceutical cooperation, large costly mechanisms are required to improve affordability for developing world individuals, which can be difficult to finance. The benefit-cost profile depends on the disease and treatment in question. Subsidising combination treatments of artemisinin for malaria via the “Affordable Medicines Facility” for example has a **PHENOMENAL** benefit to cost ratio (Jamison et al, 2012).

3.c increase substantially health financing and the recruitment, development and training and retention of the health workforce in developing countries, especially in LDCs and SIDS

RATING: UNCERTAIN There is no cost-benefit evidence on the above targets.

3.d strengthen the capacity of all countries, particularly developing countries, for early warning, risk reduction, and management of national and global health risks

RATING: PHENOMENAL For diseases that particularly pose a global health risk, e.g. infectious diseases, it has been shown that strengthening the public health system can bring tremendous benefits. For example, the TB DOTS has been shown to have a very high cost-benefit ratio across the world (Laxminayaram et al, 2009) as does malaria (WHO, 2014).

Proposed goal 4. Ensure inclusive and equitable quality education and promote life-long learning opportunities for all

4.1 by 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes

RATING: GOOD for primary education and FAIR for secondary education though it should be noted that goals promoting universal education have been promised since 1960s, and have all failed. That said, the prioritization should be for girls, over boys since girls tend to be further behind in education attainment and investment in girls education is associated with high social returns. ‘Free’ education for all should not be a policy goal, since the costs are disproportionate to the benefits for the upper levels of education and the sources of finance are uncertain. If anything, it should be free for those who cannot afford it. ‘Equitable’ education is another general term that should be avoided without specifying what it means, e.g. should all citizens achieve secondary education to 18 years? This does not even consider the costs of financing.

For improving the quality of education the rating is **FAIR** (Psacharopoulos, 2014) though the body of evidence on education quality is small. Among the few studies that report costs, a typical finding is that an increase of 1 standard deviation of test scores costs \$100 (Kremer et al., 2013). An estimate of average social rates of return to education quality interventions is 15%, which corresponds to a benefit cost ratio of 3 to 5.

Better wording: Increase access of girls to primary education

4.2 by 2030 ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education

Rating: PHENOMENAL, though depends on **realistic** stretch target that represents an **improvement** over present conditions in a given country or setting. Most evidence including that of Nobel laureate Heckman, shows that the benefits of acting early are very large, with relatively lower costs. Most of this evidence is from US studies, though there is little reason to believe that it would not also be the case in developing countries.

Better wording: Increase the proportion of children in pre-primary education and early childhood development programmes

4.3 by 2030 ensure equal access for all women and men to affordable quality technical, vocational and tertiary education, including university

RATING: POOR Literature suggests that **vocational training** does not provide large benefits relative to costs (Psacharopoulos, 2014). For **tertiary education** we have plenty of evidence that in all countries the poor pay for the higher education of the rich. This because the rich send more of their children to higher education relative to the taxes paid by the two groups. The solution is to introduce tuition fees for the rich and scholarships for the poor.

4.4 by 2030, increase by x% the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship

RATING: This is a multi-faceted target, however in general improving the education of youth has a **FAIR** rating, while for adults it is **POOR**. As stated above, the literature suggests that **vocational and technical** does not provide large benefits relative to costs (Psacharopoulos, 2014) so the rating is **POOR**.

4.5 by 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples, and children in vulnerable situations

RATING: PHENOMENAL Women's access to education has hugely positive effects on themselves and their communities. Studies have shown that the benefits are very large; improved education improves not only women's health and livelihoods but also the health and lives of their children. Improving education for vulnerable groups has benefits to cost in the **FAIR** range. While education attainment confers benefits, reaching marginalized groups would be expensive lowering the benefit-cost ratio.

4.6 by 2030 ensure that all youth and at least x% of adults, both men and women, achieve literacy and numeracy

RATING: GOOD regarding youth literacy, **FAIR** regarding adult literacy. However, youth literacy and basic literacy is a natural outcome of [4.1](#) so it seems superfluous. Adult literacy is more costly to accomplish and the benefits last fewer years.

4.7 by 2030 ensure all learners acquire knowledge and skills needed to promote sustainable development, including among others through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship, and appreciation of cultural diversity and of culture's contribution to sustainable development

RATING: POOR First of all, the target contains too many diverse components each deserving a separate treatment and rating. Second, many of the components are nice-sounding keywords that are difficult to define: For example, what is "culture of peace and non-violence"? What exactly is a "culture of sustainable development"? If these are not defined well then the target risks being ineffective.

4.a build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all

RATING: UNCERTAIN, because this is another multifaceted target that defeats cost-benefit analysis.

4.b by 2020 expand by x% globally the number of scholarships for developing countries in particular LDCs, SIDS and African countries to enrol in higher education, including vocational training, ICT, technical, engineering and scientific programmes in developed countries and other developing countries

RATING: GOOD Evidence is emerging that doctoral students are effective channels of technology transfer when they return home, so there could be large gains from expanding those flows through scholarships and fellowships. Such extensions for undergraduate and MA-level training would likely involve much larger costs for small benefit gains. The returns (for both the student and the originating country) will be greater

if students are offered scholarships to academic institutions that exhibit better learning outcomes (often in developed countries), than the ones available in their domestic country.

4.c by 2030 increase by $x\%$ the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially LDCs and SIDS

RATING: GOOD It is important to train quality teachers. While we don't have extensive cost-benefit evidence intuitively, it would seem that the benefits would be GOOD.

Proposed goal 5. Achieve gender equality and empower all women and girls

5.1 end all forms of discrimination against all women and girls everywhere

RATING: UNCERTAIN It is unclear how to rate this goal, as the policy interventions to achieve it are not specified. Generally, as discrimination against women has yet to be ended even in the developed world, it is not clear how this could then be achieved at a global scale. Yet the goal itself is valuable, as it helps to raise awareness of the need for encouraging gender equality and empowerment worldwide – and will probably have high BCR – however, there is currently no clear evidence of how this could actually be achieved.

5.2 eliminate all forms of violence against all women and girls in public and private spheres, including trafficking and sexual and other types of exploitation

RATING: UNCERTAIN As above, this is a goal which has yet to be achieved even in the developed world. Violence against women happens everywhere, and while we have some general ideas about how to help decrease it, there is a serious issue of measurement. In most cases, women do not report violence against them – and even if they start to report, it looks like there has been a spike in violence – when actually it is simply an increase in the number of *reported* but not *actual* cases. Given these uncertainties, it is probably better to remove this goal explicitly and instead focus on empowering women via economic opportunities and education, which would likely lead to a reduction in violence.

5.3 eliminate all harmful practices, such as child, early and forced marriage and female genital mutilations

RATING: GOOD The benefits of later marriage are high, and different studies suggest a variety of ways to achieve this (e.g. campaigns, access to education). Benefits include better health (young mothers and their children are higher risk, and delayed marriage has positive correlations with education). The BCR ratio of this goal is therefore generally quite high, but there is still a need for more evidence. The goal wording also needs to be better clarified; e.g. definition of who is a ‘child’. Also, forced marriage is related more to violence so should be put in another category to define this goal better.

For ending FGM the rating is **UNCERTAIN** FGM is currently outlawed in 26 of 29 countries where it is prevalent. This shows that legislation to end FGM is an ineffective solution. The most common justification for the practice cited by men and women is social acceptability. This suggests interventions to end FGM will need to target changing cultural norms, which is difficult to accomplish. The study by Denison et al (2009) offers a systematic assessment of interventions designed to change attitudes and end the practice of FGM. They conclude that although the calculated effect sizes for the interventions were positive, the low quality of the study designs affects the interpretation of results and raises doubts about the validity of the findings (Fearon and Hoeffler, 2014) Campaigns and educational programs could be proven to be effective, but changing cultural norms is something that takes an enormous amount of time.

5.4 recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies, and the promotion of shared responsibility within the household and the family as nationally appropriate

RATING: UNCERTAIN In a household with two members, if one works outside the home the other does “home production”, which is domestic work. In a household with two members working outside the

home, either they will outsource “home production”, or one or the two members will devote some time to it, probably having a smaller amount of leisure time. Home production is not a good that has to be “recognized and valued”, and even if we know from time use surveys around the world that women are the household members that spend more time in domestic work activities, this could even be optimal under some conditions. The problem is when women are the ones that systematically spent time on domestic work, enjoying a lower amount of leisure. This is almost always due to social norms and cultural reasons that we economists do not know how to change. Thus, I would rate this as “uncertain”, but I would take the opportunity to point out that improving income-generating activities for women could make women less likely to spend a disproportionate amount of time in home production in the long run, as the amount of time spent by women in home production could decline with economic development.

5.5 ensure women’s full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic, and public life

RATING: GOOD There have been various studies that show having female politicians affects health and education – and generally has a positive effect on policies and society, meaning that benefits of this goal are quite high. Costs, however, are very difficult to estimate (which doesn’t allow it to get a phenomenal rating). Other benefits outside policy level interventions, also include women simple acting as a positive role model for younger girls/women (based on studies in India). Further studies have shown that female politicians seem to be less corrupt than male politicians (therefore the costs are lower, increasing benefits). However, even if the cost of female politicians is equal to men – the benefits are still huge.

5.6 ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the ICPD and the Beijing Platform for Action and the outcome documents of their review conferences

RATING: PHENOMENAL This is a very crucial goal: without having control of their own reproductive health, women would not receive the appropriate amount of education, and can suffer from serious negative health consequences due to early childbearing etc. Kohler, 2012 shows that this has a very high BCR (\$150 back on every dollar) and this is such a basic right of women that the benefits are undeniable. It should also be added here: access to basic health care/rights – which underlie sexual and reproductive health.

5.a undertake reforms to 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 in accordance with national laws

RATING: GOOD This goal is linked strongly to general development; the first step is to ensure women have opportunities to access assets and therefore gain income.

Additionally, there is evidence that improving property and ownership rights of women would increase aggregate economic benefits. For example, if women were able to better enforce property rights they would have more incentives to increase the value and productivity of land they manage (if a crop or plot of land becomes valuable, there is the risk of appropriation by men in the household).

Giving access to financial services is **PHENOMENAL**, especially if we take into account the success of microfinance in empowering women and getting them out of poverty.

5.b enhance the use of enabling technologies, in particular ICT, to promote women's empowerment

RATING: FAIR Giving women access to ICT services is probably FAIR BCR (relatively higher cost), but it could be good if learning how to operate computers and the internet are valuable skills in the labor market, and if they can access information in the internet, which could empower women.

5.c adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels

RATING: UNCERTAIN Changes in laws do not always result in changes in practices. For example, out the 29 countries for which female genital mutilation is most prevalent, 26 have outlawed the practice. However, it is probably a good symbolic statement to remove discrimination between men and women in legislation.

This should be rephrased: laws should ensure (not promote) gender equality. Equal rights to hold and inherit property should be in the constitutions of all countries, for example.

Proposed goal 6. Ensure availability and sustainable management of water and sanitation for all

6.1 by 2030, achieve universal and equitable access to safe and affordable drinking water for all

RATING: FAIR if focused on access within the household. The costs for basic options (e.g. community well) are low, and the *quantifiable* benefits are considerable (time saved and health benefits). Additionally there are social benefits that cannot be quantified so these are potentially an underestimate.

6.2 by 2030, achieve access to adequate and equitable sanitation and hygiene for all, and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations

RATING: GOOD Like water access, the costs for basic options (pit latrine, pour flush, community well) are low, and the *quantifiable* benefits are considerable (time saved and health benefits). For more complex sanitation improvements such as providing piped water and sewer sanitation, the costs are naturally higher. Within this setting, the rating is **FAIR**. (see Hutton, 2012; Rijsberman and Zwane, 2012; Whittington et al. 2008)

6.3 by 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater, and increasing recycling and safe reuse by x% globally

RATING: FAIR, but depends on the interventions taken to improve ‘water quality’. If it means installing capital-intensive secondary treatment facilities across the globe, then this is very unlikely to occur by 2030. However, there are localized, cheaper interventions that can be implemented to improve water quality such as filters. Reducing pollution is an ambitious goal, but the focus on dumping of toxic materials is sensible, since there are stronger incentives to remove toxicity versus less harmful (but still harmful) pollution.

For improving wastewater treatment, recycling and reuse - the limited evidence suggests **FAIR** BCR (Asian Development Bank, 2013; Aram and Malinova, 2003; Murray and Drechsel, 2011). A large part of the benefit is environmental which entails complex cost-benefit analyses that need more research and time to assess properly (Drechsel et al., 2014).

6.4 by 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity, and substantially reduce the number of people suffering from water scarcity

RATING: FAIR for the **efficiency** component of the target. There are identifiable technologies that could improve water efficiency (e.g. drip or sprinkler irrigation, leak detection mechanisms, low flush toilets) and would have BCRs greater than 1. In developing nations, agriculture takes a large proportion of water use, so focusing on agricultural water use – particularly moving away from traditional canal irrigation to drip / sprinkler irrigation – would be a **GOOD** priority. In a multi-sector environment where water is scarce, improving efficiency of water use in one sector has the benefit of freeing up water for use in another sector.

The likely impediment to the achievement of this target is changing the behavior of water users, which presents unique challenges. Governments around the world have set water-use efficiency targets, typically with mixed success e.g. California’s 20% by 2020. On the other hand, increasing demographic and environmental pressures (such as climate change) may compel actors to improve water use efficiency.

For water **extraction** component of the target, the rating is **GOOD** – the technology is available (hydraulic infrastructure) to increase extraction where it lags behind demand and it is high on the agenda of governments. However it can be difficult to enforce because it requires authority and cooperation of water users.

6.5 by 2030 implement integrated water resources management at all levels, including through transboundary cooperation as appropriate

RATING: FAIR This is a good first step in water resource management because, at the very least, it compels the collection of data and assessing a baseline of water usage within an area. The other positive about this target is that it requires relatively fewer actors to implement, with a corresponding reduction in complexity. The trans-boundary element of this target is however, difficult and would entail much higher costs.

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

RATING: FAIR The benefits are apparent. However, this is difficult to achieve because it requires (costly) monitoring or creating incentives to minimize ecosystem-destroying behavior. Since this is usually a negative externality of some personally beneficial activity, it complicates the achievement of the target

6.a by 2030, expand international cooperation and capacity-building support to developing countries in water and sanitation related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies

RATING: PHENOMENAL International cooperation on water related technology has been occurring for many years and there is growing international recognition of the importance of distributing WASH technologies. The costs of cooperation are low and the benefits tangible and much larger than costs. For example, municipalities from all over the world have been sharing technologies on how to treat and extract water and energy from fecal sludge, which, with the use of private sector capital and involvement, has provided large resource benefits.

6.b support and strengthen the participation of local communities for improving water and sanitation management

RATING: FAIR This is more of a process target related to governance of a broader aim (improving water and sanitation management), so it should have a rating similar to target [6.1](#).

Proposed goal 7. Ensure access to affordable, reliable, sustainable, and modern energy for all

7.1 *by 2030 ensure universal access to affordable, reliable, and modern energy services*

RATING: As written this target is **FAIR**, because achieving universal access requires large infrastructure investment over a relatively short period of time which will likely be extremely costly. However, if the target is set more realistically then the rating is **PHENOMENAL**. Increasing access to modern energy has very large benefits from an economic, health and education perspective. The costs are not trivial, but the benefits are potentially enormous.

Better wording: By 2030 increase to x% the proportion of people able to access modern energy services

7.2 *increase substantially the share of renewable energy in the global energy mix by 2030*

RATING: POOR The costs to achieve this will be large and the impact on climate change will be very small, especially since total global energy consumption will increase in the future (increase in denominator).

Subsidies, and other inducements such as feed-in-tariffs (FITs) and renewable portfolio standards (RPSs), have been shown to be extremely cost ineffective and have not impacted emissions as hoped.

Krozer (2013) looks at the case of Europe's renewables policies between 2002 and 2011 and considers benefits in terms of reductions of CO₂ emissions and fossil-fuel imports. He finds that benefits have been higher than the FIT costs for on-shore wind and small hydro during periods of high oil prices. However, the costs of solar photovoltaics have been significantly higher than the benefits and slightly higher in the case of solar thermoelectric (Krozer 2013).

Del Río and Gual (2007) look at the costs of public support for the Spanish RES-E (electricity from renewable energy sources) deployment granted through the feed-in-tariff system (FIT). They find that the total RES-E support costs outweigh the external costs avoided by RES-E deployment for all technologies. (Del Río and Gual 2007).

Fundamentally, goals that target the share of renewables have potential at the local level but are limited globally. CBAs could be quite high for select regions, but globally poor without significant technological breakthroughs to deal with the intermittency and non-dispatchability of renewables

This target should be reworked as "half the share of carbon based energy in the global energy mix by 2030". This implies a reduction of fossil fuel based energy from 82% of the current mix to 65% by 2035. This is a 20.7% decrease versus the 8.5% decrease that is currently forecast to 2035. To meet this goal, the preferred renewable options are nuclear and hydro over wind and solar, given the cost profile and poor energy reliability of the latter. However, the former options are not without consequences (such as environmental externalities), which complicate the cost and benefit assessment for the target.

7.3 *double the global rate of improvement in energy efficiency by 2030*

RATING: FAIR The cost of doubling energy efficiency globally by 2030 is very high - \$3.2 trillion. However the benefits would be in the order of \$3 trillion from avoided supply of new investments, improved business

and consumer energy bills (\$500 million) and reduced CO₂ emissions (\$250Bn annually by 2030), which reflects a BCR is between 2-3 (see Sopinka and Galiana, 2014).

7.a by 2030 enhance international cooperation to facilitate access to clean energy research and technologies, including renewable energy, energy efficiency, and advanced and cleaner fossil fuel technologies, and promote investment in energy infrastructure and clean energy technologies

RATING: GOOD Policies that advance low-carbon technologies have substantial value in making future reduction in CO₂ cost-effective. Further, CO₂ targets and improved low-carbon technologies are correlated to some degree. Galiana and Green (2012) show that increased R&D in clean energy has a BCR as high as 15.

7.b by 2030 expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, particularly LDCs and SIDS

RATING: This target requires the same policy response as target [7.1](#) and thus has the same rating.

Proposed goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

8.1 sustain per capita economic growth in accordance with national circumstances, and in particular at least 7% per annum GDP growth in the least-developed countries

RATING: UNCERTAIN Economic growth is correlated to desired development outcomes such as better health, reduced poverty, lower crime, better governance so in theory it is a **GOOD** or **PHENOMENAL** policy objective. However, experience shows that meeting the ambition of sustained economic growth is not straightforward. There is no well-known set of policy options available to governments that guarantee growth over the short and medium term. Additionally, inserting this goal is unlikely to induce changes in behavior since this is the policy objective of most, if not all governments around the world. Given the desire for SDGs “limited in number”, perhaps it would be worth putting the sentiment behind this goal into the preamble.

Better wording: Better to include ambition to maintain economic growth in the preamble

8.2 achieve higher levels of productivity of economies through diversification, technological upgrading and innovation, including through a focus on high value added and labour-intensive sectors

RATING: Increased productivity is an important and sound policy objective – which if done correctly confers numerous benefits. The difficulty is in implementation, particularly for structural transformations. Both the private sector and government have role to play, but typically private sector is better at driving productivity improvements.

Diversification

RATING: FAIR Diversification is important. However, diversification should not be driven top down, for example governments picking a portfolio of industries to support. Rather it should be driven via a bottom-up approach, through supporting conditions for entrepreneurship, which can naturally diversify a country’s industrial base

Technological upgrading and innovation

RATING: GOOD Generally, R&D has good benefits relative to costs though the difficulty in this target is obtaining the funds, resources and human capital to support innovation. Part of this will be developing the right conditions for innovation, and strengthening the innovation value chain to attract resources and talent. One caveat is Maskus (2014), which shows that raising R&D for developing and emerging economies beyond current trends through government expenditure or R&D credits will produce benefit-cost ratios in the **FAIR** range and even then, only between 1 to 2. Such countries would be better advised to invest in human capital and governance to establish solid frameworks within which knowledge spillovers from access to international technologies are optimized.

Focus on high value added and labour intensive sector

RATING: This part of the target depends on the mechanism used to achieve it. It can be very beneficial for countries, particularly LDCs, to integrate into existing regional and global value chains (**PHENOMENAL**), rather than creating their own industries (**POOR**) or non-market ‘job creation’ (**POOR**). Integration can be a valuable way to support manufacturing with benefits for both the domestic (more jobs) and international

economy (increased productivity, lower costs). Governments' role is to establish the conditions that attract foreign direct investment to link domestic enterprises to the global value chains.

8.3 promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage formalization and growth of micro-, small- and medium-sized enterprises including through access to financial services

Support productive activities

RATING: UNCERTAIN As stated in [8.1](#) increased productivity is an important and good policy objective, though the means to obtain it are not clear. The target contains a myriad of ideas, all of which have different ratings.

Decent job creation

RATING: POOR What is defined as 'decent jobs' often leads to job protection rules that favor insiders over outsiders, contribute to high rates of youth unemployment and can bias firms choice of optimal size and increase poverty, as has been shown in the case of India (Besley and Burgess, 2014).

Entrepreneurship

RATING: GOOD It is important to foster an environment for entrepreneurship – one in which individuals have access to capital and are rewarded for taking risks. Expanding opportunities for entrepreneurship is particularly important in the developing world where it has not just economic, but social benefits (life satisfaction, upward mobility).

Creativity and innovation

RATING: FAIR Maskus (2014) shows that raising R&D for developing and emerging economies beyond current trends through government expenditure or R&D credits will produce benefit-cost ratios in the **FAIR** range and even then, only between 1 to 2. Such countries would be better advised to invest in human capital and governance to establish solid frameworks within which knowledge spillovers from access to international technologies are optimized.

Formalization of enterprises

RATING: POOR Evidence shows that formalization of employment and enterprises does not necessarily confer benefits. Recent studies have found that the informal firms that have been induced to become formal by various interventions that subsidize the costs of formalizing have experienced little benefit on average from doing so (Bruhn and McKenzie, 2013). While the formalization of employment can confer advantages on a lucky few, the rigidities in labor markets that may be created act to reduce overall labor demand at the expense of the many.

Growth of enterprises

RATING: UNCERTAIN There have been randomized controlled trials that suggest certain interventions such as providing early stage risk capital, and improving basic skilling have high benefits, relative to costs. Evidence is not clear enough to provide more confident recommendation.

Access to financial services

RATING: PHENOMENAL Access to credit for small scale producers is very important. It encourages entrepreneurship and allows businesses to expand. This is a key target that is likely to yield economic and social benefits.

8.4 improve progressively through 2030 global resource efficiency in consumption and production, and endeavour to decouple economic growth from environmental degradation in accordance with the 10-year framework of programmes on sustainable consumption and production with developed countries taking the lead

RATING: UNCERTAIN Improving resource efficiency is self-evidently a valuable objective, however much depends on implementation. The extent to which economic growth can be decoupled from environmental degradation is uncertain.

8.5 by 2030 achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value

Full and productive employment and decent work for all

RATING: POOR This is a poorly specified goal. Some level of unemployment is necessary to generate efficient labor markets. Additionally, there is no tangible, well known policy response to achieve full, productive and decent employment for all. Moreover, what as defined as ‘decent work’ often leads to job protection rules that favor insiders over outsiders, contribute to high rates of youth unemployment and can bias firms choice of optimal size and increase poverty, as has been shown in the case of India (Besley and Burgess, 2014).

It would be better restated as ‘remove barriers to productive employment’. In particular, targeting increased female participation in the workforce has **PHENOMENAL** benefits relative to costs. There is compelling evidence that the growth miracles of certain Asian economies were driven by low cost policies that allow and incentivize women to work.

Better wording: By 2030, reduce the barriers to productive employment for women

Equal pay for equal work

RATING: GOOD Jacobsen (2013) estimates that if there was a workforce of equal parts men and women, with equal pay, the increase in global GDP would be 17.5% in 2010, even after accounting for lost value from household work done by women. She estimates costs of 2% of global GDP for education and training for a larger workforce. This equates to a BCR of 8.75. Notwithstanding the cultural, political and legal shifts that would be required to implement this in practice, it is likely that such a policy would lead to large benefits and low cost.

8.6 by 2020 substantially reduce the proportion of youth not in employment, education or training

RATING: The evidence to achieve reductions in youth unemployment is **UNCERTAIN**. For education, the rating is **FAIR**. For training the evidence is **UNCERTAIN**.

8.7 take immediate and effective measures to secure the prohibition and elimination of the worst forms of child labour, eradicate forced labour, and by 2025 end child labour in all its forms including recruitment and use of child soldiers

RATING: GOOD though we are UNCERTAIN about how to ‘end’ child labor. A report from ILO shows that the benefit to cost of eliminating child labor by 2020 is 6.7 – see Dorman (2004). This rating is supported by **GOOD** and **FAIR** returns on investment in primary and secondary education – in effect, the opportunity costs of working as a child (there is a clear tradeoff between education and child labor, in that reducing child labor improves education outcomes of young people).

But there is a big caveat associated with this goal. Ending child labor has been as elusive as achieving universal primary education. For example, the ILO, UNICEF and the World Bank have been advocating for an end to child labor for some time yet in 2012 there are more than 250,000 children still in employment. The reason for this is that child labor is driven by poverty and child earnings are needed to supplement household income. So, although the goal is **GOOD**, one needs to be aware of the difficulty of ending the practice. Legislation prohibiting child labor, now in effect in all countries, has been unenforceable.

8.8 protect labour rights and promote safe and secure working environments of all workers, including migrant workers, particularly women migrants, and those in precarious employment

RATING: GOOD The costs of implementing this are not large (setting up OSHA-like agencies with enforcement capabilities, given that most countries already have labor rights and working environment improvement laws) and the benefits are substantial, given that many workers experience seriously life-shortening accidents and work-related illnesses where the costs of dealing with those are pushed onto themselves, their families, and the public health system. Any time health issues can be reduced for the young and working-age population, the payoffs are substantial in terms of extended and more productive work lives for the persons involved. Otherwise, this creates a ‘race to the bottom’ as short-term incentives outweigh longer-run considerations and workers take hazardous positions that endanger their and their families’ longer-run potential. We can look at the cases of such regulations in the currently industrialized nations’ past to see how expansion of labor rights and safe working environments supports and extends economic growth.

8.9 by 2030 devise and implement policies to promote sustainable tourism which creates jobs, promotes local culture and products

RATING: POOR This is an overly narrow focus. Most of the development and environmental impacts of tourism are local, and thus incentives are likely to exist already; tourism is a single sector, and a case would have to be made that it has sufficient leverage over global resource problems.

8.10 strengthen the capacity of domestic financial institutions to encourage and to expand access to banking, insurance and financial services for all

RATING: PHENOMENAL Access to financial services, particularly for small-scale producers, is very important. It encourages entrepreneurship and allows businesses to expand. This is a key target that is likely to yield economic and social benefits.

8.a increase Aid for Trade support for developing countries, particularly LDCs, including through the Enhanced Integrated Framework for LDCs

RATING: PHENOMENAL This has a specific and important focus, but broad reaching impact

8.b by 2020 develop and operationalize a global strategy for youth employment and implement the ILO Global Jobs Pact

The ILO Global Jobs Pact calls for numerous policy responses, which are covered elsewhere in this report. In short, the Pact calls for:

- Generating employment – productive work and decent jobs, including formalizing informal work. This has a **POOR** rating as explained by targets 8.3 and 8.5.

- Increasing social protection which has a **POOR** rating as explained by target 1.3
- Respecting labor standards which has a **GOOD** rating as explained by target 8.8, but also removing child labor which has a **GOOD** rating as explained by target 8.7 and elimination of work place discrimination, including gender discrimination, which has a **GOOD** rating as explained by target 8.5

Proposed goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

9.1 develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

RATING: The rating depends on the nature of the infrastructure. Energy infrastructure has **PHENOMENAL** rating, water infrastructure has a **FAIR** rating, transport infrastructure has a **FAIR** rating. Regional and trans-border infrastructure that supports trade has a **PHENOMENAL** rating.

9.2 promote inclusive and sustainable industrialization, and by 2030 raise significantly industry's share of employment and GDP in line with national circumstances, and double its share in LDCs

RATING: POOR There appears to be limited empirical support for an *activist* government industrialization policy.

Firstly, there has to be a compelling reason for a government to actively support an industry, if the private sector is not willing to enter that same space. Secondly, if a market failure does exist, there is limited empirical evidence that governments are good at addressing them at the right time, with the right policies without creating more or different problems. Thirdly, in LDCs with weak institutions, industrialization policies open up the possibility of rent-seeking behavior.

To be sure, industrialization policies can be beneficial if they are targeted. But broad, large scale industrial policies are unlikely to succeed. In the case of the SDGs, preference should be given to goals that support integration of LDCs into existing global manufacturing chains and policies that support entrepreneurship.

Better wording: support the integration of developing country industrial enterprises, particularly in Africa and LDCs, into regional and global value chains

9.3 increase the access of small-scale industrial and other enterprises, particularly in developing countries, to financial services including affordable credit and their integration into value chains and markets

RATING: PHENOMENAL Access to credit for small scale producers is very important. It encourages entrepreneurship and allows businesses to expand. This is a key target that is likely to yield economic and social benefits. Integrating within an existing chain can be a valuable way to support manufacturing with benefits for both the domestic (more jobs) and international economy (increased productivity, lower costs). Governments' role is to establish the conditions that attract foreign direct investment to link domestic enterprises to the global value chains.

9.4 by 2030 upgrade infrastructure and retrofit industries to make them sustainable, with increased resource use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, all countries taking action in accordance with their respective capabilities

RATING: FAIR While it is important to deal with environmental externalities, the success (and benefit-cost analysis) will depend on the incentives and the ambition of the targets used to encourage retro-fitting of clean technologies. However, given environmental problems such as air pollution and climate change affect such a

large number of people in developing countries now and in the future, there is a compelling case to incentivize actors to use technology to mitigate these problems.

9.5 enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, particularly developing countries, including by 2030 encouraging innovation and increasing the number of R&D workers per one million people by x% and public and private R&D spending

RATING: GOOD Generally, R&D has high benefits relative to costs, though the difficulty in this target is obtaining the funds, resources and human capital to support innovation. Part of this will be developing the right conditions for innovation, and strengthening the innovation value chain to attract resources and talent.

9.a facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, LDCs, LLDCs and SIDS

RATING: UNCERTAIN This goal is mainly about knowledge sharing, with a focus on infrastructure. In general, knowledge sharing can be very beneficial, with low costs (see target [17.6](#)). The type of information being shared, and the type of infrastructure will determine the exact benefits and costs (see target [9.1](#)).

9.b support domestic technology development, research and innovation in developing countries including by ensuring a conducive policy environment for inter alia industrial diversification and value addition to commodities

RATING: UNCERTAIN The rating for this goal depends on the policies used to obtain them. As stated in target [8.2](#) and [8.3](#), Maskus (2014) shows that raising R&D for developing and emerging economies beyond current trends through government expenditure or R&D credits will produce benefit-cost ratios in the **FAIR** range and even then, only between 1 to 2. However, creating an environment that encourages integration into global value chains and providing opportunities to benefit from knowledge spillovers from developed countries can have much larger benefit-to-cost ratios.

9.c significantly increase access to ICT and strive to provide universal and affordable access to internet in LDCs by 2020

RATING: The rating depends on the type of ICT in question, though likely to be **FAIR** on average. Access to mobile phones, for example, appears to be relatively inexpensive with large benefits. Providing universal and affordable access to internet in LDCs is **UNCERTAIN**.

Proposed goal 10. Reduce inequality within and among countries

10.1 by 2030 progressively achieve and sustain income growth of the bottom 40% of the population at a rate higher than the national average

RATING: UNCERTAIN Dollar, Kleineberg and Kraay (2014) show that growth in average income of the bottom 40% is the same as average income of the entire country. To suggest that income in the bottom 40% should grow faster than the average would require significant departures from historical trends which we do not know how to accomplish.

10.2 by 2030 empower and promote the social, economic and political inclusion of all irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status

RATING: UNCERTAIN This is closely related to [10.3](#) in that this is the desired input to achieve 10.3. It does not necessarily need to be a separate target.

10.3 ensure equal opportunity and reduce inequalities of outcome, including through eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and actions in this regard

RATING: The economic arguments about this target are UNCERTAIN. The economic evidence suggests that increased economic growth and supporting outcomes of the poorest are not in opposition – both can happen at the same time. There is some evidence that targeting the most marginalized will yield higher benefits than targeting non-marginalized because typically, they are coming from a lower base. However costs, including political and non-economic, will be likely be higher for this group.

The rights argument for this target however, is strong and arguably, a more decisive factor than the economics. The important factor here is identifying the right indicators that will actually measure reductions in inequality – and in this regard indicators that measure relative progress between social groups are likely to be best.

10.4 adopt policies especially fiscal, wage, and social protection policies and progressively achieve greater equality

RATING: As discussed in target [1.3](#), the implementation of wage and social protection systems has a **POOR** rating.

10.5 improve regulation and monitoring of global financial markets and institutions and strengthen implementation of such regulations

Not assessed

10.6 ensure enhanced representation and voice of developing countries in decision making in global international economic and financial institutions in order to deliver more effective, credible, accountable and legitimate institutions

RATING: UNCERTAIN Increasing the voice of developing countries in international institutions may increase the legitimacy of those institutions – or broaden their legitimacy – but whether it would lead to more effective and accountable institutions is less clear. This target is very similar to target [16.8](#).

10.7 facilitate orderly, safe, regular and responsible migration and mobility of people, including through implementation of planned and well-managed migration policies

RATING: Improving international mobility has **GOOD** benefit cost ratio. It increases opportunities for individuals and provides benefits for both the host and originator country (remittances).

10.a implement the principle of special and differential treatment for developing countries, in particular least developed countries, in accordance with WTO agreements

RATING: FAIR One reason is that preferential markets access for LDCs, while it might benefit the so-called 'least-developed countries' group (LDCs), it could hurt, through trade diversion, other developing countries including other low-income countries (LICs); and not all LDCs are LICs. The World Bank-defined LICs not in the UN-defined LDC group are Kenya, DR Korea, Tajikistan, Zimbabwe, and there are 17 LDCs that are not low-income countries.

The second reason for giving this goal a FAIR rating is that encouraging developing countries to commit in WTO agreements to less reform than high-income countries (HICs) is not only denying prospective trade gains to HICs but, far more importantly, it permits developing countries to continue to miss out on crucial poverty alleviating prospective gains from trade policy reform.

10.b encourage ODA and financial flows, including foreign direct investment, to states where the need is greatest, in particular LDCs, African countries, SIDS, and LLDCs, in accordance with their national plans and programmes

RATING: As stated in target [17.2](#) increase of ODA is a financing issue that cannot be subject to cost benefit analysis. However, encouraging FDI through integration in global value chains, as stated in target [9.3](#), has a **PHENOMENAL** rating.

10.c by 2030, reduce to less than 3% the transaction costs of migrant remittances and eliminate remittance corridors with costs higher than 5%

RATING: GOOD and particularly so when paired with policies to improve migration flexibility (see target [10.7](#))

Proposed goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable

Overall message: When individuals agglomerate in cities, the increased density provides numerous benefits – for example lower per capita environmental impact and energy use, improved livelihood opportunities and lower per unit costs of providing services and infrastructure. There is a tradeoff, particularly in the developing world, between encouraging more people to move to a city, and controlling the way in which the individuals in the city are accommodated. Put differently, it is beneficial for more people to move to a city, but if regulation and city planning are overly restrictive, this could discourage or prevent people from moving to the city in the first place.

The priorities for cities should be (most important, first): water quality, natural disaster prevention, crime / security, and congestion.

11.1 by 2030, ensure access for all to adequate, safe and affordable housing and basic services, and upgrade slums

RATING: FAIR The focus should be on providing affordable, mass produced, temporary housing to those that wish to move to cities in the developing world to 2030. The benefits are large, and the costs are relatively low. Housing does not need to be permanent because wealth in developing nations will increase over the medium term, and preferences for the type of housing are likely to change. Regarding slums, from an economic perspective, it can be preferable to accommodate more individuals in cities, even in unstructured housing, than to have planned housing but less people in cities.

11.2 by 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

RATING: FAIR Transport is important, but lower on the priority list relative to other concerns such as water quality, disaster prevention and crime.

11.3 by 2030 enhance inclusive and sustainable urbanization and capacities for participatory, integrated and sustainable human settlement planning and management in all countries

RATING: FAIR It is important to integrate land use and transport planning as part of human settlement planning, but it is difficult to do this well.

11.4 strengthen efforts to protect and safeguard the world's cultural and natural heritage

RATING: UNCERTAIN Developing indicators for this target will be difficult. It is important that this does not unnecessarily shrink urbanization (and the associated benefits).

11.5 by 2030 significantly reduce the number of deaths and the number of affected people and decrease by y% the economic losses relative to GDP caused by disasters, including water-related disasters, with the focus on protecting the poor and people in vulnerable situations

RATING: GOOD Due to the increased density of living, the impact of natural disasters in cities can be high. It is therefore cost beneficial to implement plans against disaster. The focus should be on identifying 'high

risk' cities and ensuring a large percentage of these implement disaster mitigation strategies (as opposed to x% of all cities).

The difficulty with this target is that deaths and affected people from natural disasters do not exhibit a trend over time (Hallegate, 2012), so reduction in mortality and injury needs to be standardized according to some measure (intensity of disaster, number of disasters). Finding the right measure to standardize on is a non-trivial exercise.

Better wording: by 2030, increase by x% the number of human settlements that are prone to disasters adopting and implementing policies and plans towards resilience and adaptation to climate change and natural disasters

11.6 by 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality, municipal and other waste management

RATING: UNCERTAIN Developing indicators for this target will be difficult. Additionally, it is important that this target does not unnecessarily shrink urbanization (and the benefits associated with high density living). For example, it is likely to be preferable, from an environmental standpoint, for many people to live in a high-density apartment than for the equivalent amount of people to be spread out in a low density suburban housing – though the former may appear less ‘environmental’. That said, in selected urban environments, such as cities in China, introducing congestion taxes for cars will have very high payoffs in terms of air quality and congestion at relatively low cost with benefits in the **PHENOMENAL** range.

11.7 by 2030, provide universal access to safe, inclusive and accessible, green and public spaces, particularly for women and children, older persons and persons with disabilities

RATING: UNCERTAIN The issues highlighted in this target – namely safety and inclusion are considered in broader circumstances in other targets, [16.1](#), [10.2](#), both of which are rated **UNCERTAIN**. The idea of accessibility is important, it can be a complex exercise to retrofit cities for disability access. Depending on the development of the city, there may be other, more beneficial investments that would provide benefits for the disabled, other minority groups and the general population (e.g. improving disaster resilience). The question of improving disability access should be made on a city-by-city basis.

11.a support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning

RATING: FAIR The costs of connecting cities and peri-urban and rural areas is likely to be large, mainly because the construction and maintenance of infrastructure (roads and ICT) presents significant cost. However, the benefits can be larger and include job growth, linking of farmers to markets, better supply chains, better access to information and numerous intangible social benefits.

11.b by 2020, increase by x% the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, develop and implement in line with the forthcoming Hyogo Framework holistic disaster risk management at all levels

RATING: GOOD Due to the increased density of living, the impact of natural disasters in cities can be high.

It is therefore cost beneficial to implement plans against disaster. The focus should be on identifying 'high risk' cities and ensuring a large percentage of these implement disaster mitigation strategies (as opposed to x% of all cities).

11.c support least developed countries, including through financial and technical assistance, for sustainable and resilient buildings utilizing local materials

Not assessed

Proposed goal 12. Ensure sustainable consumption and production patterns

12.1 implement the 10-Year Framework of Programmes on sustainable consumption and production (10YFP), all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries

RATING: UNCERTAIN The 10-Year Framework calls for improved resource efficiency while decoupling economic growth from environmental degradation. This is similar to target [8.4](#), so shares the same rating.

12.2 by 2030 achieve sustainable management and efficient use of natural resources

RATING: FAIR Efficient use of natural resources is self-evidently a good objective, though much depends on the policies used to improve efficiency.

12.3 by 2030 halve per capita global food waste at the retail and consumer level, and reduce food losses along production and supply chains including post-harvest losses

RATING: UNCERTAIN at the retail and consumer level – there is some evidence that improving supply chains to super markets can improve waste at retail and consumer level but this evidence is limited. **GOOD** at the production level, but more analysis required, particularly in establishing adequate baselines of the current state of global food loss and waste

12.4 by 2020 achieve environmentally sound management of chemicals and all wastes throughout their life cycle in accordance with agreed international frameworks and significantly reduce their release to air, water and soil to minimize their adverse impacts on human health and the environment

RATING: GOOD While it can be costly to manage chemicals and hazardous waste, the release of these substances into the environment can create significant health and environmental problems. There is a solid economic case to restrict the release of such substances into air, water and soil.

12.5 by 2030, substantially reduce waste generation through prevention, reduction, recycling, and reuse

RATING: UNCERTAIN This target depends on the indicator level, and how ‘substantially’ is measured.

12.6 encourage companies, especially large and trans-national companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle

RATING: UNCERTAIN for adopting sustainable practices. The term is general, and experience shows that the impact of corporate social and environmental responsibility programs enacted by companies is highly variable. For reporting, the cost-benefit ratio is **FAIR** – the costs are unlikely to be very high, particularly for large companies that are already reporting financial information – though it will depend on the regulatory burden. A strong argument in favor of this target is that it would generate increased transparency, particularly in countries with low levels of corporate reporting - which could yield large, but uncertain benefits.

12.7 promote public procurement practices that are sustainable in accordance with national policies and priorities

Not assessed

12.8 by 2030 ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature

RATING: FAIR Improving information quality and availability is unlikely to be harmful; consumers will undoubtedly benefit, and markets may then create incentives to improve along sustainability measures, although the environmental benefits are speculative and likely modest. The benefit to cost ratio will depend on the nature of the information requirements (compulsory or voluntary, the adequacy of the metrics, and the extent of the reporting burden), the ability of the consumers to understand the information, and the ability of the information to change behavior.

12.a support developing countries to strengthen their scientific and technological capacities to move towards more sustainable patterns of consumption and production

RATING: FAIR

12.b develop and implement tools to monitor sustainable development impacts for sustainable tourism which creates jobs, promotes local culture and products

RATING: POOR Given that the promotion of sustainable tourism is a poor goal (8.9), the monitoring of it, adds costs with uncertain or minimal benefits.

12.c rationalize inefficient fossil fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities

RATING: PHENOMENAL if done on a coordinated, global scale (though it is more likely to be accomplished by around 2050). If uncoordinated, then rating is **FAIR** by 2030. While reducing subsidies will generate large efficiency benefits, there will be distributional consequences, particularly for the poor in developing countries. ‘...encourage wasteful consumption’ is a vague and open term: it will be possible that actors use this phrase to justify limited or no reduction of fossil fuel subsidies.

Proposed goal 13. Take urgent action to combat climate change and its impacts*

*Acknowledging that the UNFCCC is the primary international, intergovernmental forum for negotiating the global response to climate change.

13.1 strengthen resilience and adaptive capacity to climate related hazards and natural disasters in all countries

RATING: GOOD Benefits are large in terms of avoided economic damage, while costs are manageable (Kull, Rojas et al., UNFCCC 2009, UNFCCC 2011). Tends to be evaluated on a specific case by case basis. Examples in “ASSESSING THE COSTS AND BENEFITS OF ADAPTATION OPTIONS AN OVERVIEW OF APPROACHES” find BCAs between 1 and 5 with a 10% discount rate. Will be much higher with a lower discount rate.

13.2 integrate climate change measures into national policies, strategies, and planning

RATING: FAIR from a global perspective, though individual countries might face GOOD or PHENOMENAL benefit-to-cost ratios depending on their circumstances. Certain countries may be able to draw in increased development financing by integrating climate change into poverty reduction strategies, which can help accelerate development outcomes (e.g. NAMAs), (Bassi et al, 2013; Tomkins et al 2013).

13.3 improve education, awareness raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction, and early warning

RATING: UNCERTAIN – but the BCR could be quite large given costs of education and awareness are typically modest. That said, improving institutional capacity is more expensive. There is limited economic evidence to assess, moreover the benefits although greater than the costs would likely also be modest.

13.a implement the commitment undertaken by developed country Parties to the UNFCCC to a goal of mobilizing jointly USD100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible

RATING: This target is rated as **UNCERTAIN**. Currently, LDCs are struggling with the general mechanisms of how the UNGCF would operate. Without clarifying how the fund will function at a practical level (e.g. managing LDC concerns such as geographical concentrations) and without the \$100 billion of funding in place, the risk of operationalizing the UN GCF quickly could be an expensive and ineffective undertaking. At this time, the benefits of achieving the goal as stated are not well known. If the fund is used to promote R&D then rating would be **PHENOMENAL**. If the fund is used to rollout projects with inappropriate technologies then the rating would be **POOR**.

13.b Promote mechanisms for raising capacities for effective climate change related planning and management, in LDCs, including focusing on women, youth, local and marginalized communities

RATING: This target is rated as **UNCERTAIN**. This target as written is simply a sub-target of [13.3](#) with a focus on particularly vulnerable groups or communities. There is strong evidence that women, youth, local and marginalized communities in LCDs will suffer most from climate change, but also that these have significant power to instigate change within their communities. By targeting this subset of [13.3](#), the benefits, particularly in terms of development co-benefits could be great.

Proposed goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development

14.1 by 2025, prevent and significantly reduce marine pollution of all kinds, particularly from land-based activities, including marine debris and nutrient pollution

RATING: UNCERTAIN – very hard to judge and depends on what is meant by ‘significantly’. The ocean has a large capacity to assimilate pollution, but reduction of marine pollution is likely to be beneficial.

14.2 by 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration, to achieve healthy and productive oceans

RATING: GOOD Protecting marine ecosystems ensures maintenance and basic functioning of a key component of the natural environment. Ocean acidification is a much newer area of research, and the potential benefits and costs of mitigation or adaptation are not well known.

14.3 minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels

RATING: UNCERTAIN Brander et al. (2012), estimate the economic impacts of ocean acidification on coral reef systems and find that the potential costs of increased OA (and therefore benefits from reducing OA) to this part of the ecosystem are ~0.15% of GDP by 2100. They do not examine other parts of the marine ecosystem such as marine life. In terms of the costs of mitigating or adapting to OA, these are not well known and are complicated by the fact that OA is primarily driven by increases in CO₂ only and not all greenhouse gases.

14.4 by 2020, effectively regulate harvesting, and end overfishing, illegal, unreported and unregulated (IUU) fishing and destructive fishing practices and implement science-based management plans, to restore fish stocks in the shortest time feasible at least to levels that can produce maximum sustainable yield as determined by their biological characteristics

RATING: PHENOMENAL for restoring fish stocks to maximum sustainable yield. Maintaining sustainable yields could be achieved through a system of transferable quotas, bought and sold between boats and fishing companies. This would be non-trivial cost to implement but the benefits are likely to be large, especially in the long run.

14.5 by 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on best available scientific information

RATING: FAIR This target depends on which areas are protected. Focus should be on protecting marine areas where there is a high degree of biodiversity and eco-system services are large for example coral reefs, or areas with valuable sea grasses.

14.6 by 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, and eliminate subsidies that contribute to IUU fishing, and refrain from introducing new such subsidies, recognizing that

appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the WTO fisheries subsidies negotiation

RATING: PHENOMENAL Limited costs to reduce subsidies, but large benefits, particularly in the long run from replenishing fish stocks. See Arnarson, Kelleher and Willman (2008) – The Sunken Billions report

14.7 by 2030 increase the economic benefits to SIDS and LDCs from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism

RATING: PHENOMENAL Policies that lead to sustainable fishing lower costs, raise revenue and improve fish stocks. This is like target [14.4](#), but focuses on SIDS and LDCs.

14.a increase scientific knowledge, develop research capacities and transfer marine technology taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular SIDS and LDCs

RATING: UNCERTAIN Research and technology transfer can have tremendous benefits but it depends on the type of research. There are too many uncertainties regarding the priorities of funding agencies, the type of research (basic or applied) to rate this target.

14.b provide access of small-scale artisanal fishers to marine resources and markets

RATING: FAIR – to the extent that small scale fisheries are efficient, relative to large factory fisheries, access to markets is a win-win for consumers and producers.

14.c ensure the full implementation of international law, as reflected in UNCLOS for states parties to it, including, where applicable, existing regional and international regimes for the conservation and sustainable use of oceans and their resources by their parties

RATING: FAIR Enforcing the law of the sea would allow nations to implement their own policies without poaching by other nations. These national policies would have their own benefit cost analyses and it is not clear whether the pursuit of these policies would be efficient.

Proposed goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

15.1 by 2020 ensure conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements

RATING: GOOD Overall it is unlikely the target of sustainable use of ecosystems can be met. But if focus is on restoration of degraded critical ecosystems then the target may be achievable and the benefit to cost ratios should be favorable. The mention of wetlands is welcomed. They provide numerous biodiversity and service benefits (regulation services, food, genetic, medicinal and habitat services). Some effective policies include various kinds of payment schemes for ecological services (PES), international donor support for ecosystems with significant global environmental benefits etc.

15.2 by 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests, and increase afforestation and reforestation by x% globally

RATING: GOOD Forests provide numerous ecosystem and service benefits and there is value in managing them sustainably with studies show benefit to cost ratios of between 7 and 20. Provides biodiversity and other important benefits, such as carbon storing.

15.3 by 2020, combat desertification, and restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land-degradation neutral world

RATING: UNCERTAIN Land degradation is a problem and has a high cost but the term is general and it covers all kind of use. Policy responses to achieve this target are not clear

15.4 by 2030 ensure the conservation of mountain ecosystems, including their biodiversity, to enhance their capacity to provide benefits which are essential for sustainable development

RATING: UNCERTAIN The target needs more information about how many ecosystems are to be conserved (what percentage) and if possible what criteria will be used to select the ones that merit conservation if we are to apply BC methods.

15.5 take urgent and significant action to reduce degradation of natural habitat, halt the loss of biodiversity, and by 2020 protect and prevent the extinction of threatened species

RATING: UNCERTAIN Very difficult to do a benefit cost assessment. Halting all of loss of biodiversity by 2020 seems optimistic given similar previous pledges, for example by EU by 2010, which were not met.

15.6 ensure fair and equitable sharing of the benefits arising from the utilization of genetic resources, and promote appropriate access to genetic resources

RATING: UNCERTAIN Equitable sharing does not necessarily increase aggregate benefits unless there is value placed on distribution of benefits or unless the beneficiaries of equitable sharing are more inclined to protect natural assets. The latter may be the case but is not always clear. The target is difficult to assess.

15.7 take urgent action to end poaching and trafficking of protected species of flora and fauna, and address both demand and supply of illegal wildlife products

RATING: FAIR Certain interventions can be effective such as multiple countries reaching agreements on trade restrictions in endangered and illegal wildlife products. However, other policies such as increased policing are resource intensive and often less effective. The inclusion of ‘end demand and supply...’ seems somewhat superfluous. Moreover, reducing demand for illegal products can be difficult to do, especially if demand is related to cultural norms, which are hard to change.

15.8 by 2020 introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems, and control or eradicate the priority species

RATING: FAIR It is clear that alien invasive species do significant damage to ecosystems and we should take action. Difficulty is in knowing how to curtail invasive species effectively. Elimination is unlikely, but some effective policies include coordinated action to identify and control the spread, through trade and travel, of potentially harmful species. It also requires the generation and dissemination of information on invasive species risks and strengthening the capacity of the weakest countries to handle the movement of species through transport systems.

15.9 by 2020, integrate ecosystems and biodiversity values into national and local planning, development processes and poverty reduction strategies, and accounts

RATING: GOOD To make informed tradeoffs between development, economic and biodiversity outcomes, it is necessary to research, understand and embed the value of biodiversity into decision making processes. There are several initiatives currently underway in this regard e.g. TEEB (The Economics of Ecosystems and Biodiversity).

15.a mobilize and significantly increase from all sources financial resources to conserve and sustainably use biodiversity and ecosystems

RATING: Not assessed – this is primarily a financing issue and is technically not subjectable to cost-benefit analysis

15.b mobilize significantly resources from all sources and at all levels to finance sustainable forest management, and provide adequate incentives to developing countries to advance sustainable forest management, including for conservation and reforestation

RATING: Not assessed – like [15.a](#), the first part of this target is primarily a financing issue and is technically not subjectable to cost-benefit analysis. The second half of the target: ‘provide adequate incentives to advance sustainable forest management etc...’ has a **GOOD** rating (see target [15.2](#))

15.c enhance global support to efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities

RATING: FAIR (see [15.7](#))

Proposed Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Overall message: Good governance is not only important as an enabler of development outcomes, but also, arguably, inherently valuable. Yet experience with institutional reform has been disappointing and the success of external pressure to improve governance particularly difficult. The economic evidence for specific governance interventions is small, and where it is available, it focuses on specific case studies that may lack applicability in different contexts. The evidence does not concern how to enact large, transformational reform that improves overall governance and promotes effective institutions.

In general, appropriate governance targets should focus on outcomes and measure how well institutions function, and not the form those institutions should take, which will vary across countries and contexts. Targets need to be carefully crafted and concrete, and should measure meaningful change toward better governance in specific areas, rather than broad goals.

16.1 significantly reduce all forms of violence and related death rates everywhere

RATING: UNCERTAIN but the potential benefits are very high – the focus should be on violence since it is much more prevalent than violence related death (homicide). For example up to 16% of children are punished by very violent methods and up to 30% of all partnered women experience inter-personal violence in their lifetime. While eliminating some small fraction of this violence would have very large absolute benefits, there is limited evidence for interventions that could successfully reduce violence – and most of these studies come from high-income countries. Fearon and Hoeffler (2014)

16.2 end abuse, exploitation, trafficking and all forms of violence and torture against children

RATING: UNCERTAIN The ambition to end violence is an excellent aspiration, but this is clearly not a feasible zero target for the next 15 years (or perhaps ever if taken literally). The costs of abuse, exploitation and violence against children are large – Fearon and Hoeffler (2014) estimate that largest cost to children is violence within the home, with sexual abuse and homicide somewhat lower in prevalence and cost. There is limited evidence for interventions that could successfully reduce violence – and most of these studies come from high-income countries.

16.3 promote the rule of law at the national and international levels, and ensure equal access to justice for all

RATING: UNCERTAIN This is confusing, because it combines rule of law at the national and international levels. Each is important in itself, but it would be more helpful to treat them separately, as the implementation is a matter of different sets of institutions, and the focus of rule of law domestically and internationally is about different issues. Promoting access to justice for all is, again, important, but is an additional dimension.

16.4 by 2030 significantly reduce illicit financial and arms flows, strengthen recovery and return of stolen assets, and combat all forms of organized crime

For the **illicit financial flows** component, better wording for this target is below from Cobham (2014), which focuses on key transparency mechanisms nations could adopt to reduce IFF. Given the uncertain but likely

large sums of IFF involved, and the low cost of these policies these would have a rating of at least **FAIR**, but potentially **PHENOMENAL**.

Better wording:

- i. Reduce to zero the legal persons and arrangements for which beneficial ownership info is not publicly available;
- ii. Reduce to zero the cross-border trade and investment relationships between jurisdictions for which there is no bilateral automatic exchange of tax information; and
- iii. Reduce to zero the number of multinational businesses that do not report publicly on a country-by-country basis.

16.5 substantially reduce corruption and bribery in all its forms

RATING: UNCERTAIN There are several ways to reduce corruption – introduce anti-corruption bodies, increase transparency, greater enforcement, changing expectations and norms and reducing bureaucracy. Unfortunately, the evidence for the effectiveness of these interventions is not conclusive. Furthermore, indicators that actually measure reduction in corruption are not entirely satisfactory.

Aiming to reduce corruption and bribery “in all its forms” is immense and very general. There are some measures of some relevant outcomes, but not generally very concrete. At least some pieces of this may be possible, but not as stated.

16.6 develop effective, accountable and transparent institutions at all levels

RATING: UNCERTAIN These are important broad goals and values, but as targets are too general, and unrealistic. Identifying more specific targets and indicators that are meaningful, measurable, and realistic is the challenge. It may be possible to a limited extent, especially for effectiveness and transparency.

16.7 ensure responsive, inclusive, participatory and representative decision-making at all levels

RATING: UNCERTAIN This target is based on the assumption that decentralized decision making is beneficial and desired, which in many cases it can be, but it adds complexity. Increasing participation in decision-making, does not by default, lead to better outcomes.

16.8 broaden and strengthen the participation of developing countries in the institutions of global governance

RATING: UNCERTAIN Increasing the participation of developing countries in international institutions may increase the legitimacy of those institutions – or broaden their legitimacy – but whether it would lead to better governance is less clear. This target is very similar to target [10.6](#).

16.9 by 2030 provide legal identity for all including birth registration

RATING: GOOD Legal identity provision can be a good, simple indicator of how well a government is functioning. It will be more useful as an indicator of government effectiveness than of providing public services, which is too generally stated to be helpful. This is a good target because it is clear, definable and measurable – and is likely to correlate to actual improvements in governance and the functioning of institutions.

16.10 ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements

RATING: GOOD Access to quality information can be an important indicator of effective governance and institutions. It is likely to be relatively inexpensive to implement with large benefits, however only when the political cost of providing information is low and when the ability of both government and civil society to make productive use of the information is sufficient.

16.a strengthen relevant national institutions, including through international cooperation, for building capacities at all levels, in particular in developing countries, for preventing violence and combating terrorism and crime

RATING: UNCERTAIN

16.b promote and enforce non-discriminatory laws and policies for sustainable development

RATING: UNCERTAIN This target is very broad and is difficult to assess from a cost-benefit perspective. For example, promoting non-discriminatory trade reform laws has a **PHENOMENAL** rating (see [17.10](#)), but promoting non-discriminatory gender equality laws has an **UNCERTAIN** effect (see [5.c](#)), mainly because promotion and enforcement has been difficult.

Proposed goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

Finance

RATING: Not assessed – the following, from 17.1 to 17.5 are financing targets - which cannot be subject to cost-benefit analysis

17.1 strengthen domestic resource mobilization, including through international support to developing countries to improve domestic capacity for tax and other revenue collection

17.2 developed countries to implement fully their ODA commitments, including to provide 0.7% of GNI in ODA to developing countries of which 0.15-0.20% to least-developed countries

17.3 mobilize additional financial resources for developing countries from multiple sources

17.4 assist developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring, as appropriate, and address the external debt of highly indebted poor countries (HIPC) to reduce debt distress

17.5 adopt and implement investment promotion regimes for LDCs

Technology

17.6 enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation, and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, particularly at UN level, and through a global technology facilitation mechanism when agreed

RATING: PHENOMENAL A focus on capacity building, increasing connectivity between scientific institutions globally, interchange of knowledge and scientists between regions is possible at relatively low cost, but with significant benefits. The costs should be relatively low because much of the communication infrastructure is already laid, though it could be improved in many developing countries. The large benefits would stem from linking scientists to research teams, grant funding, and knowledge sources (e.g. journals) in advanced countries, with consequent learning impacts on behalf of local personnel and greater access of local firms to technical innovations. There is **UNCERTAIN** knowledge about the effectiveness of the UN global technology facilitation mechanism.

17.7 promote development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed

RATING: FAIR

17.8 fully operationalize the Technology Bank and STI (Science, Technology and Innovation) capacity building mechanism for LDCs by 2017, and enhance the use of enabling technologies in particular ICT

RATING: POOR Incentives would need to exist for private-sector firms to participate in sharing technologies, which has a limited record of success in advanced countries. If access to such technologies were to be bought (patent licensing rights) the costs would need to be subsidized with public funds, likely a high cost. Enhancing the use of enabling technologies, in particular ICT, has a **FAIR** rating.

Capacity building

17.9 enhance international support for implementing effective and targeted capacity building in developing countries to support national plans to implement all sustainable development goals, including through North-South, South-South, and triangular cooperation

RATING: UNCERTAIN The Sustainable Development Goals within this document have been rated from **PHENOMENAL** to **POOR**, so there is large variance in the benefits and cost profiles of the targets. Attaching a BCR rating to capacity building to implement the SDGs depends on which SDGs are given prominence in implementation. Clearly, a focus on PHENOMENAL or GOOD targets, would lead to a high BCR while a focus on POOR or UNCERTAIN targets would lead to a low BCR. However, target [17.6](#) suggests that cooperation and knowledge transfer between countries, in a general sense, has very high benefits and low costs.

Trade

17.10 promote a universal, rules-based, open, non-discriminatory and equitable multilateral trading system under the WTO including through the conclusion of negotiations within its Doha Development Agenda

RATING: PHENOMENAL It is well established that increased trade has very large benefits, with low costs (e.g. Anderson, 2008). The inclusion of the agricultural mandate is crucial, since as much as 60% of the gains from liberalizing merchandise trade globally would come from agricultural policy reforms, particularly reducing import restrictions and agricultural subsidies (but also, in the case of countries such as Argentina, from reducing agricultural export taxes).

17.11 increase significantly the exports of developing countries, in particular with a view to doubling the LDC share of global exports by 2020

RATING: GOOD It is not phenomenal, since there might be some unintended trade diversion from countries that are not categorized as LDCs

17.12 realize timely implementation of duty-free, quota-free market access on a lasting basis for all least developed countries consistent with WTO decisions, including through ensuring that preferential rules of origin applicable to imports from LDCs are transparent and simple, and contribute to facilitating market access

RATING: GOOD – for same reasons as [17.11](#)

Systemic issues Policy and institutional coherence

17.13 enhance global macroeconomic stability including through policy coordination and policy coherence

RATING: UNCERTAIN Like goal [8.1](#) this is a **GOOD** or **PHENOMENAL** outcome, but is difficult to execute well. It would be better to focus on other goals

17.14 enhance policy coherence for sustainable development

RATING: UNCERTAIN In general policy coherence is a **GOOD** objective as it reduces unnecessary effort, and is relatively inexpensive to implement (assuming political objectives are aligned between actors). However, as stated in [17.9](#), the BCR rating depends on which sustainable development goals are given prominence in implementation

17.15 respect each country's policy space and leadership to establish and implement policies for poverty eradication and sustainable development

RATING: FAIR There is a trade-off that needs to be balanced. Countries should be able to work towards their national interests. However, there is clearly much interdependence between nations – and one nation's activities rarely affect only the nation itself.

Multi-stakeholder partnerships

17.16 enhance the global partnership for sustainable development complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technologies and financial resources to support the achievement of sustainable development goals in all countries, particularly developing countries

RATING: UNCERTAIN While sharing of knowledge, expertise and technologies in a general case has **PHENOMENAL** benefits (see [17.6](#)), as explained under [17.9](#), the SDGs have various ratings, so the ultimate BCR of this target depends on which targets receive prominence. Clearly, a focus on **PHENOMENAL** or **GOOD** targets, would lead to a high BCR while a focus on **POOR** or **UNCERTAIN** targets would lead to a low BCR.

17.17 encourage and promote effective public, public-private, and civil society partnerships, building on the experience and resourcing strategies of partnerships

RATING: Not assessed

Data, monitoring and accountability

17.18 by 2020, enhance capacity building support to developing countries, including for LDCs and SIDS, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts

RATING: POOR Providing this type of data requires significant strengthening of statistical capacity in developing countries i.e. personnel and technical assistance, which represents a non-trivial cost, especially for

certain countries where ability to collect is poor. Jerven (2014) shows that the costs of measuring a sustainable development agenda, in the manner envisaged by the data revolution, are in the order of \$1Bn USD per target, globally. There is a strong risk that pressing developing countries for more data, specifically for a sustainable development agenda, will mean the transfer of resources away from data collecting activities required for national contexts.

17.19 by 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement GDP, and support statistical capacity building in developing countries

RATING: UNCERTAIN The entire SDG process was an exercise in developing measurements of progress” to complement GDP. As stated in [17.18](#), this has large costs with uncertain benefits. Other initiatives may have different ratings depending on the nature of what they are measuring, and the amount of indicators being measured.

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