Rio+20 working papers

Issue 1: Development cooperation in the light of sustainable development and the SDGs: Preliminary exploration of the issues

Division for Sustainable Development, UNDESA

UN Photo, Marie

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Abstract

The purpose of this paper is to explore the nexus between the sustainable development agenda -- from the Earth Summit in 1992 to Rio+20 in 2012 -- and development cooperation. It explores the evolution of international cooperation, and in particular finance, in response to the emergence of the sustainable development agenda, and its contribution to supporting that agenda. We then examine how the elaboration of Sustainable Development Goals (SDGs), as proposed by the Rio+20 outcome document, could provide a framework for more effective international cooperation for sustainable development.

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I) Introduction

The purpose of this paper is to explore the nexus between the sustainable development agenda -- from the Earth Summit in 1992 to Rio+20 in 2012 -- and development cooperation. It explores the evolution of international cooperation, and in particular finance, in response to the emergence of the sustainable development agenda, and their contribution to supporting that agenda. We then examine how the elaboration of Sustainable Development Goals (SDGs), as proposed by the Rio+20 outcome document, could provide a framework for more effective international cooperation for sustainable development.

This paper does not engage in detailed examination of the financial flows related to international cooperation – a topic that is covered elsewhere. Instead, it tries to identify the main weaknesses in the current framework for international cooperation in regard to bringing humanity to a more sustainable development path, and the potential for improvement. The paper draws on material published since the Earth Summit, including material prepared for the UNCSD (Rio+20).[1]

II) Sustainable development and international cooperation

II.1 Earth Summit in Rio, 1992

One of the defining moments for sustainable development was the United Nations Conference on Environment and Development (UNCED, known as the "Earth Summit") that was held in Rio de Janeiro in 1992. The Rio conference came twenty years after its predecessor conference in Stockholm and translated into international agreements ideas expressed in 1987 by the World Commission on Environment and Development (WCED or "Brundtland Commission"). The WCED (1987) defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (United Nations, 1987).

UNCED gave birth to a number of international instruments that continue to provide the framework for sustainable development. This included the groundbreaking Agenda 21, which offered a practical approach to applying sustainable development policies at the local and national level, and the Rio Declaration on Environment and Development.

The Rio Declaration on Environment and Development, a set of 27 principles, was at the time perceived as a progressive statement by all nations that enshrined the recognition of the indivisibility of the fate of humankind from that of the Earth and established sustainable development in an international framework. The Declaration promoted concepts such as the centrality of human beings to the concerns of sustainable development (Principle 1); the primacy of poverty eradication (Principle 5); the importance of the environment for current and future generations and its equal footing with development (Principles 3 and 4); the special consideration given to developing countries (Principle 6); the principle of common but

[1] This paper was initially prepared as an input to the forthcoming International Development Cooperation Report, scheduled for publication in April 2013.

differentiated responsibilities (CBDR, Principle 7). It also enshrined the two critical economic principles of polluter pays (Principle 16) and the precautionary approach (Principle 15). It introduced principles relating to participation and the importance of specific groups for sustainable development (Principles 10, 20, 21, 22). Lastly, it requested Member states to put in place adequate legislative instruments to address environmental issues.

Agenda 21 was meant to be "a programme of action for sustainable development worldwide". Furthermore, as stated in its introduction, it had the ambition of being "a comprehensive blueprint for action to be taken globally, from now into the twenty-first century". The ambition was high, and so were the stated goals of the Agenda: improving the living standards of those in need; better managing and protecting the earth's ecosystem; and bringing about a more prosperous future for all.

According to some of the experts present at the Earth Summit, the deal arising from Rio took a three-pronged approach:

- Developed countries would take the lead in changing production and consumption patterns (their economic model);
- Developing countries would maintain their development goals but take on sustainable development methods and paths;
- Developed countries committed to support developing countries through finance, technology transfer and appropriate reforms to the global economic and financial structures or practices.

Issues requiring an integration of economic and environmental concerns (such as climate, the interaction of trade and environment, and the relation between intellectual property rights and environmental technology and indigenous knowledge) were to be resolved through international cooperation, in which the development needs of developing nations would be recognised (Khor, 2011).

The documents that emerged from the Earth Summit showed a clear recognition that concerted efforts were needed to achieve sustainable development, and had a strong emphasis on international cooperation in all its forms, including finance, technology, capacity building, and scientific cooperation.

Agenda 21 had a framework for action relying on nation States acting on their own for delivery, with some international coordination. Based on estimates provided by the UN agencies in charge of drafting its chapters, Agenda 21 was costed out at $625 billion USD a year, although this estimate was not validated by governments (Agenda 21, chapter 33). It also had meant to create a doubling of Official Development Aid (ODA) to $125 billion USD a year after Rio. At the end of the Earth Summit there was a perceived agreement that funding, capacity building and technology transfer would be forthcoming once developed countries moved out of recession. What was seen as the 'peace dividend' from the fall of the Soviet Union was where funding would come from (Stakeholder Forum, 2012).

II.2 After Rio

Overall, since 1992 progress on sustainable development has been limited. Various chapters of Agenda 21 have progressed at different paces. Human development has seen progress on a global level. Some countries have developed rapidly. Progress has been registered in access to education, on the health front, and in access to basic services such as water and sanitation. Areas of progress also include increased access of citizens to information and increased participation in decision-making, human rights, rights of indigenous peoples, and gender equality. However, numerous gaps remain on the development agenda.

At the same time, at the global level, the impacts of the human enterprise on the environment have been increasing. An important indicator of the growing ecological scarcity worldwide was provided by the Millennium Ecosystem Assessment (2005), which found that over 60% of the world's major ecosystem goods and services were degraded or used unsustainably (MEA, 2005). Many resources on which humanity depends for survival are witnessing trends that, if continued, would lead to depletion or collapse. Eighty percent of fish stocks are estimated to be used at or beyond capacity, and the figure has been increasing since four decades at least. Deforestation, although curbed during the past decade, has continued. What is known of the loss of biodiversity points to our current inability to limit it. Some of the major ecosystems such as oceans are thought by scientists to be approaching dangerous thresholds that could trigger collapse.

Since the Earth Summit, private consumption has grown tremendously. Significantly, developed countries did not alter their consumption patterns significantly and failed to find sustainable development paths built on sustainable production methods. As a result, pressure on the global environment continued to rise. In many emerging countries, middle-income groups have been growing fast, contributing to the rapid emergence of a global “consumer class” whose consumption choices tend to follow patterns observed in developed economies. In rapidly developing countries, the trends in consumption are set by their fast-growing cities. Many large cities of the developing world now appear comparable to cities in developed countries as far as carbon emissions and resource consumption are concerned -- so far, there is no clear evidence that the impacts of urbanization on consumption patterns are going to be substantially different in newly urbanizing countries from what they are in OECD countries.

On the other hand, examples of efficiency gains abound. For example, global primary energy efficiency has increased by a third since 1980. The carbon intensity of each dollar of economic output has fallen by about the same amount. However, historically, reductions of impacts through improved technology have been insufficient to counterbalance increases linked with those in population and affluence. For example, between 1990 and 2007 carbon intensities have declined on average by 0.7% per year. Population has increased at a rate of 1.3% and average per capita income has increased by 1.4% each year (in real terms) over the same period. Efficiency has not even compensated for the growth in population, let alone the growth in incomes. Instead, carbon dioxide emissions have grown on average by 2% per year, leading to a 40 percent increase in emissions between 1990 and 2007.

To date, Government actions at all levels to limit the negative impacts of human activities on the earth’s ecosystem have focused heavily on technology. Population has proved difficult to address in a coordinated way among nations, though some countries have seen dramatic reductions in population growth rates in a short period of time. Income growth has been the

stated objective of all development policies including those focused on poverty eradication, and is seen as indispensable. Directly influencing consumption patterns, which together with income determine the "affluence" factor of environmental impacts, has also been considered undesirable as a policy goal in many countries.

In practice, the reluctance or practical difficulty to address a range of issues related to population and affluence has left technology as the main policy lever of focus in the sustainability debate. In such a growth-focused perspective, absolute decoupling is necessary to achieve sustainability. Hence, policy efforts have focused on enhancing and accelerating technological progress, in particular in terms of efficiency and pollution reduction. Actual progress in technology performance at the global level has fallen short of requirements. While over the long run increasing eco-efficiency of technology use has greatly reduced the amounts of resources consumed and pollution produced per unit of output, absolute amounts of consumption and global pollutants like greenhouse gases have continued to increase.

The scope of current national and global policies and technology programmes does not "add up" to the scale of actions required, calling for a reality check of current plans. For example, the goal of establishing a renewable low-carbon energy technology system on a global scale remains elusive, with modern renewables jointly accounting for less than 1 per cent of primary energy, compared to fossil fuels' share of around 80 per cent. Global CO2 emissions have increased considerably faster in the 2000s than in previous decades, in spite of the brief decline in emissions registered during the recession. Despite national and international efforts to accelerate and direct energy technology change, the pace of the global energy and fuel transitions has slowed significantly since the 1970s (UNDESA, 2012a).

Despite the deal struck in Rio, action has fallen short of ambition, both in terms of progress towards sustainable development and in terms of international cooperation. Specifically, despite continued intergovernmental processes (e.g. climate change, biodiversity talks and further conferences), progress has slowed towards addressing major sustainable development challenges.

Funding arrangements and transfers of technology from developed to developing nations around the Agenda 21 outcomes have not been delivered as promised. No "additional resources" were initially provided to facilitate the transition. In fact, Official Development Aid (ODA) fell from $62.4 billion in 1992 to $48.7 billion in 1997. It was not until 2002 that it again topped the $60 billion mark. This "lost decade" was marked by regression of key development statistics with many of the world's poorest countries suffering from worsening poverty. However, aid flows from donor countries totaled $129 billion in 2010, the highest level ever.[2] At the Monterrey Financing for Development Conference in 2002, world leaders pledged "to make concrete efforts towards the target of 0.7%" of their national income in international aid. However, as of 2003, only five countries had already met or surpassed the 0.7% target. In 2011, net official development assistance stood at 0.31 percent of DAC countries' GNI. In practice, ODA is often unpredictable, poorly targeted and does not make it to where it is needed.[3]

Disputes continue on how to implement Agenda 21. For example, according to a review of Agenda 21 undertaken during the preparation of Rio+20 (Stakeholder Forum, 2012), the

[2]All ODA figures are from the OECD statistics website - http://stats.oecd.org/qwids/
[3]Sachs, Jeffrey. The End of Poverty - http://www.earth.columbia.edu/pages/endofpoverty/oda

Group of 77 developing countries still favour the implementation of the financial agreement in Rio and this would include a separate, specific global fund, as well as commitments that financing will not be obtained through reallocation of existing development assistance. Developed nations favor financing sustainable development through bilateral, regional and multilateral mechanisms and more and more through foreign direct investment -- a path promoted in the 1990s after Rio which has benefited mostly a small number of countries -- and other funding sources, both public and private (e.g. remittances, portfolio investment).

Looking at the institutional landscape, the two decades since the Earth Summit in Rio in 1992 have witnessed the diffusion of the concept of sustainable development in international and national law, as well as in public consciousness. Many core principles of sustainable development, such as participation, the precautionary and polluter pays principles, common but differentiated responsibilities, the need for international cooperation to protect and restore the Earth's ecosystem, have framed our understanding of development issues. On the other hand, since 1992 development as a discipline and practice has remained largely independent from sustainable development. Although some concepts from sustainable development have progressively been integrated into development practice, in particular at the level of project implementation, development paradigms that frame the context of international assistance have continued to evolve largely in isolation from sustainable development. As a result, there are dual tracks in development assistance, where sustainable development coexists (on an unequal footing) with “development” in the old sense, in the UN arena, in international financing institutions and in bilateral cooperation agencies (SD21, 2012a).

Countries have tended to pursue a “multi-track approach” to sustainable development financing, the goal being to secure additional resources from specific tracks (e.g. climate, CBD). The various Conventions have also collectively created support instruments on finance, technology transfer, and technical assistance. Whereas some of these efforts have resulted in breaking the status quo (for example, the financial provisions of the Copenhagen Accord, wherein developed countries commit to the provision of USD 100bn per annum in climate finance for developing countries by 2020), this has resulted in the multiplication of financing channels and instruments, including for example the Clean Development Mechanism (CDM) and Joint Implementation mechanism (JI), Reducing Emissions from Deforestation and Forest Degradation (REDD), various technology and climate funds, and many others. The overall result is a highly segmented landscape, where sector or instrument-based financing channels predominate, often using the same ultimate sources of resources (for example, ODA). The impacts of specific instruments for financing sustainable development such as GEF, CDM, REDD+ have been questioned.

The fragmentation of the landscape of sustainable development financing has been mirrored in the mainstream discourse, which often conveys the sense that sustainability can be equated to a collection of low-carbon investments in specific sectors, which can be "addressed" at the national level, given appropriate support. This is reinforced by reports or visuals that present sectoral breakdowns of the “needs” associated with transitions to e.g. climate-friendly economies (for example, see McKinsey, 2009).

Even so, some sectors are not adequately addressed. Approaches through finance encounter typical problems of lack of reach of formal finance. For example, private sector finance has been widely embraced as an important part of efforts to scale up resources for developing countries to respond to climate change. Yet there has been little analysis of what private finance means for developing countries, and whether it will really deliver what is intended. A

recent study focusing on finance for climate change adaptation for developing countries found that private sector finance is unevenly distributed among countries and among sectors, and often does not match developing countries' most pressing needs. The study also notes important differences among different financial flows – foreign direct investment equity versus portfolio equity, for example, and equity versus lending. The study concludes that "It should not be taken for granted that the private sector will succeed in tackling adaptation challenges…" (Atteridge, 2011). In general, the disconnect that exists between the "needs" (the sectors or activities that would need decarbonizing) and the reach of formal private finance is often important in developing countries, the more so where the income level of the country is low (UNDESA, 2012b). Therefore, overall, there are reasons to believe that expectations should not be set too high on actions focused on finance alone, at least in the short and medium run (Box 1).

BOX 1: Finance as an entry point to greening the global economy

Greening the stock of physical capital in a comprehensive manner implies simultaneously addressing at least several "big ticket" sectors: housing, energy, and transport, both in developed and developing countries. Using finance as an entry point for promoting a more sustainability-friendly allocation of capital is one of the options that governments can consider, along with other types of policies.

The approach followed so far by the international community has mainly focused on channeling resources to specific sectors or activities through ad hoc vehicles tied to international agreements. This approach results in a broad section of sectors relevant to the greening of the economy being left out. In addition, differences in capacities often results in some of the neediest regions or actors not accessing such resources.

Finance supply chains differ markedly across those sectors as well as across countries, reflecting differences in terms of macro-economic conditions; physical supply chains; size of investments; spatial concentration versus dispersion of the investment; risks involved in commercial lending; and the level at which investment and financing decisions are taken. Therefore, the choice of high leverage points for finance should be based on detailed examination of finance supply chains in specific countries and sectors, with the general objective to address bottlenecks.

Overall, expectations should not be set too high on actions focused on finance alone, at least in the short and medium run, as a large part of the production of physical capital is still out of reach of formal finance. However, there are a number of ways in which finance facilitation could be used (at the national level) as an entry point, along with other policies. Four main directions for consideration that have been tested at small scale are:
1) Improving the risk-return profile of investments;
2) Providing liquidity to lending institutions when this is the limiting factor;
3) Supporting the build-up of pipelines of bankable projects through capacity building both in the financial sector and in the business sector, and through supporting mechanism that allow the pooling of demand for finance;
4) Enabling the mobilization of capital from public or para-public institutions.

There are also a number of areas where coordinated action from the international community could accelerate the greening of the stock of capital, both in developed and developing countries. Going forward, three important directions should be kept in mind:
1) Correct the imbalance between the "needs" and the resource flows: if global decarbonisation is to occur, allocations should reflect needs at the country and regional level.
2) Find ways to reach segments and actors that are not or are only loosely connected to formal finance (e.g. municipalities, SMEs, ESCOs, households).
3) Find ways to better address the greening of existing capital, in addition to new capital.

Source: UNDESA (2012b).

II.3 Where we are today

In recent years, in particular within the context of the work of the Intergovernmental Panel on Climate Change (IPCC), attempts have been made to quantify the investments that would be needed to achieve specific carbon emissions reduction targets, and increasingly other sustainability objectives (e.g. universal access to modern energy).

A key conceptual difficulty surrounding such exercises is the loose connection that exists, in the context of sustainability, between financing and investment on the one hand, and outcomes on the other hand. This is an important difference with similar exercises which try to estimate the costs of eradicating poverty. In a nutshell, in the latter case fairly direct links exist between investments (e.g. in education or access to water and sanitation) and poverty reduction. Such connection is weaker on the environmental side. For example, although the rapid expansion of energy efficiency could be a boost to global growth, it would not on its own guarantee significant reductions in CO_2 emissions. As described above, so far, absolute decoupling of growth from environmental degradation has been elusive at the global level. Therefore, in the case of sustainable development where multiple, sometimes conflicting goals are used, investment is not a synonymous for "success".

To this, one has to add problems of defining "Financing for sustainable development", which have still not been well addressed. Given that the sustainable development agenda basically covers the whole range of human activities, how to define the scope of finance for sustainable development? This results in difficulties to identify related "needs", and to assess what "supply" may be. A classic example is the definitions of "green" investments, both public and private, and their relation with objective sustainability criteria. More basically, the statistical apparatus necessary to assess what current financial flows are in relation to environment-related investment does not always exist – for example, it is unclear what proportion of global Foreign Direct Investment (FDI) is targeted towards environmental investments.

In spite of these difficulties, a few lessons regarding the investment needs associated with reaching specific sustainability objectives can be drawn from exercises that have been conducted – often related to climate change mitigation and adaptation and energy. A short selection of estimates, represented as additional "costs" above business-as-usual (BAU), are summarized in Table 1 along with comments on their methodology and coverage.[4] Importantly, each study begins with different assumptions regarding targets or objectives. Very few if any of those have considered a "fully sustainable world", in the sense that the number of sustainability objectives that they include in their calculations is limited. Taken together, however, they provide a strong sense of the potential requirements for various sustainable development-relevant outcomes and of the urgency of international development cooperation to mobilize large scale investment.

[4] The notion of "costs" can be understood in different ways and this can generate confusion. For a review of the difficulties in defining the "costs" of MDGs, see for example Reddy and Heuty (2008).

Table 1: Select Estimates of Financing Needs Associated with a Low-carbon Economy Transition

Source	Estimate	Coverage	Comments
UNDESA, World Economic and Social Survey (WESS) (2011)	USD 1.1 trillion per annum over 2000 – 2050	Incremental investment to achieve sustainable development targets in developing countries.	Study assumes that 60% of global expenditure requirements are in developing countries. Global estimates based on results of a range of studies. Assumed targets in sectors covered by the estimates are: • Energy supply and end use efficiency to stabilise greenhouse gas concentrations to < 2° C (with at least 50% probability) • Adaptation: minimum investments in securing livelihoods, assuming successful mitigation. • Agriculture and food: increasing agricultural yields to ensure global food security without further expanding agricultural land (developing country only). Does not include estimates for other major uses such as sustainable freshwater management, forestry, fisheries etc.
UNEP, Green Economy Report (2011)	2% global GDP per annum over 2000 – 2050 (~USD 0.78 trillion in 2010)	Additional investments in "green economy"	Both Green Economy and business-as-usual (BAU) scenarios assume an increase in investment of 2% *global* GDP (USD 1.3 trillion in 2010). The Green Economy scenarios allocate this investment across green activities in the following sectors: energy (15-26%), transport (16-17%), buildings (10%), waste (8-10%), agriculture (8-10%), fisheries (8-10%), water (8-10%) and forests (2-3%). BAU scenarios make investments according to existing patterns. The study then contrasts the economic, social and environmental outcomes of the scenarios.
International Energy Agency (IEA) (2009)	USD 197bn each year	Additional investment in energy infrastructure and capital stock in 2020 in non-OECD countries.	Based on modelling undertaken with the IEA World Energy Model. Contrasts a Reference Scenario with a 450ppm greenhouse gas concentration scenario. The scenarios assume alternative policy measures (including emissions trading in OECD+ countries by 2013, and 2021 in other major economies) and assumptions about technological feasibility of certain energy options (such as Carbon Capture and Storage).
	USD 35bn each year	Annual investment needed to achieve universal access to modern energy services by 2030.	Estimates based on providing 1 bn more people with access to electricity and 2.8 bn people with clean cooking facilities, mostly in sub-Saharan Africa. In year 2008 dollars.

Source: Authors' elaboration.

Although the coverage, assumptions and methodologies in various studies differ, the estimates in Table 1 are clearly an order of magnitude greater than current flows directed to activities that form part of sustainable development. Even if all concerned donor Governments were to meet the target of 0.7% of GNI in official development assistance, this would provide only USD 270 billion a year for all uses. Clearly, new finance for sustainable development cannot derive solely from official grants and development assistance. The

current gaps in finance, therefore, suggest an important role for private investment in achieving sustainable development.[5] It does not mean, however, that less attention should be paid to more traditional sources of development finance. Indeed, for least developed countries and fragile states, financing gaps are likely to continue to be filled by ODA, rather than private capital, while private flows may play more important roles in fast-growing developing economies and middle income countries.

Therefore, it is critically important to find ways for the private sector to contribute to more sustainable outcomes. How to steer private investment in a sustainable direction? At the broadest level, the question is how to evolve the system of rules governing private actors' investment decisions in order to make investment patterns more compatible with sustainable development. The way resources are channeled into projects and investment is shaped by rules and institutions that together constitute the "engine" of the economic system. Those include trade rules, financial and capital market rules, rules applying to corporations, and rules applying to the broader system of public and private institutions. Many observers share the concern that, taken as a whole, the "engine" as it is currently is not geared to deliver sustainable outcomes across the board.

One major difficulty is that the increasing costs associated with rising ecological scarcity are not routinely reflected in economic signals. This was already recognized by Agenda 21 in 1992 (see Agenda 21, chapter 8). For example, investors have to invest resources into projects whose environmental and social impacts are not fully reflected in the bottom line of the firms. Firms that do not pay for resources, pollution or waste disposal have no incentives to make their production processes more resource efficient. Almost none of the major degraded ecosystem goods or services listed by the Millennium Ecosystem Assessment is marketed. Some goods, such as capture fisheries, fresh water, wild foods and wood fuel, are often commercially marketed, but due to the poor management of the biological resources and ecosystems that are the source of these goods, the market prices do not reflect unsustainable use and overexploitation. Often, policy distortions and failures compound these problems by encouraging wasteful use of natural resources and environmental degradation (Barbier, 2011).

The problem is broader than the mere absence of markets, and involves systemic issues. Households cannot recycle domestic waste if the infrastructure that allows for separate waste treatment is not in place. Commuters have to use automobiles if no public transport systems are in place. In other words, the adoption of sustainable behaviours by individuals and firms alike is in no small part conditioned by the broader rules and institutions in society.

The contribution of the private sector to sustainable outcomes has remained a vexed issue since the Earth Summit. The main question in debate has been that of the relative importance of voluntary versus policy-driven approaches to solving sustainability issues. Since 1992, voluntary initiatives have flourished in areas covering all the stages of private investment chains, from principles for responsible investment applying to various types of investors to due diligence principles for financial intermediaries to transparency initiatives in extractive industries to corporate social responsibility policies to standards for environmental and sustainability reporting. However, those voluntary initiatives are far from having achieved universal take-up. Large parts of global supply chains remain outside of sustainability initiatives, especially small and medium enterprises. Moreover, adhering to sustainability principles may not always make sense from a pure profitability perspective. For example,

[5] See for example Gates, 2012.

there is mixed evidence on the relative performance of ethical and responsible investment funds relative to other funds. This limits take-up of voluntary initiatives to situations where so-called "win-win" solutions are available. However, win–win solutions do not always exist. As importantly, there is no convincing evidence that the sum of voluntary initiatives could make private investment flows compatible with sustainability (UNDESA, 2012a).

Various components of society, including business leaders, have framed sustainability visions that are based on structural changes in rules and institutions that would allow for business to deliver sustainable outcomes "naturally" (e.g. WBCSD, 2012). Going forward, we will have to assess or re-assess a few critical questions. To what extent are current rules and institutions governing private investment at odds with sustainability objectives, and how best to achieve consistency? To what extent are voluntary approaches able to bring business and industry as a whole closer to sustainable practices globally, and where do they need to be accompanied by stronger regulation? What strategy should be followed to align rules and institutions with sustainability objectives? What high-leverage points of intervention in investment chains should be targeted? (UNDESA, 2012a).

Turning to the institutional framework for international cooperation, a major difficulty that has been pointed out by commentators is that the strategies of the most important actors are not necessarily aligned with long term sustainability objectives (as suggested by "science"). As an example, critiques have emerged from civil society regarding the energy strategy of the World Bank, and similar critiques have pointed out that sectoral strategies of the major international financial institutions are not "climate compatible" (see e.g., Friends of the Earth et al., 2011). On the other hand, many developing countries, which are the main clients of these institutions, have consistently and strongly argued that sustainability considerations should not be turned into "green conditionalities", as far as ODA in general and lending from those institutions in particular are concerned.[6]

Traditional aid architecture is still catching up to deal effectively with the management of global common pool resources. Problems in the climate area are well known, but difficulties have also been present in the case of other common pool resources such as fisheries and biodiversity. In this regard, there clearly is a funding challenge. There remains a large gap between the global benefits that humankind receives from ecosystems and what we collectively are willing to pay to maintain and conserve them (Barbier, 2011). Overcoming this funding gap is critical if the current decline of global ecosystems and the benefits they provide is to stop.

One source to bridge this funding gap would be the elimination of subsidies that are proven to encourage unsustainable behaviours, such as fossil fuel subsidies. In practice, this has been a politically difficult area, and attention has been focused on finding so-called "innovative" sources of finance. The search for innovative finance mechanisms to finance global commons or global ecosystems is in itself an example of fragmentation, as illustrated by Table 2.

[6] The rejection of "green conditionalities" was one of the most consistent threads of the discussions on a green economy during the preparations for Rio+20. This is reflected in the Rio+20 outcome document, which explicitly states that such conditionalities should not be contemplated (United Nations, 2012, para. 58).

Table 2: Examples of proposed or existing international sources of "Innovative Finance" aiming at funding global ecosystem conservation

Mechanism	Description
Global Environmental Facility (GEF)	A multi-donor global mechanism to meet the additional costs of developing countries in achieving global environmental benefits from biological diversity, climate change, international waters, ozone layer depletion, reduced land degradation and abatement of persistent organic pollution
International payment for ecosystem services (IPES)	A global mechanism for raising and distributing funds from beneficiaries of ecosystem services to those who conserve them
Reduced emissions from deforestation and forest degradation (REDD) scheme	A specific IPES aimed at reducing greenhouse gas emissions from deforestation and forest degradation (REDD) in developing countries
Global carbon cap and auction systems	Allocating a proportion of funds raised from a cap and auction scheme for CO_2 emissions among wealthy nations
Global carbon tax	Allocating a proportion of funds raised from taxes on CO_2 emissions among wealthy nations
Financial transaction taxes (FTT)	Taxes collected on the sale of specific financial assets, such as stock, bonds or futures
Currency transaction taxes (CTT or Tobin tax)	Taxes applied to currency exchange transactions
International Finance Facility (IFF)	Mobilize financing from international capital markets by issuing long-term bonds repaid by donor countries.
Taxes on airline travel or fuel	Taxes applied to international airline ticket sales or fuel use
Taxes on global arms trade	Taxes applied to international export sales of armaments

Source: Barbier (2011).

Most importantly, the traditional conception of international cooperation in terms of developed versus developing countries does not adequately address issues such as limiting the global footprint of humanity, for which the "problem" is not limited to developing countries or to lack of resources. For example, buildings located in developed countries are a major source of energy consumption and carbon emissions. Large scale investments in energy efficiency in buildings in developed countries should therefore be part of any global decarbonization strategy. Similarly, a significant part of the current investments in energy infrastructure that lock in countries on high-carbon paths for several decades are done in developed countries and emerging economies that do not rely on international assistance to finance them. Most importantly, the poorest countries (those most in need of aid) are not those who have the greatest negative impacts on global commons such as the atmosphere; therefore, development aid alone is quite powerless to address those issues.

Finally, the importance of the political context in which discussions on sustainable development happen must not been underestimated. The past decade has seen significant shifts in economic and geopolitical power, with the rise of large emerging economies. International institutions, including those for international cooperation, have just started to

adjust to this new reality. This comes on top of pent-up mistrust between developing countries and developed countries regarding the delivery of commitments related to development and sustainable development. Both these issues have shaped the tenor of the discussions at the UN, including lately at the United Nations Conference on Sustainable Development (Rio+20), held in Rio de Janeiro in June 2012.

Significantly, the Rio+20 conference, although it came to a successful conclusion, left open for further negotiations many issues that relate directly to international cooperation. Governments agreed to launch processes under the UN General Assembly to: establish a new high-level political forum on sustainable development; to establish a set of sustainable development goals; to provide a revitalized international cooperation framework for sustainable development, including a sustainable development financing strategy for resource mobilization and a technology facilitation mechanism. The outcomes of these processes will, to some extent, shape the direction of international cooperation for sustainable development over the coming years.

II.4 What does the future hold?

No one knows which path the world will take in the next 40 years. But there has been a strong consensus among experts about the major sustainability issues and the broad direction of trends. In contrast, big differences exist on the suggested policy solutions arising from different world views, grounded in different values. Many "business-as-usual" (BAU) scenarios have explored the potential consequences of the world's continuing its dominant development model. Most recent scenarios of this type are "dynamics-as-usual" (DAU) scenarios that assume across the board incremental improvements in technologies, for example for energy efficiency, following past dynamics. In principle, these scenarios are the closest to future projections. They provide a sketch of what the world could look like in 2050, if we were to continue the historical path of incremental improvements in reaction to perceived crises, instead of a shift toward a long-term perspective that aims to anticipate and avert serious – possibly catastrophic – environmental disruptions to human societies and economies (UNDESA, 2012a).

This DAU world in 2050 is a more crowded, urban world, in which poverty and hunger persist among riches. While great progress is expected on making not only primary but also secondary education universal, one billion people remain without access to basic services. Gross world product quadruples to US$300 trillion in 2050, with Brazil, Russia, India, China and South Africa (BRICS) alone accounting for 40% of the world economy. Income convergence across countries continues rapidly. However, some of the most vulnerable and poorest economies remain marginalized. This world would still be energy-hungry and powered by fossil fuels. Two thirds of world population would be living under water stress. Competing demands for freshwater resources would pose increasingly difficult allocation problems and limit the expansion of key sectors, in particular food and agriculture. Major environmental trends would be accelerated: increase in GHG emissions and global warming; decreasing forest area and more land for agriculture at least until 2030; and unabated loss of biodiversity. By its sheer scale, human activity will have transgressed the majority of the planetary boundaries as defined by J. Rockström and colleagues in 2009, with unknown effects but increasing the long-term risk of global collapse of the earth's ecosystem. (UNDESA, 2012a).

BOX 2: Sustainable development scenarios developed for Rio+20

High level of agreement on overall conclusions

Despite their variety in terms of modelling approach and desired goals, the sustainable development scenarios developed for Rio+20 agree to a large extent in their overall conclusions.

- There are numerous feasible pathways to sustainable development.
- There is no agreement on "must have" lists, but scenarios show the benefits of reining in overall material and energy use, increased end-use efficiency, and reduced poverty.
- A broad pursuit of sustainable development is far superior in performance to pursuing single objectives in isolation (e.g., promote economic growth first and introduce greenhouse gas mitigation policies later).
- Complex trade-offs related to the global commons need to be tackled globally.
- While sustainability goals put forward by politicians have become increasingly ambitious, their attainment has become increasingly difficult.
- Education, RD&D and population goals are essential, with very large synergies with the development and environmental dimensions.

Little agreement on specific policy suggestions

There is no single solution or policy for sustainable development. Bottom-up measures and policies need to be tailored to each issue, country, and sector. Great differences remain in terms of specific policy recommendations that are drawn from scenario results. A key problem is the existence of important trade-offs across time, sectors, and issues. Many "green" scenarios are unsustainable in at least one or more dimensions. None of the mainstream scenarios for Rio+20 illustrate a path toward sustainable development in 2050 that would keep humanity within the "safe operating space" suggested by science (Röckström et al., 2009).

Proposed "solutions" are often inconsistent across sectors. For example, all the mainstream sustainable development scenarios for Rio+20 see substantial increases in biofuel production and deployment of modern renewables, and consequently lead to significantly increased water and land use, increased water stress for the majority of the world population, as well as anthropogenic interference with phosphorus and nitrogen flows at a level that has been deemed incompatible with planetary limits by environmental science.

In other words, it is highly likely that scenarios in general tend to underestimate the challenge of moving humanity onto a sustainable development path. This calls for greater caution and humility about what can be achieved.

Source: UNDESA (2012a).

Sustainable development scenarios produced for Rio+20 by various research groups have explored a broad range of sustainability goals, most associated with major international development and sustainability goals that are either agreed or have been under discussion. They are also grounded in (subsets of) existing mainstream scientific sets of goals, but clearly leave out elements of wider sustainable development perspectives that typically include community or society aspects, such as peace and social capital. The sustainable development scenarios describe a much "better world" than BAU/DAU, a world that is more sustainable in important environmental and social dimensions. Yet, even this world is not free from contradictions and confronts decision-makers with a number of unresolved trade-offs. They highlight the enormity of the global sustainable development challenge, and suggest that at some point in the future we may be forced to make much more drastic behavioral changes (UNDESA, 2012a).

Given the available evidence and scenarios, what can be said of the role of international cooperation in finding solutions to sustainable development challenges? First, a framework for international cooperation that aims to support sustainable development would necessarily put a heavy emphasis on three dimensions: (i) the need to eradicate poverty and hunger; (ii) the global ecological footprint of humanity; and (iii) the management of global commons.

Ideally, such a framework should be adapted to the challenges of the future. This raises a number of difficult questions, the answers to which all condition what international cooperation should look like. For example, what can we reasonably say about the extent and location of extreme poverty and hunger in the next 20-30 years?[7] Centers of poverty have shifted over time and are likely to continue to shift from middle-income countries to least developed countries and those in fragile situations. Another question for consideration is, how to break through current deadlocks in cooperative management of global commons? Yet another question is, how to integrate sustainability at all levels in the delivery of international cooperation (e.g., in international financing institutions)?

From this brief discussion, it follows that specific recommendations on changes needed in the framework for international cooperation are quite hard to produce, unless backed up by clear visions for the future and goals for sustainability. Table 3 below gives examples of general objectives and principles that could be followed at different levels.

Table 3. Examples of general objectives that might be adopted to align international development assistance with sustainability objectives

Level	Concern for international cooperation
1: Adopting sustainability as overall paradigm	Ensure international assistance as a whole is supportive of SD
2: Vision for sustainability	End the dual track development versus sustainable development
3: Strategy to achieve sustainability	Follow cluster/nexus approaches to increase aid impact Improve donor coordination Make IFIs and bilateral assistance more supportive of SD Make aid more responsive to countries' needs and priorities (e.g. Paris Declaration level)
4: Plans of action	See how aid can best contribute to specific sectoral objectives. Ex: review energy strategy of international development banks; same for agricultural and rural development strategy.
5. Implementation	Put in place monitoring and reporting mechanisms that allow tracking of the performance of development assistance with respect to sustainability goals.

Source: Authors' elaboration

[7] For a recent discussion based on a scenario for poverty in 2025, see for example Kharas and Rogerson (2012).

III) SDGs as a potential game-changer

III.1 Rio+20 and the agreement to develop SDGs

One of the main outcomes of the United Nations Conference on Sustainable Development (Rio+20), held in Rio de Janeiro in June 2012, was the agreement by member States to launch a process to develop a set of sustainable development goals (SDGs) that could be a useful tool for pursuing focused and coherent action on sustainable development (United Nations, 2012a, paragraph 246).

BOX 3: SDGs as defined by the Rio+20 outcome document

In paragraph 246 of the Rio+20 outcome document, member States agreed that a set of SDGs must:

a) Be based on Agenda 21 and the Johannesburg Plan of Implementation
b) Fully respect all the Rio Principles
c) Respect national policies and priorities
d) Be consistent with international law
e) Build upon commitments already made
f) Contribute to the full implementation of the outcomes of all major summits in the economic, social and environmental fields, including the [present] outcome document
g) Focus on priority areas for the achievement of sustainable development, being guided by the outcome document
h) Address and incorporate in a balanced way all three dimensions of sustainable development and their interlinkages
i) Be coherent with and integrated into the United Nations development agenda beyond 2015
j) Not divert focus or effort from the achievement of the Millennium Development Goals
k) Include active involvement of all relevant stakeholders, as appropriate.

It was further agreed that SDGs must also be**:**

a) Action-oriented
b) Concise
c) Easy to communicate
d) Limited in number
e) Aspirational
f) Global in nature
g) Universally applicable to all countries, while taking into account different national realities, capacity and levels of development, and respecting national policies and priorities.

Source: United Nations (2012).

In the Rio+20 outcome document, member States clearly stated that the SDG process "needs to be coordinated and coherent with the processes to consider the post-2015 development agenda." During both SDG and post-2015 consultations (formal and informal), member States, civil society, and UN stakeholders consistently expressed their desire for a single set of development goals to complement the MDGs. At the same time, at Rio+20 member States explicitly agreed that SDGs should be based on Agenda 21 and the Johannesburg Plan of Implementation, and contribute to the full implementation of the outcomes of all major summits in the economic, social and environmental fields.

The contemplated scope of the SDGs is broader than that of the MDGs. They would encompass the completion of the work on social development reflected in the MDGs, while

integrating better than the MDGs did all three dimensions of sustainable development. In this framework, SDGs could become a framework for the international community for prioritizing key global challenges, much as the MDGs are today. The SDGs would, unlike the MDGs, be universal, applicable to all countries irrespective of level of development, while allowing for differentiation across countries. The SDGs would also serve to ensure better coordination at the global, regional and national levels.

Such an approach would integrate the economic, social and environmental dimensions by recognizing that development must proceed by bringing all human beings at least to a minimum social development threshold – and ideally well beyond it – while humanity as a whole stays within 'planetary boundaries', or ecosystems' carrying capacities.

This approach combining a social development threshold with environmental limits makes clear the universality of the SDGs and the importance of addressing, for example, consumption and production patterns and so-called ecological footprints of all countries, whether developed, middle income or developing. The challenge is to reorient those patterns so as to create space for all people to achieve human development. Notably in the case of managing the global commons and staying within global ecological thresholds, the strengthening of the global partnership for sustainable development is essential.

III.2 MDGs as a catalyst for development cooperation

Many important lessons have been drawn from the MDG experience; the strengths and weaknesses of the process have been analyzed in depth (see for example UN, 2012c), which provides a benchmark for SDGs.

There seems to be a consensus that over time, MDGs have helped focus ODA, in particular because they were adopted by major donors as their organizing framework for aid delivery. It is also conjectured that MDGs may have contributed to the increase in ODA observed in the 2000s. While it is not possible to find a clear causal link between the MDGs and the scale of ODA flows, the fact is that, after declining for a number of years before the turn of the millennium, ODA flows doubled between 2000 and 2010 from $53.9 billion to around $128 billion, the highest real level of ODA ever (OECD-DAC, 2011). The MDGs also focused ODA on targeted areas such as health and shifted focus towards measuring outcomes rather than merely the aid amounts. As commented in UNDP (2011), "the ODA landscape has changed markedly over recent years in relation to how much aid is provided, by whom, to which countries, through which modalities, as well as the purposes to which it is put." The experience from MDGs seems to suggest that SDGs could succeed in mobilizing significant additional resource flows from developed to developing countries.

Another strength of the MDG framework is that it forced major international institutions, in order to monitor the goals, to set up the statistical apparatus necessary to collect relevant data, which often was not available at the start of the process. This has since developed into improved indicators, available for a broader set of countries and on a regular basis, and made accessible to the public through friendly interfaces.

III. 3 Could SDGs play a similar role?

Given the important role played by the MDGs in framing international cooperation in the past decade, it is natural to envision a similarly important role for SDGs in the future. And while there clearly are similarities between the two, it is also clear that important differences exist.

Potential similarities/ sources of inspiration

Similar to MDGs, SDGs could play a critical role of focusing lens allowing all stakeholders to focus on the "bigger" issues. It could also play a role of focusing lens and catalyst for international aid, including finance and capacity building but also scientific cooperation. The importance of the financial dimension in particular was clear during the discussions in the preparation for Rio+20. During the Rio+20 negotiations, a large number of member States raised questions about the financial resource implications of agreeing to a new set of sustainable development goals, suggesting that in considering SDGs it is important to consider also a strategy for mobilizing financing to support their attainment. The Rio+20 outcome document makes an explicit link between the SDGs and the sustainable development financing strategy mentioned above. Lastly, SDGs could benefit from the experience accumulated around the MDGs regarding data collection, monitoring and evaluation; this would likely constitute significant progress compared to the current relative lack of monitoring of all the internationally agreed commitments on sustainable development.

Differences

A first important difference between the MDGs and the SDGs is the degree of agreement that exists among countries on the broad underlying objectives. Whereas eradicating poverty as a broad objective and economic growth as the way to achieve it have enjoyed broad consensus among countries, much weaker agreement exists on the ways and means by which sustainable development can be achieved. The "conflict" between environment and development has, to some extent, never been fully resolved since the Stockholm conference in 1972.

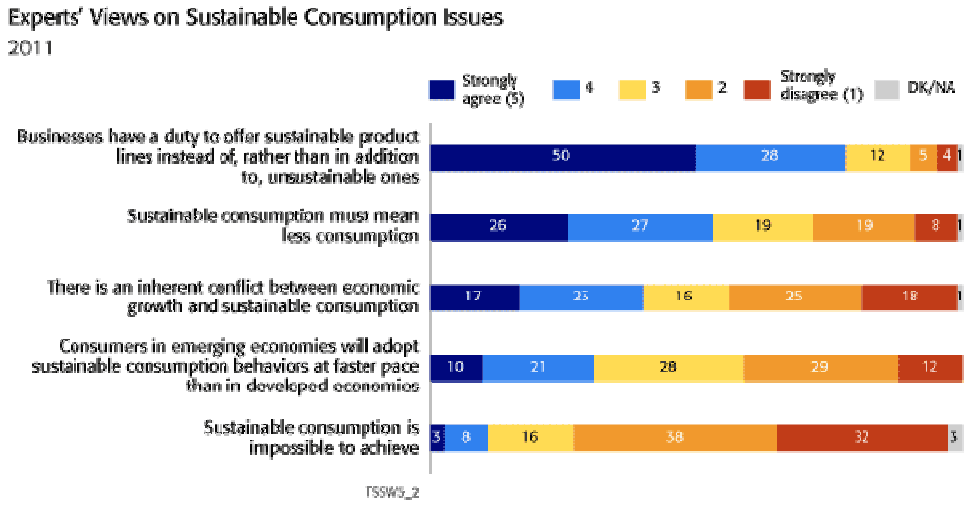
There has long been a tension between developed and developing countries regarding the interpretations of the concept of sustainable development, and more specifically the priorities that countries at different levels of development should give to economic, social and environmental objectives. However, this is not the only tension that exists. In developed countries, the shift to sustainability is an example of a "difficult problem", where future gains have to be traded for immediate losses (at least as compared to pursuing our current way of doing things). When push comes to shove, no one is eager to pay the price now in the hope that future generations will reap the dividends from our prudent behaviour.

Many experts agree that the position of sustainable development in the competition for legitimacy among world views has not strengthened since the World Summit on Sustainable Development in 2002, but may on the contrary have waned. Relevant for policy consideration is the presence in all countries of a wide spectrum of opinions regarding the seriousness of environmental issues, the priority that they should receive compared to other issues, and ultimately the electability of governments that campaign on them.

It seems fair to say that there is no broad agreement either regarding the means through which sustainable development could be achieved. One of the most divisive fault lines concerns the compatibility of sustained economic growth at the global level with environmental sustainability, and by extension the compatibility of societies based on ever expanding

material consumption with global planetary limits. A recent global survey of experts found them split on this issue (see Figure 1). Another example of this may be the range of value assessments that have been made of globalisation, which has been a defining feature of the evolution of the world for some decades. It has been presented both as a blessing and a curse by different communities that proclaim sustainable development as their overarching goal.

Figure 1: Experts' views on sustainable consumption issues

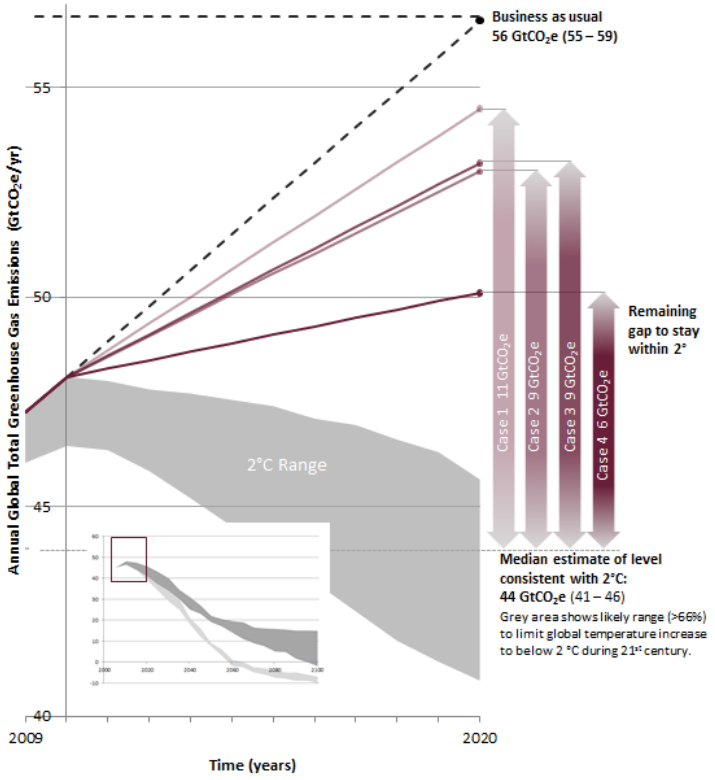


Source: GlobeScan/SustainAbility, 2011.

A second difference between the contexts of the MDGs and the SDGs is the prevalence of collective action problems at the heart of sustainable development, and the frequent failure of countries at solving those problems. In many cases the critical issue is the lack of credible enforcement mechanisms that could constrain government actions. In the absence of such mechanisms, the default solution has often been to rely on national voluntary actions. However, in many cases the addition of these is simply not adequate to solve the problem. This issue has been abundantly analyzed in the case of climate change. Figure 2, taken from a recent report done by UNEP, illustrates how national pledges – not even speaking of national actions, which may or may not reflect such pledges -- do not suffice to achieve the kind of emission reductions that science says would be necessary.

Simply put, regional and global commons cannot be managed through purely national actions (i.e., without any coordination with what others are doing). This has been clearly demonstrated in the case of fisheries, transboundary pollution, and in other cases (Dinar, 2011). However, in general governments have been reluctant to create supra-national institutions that could effectively enforce collective agreements. When such institutions exist, they may be weak and compliance may be low – a good example of this is the case of the bluefin tuna in the Mediterranean, which has not been managed sustainably, even though all the "right" institutions are in place to do so (UNDESA, 2012a). On the other hand, examples of international cooperation to manage regional or global resources have been successful. For example, international cooperation for ozone layer protection is often hailed as a success, as is European cooperation on acid rain.

Figure 2. Differences between desired GHG emissions reductions and the sum of pledges ("emissions gap")



Likely emissions end points, based on four different scenario futures:

Case 1: Unconditional pledges, lenient rules

Case 2: Unconditional pledges, strict rules

Case 3: Conditional pledges, lenient rules

Case 4: Conditional pledges, strict rules

Source: UNEP (2011).

BOX 4: lessons from international cooperation on transboundary environmental issues

A few lessons can be taken from an examination of trans-national institutions for the management of shared resources.

First, the management of regional or global commons encompasses much more than economic and financial instruments. Treaties, laws and regulations, data collection and exchange, joint modelling and research, capacity building, and other components may be critical for rapid progress.

Second, the diversity in institutional models and set-ups is significant, both across environmental issues and across regions for the same issues; and so has been the speed of progress.

Source: Dinar (2011).

A third difference between MDGs and SDGs lies in the perspectives that undergird them. In the former, the perspective is one of "us" and "them", with one group of countries helping the other to develop, implicitly by catching up and following the same development model as the "successful" countries. In the latter, common action is needed to solve common problems (as enshrined in the first part of Principle 7); and the development path of "successful" countries is explicitly designated as one of the causes of the problem (this interpretation is already clear in the UNFCCC, which recognizes the historical responsibility of developed countries); and ultimately, developed countries have to leave "operating space" for developing countries to develop while keeping humanity as a whole within safe ecosystem limits.

The fact that sustainable consumption and production, among all the elements of the initial "Rio package" of 1992, has been the one where political progress has arguably been the weakest, suggests that the difference in paradigms between the "traditional" development and the sustainable development approaches may constitute a fundamental obstacle – something that is also illustrated by the reluctance of emerging economies, who are now major contributors to pressures on shared environmental resources and sinks, to envision a reconsideration of their rights and duties under the principle of "common but differentiated responsibilities" (second part of Rio Principle 7).

Foreseeable challenges

Based on the above discussion, difficulties in creating SDGs and adopting them as a guide for international cooperation for sustainable development can be foreseen in several areas. First, as already mentioned, political difficulties with the sustainable development agenda could result in an agenda that does not fundamentally address sustainability issues – for example because the goals are vague or weakly formulated, or insufficiently ambitious to address the issues at hand, or inconsistent among themselves.

Second, the compact nature of the SDGs (the "limited number" of goals mentioned in the Rio+20 outcome document) is likely to create a competition among sectoral interests to "make it" into the SDGs, potentially at the expense of leaving out critical parts of the sustainable development agenda. As an example, sustainable consumption and production, which in view of past development is probably necessary to any meaningful sustainable development agenda, has no real "champion" to defend it; it would run the risk of being excluded of the final list of goals, if competition among sectoral interests prevailed in its definition.

Third, resistance of "traditional" international cooperation institutions to integration into a broader sustainable development framework is to be expected. Institutional inertia is not new, and this is no surprise; however, the experience of the last two decades indicates how strong resistance to change may delay the adoption of sustainable development as a paradigm for international cooperation, in practice if not in words. Such resistance can be expected from development aid institutions and more broadly from donor countries, but also from recipients, as long as there remains uncertainty on the strength of commitments that are made for supporting international cooperation.

Stepping outside the domain of international cooperation *stricto sensu*, , and given that success or failure on sustainability will ultimately be largely the result of private sector action and investments, what type of accountability framework could be devised to ensure that we stay on the right course?

IV) Conclusion

International cooperation for sustainable development has not delivered enough to achieve all the international commitments made at the Earth Summit and after. As measured by its ability to support a global shift to SD, the current framework for international cooperation, while constantly evolving, suffers from important shortcomings. The management of global common resources is perhaps the area where gaps (and stakes) are the highest. But other problem areas have been pointed out in this paper.

Many of the difficulties mentioned here are not new. Considering only issues related to the management of common resources, from transboundary air pollution to climate change to regional and global fisheries to the ozone layer, the last decades have witnessed searches for cooperative solutions, with an impressively wide range of associated outcomes going from recognized failure to broadly hailed success. This suggests that no simple, uniform "solution" to these issues should be looked for – be it the creation of markets or other tools. Rather, trial and error is likely to continue to be the main way through which collective progress is achieved.

For those who believe that sustainable development represents the correct paradigm to address global development challenges, a critical question is: how could the post-2015 period see the integration of the development and sustainable development agendas? It is clear that such integration would require deep changes, starting with a convergence of processes and institutions, from the international level, including the UN system, to the national level.

Because the decision of UNCSD to create a set of SDGs coincides with the period of reflection on a post-2015 development agenda, this point in time provides an opportunity for accelerated convergence of the sustainable development and development agendas. Solid SDGs could provide a strong operational basis for such integration to happen, by enabling sustainability to be systematically "factored in" international cooperation from a high leverage point. The SDGs will conceivably help forge a more integrated approach to sustainable development by connecting social, environmental and economic goals; addressing varying conditions and levels of development; ensuring more equitable access to resources at a time when global consumption patterns are approaching (and in some cases exceeding) ecosystem carrying capacities; and involve all actors from both developed and developing countries.

Such prospect, however, faces important challenges pertaining to the design of the SDGs itself, political difficulties still associated with the sustainable development agenda, and multiple vested interests. This paper has tried to highlight some of those challenges.

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