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# Integration and Diffusion in Sustainable Development Goals: Learning from the Past, Looking into the Future

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**Abstract:** One of the next major challenges for research and policy on sustainability is setting the post-2015 Development Agenda. This challenge arises as a direct result of the formal ending of the Millennium Development Goals (MDGs) in 2015 and as an outcome of the 2012 United Nations Conference on Sustainable Development (Rio+20). The post-2015 Development Agenda is expected to include two agendas: one on human well-being to advance the MDG targets and the other on planetary well-being, which requires a safe "operating space" within the Earth's life-support system. In contrast to the MDGs, the Sustainable Development Goals (SDGs) are meant to apply to both developing and developed countries and create a space for development within the stable functioning of the Earth's systems. However, what might this all look like? For answers, this paper reviews the achievements and reflections of the MDGs to date and identifies new challenges entailed in the shift of development goals from "millennium" to "sustainable". While most of the existing studies look at these two sets of issues separately, combining the two reveals two important features of the SDGs. First, SDGs need to integrate both human and planetary well-being in a goal, and second, goals, or sub-goals, need to be formulated at multiple levels, from global to local levels. While the MDGs represented no integrated goals, some of the existing proposals on SDGs include integrated goals. However, our analysis has shown that they do not present the vertical diffusion of goals. Considering both integration and diffusion in the architecture of SDGs is a remaining task.

**Keywords:** post-2015 Development Agenda; Sustainable Development Goals (SDGs); human well-being; planetary well-being

## 1. Introduction

One of the next major challenges for research and policy is to set the post-2015 Development Agenda. This challenge arises as a direct result of the formal ending of the Millennium Development Goals (MDGs) in 2015 and as an outcome of the 2012 United Nations Conference on Sustainable Development (Rio+20). Governments, supported by other stakeholders, such as business and civil society, are expected to agree on and advance a set of new global Sustainable Development Goals (SDGs). At the Rio+20 conference, governments agreed that an intergovernmental process would develop such novel Sustainable Development Goals (SDGs), to be integrated into the post-2015 Development Agenda. Thus, the post-2015 Development Agenda will include elements derived from the MDGs (so-called "post MDGs" or "beyond MDGs") as well as elements of the SDGs.

According to the latest research, sustainable development, which is an "ultimate objective" of SDGs, in the Anthropocene means: "Development that meets the needs of the present whilst safeguarding Earth's life-support system upon which the welfare of current and future generations depends" [1]. We have witnessed in the past that the development model that underpinned the decades after the Second World War appears to be unable to handle, or may even be a causal factor of, the crises that many societies and institutions are now struggling with (financial, demographic, environmental, *etc.*) [2–4]. The world is facing broader and ever-more urgent issues, which may both

jeopardize the options available for meeting basic human needs and eradicating poverty and threaten efforts to achieve sustainable development, including threats from climate change, concerns about energy security, an increase in unemployment and food prices, a growing rich-poor gap at both the international and national levels and an increasing number of natural and human-oriented disasters [5]. Therefore, questions related to the post-2015 Development Agenda are not solely about going beyond the MDGs, but rather, are fundamental questions on how to achieve sustainability in the twenty-first century. This requires explicit recognition of the need to secure Earth's life-support system, without which human development will be jeopardized.

The Rio+20 outcome document does not clearly mention the relation between SDGs and "Earth's life-support system", but it does mention that "(t)he goals should address and incorporate in a balanced way all three dimensions (economic, social, environmental) of sustainable development and their interlinkages" [6]. In this sense, the post-2015 Development Agenda needs to address both the human well-being agenda to advance the MDGs, the bottom line of which is to satisfy basic human needs for all, and the planetary well-being agenda, which is to secure the preconditions for advancing human well-being. This implies that the post-2015 Development Agenda will be inevitably applied to all countries on the Earth in order to create a space for development within the stable functioning of Earth's life-support system. This gives a clear contrast to the MDGs, which target developing countries. In fact, the Rio+20 outcome states that the new SDGs are meant to apply to both developing and developed countries.

However, then, what forms are logically feasible for the post-2015 Development Agenda? What is the logical consequence of the relation between post-2015 Development Agenda and SDGs? In this short paper, we are trying to make a modest contribution to the ongoing debate on the possible forms of SDGs, taking into account their relation to the even wider framework of the post-2015 Development Agenda. We are doing this by identifying the historical characteristics of SDGs; that is, reviewing achievements and reflections of MDGs to date and identifying new challenges in the shift of the development goals from "millennium" to "sustainable". While these two sets of research have been done elsewhere, these days, they are done separately—on the one hand, in the context of development studies and study on the MDGs and, on the other hand, in the context of "planetary boundaries". Although each study touches upon the others in one way or another, the challenge of the current paper is to draw implications by combining the argument of the two different tracks.

## 2. MDGs as the Foundation and Implications for Post-2015 Development Goals

While the international community is accelerating its efforts to achieve the MDGs by 2015, existing literature is generally indicating that work on the MDGs to date has achieved the following:

- Promoted improvements in issues, such as poverty eradication, and promoted the participation of many stakeholders in a number of developing countries [7].
- Enhanced sectoral linkages among several sectors, such as health and water quality, sanitation, nutrition, and so forth [8].
- Increased financial aid from institutions and official development assistance (ODA) and raised the priority of policies relating to poverty eradication in developing countries [8–11].

On the other hand, the MDGs are criticized on several counts. First, they lack vertical linkages between global to national and local levels [12], and the manifestations of the gaps vary significantly among countries [13–15]. This is in part caused by the lack of implementation mechanisms [16,17]. Second, due to the "one-size-fits-all" nature, they do not reflect the needs of recipients in the region-specific context [18,19]. To put it simply, the MDGs did specify an overall goal, but they did not set out a specific process to make this possible with reference to national priorities [20]. The third broad category of criticism addresses the nature of the targets. Because the MDGs were formulated based on the idea of results-based management, difficult to measure goals and targets, such as human rights or even the question of "good governance", were not included [21,22].

These evaluations and critiques should be reflected upon and taken into account when establishing the post-2015 Development Agenda. In this regard, the following two points are of great importance. First, considering the success of the MDGs setting global universal goals is important, but equally important is the consideration of the variation in regional, national and local circumstances, both in terms of quantity and quality. The needs and priorities of countries and actors are diverse, depending primarily on their level of development. This leads us to consider the second point, that a broader range of issues related to the development of human well-being should be tackled by the post-2015 Development Agenda in a manner that enhances linkages between different individual issues. As we enter into an era where human well-being is subject to the management of planetary well-being, it is important to simultaneously address issues of planetary well-being [1]. The question remains of "how" to address all these issues. The following section considers these points further.

The aforementioned reflection on the MDGs has also implications for the issues to be dealt with in their successors. The following four issues are still to be solved and required deeper consideration, considering the developments and achievements made since the time when the MDGs were set. They are: equity, health, education and economic growth; all are covered in the MDGs, but still remain issues unsolved. These four do not represent the exclusive list, but these are at least four of the areas that are left over within the areas covered by the MDGs. In terms of a strategy for achieving SDGs, it can be claimed that these four are significant, because a combined success in achieving them would provide a favorable context for addressing most of the other human and planetary well-being issues, in the sense that a well-educated and healthy society, supported by a thriving economic environment in which there are no marked inequalities, is a necessary (though not sufficient) condition for balancing the demands of the three dimensions of sustainable development (economic, social and environmental). This is because the sacrifices entailed in creating space for environmental sustainability would then not be felt disproportionately if these four issues are settled, and therefore, global consensus building towards sustainable development often trapped in the CBDR (Common but Differentiated Responsibility) could greatly improve.

(1) Equity and inclusiveness: Inequalities and disparities rooted in society slow progress towards achievement of the MDGs. As stressed by the MDGs, it is important to pay more attention to vulnerable populations (e.g., girls and women, minorities, the disabled, *etc.*), who have been discriminated against and left out of the socio-economic development of society. Equity issues, including gender equity, are an area within the MDGs that has lagged behind achieving these goals [23]. For instance, public support for persons with disabilities has not been well

established as a social system in many developing countries. Moreover, in some societies, various superstitions are attached to disabilities. Furthermore, it is tremendously important for both developed and developing countries to promote more inclusive social services to support vulnerable people. The international community has been aware of the urgent need of including these kinds of issues in the mainstream Development Agenda "in the light of 'no-gap policies' that recognize that all actors—including the United Nations system, Governments and civil society—should work together," as emphasized in the UN Secretary-General's report to the General Assembly [24]. Highlighting of quantitative and measurable goals and targets in the MDGs somewhat overlooks the importance of quality-related issues in society. More attention needs to be paid to the aspects of equity and inclusiveness that often cannot be measured quantitatively.

(2) Emerging health-related issues: In addition to the unachieved goals relevant to the "health set" in the MDGs and the threat of pandemics, non-communicable diseases (NCDs) are emerging as global challenges, and effective approaches and interventions need to be applied and delivered. One example is problems with obesity and being overweight. In today's world, an estimated 1.4 billion people suffer from being overweight or obese, which is a risk factor for chronic diseases, such as cardiovascular disorder or diabetes mellitus [25]. Importantly, obesity or being overweight is a phenomenon found not only in developed countries, but also in developing countries and, furthermore, not only among adults, but also young children, and is thus a common challenge for all. It can also be related to the global food supply chain and the ecological footprint of foods. In this sense, health-related issues are deeply inter-linked with other issues, such as globalization or planetary well-being. Solving these issues requires a new approach that goes beyond the MDGs.

(3) Education-related issues: Education has been considered as one of the key areas to promote human well-being and has been specifically addressed in the second and third goals of the MDGs. Significant improvements have been achieved in access to formal schooling since the 1990s, but problems still remain with the quality of education. A trend in many countries has been the reduced costs for public services, including education, and the expansion of basic education means difficult decisions for governments to allocate limited resources properly inside the education sector. It is particularly difficult for governments to improve the quality of education while spending enough of their budgets to secure teachers' jobs. Based on these experiences, policymakers once thought that educational quality and quantity/access cannot be tackled simultaneously. Recently, however, it is more widely accepted that quantity and quality are intertwined and should not be treated as trade-offs. To raise the efficiency of the education sector—the maximization of output with a given input—it is essential to improve the quality of teaching and learning. Governments may be able to improve both the internal efficiency (e.g., minimizing repetition and dropout rates) and the external efficiency (e.g., graduates finding relevant jobs) only by realizing "learning for all," which means that every single student in schools is actually "learning" and not just "attending and sitting" in the classrooms [26]. Related to the improved quality of education is including sustainable development in education.

(4) Economic growth-related issues: The past decade of economic recession reminded us of the vital importance of sustainable economic growth, which is, importantly, based on sustainable

resource management of all kinds, including human, natural or financial resources. Many disasters in recent years have also proven that disruption from steady development is also a huge obstacle for sustainable economic growth. The G20 Seoul Development Consensus for Shared Growth symbolically encouraged the international community to take actions in areas, including income security in developing countries, increasing access to finance for the poor, investment in infrastructure in developing countries in sectors where bottlenecks exist and supporting trade between advanced and developing economies [27]. The bottom line of the inclusive economic growth is to end extreme poverty, but these issues have a linkage with resources management. As we explain later, economic growth issues now need to be addressed in conjunction with planetary well-being, such as climate change.

In general, development from 2000 (or even from 1990 as the reference year for the MDGs) suggests that the global agenda for development has been shifting from issues of access to quality. It is not enough to fulfill the quantifiable needs of the poor simply by providing material resources; to improve the quality of their lives, it is also necessary to provide adequate resources and social services, as well as a sound environment.

## 3. Securing Planetary Well-Being: A Development Challenge in the Anthropocene

The fundamental enabling conditions to address the abovementioned issues lie in a safe operating space provided by the Earth system, as mentioned in the recent discourse of sustainable development [1,28]. Yet, scientific evidence has shown that we are crossing the boundaries for securing Earth's safe operating space, thereby posing a challenge to the Development Agenda. The term "Anthropocene" is being used to suggest that the Earth has left a natural geological epoch, the Holocene, and that now, it is humanity that plays the central role in geology and ecology. Rockstrom *et al.* defined the "planetary boundaries" concept, which estimates a safe operating space for humanity with respect to the functioning of the Earth system. The framework builds on and extends approaches based on limits-to-growth [29], safe minimum standards [30–32], the precautionary principle [33] and tolerable windows [34,35]. They identified nine planetary boundaries and proposed quantifications for seven of them. According to their estimates, three have already surpassed global thresholds, and this has adverse implications to the Development Agenda.

The degeneration of the Earth system, as represented by the nine boundaries, harms human well-being and increases poverty. For instance, climate change provides an additional threat to existing risks threatening the livelihoods and coping strategies of the poor. Compared to developed countries, developing countries are more vulnerable to climate change, because of their high dependence on natural resources and their limited capacity to deal with extremes. According to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC AR4) [36], developing countries are expected to suffer the most from the negative impacts of climate change. Climate change is expected to result in less access to safe drinking water, an increase in health problems, and food security problems in Africa, Asia and Latin America [36]. Water security is already a big problem in the developing world. Climate change will further affect freshwater availability, due to the increased frequency of droughts, evaporation and changes in rainfall patterns and run-off. Temperature change could affect

agricultural productivity across the world, and coastal areas will face changes in marine resources, due to sea-level rise and the change of sea temperature.

Recently, Griggs *et al.* identified seven "global sustainability objectives", based upon the idea of planetary boundaries with recent developments in the field. Those seven areas that are vital for the healthy operation of the Earth's life-support system are: climate change, biodiversity, ecosystem services, water cycle, nitrogen and phosphorus, clean air and sustainable extraction [1]. Some of these issues need to be tackled, or at least monitored, globally, such as climate change and biodiversity, while some other issues are primarily within the range of regional or local impact, such as the water cycle and clean air.

The next section will discuss how these variety of issues could be addressed in the form of SDGs.

## 4. Spaces for the SDGs in a Post-2015 Development Agenda

Having reviewed the experience with the MDGs, the remaining pressing issues for development and the extra pressure that hinders the achievement of better human well-being caused by the degradation of planetary well-being, where could we find spaces for SDGs in a post-2015 Development Agenda, and in which manner should they be placed? A prerequisite for sustainable development as the ultimate "goal" of SDGs is that without a healthy Earth life-support system, human well-being is ever harder to achieve.

On the one hand, the global agenda for development has been shifting from issues of access to quality. This implies that the post-2015 Development Agenda would include targets and indicators for measuring quality. It also implies the diverse interpretation of what quality means in different places. This means that the new Development Agenda is required to be specific to human-made boundaries—be it local, national or regional. On the other hand, the argument of planetary well-being requires tackling the issue at the global scale, in at least some of the issues, such as climate change. Quantity matters here. The question is, whether or not these implications can be addressed simultaneously.

Our answer is, "yes they can". At a first glance, planetary issues, such as climate change or biological diversity, are better tackled only at the global level. However, the influence of planetary issues appears and influences human behavior regarding development at localized levels. Linking global phenomena to local events still remains to be developed in the scientific field, and this certainly is a challenge on the side of science. Addressing planetary issues at local levels, or below global levels, in SDGs also makes sense in terms of the existing frameworks. Many of those single issues on planetary boundaries are already under consideration at the global level, by, for example, United Nations Framework on Climate Change (UNFCCC) and United Nations Convention on Biological Diversity (UNCBD). As goals and targets are aspirational in nature and different from a set of rules based on the rule of law, SDGs should, by nature, be differentiated from international legal frameworks in order to avoid duplication in already difficult international negotiation processes.

Another aspect of the form of SDGs is the kind of issues that could address human and planetary well-being under the post-2015 Development Agenda. In general, we could identify four kinds of issues here, no matter if they are global, regional, national or local levels.

(1) Issues of human well-being, but without direct causal relations with planetary well-being (absolute human well-being);

(2) Issues of human well-being that impact the state of planetary well-being (linkage issues);
(3) Issues of planetary well-being that impact the state of human well-being (linkage issues);
(4) Issues of planetary well-being with less direct causal relations with improving human well-being (absolute planetary well-being).

The borders between these four issues are blurred. We should also note that some goals and targets relating to them are already discussed and set under international treaties. For example, the target of limiting climate change to a two-degree Celsius increase of global mean temperature from the pre-industrial level is covered under the UNFCCC. We believe that such a target should not be renegotiated under the SDGs, as such goals are better suited to the specific climate change regime. However, changing food production patterns caused by climate change, for example, fall under Category 3, which could be dealt with as a linkage issues.

With this categorization in mind, Categories 2 and 3 should be addressed by the SDGs. The nexus between issues makes it important to consider the SDGs in this context. A good example is the nexus between water, food and energy, where the implementation of one has an impact or influence on the implementation of another. Simultaneously ensuring access to food, water and energy within planetary well-being, for example, has a direct impact on improving the state of human well-being. Food production and consumption is a good example. As stated in MDG1 and the aforementioned review in this paper, combating hunger is a key issue of global basic human needs and sustainable economic growth, whereas food production to address hunger must rely on sound natural resources and ecosystem services, of which preservation is a sustainability issue. Measures to increase food production, such as converting forests into grazing or crop land, may undermine efforts to address climate change and the degradation of biodiversity, and these processes should be monitored with the use of relevant goals and indicators in efforts to achieve the goal addressing hunger.

One may realize here that truly integrated governance is indispensable for the implementation of integrated SDGs, and this is the added value of SDGs as compared to the MDGs. That is, SDGs should be formulated in a way to facilitate transformative governance towards integrated management. Such governance requires scale-specific actions—from global, to regional, to national, to local—and engage stakeholders. This is a unique aspect of SDGs that should be emphasized as a logical consequence.

From the perspective we have developed so far, we have provided an analysis on the MDGs and three of the existing reports/proposals on post-2015 Development Agenda (Griggs *et al.* [1], called "Nature paper", the Leadership Council of the Sustainable Development Solutions Network [37] and UN the High-level Panel report (HLP) [38]). The analysis was made by identifying key elements in each goal, which are identified by key words, to see whether or not they address both human well-being and planetary well-being.

According to the explanation in the Section 2, we regard the words relating to human well-being as "promoted improvements in issues such as poverty eradication, and promoted the participation of many stakeholders in a number of developing countries" [7], including such sectors as "health and water quality, sanitation, nutrition, and so forth" [8] and "increased financial aid from institutions and official development assistance (ODA) and raised the priority of policies relating to poverty eradication in developing countries" [8–11]. As for issues that come under planetary well-being, we categorize the words that can be considered as contributing to a safe "operating space" within the

Earth's life-support system. See Table 1 for the categorization of the key words. Figure 1 shows how the MDGs and some existing proposals on Post 2015 Development Agenda addresses issues under human well-being and planetary well-being, or with integrated manner.

You can see here that the goals in the MDGs address either only planetary issues or human well-being issues, but some of the other three address both issues in the form of one goal, although the numbers are limited. However, none of the proposals have developed multi-level goals. Those are the issues that require further development and integration, taking into account the forms and scales of implementation, evaluation and monitoring.

**Table 1.** Categorization of key words.

| | **Human Well-being** | **Planetary Well-being** |
|---|---|---|
| **poverty reduction** | poverty reduction, hunger, slum dwellers, special needs of landlocked developing countries and small island developing states, absolute income poverty, reduction of fertility, extreme urban poverty | |
| **food security** | food security, hunger, postharvest waste, food loss, food production system, yields | |
| **gender** | gender, women, girls, right of women | |
| **education** | education, primary schooling, primary, lower secondary education | |
| **youth** | youth, young people, children, infant | |
| **capacity building** | capacity building | |
| **health** | mortality rate/ratio, diseases, HIV/AIDS, mental health, pharmaceutical companies, access to affordable essential drugs, appropriate nutrition, ending child stunting, reproductive health rights, sexual and reproductive health, death, healthcare, healthy diet | |
| **sanitation** | sanitation, basic sanitation, nutrient-use efficiency, nitrogen, | |
| **environment** | | environment, planetary boundaries |
| **natural resource** | | natural resource, fossil fuels, loss of environmental resource |
| **biodiversity** | | biodiversity, biodiversity loss, extinction, species |
| **ecosystem** | | Ecosystem |
| **desertification** | | Desertification |
| **air** | | clean air, black carbon |
| **ozone** | | stratospheric ozone-depleting substances |
| **chemical** | | man-made chemical compounds, toxic materials |
| **recycle** | | recycle, recycling |
| **waste management** | | waste management |
| **waste water** | | waste water |

**Table 1.** *Cont.*

| | | |
|---|---|---|
| **ocean** | | ocean |
| **water** | drinking water | restrict global water runoff, phosphorus runoff to lakes, rivers, river basins |
| **fisheries** | freshwater fishery | unsustainable fisheries practices |
| **global warming** | | global warming, warming, greenhouse-gas emissions, global average temperature |
| **climate change** | | global warming, warming, greenhouse-gas emissions, global average temperature |
| **forest** | | forest, deforestation |
| **agriculture** | agriculture, unsustainable agriculture practices, agricultural subsidies | |
| **good governance** | good governance | |
| **monitoring** | national monitoring systems | |
| **partnership** | in cooperation with, public participation, civic engagement, collaboration | |
| **evaluation** | national reporting and verification systems | |
| **democracy** | open access to information and decision-making process, participation, freedom of speech, association, peaceful protest, public participation, civic engagement, reduce bribery, access to science, technology, innovation and development data | |
| **security** | violence, conflict, social protection system, violent death, security forces | |
| **equality** | equal access, all girls and boys | |
| **infrastructure** | infrastructure, transportation | |
| **human rights** | human rights, legal identity | |
| **disaster prevention** | natural disasters | |
| **energy** | clean energy for all, universal access to modern energy services, subsidies on fossil fuels, renewable energy, energy mix | |
| **accounts** | economic, social and environmental accounts | |
| **industry** | industry | |
| **business** | product prices, business accounting, entrepreneurship | |
| **finance** | finance, financial system, debt, financial services, complementary financial assistance | |
| **investment** | investment | |
| **trade** | trade, fair trade, trading system, fair and development-friendly trading system, trade-distorting measures | |
| **employment** | employment, decent jobs | |
| **economic growth** | income | |
| **technology** | technology, new technologies, technology transfer, transferring technologies | |
| **procurement** | government procurement | |
| **media** | media | |

**Figure 1.** Goals categorized by key words.

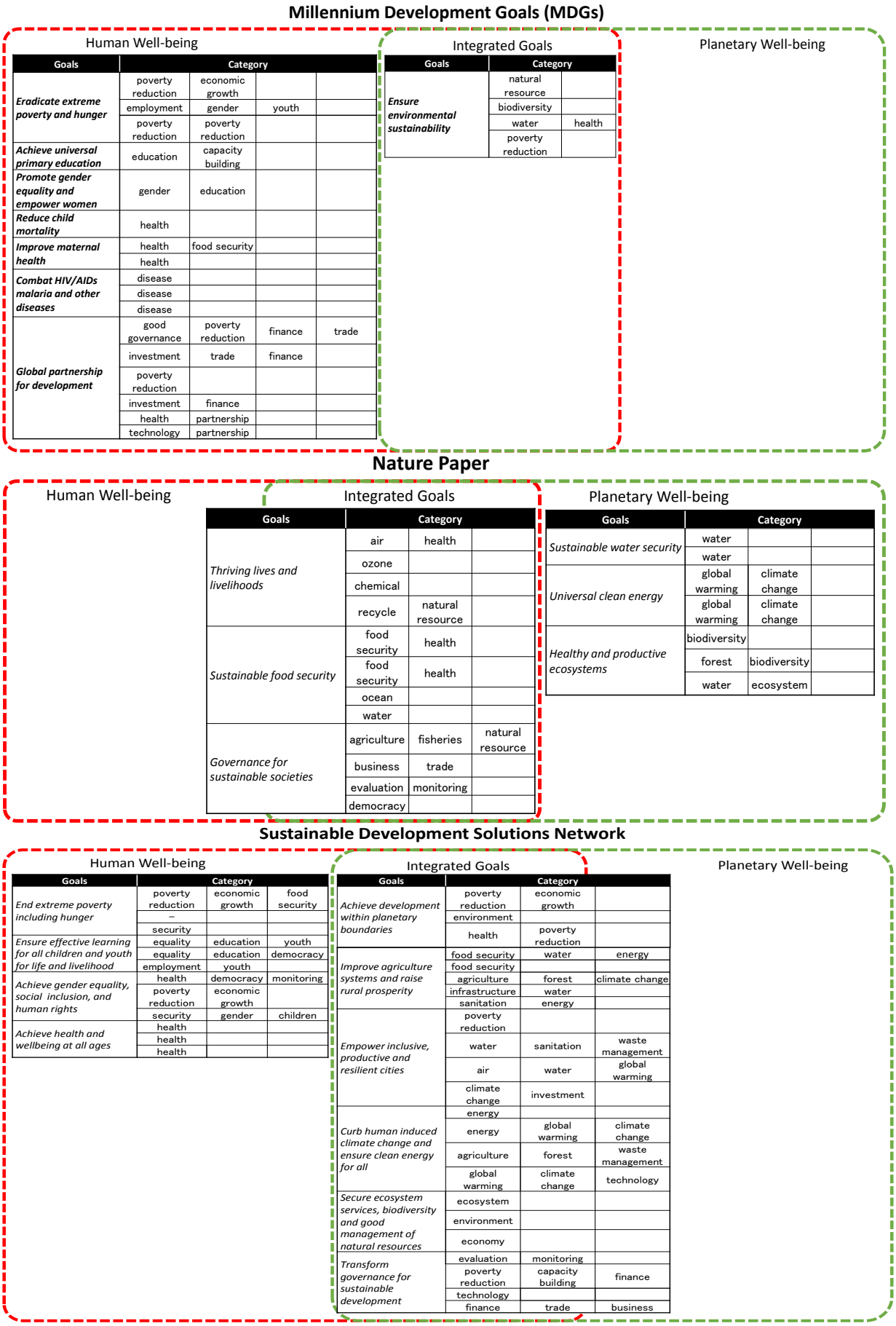
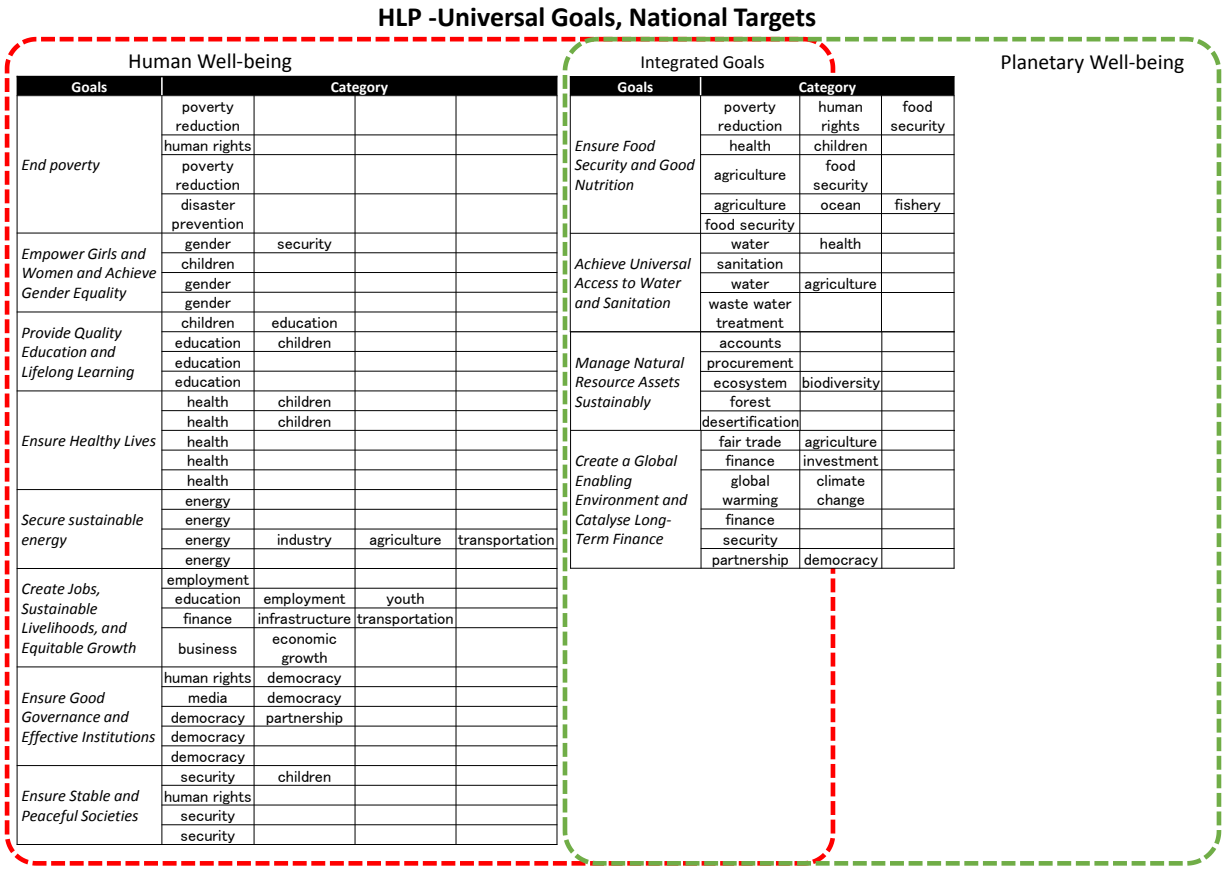


**Figure 1.** *Cont.*




| Goals | Category | | | |
|---|---|---|---|---|
| *End poverty* | poverty reduction | | | |
| | human rights | | | |
| | poverty reduction | | | |
| | disaster prevention | | | |
| *Empower Girls and Women and Achieve Gender Equality* | gender | security | | |
| | children | | | |
| | gender | | | |
| | gender | | | |
| *Provide Quality Education and Lifelong Learning* | children | education | | |
| | education | children | | |
| | education | | | |
| | education | | | |
| *Ensure Healthy Lives* | health | children | | |
| | health | children | | |
| | health | | | |
| | health | | | |
| | health | | | |
| *Secure sustainable energy* | energy | | | |
| | energy | | | |
| | energy | industry | agriculture | transportation |
| | energy | | | |
| *Create Jobs, Sustainable Livelihoods, and Equitable Growth* | employment | | | |
| | education | employment | youth | |
| | finance | infrastructure | transportation | |
| | business | economic growth | | |
| *Ensure Good Governance and Effective Institutions* | human rights | democracy | | |
| | media | democracy | | |
| | democracy | partnership | | |
| | democracy | | | |
| | democracy | | | |
| *Ensure Stable and Peaceful Societies* | security | children | | |
| | human rights | | | |
| | security | | | |
| | security | | | |

| Goals | Category | | |
|---|---|---|---|
| *Ensure Food Security and Good Nutrition* | poverty reduction | human rights | food security |
| | health | children | |
| | agriculture | food security | |
| | agriculture | ocean | fishery |
| | food security | | |
| *Achieve Universal Access to Water and Sanitation* | water | health | |
| | sanitation | | |
| | water | agriculture | |
| | waste water treatment | | |
| *Manage Natural Resource Assets Sustainably* | accounts | | |
| | procurement | | |
| | ecosystem | biodiversity | |
| | forest | | |
| | desertification | | |
| *Create a Global Enabling Environment and Catalyse Long-Term Finance* | fair trade | agriculture | |
| | finance | investment | |
| | global warming | climate change | |
| | finance | | |
| | security | | |
| | partnership | democracy | |

Considering recent developments in science and those made after the establishment of the MDGs, the integration of the goals of human and planetary well-being is the logical consequence for the operating space for the SDGs. Therefore, first, they need to consider the feasible issue areas that would simultaneously address human and planetary well-being. For human well-being, we have identified in this paper the lessons learned from the MDGs and the key problems that are left over in the implementation of the MDGs. Together with recent scientific developments regarding conditions for sustaining Earth's life support system, they should cover multiple issues in a balanced and simple manner in the form of goals, as described in the Rio+20 outcome. That is, we need to find "critical nodes" that have spill-over effects in terms of both the issues addressed and the stakeholder participation for sustainable problem solving. Efforts to integrate goals, therefore, are an important aspect of discussions on SDGs.

Another important aspect of the integration of development and planetary issues is addressing the issues at an appropriate level, such as regional, national or local levels, in addition to global-level SDGs. At a glance, integrated SDGs and the diffusion of SDGs from global to other levels seem like contradictory directions. However, integration could be made easier at the level closest to implementation, rather than at the international level, where politics prevails and bureaucracy operates under silos. Stakeholder engagement would also be helpful for better problem solving [39]. Paragraph 247 of *The Future We Want* reads "SDGs should be action-oriented, concise and easy to communicate, limited in number, aspirational, global in nature and universally applicable to all countries while taking into account different national realities, capacities and levels of development and respecting national

policies and priorities" (para. 247). Finding a concrete form to secure the universality and different national realities simultaneously is a challenge we are facing. The answer may be found by departing from the "one-size-fits-all" approach to a more diffused one involving locally-oriented approaches in the architecture of SDGs, which also makes it possible to address both the qualitative issues of development and the planetary issues in an integrated manner. However, it is important to link localized goals to the universal goal. Further research is required on this end.

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**Author Contributions**

Norichika Kanie designed the research lead writing the manuscript, and other co-authors contributed equally to this work.

**Conflicts of Interest**

The authors declare no conflict of interest.

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