

# 19 Green Growth/Green Economy: The New Economic Development Paradigm?

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## Introduction

The concept of green growth/green economy (hereafter, GG/GE) has been at the center of many international and national debates since 2008–2009. That was a time when three very important events took place. First, the global financial crisis was spreading around the world, threatening to exacerbate problems such as poverty and inequality. Second, in spite of the fact that humankind was not living within the planet's ecological limits, the world's leaders failed to agree on coordinated climate action at the 2009 UN Framework Convention on Climate Change (UNFCCC) negotiations. Third, in 2008 the EU adopted its energy and climate change package<sup>1</sup>, taking the lead in reducing greenhouse gas (GHG) emissions and in promoting renewable sources of energy. In addition, the energy and climate change package was considered a vital part of the EU's Europe 2020 growth strategy.

The above events present a very short summary of the historical background to the revival of the interest of international organizations and national governments in the concept of GG/GE. As a result, we have witnessed a proliferation of reports by international organizations promoting GG/GE, such as, for example, UNEP (2011), OECD (2011b, 2013), the World Bank (2012) and UNESCAP (2012). Furthermore, in 2012 the Global Green Growth Institute (GGGI) became an international treaty-based organization that has been involved in the adoption of national green growth plans in sixteen emerging and developing countries.

The concept of GG/GE is generally thought to have three main applications: (1) to deal with global issues such as climate

change, resource depletion and socioeconomic development (e.g. poverty and inequality); (2) to meet the challenges of sustainable development in advanced countries; and (3) to guide national growth strategies in emerging and developing countries. This chapter mainly addresses the third application, or the question of whether GG/GE can become the new paradigm of economic development. However, I should add that the adoption of GG/GE strategies by emerging and developing countries is also regarded as a necessary condition for dealing with climate change and resource depletion at the global level (that is, the first application).

The study of GG/GE is also very important for the goal of this book, i.e. to establish a new integrated academic field called Human Survivability Studies (HSS). As discussed in the Introduction of this book, HSS deals with complex social issues such as population increase, the spread of infectious diseases, environmental destruction, securing food, water and energy, correcting disparity and eradicating poverty. Since the international and national actors promoting GG/GE aim to tackle the problems of climate change, resource depletion, poverty and inequality, there should clearly be many things in common with HSS. Thus, the similarities and differences between research on GG/GE and HSS should be clarified.

This chapter is structured as follows. In the first part, I briefly review the conventional and modern views of development. I then analyze the concept of GG/GE in more detail and evaluate its benefits and shortcomings. Finally, I draw conclusions and delve into the issue of the similarities and differences between research on GG/GE and HSS.

### **Conventional and modern views of economic development**

To put it simply, the conventional view is that economic growth, in particular the increase of GDP or GNI per capita, is the key to development. A developing country should expand its output at a rate faster than the growth rate of its population for a sustained period of time. Moreover, to catch up with advanced countries, a developing country should grow at a faster rate for a sustained period of time. Some famous examples from East Asia of successful leveling with advanced countries are Japan, South Korea and Taiwan in the post-war era, as well as China since the start of market reforms in 1979.

Furthermore, the following three characteristics should be added to the summary of the growth-based model of development: (1) the belief that economic growth automatically leads to poverty reduction and lower inequality (the so-called ‘trickle-down effect’); (2) disregard for the adverse impacts of economic growth on the natural environment (increase of greenhouse gas (GHG) emissions and pollution, resource depletion and biodiversity loss); and (3) the idea that government intervention should be limited to facilitating the functioning of the market mechanisms and the provision of some basic public goods. To make a contrast between GG/GE and the growth-based model of development, I also call the latter ‘brown growth/brown economy’.

Since the 1970s, there has been growing dissatisfaction with the conventional view of economic development. During the 1970s–1980s, most of the criticism pointed to the fact that in many developing countries the increase of GDP or GNI per capita did not actually lead to poverty reduction and lower inequality. The predominant way of thinking started to change in the direction of seeing development as something broader and much more complex than the quantitative expansion of average per capita income. The changing views of economic development led in the 1990s to innovations in terms of methods to measure it in a more holistic and integrated way. An example is the Human Development Index (HDI) that includes indicators of health and education<sup>2</sup>.

During the 1990s, we have witnessed another wave of criticism aimed at the conventional view of economic development. Two main proponents of this wave were Amartya Sen and Partha Dasgupta. These scholars espoused a much more qualitative approach to development that understands it as improving quality of life, or human wellbeing. In its 2009 report, the Commission on the Measurement of Economic Performance and Social Progress (also known as the Stiglitz-Sen-Fitoussi Commission) gave a multidimensional definition of wellbeing based on the work of Sen, Dasgupta and other scholars. Apart from the material aspects such as income and consumption, the Stiglitz-Sen-Fitoussi Commission identified seven other dimensions: health, education, personal activities, political voice and governance, social connections, the quality of the environment and insecurity (Stiglitz, Sen and Fitoussi 2009: 14).

Another innovation was the inclusion of a concern not just about current but also future wellbeing. This was done by borrowing

Dasgupta's idea about wealth as the sum of three types of capital assets: the stocks of manufactured capital (for example, machinery and equipment), human capital (knowledge and skills) and natural capital (natural ecosystems)<sup>3</sup>. National wealth reflects a country's capacity to sustain both present and future wellbeing. A country's wealth could decline if that country destroyed/degraded its natural capital at a rate faster than that at which it accumulated manufactured and human capital (Dasgupta 2002: 3).

The inclusion of a concern about future wellbeing places sustainability at the heart of the new paradigm of economic development. According to the famous definition of the UN's World Commission on Environment and Development (also known as the Brundtland Commission), sustainable development is 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs' (WCED 1987). The second part of the definition means guaranteeing that the stocks of resources passed on to future generations are not depleted by the current generation. Another way of putting it is that we should not consume resources today beyond the environment's carrying capacity.

Here a number of questions arise. For example, how can we estimate whether or not we are handing down a non-depleting stock of resources to future generations? Or, how can we measure sustainability? How can we determine the value of natural ecosystems when most are not traded on the market? Can the depletion of natural capital be compensated by increasing the sum of manufactured and human capital?

Since the early 2000s, a wide variety of sustainability indicators have been developed, and a comprehensive summary has been published elsewhere (see, for instance, Stiglitz, Sen and Fitoussi 2009: 61–82). The conclusion is against the formation of a single composite index and in favor of a hybrid approach that combines a) the monetary valuation of resources that can be traded on the market, and b) a set of physical indicators following the changes in the quantity and quality of various natural ecosystems that are difficult to measure in monetary terms. This appears to be an attempt to achieve consensus between 'weak' and 'strong' sustainability perspectives<sup>4</sup>.

Finally, one should not forget the first part of the definition of sustainable development, which is about meeting the needs of the

present generation. This signifies that we have to make a special coordinated effort today to improve human development around the world. An example of such effort at the international level is the UN agreement on the Millennium Development Goals (MDGs) in 2000. Although uneven and fragile, there has been substantial progress toward achieving some of the eight goals and twenty-one targets<sup>5</sup>. After the MDGs expired in 2015, the UN adopted their successor, the Sustainable Development Goals (SDGs).

To summarize, the modern view of development differs from the conventional view in the following three points. First, it shifts the emphasis from economic growth and measures of per capita income to human development and quality of life, or wellbeing. Second, it places sustainability at the heart of the thinking about development and embraces the view that we should sustain both present and future wellbeing. Third, it recognizes that poverty reduction, lower inequality and environmental protection will not happen automatically. Humankind needs targeted policy interventions at the local, national and international levels to achieve development goals.

## **GE/GG and emerging/developing countries**

### **GG/GE's potential for emerging/developing countries**

As discussed above, since 2008–2009 international organizations have been among the major players in the field of GG/GE. They can also claim credit for two of the most oft-quoted definitions. For instance, the OECD defined 'green growth' as 'fostering economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which our wellbeing relies' (OECD 2011b). According to the UNEP, 'green economy' signifies 'improved human wellbeing and social equity, while significantly reducing environmental risks and ecological scarcities' (UNEP 2011).

On a closer look, it can be said that the OECD's and UNEP's reports about GG/GE share the following characteristics: (1) a concern about the flaws of the prevailing brown growth-based model that has failed to solve problems such as poverty, inequality and environmental degradation; (2) a belief in the possibility of 'win-win' solutions, i.e. that we can improve people's lives while reducing GHG emissions, pollution and resource depletion; and (3) a reliance on technological

and market-based solutions to decouple economic progress from resource consumption. In particular, the concept of GG/GE assumes governments play a strong role in terms of encouraging private sector investment in green technologies and products ('green innovation'), leading to the creation of green jobs.

In fact, the idea that the relationship between the economy and the environment can be a positive sum game is not something new. Many scholars have pointed out that the concept of GG/GE is based on the theory of ecological modernization developed in the early 1980s in Germany (Mol and Sonnenfeld 2000). According to that theory, the greening of the economy could be achieved by making better use of resources (i.e. higher resource efficiency) and incorporating environmental considerations throughout the whole product life cycle, starting from its design and ending in its recycling. In addition, the theory of ecological modernization assumes that the decoupling of economic progress from resource consumption is possible within the capitalist system (Lidskog and Elander 2012).

As mentioned in the Introduction of this book, the applications of the GG/GE concept should be different for high-income economies on the one hand, and emerging and developing countries on the other. In spite of their high level of income, the former continue to consume resources excessively and are still responsible for a large part of the world's GHG emissions. These economies have to change their current patterns of production and consumption to bring them within ecological limits and to reduce inequality. They also have a responsibility to assist developing countries' green transitions<sup>6</sup>.

As for emerging and developing countries, we need to examine whether the concept of GG/GE can really be useful for them – can it become the new development paradigm as stated in the title of this chapter? There are at least a couple of reasons why people in these countries are more skeptical than those in high-income ones towards the inclusion of environmental considerations in policymaking. One reason is the view that taking care of the environment is a luxury that only wealthy countries can afford. The other is the idea that GG/GE is some kind of ploy by rich countries to hinder the development of poorer ones. For instance, there are considerable concerns that GG/GE might lead to 'green' trade barriers on exports from developing countries.

In comparison with the high-income economies, the emerging and developing countries have a relatively smaller ecological footprint,

but face much greater challenges in terms of reducing poverty and inequality and ensuring people's access to health, education, electricity, safe water and sanitation. However, this does not mean that they can afford to disregard the adverse impacts of economic growth on the natural environment. Unlike the process of economic development in the nineteenth and twentieth centuries, emerging and developing countries today can no longer follow the model of 'grow (pollute) first, clean up later'<sup>7</sup>.

The main reason for this is that due to population growth and the expansion of the middle class in emerging and developing countries over the next thirty to forty years, we can expect further large-scale increases in GHG emissions and resource consumption on a global scale. If we allow this 'business-as-usual' scenario to materialize, the increase of global average temperatures could reach four degrees Celsius above pre-industrial levels by the end of the twenty-first century (New et al. 2011)<sup>8</sup>. The results of such large-scale global warming could be catastrophic for the future of our planet and for the survival of humankind.

One may ask why emerging and developing countries should care about global issues such as climate change and resource depletion. Actually, many studies show that emerging and developing countries will be the ones most affected by these issues (see, for instance, UNFCCC 2007). One reason is their relatively higher dependence on agriculture that will likely be very seriously affected by the rise in global average temperatures. In addition, these countries also have a larger proportion of poor people, and there is evidence that shows that the poor are hit hardest in extreme weather-related disasters. The world has already seen a preview of what can happen if there is a big increase in food prices: during the 2007–2008 food crisis it was mostly emerging and developing countries such as Indonesia, Mexico and Egypt that experienced popular unrest and riots.

In a nutshell, emerging and developing countries cannot ignore the concept of GG/GE and regard it as something that should only be adhered to by wealthy countries. In its definition of 'inclusive green growth', the World Bank stated that developing countries' urgent need for rapid growth and poverty alleviation should be reconciled with the need to avoid irreversible and costly environmental damage (World Bank 2012: 2). Furthermore, the World Bank's experts warn that if developing countries do not embark on promoting GG today,

their economies could be locked into unsustainable patterns, or they might risk facing costly policy reversals in the future.

### **Evaluating GG/GE: Lessons from emerging/developing countries**

Since the practical application of the GG/GE concept has only recently begun, it is probably a bit early to give a definitive evaluation of its benefits and shortcomings. Therefore, I summarize the optimistic and pessimistic views on GG/GE and review the preliminary evidence of its success or failure based on several case studies.

Let's start with the benefits, as argued by the optimistic view. First, the scholars and experts in favor of GG/GE emphasize that, in spite of its shortcomings, our goal should be to eradicate the 'brown growth/brown economy' model that has failed to deliver progress in human development and environmental sustainability. There is a certain sense of urgency, or an awareness that we can no longer afford to postpone the solution of global issues such as poverty, inequality, climate change and resource depletion. GG/GE may not be the 'first best' way forward, but it promises to be at least a bit better than our 'brown' past.

A second benefit is that GG/GE serves to operationalize the concept of sustainable development. Another way of putting it is that GG/GE is a strategy towards achieving sustainable development in practice. The rationale behind this is that in spite of the broad consensus in favor of sustainability, little has been done to translate its principles into reality. As quoted in Lidskog and Elander (2012: 413), 'sustainability is so ambiguous that it allows actors from various backgrounds to proceed without agreeing on a single action'<sup>9</sup>.

In contrast with sustainable development, we know more clearly what policy actions we must take to facilitate the green transition. A short list of GG/GE policy actions will certainly include increasing resource efficiency, shifting to renewable sources of energy, managing natural resources in a sustainable manner and investing in green technologies and products. Moreover, since powerful national and international actors have been pushing forward the GG/GE agenda, the expectations are that this time things will be different and we will see implementation of the ideas in practice.

Finally, OECD experts argue that GG/GE could be beneficial especially for emerging and developing countries because natural



assets tend to be relatively more important for them in comparison with OECD economies (OECD 2013: 33). Natural assets play a significant role not only because exporting them elsewhere can bring a substantial amount of income, but also because they provide ecosystem services (e.g. clean air, drinkable water, CO<sub>2</sub> absorption, etc.) that are vital to sustain quality of life, or wellbeing. However, the management of natural assets such as forests, fisheries and freshwater is far from sustainable, implying the existence of potential threats to the wellbeing of poor communities.

One of the success stories among the GG/GE initiatives in the developing world is the Humbo Assisted Natural Regeneration Project in Ethiopia, which is directly related to the topic of natural asset (forest) management (World Bank 2012, citing Brown et al. 2011). As a result of deforestation and soil erosion, droughts and floods started to occur frequently and the productivity of agriculture declined. Since 2006, nearly 3,000 ha of forest has been regenerated, and a part of it has been designated as a 'protected area'. The project outcomes are 'win-win' as the logic of GG/GE would suggest. On the one hand, the incomes of the poor communities living in the area have increased, and on the other, the regenerated 'forest now acts as a carbon sink, absorbing and storing nearly 0.9 million tons of CO<sub>2</sub> over the project life' (World Bank 2012: 122).

Another success story is the Rural Electrification and Renewable Energy Development Project in Bangladesh. Like in other parts of the developing world, the problem is that many people in rural areas of Bangladesh lack access to electricity. To light their homes and cook after dark, people use kerosene fuel. Kerosene can be damaging for health and is also not cheap. The solution was found in installing off-grid solar home systems (SHS) to supply rural poor households with electricity generated from a renewable energy source (see, for instance, OECD 2013: 49–50). The project outcomes are again 'win-win' because of the numerous benefits for the rural poor and because of the positive effect on the environment in the form of lower pollution and GHG emissions.

Next I examine the shortcomings as argued by the pessimistic view. First, the fact that powerful national and international actors have been promoting the concept of GG/GE may be positive in terms of its chances of implementation, but there is also some criticism that decisions about GG/GE have been made in a top-down manner, without the participation of a variety of civil society actors.

According to its critics, GG/GE is just a new way for big corporations and financial institutions to continue making profits after the 2008–2009 crisis with the help of international organizations and national governments (Hoffman 2014). Therefore, we should not expect any significant progress in tackling the global issues mentioned above.

All this sounds quite similar to the way the concept of sustainable development has been rendered almost meaningless over the past twenty-two years<sup>10</sup>. As discussed earlier, in spite of the broad consensus in favor of sustainability, very little has actually been achieved. One possibility is that sustainable development has become ‘a key strategy of sustaining what is known to be unsustainable’ (Lidskog and Elander 2012: 413, citing other sources).

A second reason for the skepticism about GG/GE is its similarity with the ideas of ecological modernization theory. A great deal of criticism targets the ‘economic growth’ aspect of the GG/GE concept. As explained above, the modern view of development says that we should go ‘beyond GDP/GNI growth’ and focus more on quality of life, or wellbeing. In advanced countries, in particular, the idea that we should consume less and share more (through the ‘sharing economy’) has steadily been gaining popularity. For instance, the ‘degrowth movement’ argues that reducing consumption will actually increase our happiness and wellbeing<sup>11</sup>.

According to another group of critics, due to GG/GE’s reliance on technological and market-based solutions to decouple economic progress from resource consumption, the best scenario we can expect is one of incremental improvements rather than radical solutions (Lorek and Spangenberg 2014: 34; Hoffmann 2014). One argument in support of the pessimistic view is the existence of the ‘rebound effect’, where the increase of resource efficiency promised by the GG/GE proponents will actually lead to greater resource consumption and therefore further resource depletion<sup>12</sup>. Another argument is that GG/GE can only bring ‘relative decoupling’ (less GHG-intensive growth) but not a reduction of resource consumption in absolute terms (Lorek and Spangenberg 2014: 34; Hoffmann 2014).

Here the following question arises: if the GG/GE approach cannot offer solutions to global issues, then what is the alternative? What do the critics propose? Some (for instance, Lorek and Spangenberg 2014) argue in favor of a ‘strong sustainable consumption’ perspective, while others (Hoffmann 2014) point out that the transition to a sustainable economy would require a ‘radical transformation of the

capitalist system' as a whole. However, it is unclear what 'radical transformation' exactly means. Does it signify a new, post-capitalist system, or something called 'green or sustainable capitalism' (i.e. putting certain limits on capitalism's innate hunger for higher profits, while preserving its creativity and dynamism)? In other words, is 'green or sustainable capitalism' really feasible?

The final reason to be pessimistic about GG/GE is evidence from country case studies showing that its implementation in emerging and developing countries may be costly and therefore generate strong domestic resistance (Resnick et al. 2012). For instance, GG/GE may contradict traditional development strategies based on comparative advantage considerations, as shown in the cases of Mozambique and South Africa. Such strategies include deforestation to grow biofuels in the former and the use of coal for electricity generation in the latter. Although environmentally unsustainable, they have been supported by both the elites and the poor (Resnick et al. 2012: 216–218).

The evidence presented above remains incomplete and inconclusive. Yet, it may suggest that GG/GE could be successful at the level of individual projects (like those in Ethiopia and Bangladesh), but not at the national level. The reason is that the benefits of a national GG/GE strategy will be felt more in the long run, while in the meantime there will be short-term losers who may block its implementation. Therefore, GG/GE strategies in emerging and developing countries may not be feasible without strong international assistance to alleviate the short-term losses.

## **Conclusion**

In this chapter I examined the question of whether GG/GE can become the new paradigm of economic development. Since 2008–2009, the concept of GG/GE has attracted a great deal of attention from international organizations and national governments, one reason being the possibility of its application to emerging and developing countries. The idea is that these countries can deal successfully with both socioeconomic problems (such as poverty and inequality) and environmental challenges at the same time. In addition, the adoption of GG/GE strategies by emerging and developing countries is regarded as a necessary step for dealing with the problems of climate change and resource depletion at the global level.

However, my conclusion is that we need much more empirical evidence to understand whether and how exactly the ideas of GG/GE could be useful for emerging and developing countries. On the one hand, OECD, UNEP and World Bank reports are full of success stories emphasizing ‘win-win’ outcomes, i.e. project results showing the simultaneous achievement of higher wellbeing and environmental benefits such as reducing GHG emissions, pollution and resource depletion.

On the other hand, there are also many critics who are skeptical about the benefits of GG/GE. The critics can be divided into two groups. The first group is composed of scholars and NGO activists who view GG/GE as just rhetoric aimed at helping big corporations and financial institutions from advanced countries to continue making profits in the wake of the 2008–2009 crisis. The second group includes scholars who try to evaluate the usefulness of the GG/GE approach based on empirical studies. According to one of these studies (Resnick et al. 2012), instead of being ‘win-win’, a GG/GE strategy at the national level is actually characterized by trade-offs between its socioeconomic and environmental goals. If implemented, it would lead to short-term costs, and among the losers we may find not just a few powerful cronies but also a large number of poor people.

What are the similarities and differences between research on GG/GE and HSS? First of all, we need to know more about HSS. As discussed in the Introduction of this book, HSS is a new integrated academic field that aims to develop the philosophy and methodology to solve complex global issues such as climate change, resource depletion, poverty and inequality. There is obviously an overlap in research themes, as GG/GE is also concerned with the same problems. In addition, as in the literature on GG/GE, HSS aims at developing a transdisciplinary perspective integrating insights from the humanities and natural and social sciences.

However, apart from the above similarities, HSS is quite different from the approach of GG/GE as it also includes research on the interconnectedness of the seemingly distinct global issues. An example is the interconnectedness of energy, water and food security, also known as the ‘energy-water-food nexus’<sup>13</sup>.

On a number of occasions the UN has pointed out that the lack of adequate access to energy, water and food to cover basic needs is the main barrier to overcoming poverty and inequality. In addition, we

can predict that as a result of population growth, expansion of the middle class in emerging countries and climate change, the world's demand for energy, water and food will probably double by 2050, exacerbating the problem of resource depletion (see, for instance, REEEP 2014). Understanding and analyzing the vulnerabilities as well as the impending risks for individual countries, organizations and local communities cannot be carried out within the boundaries of traditional disciplines. We need a transdisciplinary, holistic approach that takes into account the above interconnectedness.

HSS aspires to offer such a holistic perspective based on the integration of individual disciplines from the humanities and natural and social sciences. To achieve this, HSS adopts an original methodology including forecasting, backcasting and meta-analysis. Furthermore, HSS relies on the synthesis of a wide variety of empirical case studies to identify patterns and formulate solutions.

In this chapter, I compared the ideas of GG/GE with the well-known concept of sustainability. I established that the thinking behind GG/GE has more in common with so-called 'weak sustainability'. On the other hand, HSS is more aligned with the stronger version of sustainability. Yet, as mentioned in the Introduction of this book, even though HSS and Sustainability Studies may seem similar, there are very important differences. The main difference is the emphasis in HSS on the sense of urgency, analyzing vulnerabilities and finding novel solutions to prevent or in response to crises.

Generally speaking, HSS has many things in common with the concepts of GG/GE and of sustainability. It does not contradict them, rather it complements them as it brings into focus some new perspectives and methods. Therefore, HSS can make an important contribution in support of our transition to a sustainable society.

# Notes

## Chapter 19

- 1 The EU's energy and climate change package set the so-called '20-20-20' targets that have to be achieved by 2020, i.e. a 20% reduction in greenhouse gas emissions from 1990 levels, raising the share of EU energy consumption produced from renewable resources to 20% and a 20% improvement in energy efficiency.
- 2 For details, please visit the UNDP's website at <http://hdr.undp.org/en/content/human-development-index-hdi>.
- 3 For details, please refer to Partha Dasgupta's paper 'Economic development, environmental degradation, and the persistence of deprivation in poor countries' (2002).
- 4 In brief, the 'weak' sustainability view says that the depletion of natural capital can be compensated by the increase of the sum of manufactured and human capital, whereas according to the 'strong' sustainability perspective, there are certain functions performed by the environment that cannot be duplicated by humans but are crucial for human survival.
- 5 For details, please visit the UNDP's website at <http://www.undp.org/content/undp/en/home/mdgoverview.html>.
- 6 The green transition or transformation is the shift to a green economy that has been taking place at the global, national and local levels.
- 7 This model has also been known as the 'environmental Kuznets curve'.
- 8 According to the general consensus in the scientific community, we should prevent an increase in global average temperatures of more than two degrees Celsius above pre-industrial levels by the end of the twenty-first century.
- 9 The original text is from a 2007 book titled *The Sustainable Development Paradox*, edited by R. Krueger and D. Gibbs.
- 10 Since 1992 when the Rio Declaration on Environment and Development was adopted.
- 11 See <http://www.degrowth.org/>.
- 12 For example, increasing fuel efficiency makes it cheaper to travel. Therefore, savings from more fuel-efficient cars or planes are outweighed by the rise of travel frequency and the total kilometers traveled. The outcomes are greater fuel consumption and higher GHG emissions.
- 13 See <https://www.water-energy-food.org/>.