



Transformative narratives for climate action

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1 Introduction

Arguably, a *doom and gloom narrative*, which emphasizes problems, costs and adverse impacts, is the most dominant narrative about climate change. Narratives are socially constructed “stories” that make sense of events and phenomena, integrating them into worldviews (van der Leeuw 2019). By doing so, narratives shape preferences and opinions giving direction to human action (Fløttum and Gjerstad 2017). In the context of climate change, it is widely acknowledged that narratives, rather than climate information per se, play the decisive role in motivating or demotivating climate action (Chapman et al. 2017; Fløttum and Gjerstad 2017; Hulme 2009; Moser 2010). Consequently, there has been intense debate about whether the doom and gloom narrative is counterproductive for climate action as fear may demotivate climate action (Chapman et al. 2017). Conversely, narratives can also empower people to act upon problems such as climate change. In this context, Tàbara et al. (2018), for example, put forward the notion of *transformative narratives*, which are bottom-up narratives that tell a positive and engaging story, articulate a vision of “where we want to go” and provide solutions for attaining this vision, rather than articulating problems to avoid.

This special issue focuses on transformative narratives for climate action that highlight economic and other opportunities in climate action. The narratives have been co-developed and empirically validated in the GREEN-WIN project, an international transdisciplinary research collaboration supported by the EU from September 2015 to December 2018, which

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involved 16 project partners and 25 supporting organisations from UN agencies, civil society, financial institutions, universities and think tanks around the world.

The transformative narratives developed are built around what we call win-win strategies (WWS), which are practicable solutions that provide near-term economic benefit to individual businesses, municipalities or countries, and at the same time contribute to meeting climate mitigation, adaptation and other sustainability goals. At the micro level, WWS include green business models and, at the macro level, green growth policies. An example of the latter is an investment-oriented climate policy that switches the European economy to a pathway with higher growth, lower unemployment and lower emissions (Tàbara et al. 2013).

The GREEN-WIN project investigated WWS in a range of diverse mitigation and adaptation cases at both micro and macro levels, and critically assessed the conditions under which WWS may be realized, transferred and up-scaled, and where fundamental trade-offs between climate and economic goals must be faced. At national levels, we investigated the feasibility of green growth through financial policy and technology transfer. At local levels, the project gathered empirical evidence on WWS and enabling environments for green businesses in the areas of coastal flood risk management, urban transformation, energy poverty and climate-resilient livelihoods. At both levels, we investigated financial instruments and policies, as well as financial system reforms that could redirect financial flows towards sustainability and climate action.

This editorial first reviews some of the main contemporary narratives for climate action and clarifies why we focus on transformative narratives (Section 2). Then it introduces the individual papers of this special issue (Section 3) and summarizes some of the key findings across the papers.

2 Climate action narratives

2.1 Top-down doom and gloom narratives versus bottom-up transformative narratives

Historically, the dominant narrative regarding climate action emphasised massive climate risks and “top-down” solutions of globally binding international agreements on emission reductions. This narrative was supported by mainstream climate change research and the traditional view of science-policy interactions based on the knowledge-deficit model (Simis et al. 2016). Climate research provides information to policy makers on the impacts of greenhouse gas emissions, showing that today’s emissions will place a heavy burden on future generations, including increased occurrence of extreme weather events, rising sea levels, growing pressure on livelihoods, food production and health (IPCC 2015). Research results also show that while developed countries and some large economies in transition are the largest emitters, developing countries generally experience the most severe impacts.

This narrative provides strong ethical arguments for reducing greenhouse gas emissions and for assisting developing countries in meeting the costs of adaptation. And arguably, this narrative has been successful in helping to bring the climate issue onto political agendas, e.g. through the establishment of the United Nations Framework Convention on Climate Change (UNFCCC). The ethical arguments provided the impetus for countries to agree on ambitious climate mitigation targets and establish financial transfers from developed to developing countries. The recent Paris Agreement, in which the 195 UNFCCC member states

agreed on the goal to limit global warming to “well below 2°C” (United Nations 2015), demonstrates a success in this pattern of science-policy interaction.

However, the top-down narrative was not successful in helping to deliver a globally binding agreement on national emission reductions. The 2009 Copenhagen Conference of Parties, which failed to achieve such a global agreement, illustrated the serious challenges associated with this narrative: reducing emissions was perceived to be costly, reducing competitiveness and slowing down national economic development. This resulted in understanding climate mitigation as a social dilemma, in which individual countries had the incentive to free ride on the costly emission reductions made by others. Hence, solving the climate issue was perceived as a matter of sharing the burden of emission reduction among countries and the only way of doing this would be binding agreement that explicitly divided global emissions into national contingents.

The 2015 Paris Agreement, however, witnessed the emergence of a different, *bottom-up narrative* emphasising voluntary contributions to climate action in terms of Nationally Determined Contributions (NDC) from each country. This acknowledges the difficult trade-offs countries may face between economic growth and climate action and puts a greater emphasis on solutions that resonate with the interests of individual countries. This bottom-up narrative, which emphasizes individual interests and advantages of climate action in terms of economic and sustainable development, is not new. On the contrary, it has been practised widely in the context of communities, e.g. in the form of community-based adaptation (Ayers and Forsyth 2009), and cities and regions, e.g. within the C40 Cities (Lee and van de Meene 2012), just to name two prominent variants. What is new is that this bottom-up approach has been accepted internationally at the level of the UNFCCC.

On the one hand, this new bottom-up narrative of international climate action seems promising. Opportunities or co-benefits of climate action are increasingly emphasized. For example, Europe announced its aspiration to become the first continent in the world to be carbon neutral in 2050 and launched a plan to mobilise at least 1 trillion investments through the European Green Deal (European Commission 2019). On the other hand, we still see a significant gap between the current Nationally Determined Contributions and the goals of limiting warming to “well-below 2°C”. Furthermore, it remains to be seen whether countries will comply with their voluntary commitments.

Despite the shift from top-down to bottom-up solutions, the doom and gloom narrative persists in large parts of climate policy, civil society debates, climate research literature and the media coverage thereof. This narrative has even received renewed attention through civil society movements such as “Fridays for the Future” and “Extinction Rebellion”, which emphasize the failure of public and collaborative governance in preventing the “climate catastrophe” (Extinction Rebellion 2019).

While climate scientists are debating whether doom and gloom messages about climate change can be effective in leading to action (Chapman et al. 2017), there is some evidence that this might be counterproductive in motivating climate action (Moser 2010; O’Neill and Nicholson-Cole 2009). Research from social psychology, for example, shows that people are more reluctant to act on climate change if they are overwhelmed with negative information (Nelder 2013). Worse, narratives of fear can become self-fulfilling prophecies. A typical example exists in the role of expectations and fear in economics: if people believe that a recession is on its way, they behave as if it is already here, and through that actually can cause the recession without the presence of any objective factor driving the economy into recession (Azariadis 1981).

2.2 The green growth and degrowth narratives

Another narrative prominent in recent years is the *green growth narrative* (or green economy narrative). Green growth seems to be an attractive answer to the climate dilemma, because if green growth is possible, the global public good dilemma would disappear. Under green growth, single countries would be interested in reducing emissions for their own economic benefit and the global public good of a safe climate would be provided as a side effect of these individual actions.

It is no surprise, then, that this concept has gained wide popularity in the policy world. The vision of a green economy that “results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities” (UNEP 2011, p. 6) has been adopted as a development strategy by leading international organisations such as the International Labour Organization, United Nations Environmental Programme (UNEP), the United Nations Industrial Development Organization (UNIDO), the World Bank and the Organisation for Economic Co-operation and Development (OECD) and many Asian and Pacific governments. Even more prominently, the green growth claim has become part of the Sustainable Development Goals Number 8, which calls “to decouple economic growth from environmental degradation” (UNDESA 2020).

But is green growth really possible or is it just an oxymoron that disguises business-as-usual development? And what are the actual implications of green growth in terms of distributional effects and employment? Existing literature argues that green growth is highly unlikely to succeed in stopping environmental degradation (Hickel and Kallis 2019; Jackson and Victor 2019; Parrique et al. 2019; Ward et al. 2016; Wiedmann et al. 2015) and empirical evidence demonstrates that economic growth is generally not decoupled from carbon emissions (Parrique et al. 2019; Zsyman et al. 2012). The same literature, however, also acknowledges that limited research, to date, has addressed this topic. Furthermore, little effort has been made to substantiate the concept through economic theory and applied economic modelling (Scricciu et al. 2013).

A narrative that radically differs from the green growth narrative is the *degrowth narrative*, which questions the viability of continued economic growth and argues that the sustainable use of natural resources requires more fundamental changes to the organization of society, including substantial reductions in production and consumption levels (D’Alisa et al. 2014; Jackson 2013; Martínez-Alier et al. 2010). Proponents of this narrative see degrowth as the only possible way of addressing the root cause of environmental destruction, because a smaller economy requires fewer resources and creates less pollution. They further argue that rich countries appear to be exhausting the means to sustain economic growth over the long term, and thus the need to consider degrowth as an option is inevitable (Raworth 2017).

Despite the arguments in favour of degrowth, green growth continues to be the dominant narrative for environmental sustainability in policy, while degrowth is rarely considered, especially not at international levels. To a large extent, this results from today’s economies and power structures being closely tied to economic growth, and it is thus questionable if degrowth could deliver the large scale and urgent climate action needed today. Furthermore, empirical evidence shows that decreasing economic growth generally reduces employment and social equity and so far, there is little evidence on how a large scale degrowth transition can work without massive social disruption (Kallis et al. 2018; Martínez-Alier et al. 2010).

But in any case, both proponents of the green growth and degrowth narratives run the risk of reducing the sustainability discussion to a question of metrics (i.e. GDP), rather than

focusing on the complexity of multiple dimensions, social processes and interests that drive societal development and the extent to which people cooperate in addressing social dilemma such as climate change. Trying to find empirical examples and new ways to frame the climate challenge in order to overcome the stereotypical debate between green growth and degrowth was one of the main aims of the GREEN-WIN project.

2.3 Transformative win-win narratives

The win-win narratives put forward by the GREEN-WIN project combine elements of the bottom-up, transformative narratives with a cautious version of the green growth narrative. They build on WWS, which are economically attractive to individual entrepreneurs, communities and whole economies on the temporal scale of their contemporary decisions, and address climate and sustainability goals at the same time. We argue that such WWS are needed for advancing climate action today for two reasons.

Firstly, the majority of countries, businesses and individuals around the globe are either unwilling or unable to sacrifice near-term economic development for emission reductions. Globally, 2.2 billion people lack safe drinking water (UNICEF 2019) and three-quarters of a billion people remain in extreme poverty, living below the international poverty line of US\$1.90 per day (Global SDG Awards 2020). For these people, and the countries they live in, economic development is the only way forward. Also, for those countries that could in principle afford substantial emission reductions, compromising on economic growth is generally a no-go area. This is illustrated by the current debates in many countries around the world in which proposals for ambitious mitigation strategies are turned down with the argument that these would damage industries, lead to unemployment etc.

A second reason why WWS are necessary for advancing climate action today is that the implementation of climate action is often impeded by a range of behavioural, psychological, economic, financial and institutional barriers, and WWS are exactly what we need to overcome some of these barriers. Barriers are documented by a large and growing empirical literature both in the domains of adaptation (Chambwera et al. 2014; Dow et al. 2013; Eisenack et al. 2014; Klein et al. 2014; Moser and Ekstrom 2010) and mitigation (Brown et al. 2008, p. 200; Rickards et al. 2014; Semenza et al. 2008). Many of those barriers relate to economic and financial issues. In the adaptation domain, for example, a lack of access to finance often prohibits the implementation of adaptation measures, even if those measures are economically beneficial (Hinkel et al. 2018). In the mitigation domain, climate action is often hindered because senior decision makers in government and business are narrowly focused on near-term issues (Rickards et al. 2014). WWS provide economic benefits today and hence are the means for enhancing access to finance, as well as channelling climate action considerations into near-term decision making. Furthermore, by taking into account diverse interests of all individual people, firms or countries, institutional barriers can be overcome.

We acknowledge that win-win narratives and WWS will not be sufficient for solving the climate problem, but they move the ball in the right direction and help to overcome barriers of climate action associated with narratives of fear and doom. It is possible that it will turn out that some WWS, implemented for some sectors and actors, may have negative effects on long-term sustainability for other actors or sectors. Hence, it is important to learn and correct courses of climate action as we go along. However, WWS can change the climate action narrative from one of burden sharing and doom and gloom to one of opportunities, which in turn can then trigger further climate action, including action that is not economically directly beneficial.

So far, little dedicated research has targeted the uncovering of win-win opportunities; therefore, investing in this kind of research is a timely endeavour. By saying this, we have no intention of saying that we should stop doing research that supports the ethical arguments or degrowth narratives as outlined above. On the contrary, the climate problem is so serious and complex that no one can honestly claim that any single strand of research can solve the climate problem. It is, however, timely to enhance research providing short-term economic arguments that have received little attention so far in climate research despite being critical for solving the climate problem. It is difficult to imagine that we can make any significant progress towards solving the climate problem without providing economic arguments for reducing emissions and opportunities for development that work today for individual countries, regions and entrepreneurs.

3 Papers in the special issue

The papers in the GREEN-WIN special issue cover a wide range of climate mitigation and adaptation action domains, both on the micro and macro levels and ranging from addressing theoretical issues on narratives and green growth to empirical case studies. We have clustered these papers into the following four thematic subsections.

3.1 Win-win strategies in the broader cultural and economic context

An initial set of papers set the stage for the special issue, situating win-win narratives in the broader cultural and economic context, providing key conceptual language for the understanding and analyses of WWS. In an essay exploring the role of narratives in human-environmental relations, Van der Leeuw (2019) argues that narratives are key for transitions to sustainability as they mediate social and individual perceptions of environmental phenomena and society's role in influencing these. Narratives that enable a sustainability transition must be grounded in context-specific meaning to empower different groups around the world to engage in win-win climate solutions.

Thornton et al. (2019) study cultural models of the relationship between economic development and environmental outcomes. The authors survey 225 respondents in China, Lebanon and Turkey to elicit perspectives on whether growth and environmental quality are competing or complementary, finding that views on the existence of such trade-offs differ across locations. For example, respondents in China and Lebanon viewed green economic development as feasible, while those in Turkey were more pessimistic.

Meissner et al. (2019) develop a typology of WWS for climate mitigation and adaptation, by analysing diverse socioeconomic activities identified together with stakeholders in the GREEN-WIN project. Their typology based the concept of a value-consumption chain, which links production and consumption activities and identifies value-consumption chains with an overall ecological/climate benefit and individual economic benefits for countries, companies or households. For example, a company selling organic coffee roasted with biogas instead of fossil fuel energy includes at least four interconnected actors and activities that together realize a win-win solution. This includes farmers processing farm waste for use as biogas, coffee-roasters using biogas to roast coffee, coffee distributors purchasing and labelling such biogas roasted coffee and consumers purchasing the coffee.

3.2 Win-win strategies in climate finance

A second set of papers address the cross-cutting issue of financing WWS, exploring questions regarding the role of international and sectoral policies for increasing the flow of finance for the sustainability transition. Ameli et al. (2019) question whether the current regulatory emphasis on disclosure of climate risks for financial actors is sufficient for shifting institutional investors (i.e. insurers and pension funds) towards the green investments needed for a sustainability transition to meet the Paris Agreement targets. Interviewing institutional investors, they find that barriers to redirecting financial flows towards sustainability will not be overcome by regulating disclosure alone, but that incentives for long-term investment, e.g. through public investments aimed at de-risking and stable policy targets are also needed.

Paroussos et al. (2019) apply a computable general equilibrium (CGE) model to assess the macro-economic impacts of low-cost finance for climate mitigation measures, as a complement to stringent mitigation policies. The results show that increased growth along with emission reductions can result from such financing instruments and policies aimed at meeting greenhouse gas emission reduction targets.

Mandel et al. (2019) assess the role of networks on technological diffusion, and the potential for international policy levers such as climate clubs (Stewart et al. 2017), to realise GHG emission reductions through making use of such diffusion networks. The authors develop a model of technological diffusion using micro-data for three key mitigation technologies as follows: e-mobility, renewable energy and agriculture. They then apply the model to test the effect of climate clubs on the speed of mitigation technology adoption. They find that large emerging countries like China and India can play a fundamental role in climate mitigation globally through such climate clubs if levels of emission and potential role in technological diffusion are taken into account.

3.3 Win-win strategies at the local level

A third set of papers brings the analytical focus down to the local or municipal level, analysing the WWS in urban and rural settings. Ma et al. (2019) analyse governance and business development processes for WWS in urban sustainability. They analyse four distinctive urban green business cases: free-floating bike sharing in Shanghai (Mobike), a renewable energy cooperative in Girona (Som Energia), urban agriculture in Venice and green building start-ups in Istanbul. They find that the following three enabling processes are needed for urban WWS to emerge: (i) co-creation of sustainable values between business and society; (ii) co-evolution between the business and the city's visions and policies; and (iii) co-governance between society, business and government at multiple levels.

Yazar et al. (2019) explore the sustainable urban renewal strategy in Istanbul as a WWS, promoting urban economic growth and improving environmental quality, as well as its distributional implications in the context of the current “green gentrification” debate. They find that sustainable urban renewal has been steered by a powerful construction lobby, which has resulted in parcelled ‘redeveloped neighbourhoods’ that realise only marginal environmental benefits, while substantially increasing real estate prices in the redeveloped areas and displacing existing populations.

Lan et al. (2019) analyse consumption patterns and behaviour changes related to risk perception in sharing economy business models, focusing on EVCARD, an electric vehicle (EV) sharing scheme in Shanghai. They show that the perceived scarcity risk of the EV-

sharing scheme significantly affects access-based consumption behaviour and collaborative consumption behaviour. They also find that while using an EV-sharing system is vital for substituting ownership-based consumption, users' access-based consumption behaviour does not necessarily induce collaborative consumption behaviours effectively. Therefore, if the sharing businesses need their users for maintaining the sharing system, users need to be guided towards this end from the outset through values orientation and incentives.

Bisaro et al. (2019) examine coastal urban land reclamation as a potential win-win strategy by which governments responsible for adaptation can recoup their investments in coastal protection infrastructure through capturing value from newly created land. Examining cases in Germany, the Netherlands and the Maldives, they find that urban land reclamation is a highly attractive strategy for public finance and can provide adaptation benefits in settings where alternative coastal development pathways are not feasible. Furthermore, they show that land reclamation gives rise to a distributional issue regarding the share of social housing included in the planning of projects and how access to social housing leases is distributed after implementation.

Chaar et al. (2019) analyse how the transition towards sustainability might develop in the post-conflict country of Lebanon. Applying a neo-institutional approach, focused on key actors and institutions, they analyse the case of the development of renewable energy in Lebanon to understand how green initiatives might emerge without a prior master plan. They find that the renewables target of 12% in the energy mix by 2020 pledged at the COP15, along with financial and technical support from UNDP, has led to the development of a viable green business ecosystem for realising the sustainability transition.

3.4 Comparing win-win strategies across cases at the local level

Finally, three papers address the questions of which kind of enabling environment is needed for WWS to emerge, and what is the potential for scaling WWS. Tàbara et al. (2019) examine a number of “micro” WWS in South Africa, Indonesia and India, addressing the question of what aspects of the social and cultural context have allowed these solutions to emerge. The authors find that the global Sustainable Development Goals may mean very little at the local level, especially when very pressing and basic needs need to be fulfilled. In general, there is no one-size-fits-all solution. The ability of communities, social business or entrepreneurs to generate innovative albeit ‘imperfect’ solutions fitting to their specific contexts is key to the emergence of WWS. For example, in Indonesia, social entrepreneurs developed a coffee and biogas production solution that reduced farmers' vulnerability to climate change by diversifying products (moving beyond rice) and switching to sustainable energy sources.

Yazar et al. (2020) assess the challenges of realizing regime destabilization opportunities and a transition to sustainability through WWS in the transport and building sectors in Shanghai and Istanbul, respectively. They find that without adequate enabling environments for regime destabilisation, urban transitions to sustainability may fail to achieve effective low-carbon action and progress towards meeting the sustainable development goals. They also show that while deliberate and collective efforts are underway from multiple agents within and beyond the two megacities, the environments for regime destabilisation in the sectors considered remain insufficient primarily due to conflicting priorities among key agents in the underlying urban systems.

Finally, Omann et al. (2019) explore the question of whether WWS can be implemented in other socio-economic settings, can engender enabling changes in political and legal contexts

and can initiate deeper social and cultural change needed for the sustainability transition. They identify several WWS that can be implemented in other contexts and that have the potential to change political, legal, social and cultural contexts. For example, Ilova Sugar in Africa successfully implemented a WWS for sharing the cost of flood risk reduction investments with private farmers in its supply chain, which led the company and other actors in the business ecosystem to consider its applicability in other settings.

4 Conclusions

Arguably, the most dominant narrative about climate change is the “doom and gloom” narrative, which emphasises problems, costs and adverse impacts of climate change, as well as global top-down solutions. While this narrative has been successful in bringing climate change onto the political agendas, and a substantial amount of climate research is underpinning this narrative, it is less clear to what extent this narrative can today mobilise effective and sustainable climate responses at multiple scales of action.

Hence, this special issue explores complementary, transformative narratives for climate action that highlight economic and social development opportunities. These narratives are built around win-win strategies, which provide practicable solutions that provide near-term economic benefit to individual businesses, municipalities or countries, and at the same time contribute to meeting climate mitigation, adaptation and other sustainability goals. So far, little empirical research has been conducted on such win-win strategies. The GREEN-WIN project addressed this gap and co-developed and empirically validated a set of transformative win-win narratives for diverse domains of climate adaptation and mitigation action at multiple societal scales and using mixed methods.

In all the domains of climate action investigated, we find that win-win strategies exist and that they indeed seem to be a necessary piece for advancing climate action today, because, in all the domains we investigated, climate action is predominately driven by economic and social opportunities. Hence, significant additional potential for climate action can be unleashed through bottom-up work searching for green business and development opportunities and inquiring how to overcome barriers to their realisation.

Another important finding from this work is that win-win strategies are diverse, cut across different groups of society, emerge under specific learning processes and are usually not self-evident. Most win-win strategies found are not the product of a particular sector working on its own, e.g. government, business or citizens, but rather of a configuration of actors from each of these sectors working together. The complexity of both the climate/sustainability challenge and the networks of social and economic relations in which this challenge is embedded, means that there is no single optimal solution. Rather, we need clusters of solutions adapted to many contexts and engaging multiple constituencies of action.

The results across cases also highlight the important role of a social environment that enables and supports the collaborative development and implementation of win-win strategies. Often we do not know beforehand what win-win strategies emerge within a system or whether a strategy working in one place will work or be applicable in another. Rigid and predesigned solutions may thus not work. Place, space and context matters.

However, the emergence of win-win solutions can be supported by providing the right environment. This includes providing incentives for learning and opportunity spaces that foster new forms of value co-creation among ‘climate policy entrepreneurs’, ‘green business

entrepreneurs' and 'green prosumers'. This also includes raising awareness of multiple co-benefits that climate action could provide and developing a collective and effective vision of a sustainable future.

Last but not the least, we must carefully consider the distributional implications of win-win strategies, because these are driven by revenue generation, which creates the risk that revenues are captured by powerful interest groups. For example, the coastal adaptation win-win identified in GREEN-WIN depends on privatizing some part of the value created by public investment in land reclamation. Whether and how this value is redistributed across society is a key social justice issue to consider for win-win strategies.

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