# 52. Introduction to Part VII

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We simply have to admit it. Just as Georgina Mace highlights at the outset of her chapter on biodiversity, we have, despite the fact that biodiversity loss is perceived as a concern and has many advocates, largely failed to touch the hearts of citizens at large. The role that nature and climate – in essence, a stable planet – plays in our lives and the lives of our children on Earth has failed to become a driving force behind individual and global action for most people, in most parts of the world.

Despite significant progress in our awareness, understanding, and policy engagement in actions to solve global environmental challenges, manifested not least in UN conventions such as the Convention on Biodiversity (UNCBD) and the Framework Convention on Climate Change (UNFCCC) adopted almost 30 years ago, we now face a planetary emergency. The aggregate human pressures on the planet fuelling this emergency are not only continuing to rise, they are reaching dangerous levels, putting us at risk of triggering irreversible loss of ecological functions and a manageable climate (Steffen et al., 2018). Perhaps a central reason for this failure to reach only a minority (< 20 percent) of citizens in countries around the world is our tendency to communicate the climate and nature crises as environmental problems, instead of talking about humans and solutions (Pihl et al., 2019).

The coronavirus crisis is a devastating global health shock causing the most abrupt slowdown of the world economy since the global recession in the 1930s. It is also a major moment of learning and reckoning for all citizens in the world. If the world, from political leaders to city dwellers, is able to rise so fast, mobilizing collective action and trillions of US dollars in financial bail-out programmes to address one crisis – COVID-19 – why are we not able to rise in the face of the global climate crisis and nature crisis?

These crises, unlike the coronavirus crisis, are putting the future of humanity on Earth at risk. As proposed by François Gemenne and Anneliese Depoux, we need to focus much more on communicating the direct impacts of climate change on human well-being and health. After all, how many recall today that over a time span of only a few excessively hot months in the summer of 2003, 70 000 Europeans (Robine et al., 2008), predominantly elder and weak citizens, died as a result of the most devastating heatwave on record, very likely

amplified by human-caused global warming (Stott, Stone and Allen, 2004). This was a terrible shock, hitting in particular the big cities of Europe.

The grand challenge is how do we tip the scales in the world towards global sustainability? How do we rapidly reach a point of no return, embarking on journeys that not only imminently – in the next few years – bend the global curves of negative change (on climate and biodiversity, water and air, soils and toxic waste), but also follow deep transformation pathways that, for example, cut emissions in half, globally, every decade? Communicating science on risk and solutions, continues, and will continue to be, of critical importance. Philippe Cury and Daniel Pauly remind us that committed science that actively communicates is a necessity to avoid the looming collapse of marine fisheries, and Edward Maibach shows how connecting science with innovative ways of reaching citizens can make a big difference. Importantly, Jean Jouzel points out the importance of robust science, such as the Intergovernmental Panel on Climate Change (IPCC), as a basis for credible communication on climate risks. This is a necessarily slow variable, a foundation to build on, in efforts of achieving societal system change towards sustainability.

We must admit that our sustainability-science communication, activism, and engagement on environmental risks, while having made important progress over the past decades, have not altered the course of the world (despite the existential risks we face). Emissions continue to rise (Jordan, 2019) despite temporary falls (e.g. after the financial crisis and the coronavirus crisis), and natural capital continues to be lost at a catastrophic pace. Even in the most environmentally engaged societies, it is always a committed minority, never an engaged majority, representing < 20 percent of the global population, who drive the environmental agenda (Pihl et al., 2019). I would argue that a reason for this inability to engage the broader citizenry is not poor ways of communicating, but rather communicating the wrong narrative. We have focused on sharing knowledge on why we need to protect the environment and conserve nature as a responsibility and a moral obligation. For a long time, taking care of the environment was achieved by raising awareness. Take economics as an example, where the progress of ecological economics tended to translate to different forms of "willingness to pay" for nature. In short, saving the planet was a moral obligation associated with a significant degree of personal sacrifice. With such a melody determining the development symphony, it is perhaps not so surprising that only a minority of souls have been touched.

This core narrative has been changing within the environmental movement, evolving over the last decades, culminating in the Paris climate agreement negotiations. The Paris Agreement heralded a new and more mature narrative, convincingly walking the talk in the real world. The Paris Agreement cemented the narrative of global sustainability as the prerequisite for prosperity and equity for all humans in the world. This was made possible by

mounting evidence that decarbonizing the world's energy system will neither threaten the global economy nor lead to unemployment, while instead saving millions of lives through improved air quality and take the world into a new era of technology, mobility, and life quality (Luderer et al., 2019). The emerging narrative, backed by science, can be summarized like this: there is no contradiction between profit and sustainability, and that democracies, prevention of conflicts, migration, security, and social justice are better protected in a sustainable world, than in a world that runs on fossil fuels and destroys its natural capital. The new narrative is maturing and increasingly fed with empirical evidence (Clark, Feiner and Viehs, 2015).

But we are running out of time. This makes communication so fundamental. We have only a decade to decisively turn things around (United Nations Environment Programme [UNEP], 2019). The coronavirus crisis may help us, providing the direly needed evidence that sustainability and resilience are investments to reduce risks of future pandemics.

And there is reason for a certain degree of optimism. Why? Not only is science clearer than ever before in terms of immediate and long-term global risks to human development. And not only do we have overwhelming evidence that "yes we can" and "yes we gain" from transitions to circular, zero-carbon, ecosystem-conserving, economic development (Geels et al., 2017; New Climate Economy, 2018). We also know that engaged and concerned citizens across the world, while still constituting a minority, are no longer the isolated few. Opinion polls by Yale University show consistently that 60 or so percent of US citizens are concerned about climate change and want to see climate action (Gustafson et al., 2019). Similar or higher numbers are found in European and Asian countries (Global Challenges Foundation, 2018). And, green political parties and movements across the world often receive double-digit percentages of votes by citizens in elections.

We may be at a pivotal moment: with the right story (facing catastrophic risks with attractive and fair solutions) at the right time (the coronavirus crisis and the super-year 2020 when global curves of negative impact on the planet must bend), with a relatively large engagement and recognition across the world of why a stable climate and functioning nature is worth having.

As shown by Everett Rogers in his famous 1962 book *Diffusion of Innovations* (with the 5th edition published in 2003), behavioural change processes among people are largely determined by the bell-shaped distribution of groups of people. Every population will always have a small minority (2.5 percent) of "innovators", whom we can think of as the "die-hard" environmentalists. Then we have the 13.5 percent "early adopters", essentially the seriously concerned and receptive citizens who do not stand on the barricades. This makes some 15 percent sustainability-engaged core citizens in any given society. A significant minority. A voice that is often heard. At the other

extreme end of the population distribution is, according to Everett Rogers, the 16 percent "laggards". Here we find the sceptics and denialists, and the actors with clear vested interests in remaining in an unsustainable world order (e.g. oil industrialists, coal miners). In between these two extremes, we have the majority. I call these the "indifferent majority". They do not question sustainability science. But they do not lift a finger to support the transition to a sustainable world. In short, they live their day-to-day lives and try to do this with a minimum of friction, that is, move along the path of least resistance. When they go to the supermarket they choose the cheapest tomatoes. They do not care whether they are ecological or not. If the sustainable option would be the best option, then they would take it.

Everett splits the majority into two parts – the "Early" and the "Late" majority – recognizing that also in the indifferent majority, there is a sequence in behavioural change. This theoretical framework suggests that in any given society there is an indifferent majority (68 percent) who do not care too much but would not object to a sustainable life as long as it makes social sense. True, while Everett's thesis applied to entrepreneurs and innovators, I am suggesting the same population dynamics applies for transitions to sustainable lifestyles. This may not be the case. Social science studies are needed. But the applicability is not far-fetched, I would argue, as sustainability has so much to do with novelty, innovation, and system change. If I am right? Then the focus of science communication, if we want to rapidly "tip the scales" to sustainability, should be on the "early majority", that is the 34 percent of any population who are quite indifferent but certainly willing to move.

My gut feeling, at the height of the corona crisis, is that this "early majority" is more receptive to change than ever before. Why are they so important? Well, there is evidence that large enough minorities can "tip over" majorities (Pihl et al. 2019). The Pareto principle (Pareto, 2014), the 20/80 law of the vital few, states that 80 percent of the effects come from 20 percent of the causes, or phrased another way, a large enough minority (20 percent) can tip the logic of the majority. This principle, originating from assessments of unequal distribution of wealth, has proven significant in understanding societal change. It is only when a large enough minority reacted against slavery, passive smoking, apartheid, or rules forbidding marriage equality, that these engrained social habits and cultural rules could be overturned and penetrate the indifferent majority.

Today, while difficult to assess, I think the proportion of citizens convinced that the sustainable narrative is our preferred path to the future is or has reached well beyond the < 5 percent "early innovators", and in some regions – for example in Europe – is approaching the 20 percent Pareto threshold (e.g. in Germany, the UK, and the Nordic countries).

This would suggest that our sustainability communication, in order to have the largest possible impact in the shortest amount of time, should focus on the receptive half of the indifferent majority. And who knows, it may be enough to add perhaps only another 5 percent or so of convinced citizens to cross the social tipping point of desired change (to reach the Pareto threshold). This feels at least quite doable.

For the early majority, the environmental storyline does not work. Urging them to "stop flying", "turn vegan", or "use only public transport" will not tip the scales. Certainly, it is not only about communicating benefits and solutions, it is also, as pointed out by Genevieve Guenther, about communicating *fear* of climate breakdown and *outrage* that powerful actors are blocking the passage of effective climate policy. And no doubt, it is a *fight* against powerful vested interests, as manifested by Michael Mann's tireless efforts of communicating the scientific facts of rapidly rising global climate risks. And, as so powerfully argued by Asmeret Asefaw Berhe, the voices of the marginalized and most threatened by the interconnected health, biosphere, and climate crises, need to be heard, loud and clear.

While all this is correct and important to incorporate in the wide narrative of sustainable development, it seems to me that we have a unique window of opportunity right now. Crossing a social tipping point feels like a real option, making the path towards a fair and safe sustainable future for all humans on Earth inevitable. The collection of writings in this book should be a battle cry to amplify the positive story of the benefits and opportunities that a transition to sustainability offers, and to target this communication at the receptive, while indifferent, majority. Potentially our best friends.

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