GLOBAL SOLUTIONS
THE WORLD POLICY FORUM

YOUNG GLOBAL CHANGERS

Volume 01

CONTENT

FOREWORD

AUTHOR

Dr Markus Engels
Secretary General of the Global Solutions Initiative

I am thrilled to write this foreword for the first publication of the Young Global Changers (YGC). The YGC are extremely important in the network of the Global Solutions Initiative, which aims to integrate global civil society into multilateral processes and to recouple social, environmental and economic progress. The YGC bring their experience and new perspectives into this international network and thereby pollinate decision-making processes on a global level. They are the voices of the generation that has to live in the world created by the decisions we are making today.

It is obvious that international cooperation is the task of people; in cities, schools, universities, sports and cultural associations – in short: multilateralism is the responsibility of everybody, because in a connected world everyone is affected by the actions of anyone. While former generations had to learn this lesson step by step and began this adventure by building bridges through city partnerships or school and university exchange programs, my impression is that these days international exchange and cooperation has become an established practice. No wonder, because the digital age enables most of us to easily follow and engage in events and discussions around the world. The world has become smaller and more vulnerable because many actions have a global impact. Growing together is a fascinating process, but at the same time we witness how clashes between groups of people can quickly escalate due to this more readily available, yet more anonymous, access to one another. We see this daily in appalling hate speech amplified by social media. This exposes the need for an international set of rules for the digital age that uphold our basic human values of solidarity, justice and equality. I'm keen to learn new ideas for creating a better and more sustainable world from a generation that grew up in the digital age.

It is also this generation which will be mostly affected by disturbing environmental changes. Climate change, the loss of biodiversity and the exploitation of resources are fundamental threats to all of us. It is now incumbent upon the young generation to put right the terrible mistakes of their parents and grandparents. For too long we followed a global narrative of ever more growth and expansion. Cruelly, it is mainly those who were not the initiators of this ideology or its damage who are paying the price for this failure. This will also be true for the younger and unborn generations who will certainly pay a high price as well. In the debate about resilience and sustainability we cannot forget the social dimension. The distribution of vaccines to fight COVID-19 has once again highlighted the incredible gap between rich and poor. But the pandemic showed also that nobody will be safe until everybody is safe. This makes me optimistic that we will soon see a new international narrative that strives for a recoupled world and the overcoming of conflicts and inequalities.

I'm convinced that the Young Global Changers can contribute significantly to this debate and its implementation. I am proud that the Global Solutions Initiative is helping the YGC to make their network as powerful as possible as they humble their predecessors with great ideas and enthusiasm.

ABOUT THIS PUBLICATION

AUTHOR

Ole Spies
Program Lead: Young Global Changers

AUTHOR

Laura Herde
Program Assistance: Young Global Changers

AUTHOR

Rémy Weber
Editorial Assistance

At a time of polarized views and conflictual debates on many issues of public interest, one issue seems to receive broad consensus. Most spectators and commentators of our global political and economic situation seem to agree that our current economic system needs fundamental changes. Even flagship publications of global market liberalism like the Financial Times and The Economist regularly question and critique capitalism in its current form, globally and internationally, but also nationally, including in economies of the West.

We have come to realize that our extractive, fossil-fueled economies are destroying our natural resources and are bringing us to the brink of a global climate catastrophe. At the same time, economic prosperity and economic growth seem to be more and more decoupled from broader societal benefits. In simple terms, only very few are benefiting from economic growth while most are left behind. Even within economic orthodoxy it has become hard to defend the promise of a rising tide that lifts all boats. The opposite seems to be true; the economic success of a few is coming at ever greater costs for the many, socially and ecologically.

These trends are by no means recent developments. They have been developing for some time. They were exacerbated and highlighted by the COVID-19 pandemic, which has laid bare and heightened many of the underlying economic developments.

Inequality is growing, globally as well as within many societies, the destruction of the environment is continuing, and the climate crisis is worsening – despite the many recent pledges from political and business leaders. At the same time, trust in democratic institutions has declined in many countries. And while the COVID-19 pandemic and other recent trends may have led to a revival of multilateral approaches in some areas, the absence of a coordinated response – especially regarding the global distribution of vaccines – has demonstrated once more the current boundaries of international solidarity and collaboration.

It is against the background of these observations that the Young Global Changers program aims to identify ideas, projects and people from around the world that help to shed light on these developments, but also to move beyond simply acknowledging that things cannot continue to go on as they are. Instead, the YGC program aims to provide approaches and avenues for moving forward and making the necessary shifts.

At the core lies the idea that we need to fundamentally rethink our economic activities, towards a better alignment – a recoupling – of our economic and political activities with social prosperity and environmental sustainability. To this end, the Young Global Changers program is bringing young voices into debates around global problem solving, not least because it is the younger generation that is most affected by today's actions or inactions on these issues. Furthermore, the program draws specifically on young researchers, social entrepreneurs, intrapreneurs, activists and organizers to find concrete examples, projects and initiatives of "recoupling in practice," to identify and learn from best practices but also to understand which organizational, structural and systemic factors foster recoupling and which stand in its way.

Over the past five years, the Young Global Changers program has worked with almost 400 young people from around the world. It has identified voices, ideas and initiatives that address the intersection of

economic and political activities with social prosperity and ecological sustainability.

In this volume we have complied assessments, recommendations, proposals, and specific approaches aimed at addressing the decoupling processes described above. All contributions to this volume have been written by Young Global Changers or members of the program's Extended Circle.

The publication is structured into four sections. In the first section, our authors argue for a better inclusion of youth and upcoming generations in decision-making processes. In the next two sections, articles are clustered around two central themes: digitalization, data and technological innovation and how these affect and interact with civil societies; and our natural environment, in particular, climate change and climate action. These two areas – how our societies manage and use technologies and how we tackle the climate crisis – are topics at the top of the agenda for most of the program participants. The final section of this publication is dedicated to the question, "Where to go from here?" and highlights approaches for tackling some of the challenges and issues raised in the preceding chapters. The authors present concrete projects and initiatives that aim for more and better recoupling.

The contributions to this volume have been developed as part of, or in relation to, a series of summer schools held between 2019 and 2021. These international summer schools took place onsite and online. At these meetings, program participants from around the world familiarized themselves with recoupling approaches and discussed how their own activities, research projects and initiatives fit within larger processes of societal and economic transformation.

We would like to express our gratitude to the Volkswagen Foundation, who helped us realize the latest series of Global Solutions Summer Schools (2019–2021) and made this publication possible.

We also want to thank our additional program supporters, without whom the Young Global Changers program would not be possible; among them the Friedrich-Ebert-Stiftung, PwC and The German Federal Environmental Foundation (Deutsche Bundesstiftung Umwelt DBU).

The articles in this publication have been written by the authors themselves and do not necessarily reflect the positions of the Global Solutions Initiative, the Young Global Changers program, or our partners.

This publication aims to present diverse and sometimes differing voices, viewpoints and ideas of young researchers, academics, social entrepreneurs, activists and organizers from around the world who add their perspectives, share practices and describe avenues towards much-needed transformation.

YOUNG VOICES // GLOBAL ISSUES

Young Voices // Global Issues: Introduction

Young people have become distinguishable voices on issues like social justice, diversity, global inequality – and more recently the climate crisis. Pictures of global leaders with young activists, keynote speeches and heartfelt appeals by young leaders from around the world have become standard features of many international meetings and conferences.

But despite the increased presence of young voices and faces at conferences and in the media, young people themselves are still seldom involved in any of the decision-making processes, nor do they feel sufficiently represented.

While decision makers give regular lip service to the importance of youth inclusion, this is rarely followed up with actual inclusion or even proper representation and consideration of their positions and demands. This of course is by no means unique to voices and positions of the youth but reflects a larger deficit of inclusion and representation across the board. This representation is, however, especially pressing when it comes to topics and decisions that directly affect our future on this planet.

In the following section, our authors argue that young activists and youth movements deserve much more attention and actual consideration by senior political leaders and decision makers.

In her contribution, our author Giulia Carsaniga identifies specific sets of topics that are particularly relevant in this regard. Yasmin Morais argues that with the right skills and opportunities, youth can become a true driving force for social transformation. Finally, Johanna Bärnreuther calls for a fundamental reorientation towards more evidence-based approaches in our individual as well as collective activism – drawing on a demand that has been front and center to the youth-led climate movement since its very beginning.

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AUTHOR

Giulia Carsaniga
2020/21 Young Global Changer & Consultant, Capgemini
Social Media: LinkedIn: https://linkedin.com/in/giulia-carsaniga-5b1887154/
Keywords: Young generations; policymaking; global challenges; learning

Policymaking knows no age limit:

What decision-makers can learn from Millennials and Generation Z

"You are too young to understand." Everyone in their youth has been told this at least once. Yet, today more than ever, this way of speaking to young people has become obsolete. Indeed, Millennials and representatives of the Generation Z – i. e. people born between 1981–1996 and 1996–2019, respectively – have been active shapers of solutions to this world's greatest challenges: from climate change to the COVID-19 pandemic. Hence, while wisdom may increase with age and experience come with time, younger generations seem today able to teach useful lessons to decision-makers. In particular, five sets of values, characterizing young activists and movements worldwide, are worth the consideration of senior political leaders.

1. Determination and pragmatism

One of the most common reasons for ineffective policymaking is a slow and inconsistent approach to wicked problems. A good example is the fight against climate change, which international policymakers dangerously postponed – some even denied – in

»Younger generations seem today able to teach useful lessons to decisionmakers. In particular, five sets of values are worth the consideration of senior political leaders.«

favor of economic globalization. Now that rising sea levels, destructive floods and wildfires call for prompt global action (Oxfam International, 2019), politicians worldwide appear still unable to adequately set their agendas, losing themselves in neverending national and supranational debates. In this sense, policy decision-makers everywhere should show the same determination as Greta Thunberg did in 2018, when she began protesting every Friday in front of the Swedish Parliament, and the same pragmatism that she – and now millions of #FridaysForFuture (Fridays For Future 2020) young activists on all continents – show today in asking leaders worldwide for a straightforward and immediate reduction of CO_2 emissions.

2. Cooperation and team spirit

Another backlash to globalization – in particular to the increased inflow of migrants in advanced economies – has been the vehement emergence of extremist nationalist voices. In this regard, the decision of Great Britain to leave the EU, the election of the protectionist Trump, and the rise of a populist government in Italy can be seen as consequences of the dissatisfaction of certain social groups who feel "left-behind" by the process of global integration (Rodrik, 2018, 2020). Profiting from this sentiment, these newly elected decision-makers have taken a "my-nation-first" approach, claiming the need to regain control over areas that had become too internationalized, including labor, security and trade. However, to deal with the present wave of globalization and its implications, cooperation and team spirit are needed, not only between, but also within nations. Policymakers could take inspiration from the Sardines movement in early 2020 in Italy (Horowitz 2019). Tight as sardines in a can, the young founders of this anti-fascist and inclusive group reminded everyone in Italy and beyond (demonstrations happened in Austria as well) of the importance of staying united in times of crisis, avoiding hate speech and the spread of xenophobic sentiments, while fighting together against global threats (Jones, 2019).

3. Open-mindedness and progressive thinking

What is evident from the examples of climate change and populism is that the answer to these global challenges is not to step back from globalization and embrace more protectionism. Instead, global leaders should be open to new possible solutions and think progressively instead of regressively. This conclusion seems obvious to the students who, for example, in 2019 protested against the Citizenship Amendment Act (CAA) in India, which threatens the presence of Muslim immigrants in the country, actively discriminating and violating the secular principles at the basis of the Indian constitution (Biswas, 2019). To some extent, the same open-mindedness and progressive thinking demonstrated by these young Indians is an example for international decision-makers to make much-needed adjustments

»Decision-makers are beginning to listen to (and learn from) young people's ideas and needs.«

and changes to global governance rules to ensure a more inclusive, cooperative and balanced globalization.

4. Courage and consistency

Bringing about change is risky because it always involves a certain degree of uncertainty in terms of the effects and consequences of the actions taken. This is even more true when the aspired change is against the will of strong members of society or opposed by cultural, religious and/or historical norms of a country. Examples here abound: From the idea of taxing the top 1% of earners to reallocate resources against economic inequality, which is highly contested in several developed nations, (Robinson, 2019; Looney, 2019) to fighting for gender balance in the MENA region. To tackle certain problems –first and foremost inequality in all its forms – today's policymakers should be able to take risks and display the courage required to break taboos and move towards change, especially when fundamental rights and social injustices are involved. Young sources of inspiration in this regard currently come from Afghanistan, where, with the retreat of all foreign forces, the Taliban recently proclaimed the founding of an "Islamic Emirate," excluding women from political positions and abolishing the Ministry of Women's Affairs (Doucet, 2021). The courage of dozens of women refusing to abandon their land to find shelter abroad and risking their lives in Kabul to protect their right to study, work, and lead an independent life is undeniable (Limaye and Thapar, 2021). Most importantly, it shows a persistence and a consistency hardly recognizable in the conduct of those Western countries bragging for years about restoring peace and building up democracy.

5. Social media and effective communication

While policies will always remain to some extent controversial, especially when it comes to military interventions in another state- communication of problems and their proposed solutions should be transparent and straightforward. In the midst of the digital revolution, social media have certainly become essential communication channels for global politics. Yet, these powerful instruments should not serve the self-interests of politicians, dis-informing or mis-informing entire populations. Rather, they should bring people closer to each other and to decision-making by providing understandable news and encouraging solidarity. The need for such a use of communication has emerged during the COVID-19 pandemic at least in two ways. First, the spread of conspiracy theories about the virus could only be defeated by a proper share of accurate information. Hence, initiatives such as the mass literacy program (#AgirContreCOVID19) launched by a young medical doctor from Benin and a consortium of health-related content producers has been essential to inform a cautious conduct among citizens in francophone Africa (Women Deliver, 2020).

Secondly, the recent hesitancy of Generation Z to undergo vaccination clearly indicates a lack of targeted vaccination campaigns (Crist, 2021). In this respect, the decision of the US government to enlist Instagram and TikTok influencers to raise awareness about the risks of the virus for young people and to boost vaccination rates (Chatelain, 2021) is a sign that decision-makers are beginning to listen to (and learn from) young people's ideas and needs.

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AUTHOR

Yasmin Almeida Lobato Morais
YGC Extended Circle Member & Programmes Manager, Global Changermakers
Social Media: LinkedIn: https://linkedin.com/in/yasminlmorais/
Keywords: Youth; Sustainable Development Goals; United Nations; sustainable development; sustainability

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The importance of youth to reach the Sustainable Development Goals:

The roles young people may take toward realizing the SDGs

The expression "sustainable development" is defined by the United Nations (UN) as "development that satisfies current needs without compromising the ability of future generations to satisfy their needs" (UN, 1987, p. 41). During the United Nations Conference for Sustainable Development in 2012 (also known as "Rio +20"), where the sustainable development agenda for the next decade was developed, 17 comprehensive goals were defined and adopted by the UN member states. The goals are called Sustainable Development Goals (SDGs) and encompass the social, environmental, and political spheres. Their objectives range from eradicating poverty and promoting economic growth to investing in clean energy sources and quality education. Altogether, the SDGs are also called the "2030 Agenda."

Against the backdrop of the 2030 Agenda, the world sees an increasing number of young people. In fact, we have the largest generation of young people in history. With 1.8 billion people currently between the ages of 10 and 24 years old and with roughly 90% of these young people living in developing countries, young people are key to the success of the global goals. With the right skills and opportunities, youth can become the driving force behind sustainable development, world peace, and security (UN, 2018).

Five key roles for youth

There are five key roles that they can play: (1) As critical thinkers, identifying and challenging the current power structures; (2) As changemakers, acting and mobilizing

people through new social technologies; (3) As innovators, bringing new perspectives and developing new solutions for current problems; (4) As communicators, disseminating knowledge about the 2030 Agenda and monitoring its indicators and, lastly, (5) As leaders, leading their communities and countries through organizations, networks, civic engagement, and other means and extending opportunities to marginalized youth (UN, 2018). When equipped with the abilities and opportunities they need to develop their potential, this generation will fulfill their role in advancing the Sustainable Development Goals.

»With the right skills and opportunities, youth can become the driving force behind sustainable development, world peace, and security.«

Recognizing the key role that youth will play in this process, the UN has encouraged and facilitated youth participation and engagement in UN processes and negotiations. In 1995, the General Assembly adopted the World Program of Action for Youth (WPAY) that acknowledges youth as meaningful human resources in promoting development and social change. The program seeks to increase the quantity and quality of opportunities for youth participation, especially on issues that directly impact young people, and invites all member states to include young representatives in their UN delegations (UN, 1995, p.1).

Between the adoption of WPAY and the creation of the SDGs, the UN has expressed several times that it is necessary to include youth in the efforts to reach the goals. In 2013, right after the adoption of the 2030 Agenda, one of the General Assembly Resolutions stated:

"[This resolution] recognizes that youth participation is important for development, and urges the Member States and entities of the United Nations system, in consultation with youth-led organizations, to explore new avenues to promote full, effective, structured and sustainable participation of young people and youth-led organizations in relevant decision-making processes, including in the design and implementation of policies, programmes and initiatives and in the elaboration of the post-2015 development agenda; [...]" (UN, 2013,1-4)

In addition, the current Secretary-General of the United Nations, António Guterres, recently made the focus of actions involving youth a priority of the UN system. To this end, the strategy "Youth 2030: Working with and for Youth" was launched at the General Debate of the 73rd General Assembly, which took place between September and October 2018 (UN, 2018).

Maria Fernanda Espinosa Garcés, President of the 73rd UN General Assembly, recognized youth as important drivers of change. She stated that young people are "amongst our best educated, most innovative and most creative resources" when it comes to addressing health, education, and economic prosperity (IISD, 2017).

Five priority areas for Youth 2030

This youth perspective seeks to increase the regional, national and global impact of social actors to meet the needs and promote the rights of young people in their diversity around the world, ensuring their participation and engagement in the implementation, review and monitoring of the 2030 Agenda. The strategy Youth 2030 is organized into five priority areas:

1. Engagement, Participation and Advocacy – Amplify youth voices for the promotion of a peaceful, just and sustainable world
2. Informed and Healthy Foundations – Support young people's greater access to quality health and education services
3. Economic Empowerment through Decent Work – Support young people's access to decent work and productive employment
4. Youth and Human Rights – Protect and promote the rights of young people and support their civic and political engagement
5. Peace and Resilience Building – Support young people as catalysts for Peace and Security & Humanitarian Action. (UN, 2018, p. 10–12).

»By representing the transition between the past generation and the generation to come, youth have a fundamental role in deciding the future path of global development.«

This resolution has had a very important symbolic and institutional character for the international community to recognize and promote the integration of youth into society at large, as a focal group for the realization of the 2030 Agenda.

The definition of sustainable development, developing a certain region without compromising the ability of future generations to meet their needs, already serves to express the importance of youth engagement for the inclusive and lasting growth of their communities (UN, 1987, p.41). By representing the transition between the past generation and the generation to come, youth have a fundamental role in deciding the future path of global development. The role of young people, as acknowledged by the United Nations, is increasingly relevant, considering that we face numerous unprecedented challenges that need to be addressed in an innovative and collaborative way. These include rapid urbanization, the development of new technologies, and new scientific discoveries (SDSN, 2015). These changes have been, for the most part, led by young people, who naturally become the best actors to transform them into tools for social impact. Thus, instead of waiting for governments and other institutions to offer opportunities and support for young people to get involved in causes related to the 2030 Agenda, it is important that young people themselves believe in their capacity to mobilize, engage and strengthen their communities. In this way, the future will become more transparent, inclusive, sustainable, and fair – without leaving anyone behind.

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AUTHOR

Johanna D. Bärnreuther
2020/21 Young Global Changer & MPhil in Environmental Policy Candidate, University of Cambridge
Social Media: LinkedIn: https://linkedin.com/in/johanna-baernreuther/
Keywords: Activism; impact; efficiency

© Kua | Misty slopes of Mount Elgon in the north of Uganda

Warm hearts and cool heads:

How we fundamentally need to change our approach to major problems in the world

As I sit in a warm Berlin library typing this essay, global problems seem both remote and close at hand – just one click away on my screen. Wildfires rage in Turkey and Greece. The Taliban takes control of Afghanistan. A fuel tank explodes and life-saving medicine is in short supply – just two of many events lining the path of Lebanon's economic and financial implosion. Belgium and Germany experience grave floods, bringing climate change closer to my doorstep. But people are also taking action. German activists celebrate a small, late victory in their battle against the utility RWE, as a court rules the clearing of their Hambach forest camps in 2018 to make way for coal mining was unlawful.[1] A lawyer volunteers at a soup kitchen to help the poor.[2] Influencers on social media embrace a more sustainable lifestyle, praising reusable straws and bamboo toothbrushes.

Our time and resources are limited, and yet we opt for behaviors that seem to ignore this fact. No plastic straw saved will prevent people from dumping so much waste into the oceans that there will be "more plastic than fish in the sea by 2050."[3] At the same time, we continue to pile up packaging

»Our time and resources are limited, and yet we opt for behaviors that seem to ignore this fact.«

waste and ignore the role that the fishing industry plays.[4] A thousand felled Hambach forests will not come close to the destruction caused by the 2019 Amazon fires or by (illegal) logging in Romania and Ukraine,[5] nor would the additional coal mined contribute substantially to the 2,000 gigawatts of global coal capacity.[6] Instead of volunteering at the soup kitchen, the lawyer could have donated his billable legal fees. Many choices we make in goodwill are inefficient.

To a certain degree, those actions have symbolic value: low-scale, prosocial, community-building behavior has the power to motivate everybody to combat the same problem on a bigger scale. In this sense, local activism serves as an outlet for willpower and a role model for change. Furthermore, concrete examples are essential for policy development. Even though the Hambach forest might be entirely negligible on a supraregional level, the activism protesting its destruction garnered media attention that helped seal a government deal to end coal power as part of the German Energiewende.[7] The recent court ruling also sets a precedent.

Despite such initial justifications, we can do better overall. If we sincerely want to have an impact, we should focus on promoting what has proven to be a success. Stable, democratic regimes have enabled peace in Europe for the past 75 years. A dollar given to the right organization will on average contribute substantially to saving a life from disease.[8] Research enables quantum leaps in reducing world problems – like the experimental approach to alleviating global poverty pioneered by the 2019 Nobel Laureates in Economics.[9] Finally, government intervention can be expedient, for example, when markets fail to price in externalities, as is the case with plastic production and disposal.[10]

»If we sincerely want to have an impact, we should focus on promoting what has proven to be a success.«

Why do we prioritize inefficient action over evidence-based behavior?

First of all, a feeling of powerlessness leads us to believe that our individual actions are unimportant. The world's problems are too complex, intertwined and remote for us to feel like it matters which particular course of action we choose. While it is in fact true that one person will hardly change the world, the aggregate of all individuals is potent – but only if enough people on the individual level abandon this belief. Unfortunately, the belief is reinforced by a vicious cycle caused by disengagement: Regarding democracy, for example, consider citizens who do not feel represented. Dissatisfied with their politicians, they stop engaging in politics, which in turn becomes a self-fulfilling prophecy of not being represented, and so on.

Second, some actors who pretend to be tackling global challenges actually make egocentric choices. Altruistic action and solidarity are widely regarded as noble, which might spur people to choose an allegedly sustainable lifestyle à la zero waste or to give to fundraisers. On top of that, activism helps to morally free the informed egoist of their bad conscience. Their and

many companies' profit interests are mutually reinforced by providing ersatz solutions to actual problems (Giridharadas, 2019).

Third, many people hold the false belief that our intuitive emotional response to problems is the best possible response, since facts seem too complex to grasp and too insensitive to be combined with emotion. Drawing from personal experience, they associate predominantly evidence-based decisions with cold-heartedness, which seems to stand in contrast with emotion. We attribute an authenticity to the intuitive response which fact-peddling lacks. Unfortunately, our belief in taking an emotional approach to problem solving is mistaken. As Kahneman and Tversky (1974) elaborate, our mind is incapable of grasping large numbers, draws from whatever sources are available at the moment, avoids ambiguous solutions and is unable to put events into contexts of scope, among others. Their research points towards the conclusion that our choices are biased by such cognitive failures. This explains why some popular solutions are inept at fundamentally mitigating major global problems.

Taking the feeling of powerlessness, the phenomenon of ersatz solutions and cognitive failures into account, it is clear that we fundamentally need to change the way we try to solve global problems. Actively reinforcing the belief that a single person's actions matter is a good starting point. In order not to feel overwhelmed by the excess of information and wide variety of causes, we should embrace priority-setting: A certain degree of ignorance about the rest of the world can actually help us focus on "doing good better."[11] Once we are sure about a certain pressing issue, why not become an ambassador for radical change?

Regarding egoistic motives, there is nothing is wrong as such with trying to assuage feelings of guilt, wanting to be seen as a good person, or other self-focused drivers. Nevertheless, we should approach suggested solutions with a more critical attitude than is the norm today, eager to investigate the evidence indicating how much impact an effort can actually produce. Mainstreaming such commitment is crucial to global change, since many people are motived by self-interest.

Moreover, evidence-based action as opposed to an intuitive response must be destigmatized. We should do good according to our best knowledge, not according to our biased emotional viewpoint. This is not to say emotions should be suppressed: In fact, they are the engine of all change. Nevertheless, we require more trust in global research to adequately respond to common challenges. This involves reconsidering moral attitudes when they conflict with the proposed solution. Government,

»Giving resources to the powerless so they can enable change, while rigorously evaluating effectiveness every step of the way might be among the best decisions we could take.«

as one of the main administrators of aid, should engage in evidence-based action. It should only commit to choosing effective programs and evaluating their implementation and success according to the highest academic standards, and should serve as a role model for change.

Lastly, let us acknowledge the immense privilege we hold to be able to afford to even read this article and engage in policy debate. It is unjust that those who must shoulder some of the gravest consequences have no say. I am convinced that people who are directly affected can make far better decisions than even the most well-meaning who are unaffected, as Perez (2019) suggests. She warns that data collection is in the hands of the powerful, biasing evidence towards what they deem worthy. Giving resources to the powerless so they can enable change, while rigorously evaluating effectiveness every step of the way might be among the best decisions we could take.

With warm hearts and cool heads, we can achieve so much more than what we can imagine.

[1] The corresponding press release can be found at https://www.vg-koeln.nrw.de/behoerde/presse/Pressemitteilungen/25_2021_09_08/index.php

[2] Original example from Yudkowsky (2009), probably in allusion to Grisham (1998).

[3] Wearden (2018).

[4] Marine sources, predominantly the fishing industry, make up 20 to 30 percent of global ocean plastics according to Ritchie and Roser (2018).

[5] In Romania, activists risk their lives to protect forests from the 'Timber Mafia', https://www.aljazeera.com/features/2020/11/26/romania-disappearing-forests. In Ukraine, illegal logging remains at high levels, https://ec.europa.eu/environment/forests/pdf/Country%20overview%20Ukraine%20_17.05.2020.pdf .

[6] Number retrieved from Evans and Pearce (2019).

[7] Mohr (2019).

[8] Weller (2015) declares that currently, less than 3.400 USD save one life.

[9] Duflo (2010).

[10] As of July 4 2021, a range of single use plastic items have been banned in the EU (Directive (EU) 2019/904). Moreover, exports of all but easy-to-recycle plastics from the EU to non-OECD countries have been prohibited, taking effect on January 1 2021 (Commission Delegated Regulation (EU) 2020/2174). If enforced, these steps should bring significant positive change.

[11] 'Doing good better' by MacAskill (2015) is a central piece to the literature about Effective Altruism, an "intellectual project, using evidence and reason to figure out how to benefit others as much as possible" and "a practical project to take action based on the research, and build a better world", https://www.centreforeffectivealtruism.org/ .

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TECHNOLOGY, DIGITALIZATION & CIVIL SOCIETY

Technology, Digitalization & Civil Society: Introduction

Digitalization and technological innovation are concepts that come to mind quickly when we think about societal transformation. The technological changes of the past few decades (the internet, digitalization, smartphones, social media, artificial intelligence, automation) perfectly epitomize our rapidly changing, ever accelerating societies. At the same time, technological innovation is presented and lauded as a potential solution for many, if not all, challenges we are facing today – from the climate crisis to city planning, from schools and education to pandemics, natural disasters and more.

There is no doubt that technological innovation, including a better use of data, has the potential to significantly improve lives. New technologies are playing a major role in making industries more sustainable. Data-driven approaches are helping us to address all sorts of societal and environmental challenges.

At the same time, we have been witnessing the systematic marketization of personal data and a commodification of digital spaces. This is accompanied by a disproportionate aggregation of market power as well as cultural and political influence of big-tech companies.

Furthermore, the continuous production of newer and newer electronic hardware has led to a growing electronic waste problem on the one end of the supply chain, while fueling atrocious mining practices (including for conflict minerals) on the other end. This is accompanied by exploitative working conditions from cobalt mines in the Congo to production lines in China, or the precarious working conditions of so-called gig workers around the world, to name a few.

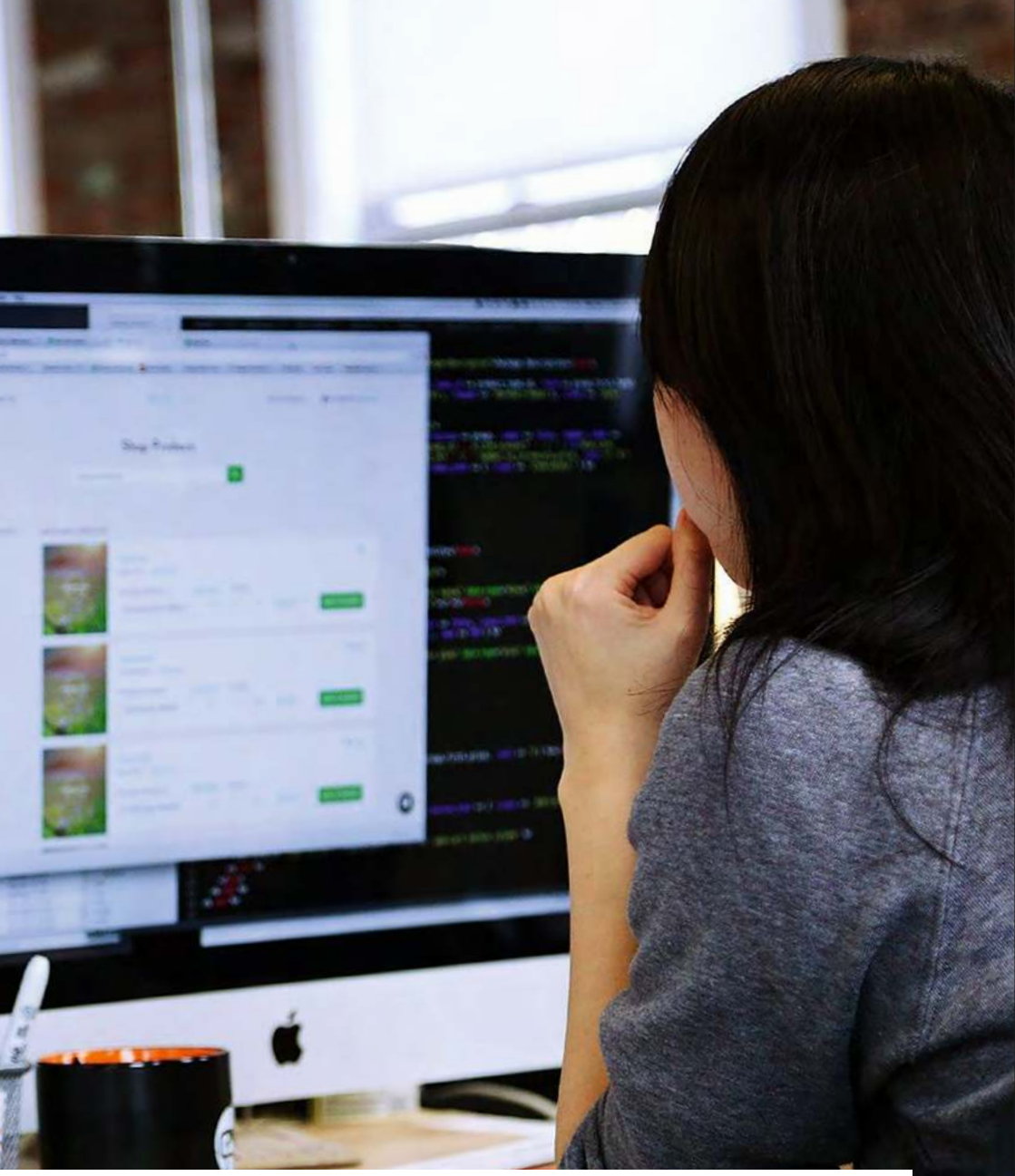
Some of these developments are specific to the domain of technology and digitalization, others are indicative of general deficiencies of globalized capitalism. All these developments are being enabled and reinforced by permissive regulation, inadequate democratic control and a lack of international coordination.

No question: Tech companies have created tremendous economic and social value. However, technological innovation and entrepreneurial spirit alone will not be enough to steer digitalization and new technologies towards delivering for the many.

For digital technologies to deliver on their promise, concrete steps need to be taken towards more citizen-led control and an empowerment of those affected – putting people and the environment back at the center of technological innovation.

»Technological innovation and entrepreneurial spirit alone will not be enough to steer digitalization and new technologies towards delivering for the many.«

In the following section Young Global Changers and members of the program's Extended Circle address and try to balance these phenomena, trying to make sense of the potential as well as the potential pitfalls of technological progress and innovation.



AUTHOR

Viliana Dzhartova
2020/21 Young Global Changer & Co-Founder, Relmagined Futures
Social Media: LinkedIn: https://linkedin.com/in/viliana-dzhartova-77b40420/
Twitter: @vili_dzhartova
Keywords: Innovation; technology; sustainability

Can technology and innovation help us with social and environmental priorities?

The world we live in today is subject to complex ecological and social challenges. The most recent report by the Intergovernmental Panel on Climate Change (IPCC 2021) warns that increasing global temperatures will most certainly lead to crises in biodiversity, water, and energy. The global impact of this is expected to grow exponentially as we approach certain thresholds that put our planet at risk (Steffen et al. 2015). Furthermore, social sustainability challenges interlinked with ecological disparities manifest themselves as inequalities in wealth, gender and race, violent conflict and forced migration, and create major challenges for global development (OECD 2015).

A growing number of academics, companies and governments anchor their hopes in innovation as the medium to effectively transition towards sustainability. In a recent study, Silvestre and Țîrcă (2019) introduced four categories of innovation based on the focus and motivations of innovators: Social Innovations, Sustainable Innovations, Traditional Innovations and Green Innovations (see Table 1). The study notes that Traditional Innovations continue to dominate the innovation discourse, with economic considerations and profit being the main driver. Other types of innovations are growing but are still small in comparison.

In daily conversations, when people talk about innovation, they usually mean new or improved technology. Most of the time, this falls into the category of Traditional Innovations. Technology on its own without being driven by a strong social and/or environmental purpose is simply fueling the existing systems, which in many instances are the ones that have caused the huge challenges we are facing today (Packham 2009). For example, technology facilitating convenience – products and services that are available at the push of a button, anytime and anyplace – is both the result of and the driver for consumerism (Nykiel 2001).

While the role of technology and innovation in our transition to social and environmental sustainability is essential, it is important to acknowledge the significance of the unintended consequences of Tradi-

TABLE 1. A TYPOLOGY OF INNOVATIONS (Source: Silvestre and Tirca 2019)

Social Emphasis	Low Environmental Emphasis	High Environmental Emphasis
High	**SOCIAL INNOVATIONS** – Primary focus is given to the social dimension and associated concerns when developing and/or adopting this type of innovation; – Environmental dimension/concerns and economic dimensions/concerns are subservient (i.e., often compromised to maximize social outcomes).	**SUSTAINABLE INNOVATIONS** – Social, environmental and economic dimensions and their associated concerns are considered in a balanced approach when developing and/or adopting this type of innovation; – There is no maximization opportunities, but satisfactory solutions that allow all the three pillars being considered simultaneously.
Low	**TRADITIONAL INNOVATIONS** – Primary focus is given to the economic dimension and associated concerns when developing and/or adopting this type of innovation; – Environmental dimension/concerns and social dimension/concerns are subservient (i.e, often compromised to maximize economic/financial outcome).	**GREEN INNOVATIONS** – Primary focus is given to environmental dimensions and associated concerns when developing and/or adopting this type of innovation; – Social dimension/concems and economic dimension/concerns are subservient (i.e., often compromised to maximize environmental outcome).

tional (technology) Innovations. The fact of the matter is that most innovation currently does not happen with sustainability in mind (Truffer and Coenen 2012). Facebook is an example of a platform introduced as an exciting piece of technology able to positively connect people around the world. However, it also has the potential for significant unintended negative consequences, which we have already started to witness, such as the facilitation of international terrorism and election meddling (Softness 2016; Madrigal 2017).

By putting Traditional Innovations aside and examining the other three categories of innovations (Social, Sustainable and Green), we can see how technology can be used for good. In these cases, the focus is on the social or environmental challenges and technology emerges as a tool for the solutions (Szopik-Depczyńska et al. 2018).

An example of Social Innovation is Bite The Ballot, a UK charity that uses a range of online games to teach children and young people about the power of democracy and how they should see it as their tool for change ("Bite The Ballot," n. d.).

»Technology by itself without the proper good will and mindset change will not be enough – what we need is a system and mindset change that can guide technology.«

An example of Green Innovation is the electrically operated technology used for carbon capture and sequestration from smokestacks and even directly from the air

(Wilberforce et al. 2020). The carbon is then either stored in an underground geological formation or used to make fuels and other chemicals.

Finally, Sustainable Innovation is the combination that emphasizes both environmental and social concerns (Silvestre and Țîrcă 2019). An example of Sustainable Innovation is the Finnish Co-op community called Lahti Food Co-op (Kuokkanen, Uusitalo, and Koistinen 2018). They produce sustainable greens and vegetables to challenge the current food retail, consumption, and community engagement. Lahti food co-op is a social enterprise with its main aim being to teach the community how to grow and share food.

»Technology on its own without being driven by a strong social and/or environmental purpose is simply fueling the existing systems, which in many instances are the ones that have caused the huge challenges we are facing today.«

These examples are part of a growing number of Social, Green and Sustainable Innovations using technology as a force for good. We have strong indications that these kinds of technology and innovation will be key drivers for our transition to a socially and environmentally sustainable world (Tello and Yoon 2008). Unfortunately, these still occupy a very small market size compared to Traditional Innovations led by "traditionally-motivated" innovators, where the idea of fast and short-term profit rules. Policy needs to take a proactive stance on this and not only reinforce Social, Sustainable and Green Innovations but also steer Traditional Innovations towards the adoption of social and environmental principles. We are starting to see this with several EU-wide bans on single-use plastics, while at the same time around 20% of the EU budget goes to climate-related action (European Commission 2017). A further leading example of progressive national policy is New Zealand's recent carbon neutrality bill, which aims to make the country carbon neutral by 2050 (The Beehive 2020).

All these are steps in the right direction, and it is imperative that in the next few years citizens continue to exercise pressure on damaging practices and encourage socially and ecologically responsible solutions through their economic behavior (purchasing power) and push entrepreneurs, corporates and policymakers to take more systemic action. Technology in itself is a very strong and powerful tool that needs to be leveraged properly in order to affect positive change. However, technology by itself without the proper good will and mindset change will not be enough – what we need is a system and mindset change that can guide technology.

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AUTHOR

Beck Hayes
YGC Extended Circle Member & Social Impact MBA Candidate,
Heller School for Social Policy and Management at Brandeis University
Social Media: LinkedIn: https://linkedin.com/in/rebecca-hayes-2943a744/
Keywords: Social entrepreneurship; innovation; technology; social impact

© E[co]work | Man in Delhi separates electronic waste.

It just makes 'cents':

Innovation and technology align economic activity with social and environmental goals

Social impact businesses are the future of capitalism. By using innovative technologies, entrepreneurial business leaders can capitalize on the triple bottom line: social, environmental, and financial gain. These new technologies hold incredible potential to improve business by making rapid progress in the energy sector, increasing productivity through automation, and channeling vast amounts of data in seconds. Specifically, innovative techniques have already changed the consumer mindset about sustainability practices, led to cheaper renewable energies, improved corporate social responsibility, and brought about better policies for reducing poverty.

In the digital age, access to information is easier than it has ever been before. Consumer behavior has drastically changed in the past 30 years because people are more aware, connected, and knowledgeable due to access to the internet. For instance, more and more people today are concerned not only with the quality of goods and services they buy, but also the impact those products have on the environment and the global economy as a whole. We, as individuals, use our dollars to vote for a greener economy by consciously choosing to purchase fair trade, environmentally friendly products. According to the global performance management company Nielsen[12], 73 percent of millennials are willing to pay more for sustainable goods. This positive trend gives us the power over large corporations by deciding which products and services

»Social impact businesses are the future of capitalism.«

we deem add societal value. For example, the Global Diamond Report[13] indicated that in 2019, sales for rough diamonds dropped by 25 percent. The reasons, the report concludes, are not just because millennials are getting married later or simply can't afford the product. A major reason for the decline is that millennials are more aware of the exploitation involved in the business and refuse to support that kind of industry. Entrepreneurs can capitalize on information like this by starting businesses geared toward today's market, like selling eco-friendly engagement rings that perhaps are made from more sustainable gems.

Our resources on this planet are limited and we simply cannot sustain exponential growth in the way we have for the past 200 years. If we continue burning fossil fuels at the current rate, we will run out of petroleum, natural gas and coal by the year 2060[14]. This means that large corporations have to start thinking about innovative solutions today, not tomorrow. Moreover, advances in energies like wind and solar energy are now cheaper than fossil fuels. It makes economic sense to invest in these renewable energies as the price is now competitive with fossil fuels. An article from Bloomberg reports[15] that PV solar energy has fallen 70 percent to $57 per MWh while coal remains between $58 and $73 per MWh. This, coupled with the rapid decrease in the price of lithium-ion batteries, means that electric vehicles will be cost-competitive with combustion-engine cars by the year 2022.

Digital technology is also helping to improve human rights initiatives by making it easier for companies to prioritize corporate social responsibility. For example, blockchain – a new digital technology that is used to record transactions – can offer transparency in the supply chain. A recent test by Walmart found that it took 6 days, 18 hours and 26 minutes to manually trace a simple package of sliced mangoes back to its source. According to Open Global Rights[16], a blockchain solution developed by IBM replicated the task in 2.2 seconds. This solution not only automizes an arduous process, but also allows for companies to track products from their source, a fundamental approach to managing corporate social responsibility needed to identify human rights abuses. Managers have known for decades that they can use automation to increase profits, but now they can improve the business and make the world a better place at the same time.

Effective governmental policy in sustainable development will help us use technological breakthroughs more quickly. It is well documented by the UN and other intergovernmental organizations that educating girls is considered the "silver bullet" for reducing poverty because it increases economic productivity. It is also true that reducing gender inequality increases economic growth because restricting women limits earning potential for half the population. UNESCO reports[17] that giving girls education lowers birthrates, reduces child and maternal mortality, and improves child nutrition and health. Innovations in this

»73 percent of millennials are willing to pay more for sustainable goods.«

field include the concept of cash transfers whereby a government offers economic incentives to families who allow girls to go to school. Although there is conflicting evidence on the effectiveness of microcredit, there are many who would argue that it, too, is an innovation that advances social equality. Additionally, effective policy can lead to environmental innovation that actually improves the bottom line. For instance, the hole in the ozone layer was caused by the release of chemical compounds in items such as refrigeration systems and hairsprays. In 1987, the world came together to agree on the Montreal Protocol, a promise to phase out the production and consumption of ozone-depleting substances. The policy forced companies to come up with alternative innovations, one of which was the realization that high-pressure water could be used as a cheaper and equally as effective solution.

»Electric vehicles will be cost-competitive with combustion-engine cars by the year 2022.«

Radical transformative change is needed across all sectors of the economy if we are going to reach net zero in carbon emissions. Innovation and technology are necessary components of that process and, as evidenced, new developments are already revolutionizing the energy sector, supply chain, and consumer opinion. It simply makes economic sense to push for innovative solutions to social and environmental issues, which is why social enterprise is the key that will bring the world that much closer to reaching our sustainable development goals.

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AUTHOR

Gina M. Cortés Valderrama
2020/21 Young Global Changer & Project Manager Gender & Climate Policy, Women Engage For A Common Future (WECF)
Social Media: LinkedIn: https://linkedin.com/in/gina-cortesv/ Twitter: @CortsGina
Keywords: Climate change; innovation; intersectionality; gender-responsive technologies; multilateralism

Technology and innovation fall short without an intersectional feminist approach:

The key towards a more equitable, healthier, and just system for all

Jules Gabriel Verne, the poet and writer whose narratives took us on a journey into imaginary, inconceivable worlds, left us an invaluable lesson: Through dreams we can conceive a collective imaginary, where ideas are formed that give way to humanity's amazing inventions. The history of technology, full of innovation and development, provides us with evidence of the truth of this statement. The application of observation, science, and engineering has allowed humans to invent techniques, tools, and knowledge to assist and optimize their lifestyles (Hughes, 2001). Today, technological development is not simply a matter of convenience for individuals and communities, but one of long-term survival – particularly in the face of the urgent need to respond to the impacts of climate change.

Climate change is one of the most pressing challenges of recent decades. Whether it impinges on infrastructure, livelihoods, resources, health or even results in the loss of lives and homes, these impacts are by no means uniform across countries or population groups (UNDES, 2020). Technology plays a critical role in mitigating and adapting to the multiple impacts of environmental degradation and disasters. A wave of highly disruptive innovations that brings new big ideas and triggers technological development is vital to rethinking our models and responses to climate challenges (UNESCAP, 2018). Recent technological advances could bring huge benefits to advance the Sustainable Development Goals and Paris Agreement agendas. However, the potential of new

technologies to foster sustainable development can only be realized if everyone has access to them; if everyone's needs and knowledge are integrated (UNDES, 2020). According to the latest report on Technology and Innovation from the United Nations Conference for Trade and Development (UNCTAD), if the dissemination of new technologies is limited to already advantaged groups, this could reinforce a vicious cycle that widens existing inequalities (UNCTAD, 2021). In the same vein, those with access to wealth and power could also affect the direction of innovation in ways that could increase inequality. Ambitious technologies can be part of the answer to our collective challenges, as long as we put them in perspective (Ovida , 2021).

Discrimination and unequal distribution as limiting axes of technological outreach for combating climate change

Efforts in innovation and technology must enhance the well-being of living systems and guide the way to a resilient future, instead of further exacerbating pre-existing inequities. These intertwined concepts must go beyond the development or the adaptation of electronic appliances and algorithms that can improve the efficiency of a process. For innovation and technology deployment to be successful, the acceptance and appropriation of its beneficiaries and communities are imperative.

In the current scenario of environmental emergency, innovation and technology must take into consideration the real needs of the people. It must understand the differences among cultures and the role of each member within a community, in particular of women, youth and indigenous people in all their diversity, who have been left out of the decision-making and implementation phases of technology. This is a key determinant to guaranteeing the sustainability of such technologies – a sustainability characterized by the balance between three main pillars: economic, environmental, and social development. However, instead of striving for a balance among the three main elements of sustainability, the ecological and social aspects are currently eclipsed by the economic aspect, which has predominated in the last centuries thanks to the promotion of global production and consumption models that are rapidly devastating our finite natural resources.

»As with climate change, technologies are not gender-neutral either.«

As with climate change, technologies are not gender-neutral either. Unequal distribution of roles among men and women, power relations, economic opportunities, and gendered divisions of labor, as well as constraints in access and control over financial and physical resources, affect women and girl's ability to respond to the multiple effects of climate change. Consequently, vulnerability to climate change is intensified by gender inequality (Alhassan, Kuwornu, & Osei-Asare, 2019). Various forms of discrimination and structural violence rooted in patriarchal, colonial, and capitalist narratives have exacerbated the lack of meaning-

ful participation by women and girls in all their diversity in the learning, design, development, and maintenance of technologies.

We are at the right moment to ensure that climate technology transfer and development follow a transformative and inclusive approach. According to the latest findings from the Intergovernmental Panel on Climate Change (IPCC), efforts to limit the temperature increase require a systemic, deep, rapid, and society-wide transition. This is the time to ask ourselves, as countries, communities, businesses, academia, and individuals, how we can make the most of the current technological revolution to put an end to those gaps that hold back truly inclusive and sustainable development (UNCTAD, 2021).

Technology, without an intersectional approach, falls short of ensuring a transformative pathway to a more equitable and just system for all

Countries must strive to stimulate technology adoption and behavioral change while ensuring that the rights of most affected populations – indigenous people, women, and youth in all their diversity – are protected and strengthened. Understanding the multiple links between gender inequality and environmental degradation can accelerate positive dynamics and promote the achievement of the Sustainable Development Goals. The incorporation of gender-transformative technologies in adaptation and mitigation strategies at all levels promotes a shift in power imbalances and rigid gender norms within communities to increase people's resilience. Thus, climate technology action needs to ensure that people in all their diversity, including the LGBTIQ+ community, are engaged in decision-making processes, as well as in the design, development, use and maintenance of technologies (CTCN, 2021). The diversity of their needs, priorities and ideas must be included during these different stages to effectively respond to the challenges of climate change.

It is from an intersectional perspective that we can truly understand how context and the different characteristics of the individual (i. e., race, class, gender, among others) pose a barrier to accessing and using technologies. This term, first coined by Kimberlé Crenshaw in 1989, is understood as a prism for seeing the way in which various forms of inequality often operate together and exacerbate each other. An intersectional approach shows the way that people's social identities can overlap, creating compounding experiences of discrimination (UN Women, 2020). However, this approach also offers a particular understanding of how to better assess and generate solutions that address a real need and contribute in a transformative way to the construction of a more equitable and just system for all.

As defined by the Climate Technology Centre and Network (CTCN), one of the technology mechanisms of the United Nations Framework Convention on Climate Change (UNFCCC), technology is understood as any equipment, technique, practical knowledge, or skills needed to reduce greenhouse gas emissions and/or adapt to climate change – acknowledging traditional and endogenous wisdom. Regardless of its form or magnitude, innovation and technology are always accompanied by the subject that interacts with its surroundings, generates knowledge and a solution to an existing need. Under this definition, real solutions and responses to the climate crisis already exist on the ground. Women have

proven to develop climate adaptation and mitigation strategies and technologies that are specially fitted to the specific needs of their communities. Women bring new perspectives and innovations in identifying and implementing solutions (CTCN, 2021). For centuries, women, particularly indigenous women, have passed on their skills to future generations on relevant topics such as water management, agricultural production, biodiversity conservation, ecosystem-based solutions, among many others. It is through these experiences that women and girls in all their diversity have gained valuable knowledge that allows them to contribute positively to the identification of appropriate adaptation and mitigation techniques (WEDO & ENERGIA, 2010).

»Women bring new perspectives and innovations in identifying and implementing solutions.«

As an exemplary case,[18] Gender CC Southern Africa, a non-governmental organization working with women, gender activists, civil society organizations, and gender experts from the region, has achieved the empowerment of rural farmers through a "learn and build methodology" by which 2,000 beneficiaries are capacitated to use and maintain new technologies for farming, water harvesting, waste management and sustainable energy. This women's led initiative has established a network of female technology champions to transfer their knowledge and skills to more communities. New social enterprises emerged with the initiative of women leaders, building climate resilience and food sovereignty.

In Guinea-Bissau, the organization UNIVERS-SEL empowered 1,500 women and 500 men with innovative salt and rice production technologies that preserve the mangroves and drastically reduce firewood consumption. Solar salt production and sustainable water management also improved working conditions, health, and yields. Women gained new technical skills and management capacities. They established two producers' associations where 200 members gained control and decision-making power over their value chain and markets. Training and monitoring activities have enabled women to play a leading role in stabilizing the local economy and protecting ecosystems (WGC, 2020).

A call for true multilateralism

Technology and innovation serve us to interconnect people, to unite societies and to materialize those unattainable dreams that were once told in science fiction books. Human beings have been able to take technology to unimaginable points. We need to believe and trust a collective imaginary in which ambitious and just climate action is possible to achieve a healthy environment for all. And for that, technology is vital to reaching the long-term goals of the Paris Agreement and building climate-resilient societies.

Climate agreements and response plans should be inclusive and equitable so that people in all their diversity, including

members from the LGBTIQ+ community, can have access to, and benefit from, the development and transfer of new technologies. As the UNFCCC has stated, the development and transfer of environmentally sound technologies represent an opportunity to increase efforts on gender mainstreaming concerning technology access and information and training on the use of appropriate technologies (UNFCCC, 2021). Commitments from countries should strive to minimize any adverse economic, social, and environmental impacts in countries where existing inequalities in socioeconomic status, income, discrimination on the basis of gender, class, ethnicity, age, and (dis)ability shape differential risks from climate change (IPCC, 2014). Additionally, many women-led initiatives experience challenges accessing funds, especially unconditional core funding, to ensure the long-term sustainability of their projects. Lack of financial support creates barriers to accessing technical equipment, training, awareness-raising, and campaigning (WECF & CTCN, 2019). Thus, access to climate-related funds and mechanisms to support gender-responsive, low-carbon, renewable and energy-efficient technologies is vital for up-scaling ambitious climate action.

»Countries must strive to stimulate technology adoption and behavioral change while ensuring that the rights of most affected populations are protected and strengthened.«

»Coordinated efforts are required to overcome social, cultural, and even legal barriers.«

It is fundamental to make a clear call for a bold and true multilateralism and strengthened international cooperation that build innovation and technological capacities in our society, particularly in developing countries. Such multilateralism must foster collaboration and agreements to facilitate technology transfer, increase women's participation in digital sectors, conduct technological assessments and promote an inclusive debate on the impact of technologies on sustainable development (UNCTAD, 2021). Coordinated efforts are required to overcome social, cultural, and even legal barriers, such as customary laws, which impose on women and girls in all their diversity a constraint on their full development of knowledge and contribution to global well-being.

[18] More exemplary cases in the Gender Just Climate Solutions 2020 publication.

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AUTHOR

Yelena Novikova
2017/18 Young Global Changer & Multi-award-winning expert on ESG
Social Media: LinkedIn: https://linkedin.com/in/yelena-novikova-esg-csr-90985328/
Twitter: @NovikovaYelena
Keywords: ESG investing; corporate diversity; diversity and inclusion; disability; ESG integration

ESG investing and disability integration:

Could the pandemic move us through a civil-rights approach to a data-driven practice?

Corporate disability inclusion: Still between the lines of I&D integration in 2021?

In September 2021, a group of NGOs, including the Business and Human Rights Resource Centre, EIRIS Foundation, the Investor Alliance for Human Rights, ShareAction and its Workforce Disclosure Initiative (WDI), as well as the World Benchmarking Alliance (WBA), joined forces to take a position on the proposed EU social taxonomy. While their statement called for greater focus "on promoting diversity and inclusion covering ethnicity and other identity characteristics as well as gender," it didn't explicitly mention "disability."

Looking at the latest EC draft report on social taxonomy itself, this is hardly surprising. The 61-page document neither brings up nor explicitly mentions "disability" even while discussing such issues as:

- "enabling inclusive and sustainable communities" (European Commission, 2021, p. 22);
- "respecting sensitivity of marginalised groups" (European Commission, 2021, p. 29);
- "vulnerable people and groups" (European Commission, 2021 p. 24);
- "low rate of injury and occupation disease" (European Commission, 2021 p. 25);
- and even "the right to the highest attainable standard of physical and mental health" as it relates to adequate living standards (European Commission, 2021, p. 28).

Although this example of the EU social taxonomy is as high-profile as it is telling

»2020 served as a stark reminder of why investors cannot simply rely on their moral compass and also why those morals must guide them at the same time.«

in its omission of "disability," this is by no means specific to the EC. The 2020 edition of McKinsey's highly influential corporate diversity study, "Diversity wins: How inclusion matters," acknowledges the "multivariate nature of diversity" and "multiple forms of acquired diversity" (Hunt et al., 2020, p. 12), but it only cites the particular examples of "educational or socio-economic background, or diversity of thought."

Much like this, disability used to routinely exist between the lines of the I&D agenda – until Fiona Reynolds of the UN Principles for Responsible Investment (PRI) proclaimed in a webinar in February 2020 that disability inclusion would be "the next frontier" in ESG investing. Yet, as this took place just days before the pandemic hit, heightened interest in these issues is not just a new phenomenon, but also a disrupted one.

Can we afford a charity-based approach to corporate disability inclusion?

Because disability is hidden in plain sight as part of I&D integration, there is a vicious cycle in terms of data. Even though he is in favor of [disability] inclusion for moral reasons, the internationally renowned expert on Environmental, Social and Governance (ESG) issues Alex Edmans stated at the Responsible Investor Digital Festival –2020: "I don't know of any evidence showing that if you are more inclusive to disabled people, your returns will go up."

This charity-based approach to disability inclusion prevails even within progressive ESG Investing and Corporate Social Responsibility (CSR) investment circles. In part, it's precisely because our industry is forward-thinking that Edmans' call for inclusivity "because it's the right thing to do, not because of the McKinsey study"*(Edmans A. 2020, unpaged) lands well here. Yet, it's also about the perceived lack of data.

2020 served as a stark reminder of why investors cannot simply rely on their moral compass and also why those morals must guide them at the same time. The US Department of Labor (DoL) proposed a rule for fiduciaries stating that "Providing a secure retirement for American workers is the paramount, and eminently-worthy, 'social' goal of ERISA plans; plan assets may not be enlisted in pursuit of other social or environmental objectives."

The proposed rule then accumulated 8,737 comments. Many pointed to the DoL's mischaracterization of ESG integration as "non-pecuniary," while others were concerned about the increased scrutiny of ESG investments. International commentors went further, noting that "The proposal... could set a poor precedent internationally." Although the rule was later scrapped, reminding responsible investors around the globe that standing up for what's right together does work, it also set some prec-

edents. Texas recently passed a partisan Republican [12-0] bill that is similar in tone.

In last year's incarnation of this article for the website Responsible Investor, I expressed worries that it wasn't just about setting a precedent for the investment community. In the age of "fake news" and people "being tired of experts" (I then argued), mischaracterizations of ESG factors would set a wider cultural precedent that could spread far beyond the intended purpose and audience of the proposed rule. I believed that it provided a clear case for referring to hard data when talking about financial materiality of such ESG factors as "disability inclusion."

One year on, ESG has effectively gone mainstream. With that came high-profile scandals also featured in the mainstream media. Ultimately, whether we speak of "an exposé" of the sustainable finance industry by the former CIO of Sustainable Investing at Blackrock, Tariq Fancy, in his opinion piece in USA Today earlier this year, or of recent revelations about the German asset manager DWS by its former sustainability executive Desiree Fixler, it all boils down to the need for ESG investors to rely on hard data, as opposed to sentiment.

Civil rights launchpad: Why it's "now or never" for robust data and evidence-based disability inclusion

Since the COVID pandemic hit, countless experts dubbed 2020 "the year when 'S' factors rose to [greater] prominence." Jonathan Neilan et al. (2020) even argued that the "S" in ESG should now stand for stakeholders. The list of stakeholders is becoming gradually more nuanced as we move through the pandemic. For instance, ratings agency Morningstar was quick to connect the increasing attention to "S" factors with growing support for the Black Lives Matter movement.

Observing how the senseless killing of George Floyd triggered a civil-rights-based approach to some dimensions of corporate diversity is inspiring to say the least. However, as I'm cheering minority rights and inclusion, I can't help but notice that the world's biggest minority – those with disabilities – isn't necessarily as engaged in setting a common I&D agenda.

Pre-pandemic data from the WHO and the World Bank shows that over 1 billion people (or about 15% of the world's population) live with some form of disability. Moreover, due to such common chronic conditions as diabetes, cardiovascular disease, cancer and mental health disorders, each of us has a chance of "transitioning" into this minority group over the course of our lifetimes.

It is particularly notable amid the continuing pandemic that Accenture's "Getting to Equal-2020" study defines a person with disability as anyone who has "... difficulty performing day-to-day activities (e. g., walking, communicating, hearing, seeing even if wearing glasses) because of a mental, intellectual, sensory or physical health condition *that has lasted, or is expected to last, at least six months*" [emphasis added] (Henneborn and Jerdee, 2020, p. 8). The study also says that since 80% of disabilities are acquired between the ages of 16 and 64, there can never be an "us" or "them."

Furthermore, "long COVID" is set to significantly increase the number of permanently and temporarily impaired people around the globe. This is not just due to the long-term consequences of surviving COVID, but also due to other conditions go-

ing untreated, as some health services are disrupted or cancelled (Kubenz and Kiwan, 2021, p. 54).

Meanwhile, the pandemic puts us in a unique position to "reset" I&D integration, because it brings attention to diversity and inclusion issues in a variety of different ways:

1. Communities and stakeholders pull together to fight the COVID threat, which happens to be ageist and ableist by design. This brings greater visibility to the elderly and vulnerable;
2. The pandemic has not just re-exposed social inequity issues, it also personified them and made them feel deeply personal:

2.1. First, the killing of George Floyd bared racial and ethnic inequities and remobilised stakeholders around the BLM-driven diversity agenda;

2.2. Then, the peculiar political, cultural and ideological circumstances surrounding the succession of Ruth Bader Ginsburg's on the Supreme Court after her death resulted in a similar revitalisation of "dissent" against injustice.

While there were some early attempts to reduce the mobilization of "dissent" to "white women's feminism," prompt dismissal of such reductionism indicates readiness for more integrated, holistic and intersectional conceptions of social equity, diversity and inclusion.

"S"earching for "S" data hidden in plain sight?

While the current environment could enable a more intersectional approach to I&D integration, in which disability inclusion could feature more prominently, we risk narrowing the window of opportunity, as the pandemic subsides and the world goes back to some semblance of perceived "normalcy."

Looking at the widely cited McKinsey study, which was once "the firm's most downloaded publication on diversity," it's easy to see why. The latest "research focuses on gender and ethnicity as intrinsic forms of diversity which are measurable at scale" (Hunt et al., 2020, p. 12). Considering that in 2018 the previous edition of the study had to rely on a limited sample size of just 6 countries even when it came to ethnic diversity issues, the omission of the disability dimension is likely to be a data availability issue. (Especially since disability is still featured as anecdotal evidence

»The pandemic puts us in a unique position to 'reset' I&D Integration. because it brings attention to diversity and inclusion issues in a variety of different ways. It has not just re-exposed social social inequity issues, it also personified them and made them feel deeply personal.«

in the sidebar "Delivery Examples" both in 2018 and 2020).

The popularity of the study relative to other topics might reinforce the cognitive bias that the data simply isn't there. The irony isn't lost on us that this happens against the backdrop of the so-called Greta Effect. To put it bluntly, being more inclusive of just one inspiring, openly neurodivergent young lady has resulted in 78% of CSR professionals agreeing that she "helped to raise awareness of sustainability/energy issues within their business." (see EDIE, 2020, p. 9).

Though disability inclusion data provided us with some interesting evidence long before the Greta Effect. After all, moral reasons aren't the only thing driving investors representing USD 2.8 trillion (up from USD 2.1 trillion a year before) to sign "A Joint Investor Statement on Corporate Disability Inclusion." The world's largest minority holds tremendous purchasing power. For example, the discretionary income for working-age Americans with disabilities is about USD 21 billion, which exceeds even those of the African-American and Hispanic market segments combined. In addition to that, as early as 2005, 87% of Americans either "agreed" or "strongly agreed" that they prefer to give their business to companies that employ disabled people. More recently, companies that champion disability inclusion reportedly enjoy 28% higher revenue and 30% higher profit margins than their peers.

Discussions about evidence and data availability are as relevant in terms of disability and inclusion as they would be for just about any other ESG factor. At the same time, our departure from a charity-based approach to disability inclusion is long overdue.

As the pandemic created an enabling environment that could accelerate us through the civil-rights-based approach, we are perfectly positioned to not just build upon available data, but also to rethink diversity and inclusion integration as a more intersectional process that features disability alongside other dimensions. In some ways, it is already happening, as the US-based Disability Equality Index (DEI), which included 319 US companies in its 2021 Index (up 29% from last year), piloted its global version, the GDEI, this year.

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AUTHOR

Cindy H. Adem
2020/21 Young Global Changer & CEO, Village2nation Academy
Social Media: LinkedIn: https://linkedin.com/in/cindy-h-adem-60432463/
Keywords: 4th Industrial Revolution; Internet of Things; Future of Tech

© E[co]work | Printed circuit boards lie on the floor in an informal workshop that processes electronic waste in Delhi.

Before the coffee machine goes haywire:

Thoughts on key questions to ask when legislating emerging tech becomes an oxymoron

At no other time in history has technological advancement been so profound that completely new industries have been created and even more decimated as a result. We call it the 4th Industrial Revolution[19] – or the 4IR, if you may. I'd like to talk about why I think it should take center stage in international governance fora in 2021, 2022 and over the next decade.

Artificial Intelligence allows us to have cute dog ears on snapchat just as much as it allows farmers in Africa to access information about the health of their crops just by using their phone.[20] Yet, in the same fell swoop, it has made it possible for real-looking fake news to go viral through the use of deep-fake technology. One brilliantly edited video with nefarious intent has the ability to dramatically influence people's opinions[21] and destabilize democracy in communities around the world. Similarly, drone technology is being used as 'uber for blood' in places like Ghana and Rwanda to transport blood bags[22] across distances at a fraction of the time and cost, thus saving lives. The technology is also being used to create the most spectacular videography ever. Yet, a drone flying overhead[23] could be the last thing a young child sees in Yemen or Afghanistan moments before their life ends in a remote-controlled attack.

I can't remember the last time I went to any random, non-dodgy-looking website without the 'cookies' pop-up offering me a 'learn more' privacy policy link that I have never bothered to click on. Somehow, I trust that the website and whatever powers-that-be in the global internet space will not sell

me out, hack into my computer remotely or send me malware.

The 4th Industrial Revolution has tested our ability and willingness to trust – institutions, strangers, the world wide web. We trust that our self-driving cars will get us home safely and that our electric vehicles will not explode as they charge in their outlets at home. We trust that robots, while they may take our jobs, won't plan a revolution against humanity and turn us into slaves. We trust that our online engagements in social media are between us and fellow human beings, not bots. We *hope* that our smart TVs and PCs aren't being used to spy on us[24] at our most vulnerable moments.

»The 4th Industrial Revolution has tested our ability and willingness to trust – institutions, strangers, the world wide web.«

But we have trusted before and have been remarkably disappointed and betrayed. Trust is not a currency that is efficient enough in a world that's heavily capitalistic; we need to talk about how we can welcome this new world and thrive in it without losing the essence of our humanity- our soul.

The privacy movement is making progress, but spyware like Pegasus[25] is fighting back. This kind of technology does not depend on the target's naïveté to work. With just a simple WhatsApp missed call (whose history can be deleted), Pegasus can infiltrate a majority of modern devices and record private conversations and even activate a phone's camera without any input from the victim. It theoretically can harvest any data – from photos to location info – and send it back to the attacker. NSO Group, the Israeli company that is responsible for creating it, claims that it was meant to help governments fight terrorism, but a list of 50,000 phone numbers purportedly targeted by the spyware shows that powerful people from politics to business use it to spy on their "enemies."

So, how do we ensure that the universal rules of war are updated fast enough to regulate the military technology that's being created? Or that the faceless boundaries of the Internet of Things are designed to encourage future-oriented growth and innovation – without weaponizing my coffee machine? Is there a way to ensure that such guidelines and regulations are created and implemented expeditiously? Just like the EU came together in 2016 and brought us the General Data Protection Regulation[26] (GDPR), which was somehow adopted in several other jurisdictions around the globe. These are some of the core questions I would like the global governance bodies to consider and address.

I am keenly aware of the irony and ambition inherent in wanting emerging technology to be legislated and regulated. I mean, no one could have seen blockchain coming and the love-hate romance the world has had with bitcoin; nor that disappearing video and picture texts (along with bunny ears)

would be such a raging hit; nor that I could order Alexa to set my morning alarm, sing me a lullaby and then switch off the lights.

But then again, when we are heading towards a world where a human, "in the flesh" cashier, chef or driver may go out of fashion and then come back *in vogue* (my personal forecast), where lonely singletons can get robotic humanoids as sex partners[27] where human judgment and soul are removed from active battlefields, we perhaps need some overarching guidelines for how similar social and life-changing circumstances should be handled.

»Trust is not a currency that is efficient enough in a world that's heavily capitalistic.«

Going back to the topic of trust, the social contract we have with our leaders depends on us trusting them to be visionary and make decisions that reflect our *assumed* shared desire for security and socio-economic human advancement. Mistakes will be made – that is to be expected; but we'd sure hope that, at the very least, they have critical issues such as these in mind. Because at the end of the day, we only have one planet habitable by humans; we are not ready to abandon it yet to robots gone crazy.

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AUTHOR

Kateryna Heseleva
YGC Extended Circle Member & Master of Public Policy Class of 2021, Hertie School
Keywords: Data governance; G20; digital economy; interoperability

AUTHOR

Alan Ichilevici de Oliveira
YGC Extended Circle Member & Master of Public Policy Candidate, Hertie School
Keywords: Data governance; G20; digital economy; interoperability

AUTHOR

Vincent Jerald Ramos
YGC Extended Circle Member & PhD Candidate, Hertie School
Keywords: Data governance; G20; digital economy; interoperability

Towards a multilateral consensus on data governance – A Policy Brief

»Fragmented approaches to governance do more harm than good. Nations could and should take part in international agreements to converge data-related policies, but still preserve the nations' policy sphere and sovereignty to data governance.«

ABSTRACT

To recouple the benefits of increased digital trade with human and societal well-being on a global level, countries must achieve a consensus on how to regulate data. Past international discussions show that while countries have significantly varying approaches to data governance, consensus can still be reached on multiple fronts. This Policy Brief highlights a feasible and multilaterally agreeable data governance framework that is anchored on two pillars: (1) promoting interoperability; and (2) establishing global governance rules and norms. Each pillar consists of more specific and actionable policy proposals that follow through prior international work. We conclude with a recognition of the G20's role as a strong multilateral forum where this consensus can be reached. Indeed, this Policy Brief bridges the silos between data governance, international cooperation, and growth in pursuit of proposing a data governance framework that works for all.

CHALLENGE

Data is increasingly becoming one of the most important resources of the 21st century, greatly affecting how industries, nations and societies develop. As of 2021, the digital population is estimated to be at 4.80 billion and is growing at an annual rate of about 5 percent (Kemp, 2021). Goods and services flow across borders through digital platforms at an unprecedented rate.

However, approaches to data governance vary significantly across countries and, even in countries where data-related laws exist, enforcement mechanisms might not be in place (López González and Ferencz, 2018). This fact is reflective of a larger problem of regulation in the digital economy. Government regulations on how data should be regulated, stored, transferred and processed are non-existent at worst and fragmented at best. Case in point, the COVID-19 pandemic is highlighting the need for more extensive coordination on data governance. Contract tracing, risk exposure monitoring, and vaccination monitoring are all being done through mobile applications. The involvement of the state as to the operations of these apps and the degree of access by which governments have over the data greatly varies across jurisdictions.

Such divergence in regulation ultimately leads to a divergence in standards and experiences in the Internet of Things (IoT). For instance, while some nations are treating privacy as a human right and making great efforts to preserve users' information and anonymity, other governments are enforcing strong state control and content censorship. Many nations demand data to be stored locally and impose limitations to data transfers outside their borders.

Understandably, governments want as much control over data for security and protectionism reasons. Nevertheless, fragmented approaches to governance do more harm than good. Nations could and *should* take part in international agreements to converge data-related policies, but still preserve the nations' policy sphere and sovereignty to data governance. By creating a governance framework which facilitates free data flows, while ensuring cybersecurity and trust, all nations would benefit and still decide how to regulate data. In doing so, nations would develop common solutions to address issues where there is a broad global consensus about desirable "universal goods" and undesirable "universal bads" (Cory, Atikson and Castro, 2019).

Finally, the discussion of data governance and the digital economy has indeed become abstract and complex. This Policy Brief attempts to go back to basics and ask more fundamental questions. What is our

TABLE 2 Source: Cory, Atkinson, and Castro (2019)

	Oppurtunity to Develop International Agreements: Consensus	Oppurtunity to Develop International Agreements: Unconsensus
Desireable	Universal Goods	Local Goods
Undesireable	Universal Bads	Local Bads

universal understanding of data? How can countries agree on data interoperability to maximally reap the benefits of digital trade? What global rules and norms should be put in place? From this point, countries can start recoupling the silos between data governance, international cooperation, and growth.

PILLAR 1:
Promoting Data Interoperability on a Global Level

In the absence of a universally accepted definition of interoperability as it pertains to data governance, Kerber and Schweizer (2017) broadly characterizes it as "the ability of a system, product or service to communicate and function with other (technically different) systems, products or services." The main benefits of interoperability are two-pronged – efficiency and security. Take two economic agents who want to exchange information via two technically different systems. With interoperability, transaction costs are lowered and data is more secure since agents would no longer need to invest in a new system just to "read" new information. Agents would also no longer need the services of a third party who will convert the information into a format that is readable by their systems. This promotes efficiency through cost-savings and improves security through exchanging information directly. However, we recognize that promoting interoperability entails financial costs and risks on innovation and competition. Hence, following Kerber and Schweizer (2017), we likewise recommend a context-specific optimal degree of interoperability that achieves efficiency and security.

Indeed, any consensus on data governance should begin with a recognition that data is anchored in human identity. In the definitions of data in various national statutes and multilateral agreements, there seems to be one lacking element: identity. Simply put, data is a resource which contains information that is ultimately about people (Lovelock, 2018). Hence, it ought to be protected and handled properly by whoever is in possession. This definition, as it is, does not bring up any contestable aspects of "identity" such as human rights, data privacy, and freedom of information, which may be met with hesitation by some states. Therefore, we believe that such a definition of identity in data can be agreed upon by most, if not all, countries. Therefore, the foundation of the two specific proposals under this pillar is the recognition that data is anchored in human identity and should be safeguarded and traded with care.

PROPOSAL 1:
Support data flows through encryption

The whole discussion of interoperability matters because of the underlying assumption that agents (individuals, firms, countries, etc.) want to exchange data. Therefore, as data flows from one agent to another, there has to be a mechanism by which the information contained in the data reaches its desired recipient. With this mechanism in place, interceptors are unlikely to obtain and access secure data. Encryption is the key technology that agents use to ensure data security and confidentiality (GSMA, 2018). It is a precondition for data to flow with trust. Therefore, governments should support, and not undermine, encryption's role in securing data flow. Governments around the world have in different ways attempted to undermine encryption, including: requiring to license encryption with government agencies, imposing a government-mandat-

»Any consensus on data governance should begin with a recognition that data is anchored in human identity.«

ed encryption standard, prohibiting end-to-end encryption which allows leakages and loopholes to be present, and advocating for backdoor government access. These policy measures defeat the purpose of encryption. Encrypted data with backdoors and leeways for government access are prone to interceptors and cybercriminals as well. We encourage governments to secure the data of their individuals, firms, and states through encryption without interference.

PROPOSAL 2:
Protect data flows without constraints on domestic localization policies

Data localization – which implies that data collected from a country should be stored within the borders of that country, is arguably one of the more contentious provisions in the data governance debate. Think of it as a spectrum. Under extreme localization, data should be stored within the borders of a country and under no circumstances will it be allowed to be transferred elsewhere. On the other end of the spectrum, no localization, there is no regulation as to where collected data should be stored. Countries occupy significantly different points on the spectrum. India has advocated for relatively strong localization of personal data[28], whereas the US, Mexico, and Canada have recently adopted a provision that entirely rejects localization[29]. We propose a consensus on data protection that does not bound or limit a country's localization policy.

Are proposals that aim to protect data flows without binding countries' localization policies unlikely to be effective? The short answer is no. There have been successful multilateral attempts to promote and protect data flows without specific provisions on what the country's localization policies ought to be. One of which is the Cross Border Privacy Rules System of the Asia-Pacific Economic Cooperation (APEC CBPR) – a model framework for protecting personal data flows across the APEC region. It is a voluntary and accountability-based system which should be accepted by a country first, followed by a certification of an accountability agent that a firm or organization is compliant with the standards. CBPR's objective is not to impose a binding law or regulation on the protection of personal data but to facilitate data transfers that meets a certain threshold of data protection parameters (Sullivan, 2019).

The voluntary nature of the CBPR, as well as its explicit intention to balance the promotion of data transfers with protection of personal data, strengthens its appeals to countries regardless of their stance of localization. USA, Mexico, and Canada – all of which have rejected localization, are part of the CBPR. However, the Philippines and Australia, both of which have no explicit general positions on localization, are also part of the system. Therefore, can different countries with different localization regulations ever find a consensus for data protection? The answer is yes and the CBPR shows it's possible.

RELATED POLICY IMPLEMENTATIONS

In this section, we proposed two specific recommendations to support and complement the promotion of interoperability on a global level. To operationalize this vision, we recommend a related policy recommendation for countries to explicitly recognize data protection and interoperability as objectives in its laws and regulations and appoint enforcement authorities. More specifically, countries must strengthen their coordination efforts to form a voluntary and accountability-based mechanism for data flows and data protection, similar to the APEC CBPR.

PILLAR 2:
Establishing Global Data Governance Rules and Norms

Japan's Prime Minister, Shinzo Abe, used the country's G20 presidency in 2019 as a spotlight to advocate for the creation of a set of international rules which would enable the free movement of data across borders. 'Data Free Flow with Trust', as this concept is known, promotes finding common ground for worldwide data governance and establishing a common legal framework. According to Koizumi (2019), "although the idea of free data flows is not new, the inclusion of 'trust' is". The innovation in this proposal relies on the fact that trust is placed centrally for the success of a global data governance framework. By developing and enforcing common data governance rules and norms, supported by efficient cooperation mechanisms and strong cybersecurity measures, data can flow in a secure environment. Hence, we build on Abe's contribution and recommend that domestic data governance become part of a global cooperation trust-based framework with adequate cooperation instruments allied to strong local law enforcement.

G20 has made a step towards developing a global data governance framework as 1 member states have approved of a declaration that identifies 12 principles for digital transformation as the result of the meeting of Digital Ministries in Italy, in August 2021 (Declaration of G20 Digital Ministers, 2021). Declaration focuses on inclusivity, trustworthiness, and sustainable growth.

PROPOSAL 3:
Strengthen Law Enforcement and Cooperation Mechanisms

For a trust system to work, it is crucial that rules are followed, and wrong doers face the consequences of their actions. Firms doing business in a country should be held accountable to national laws regardless of where they store, process or transfer data. Hence, a clear and efficient legal framework should be established to facilitate access to data stored in other jurisdictions for legitimate investigation purposes. This way, companies would still be subject to national laws and would not be able to escape regulations by transferring data overseas. Similarly, international financial markets require firms to comply with a country's local regulations even if they are operating from abroad or sending money to another country. The same must be the case for companies using data acquired within a country.

For this to happen, cooperation procedures must be revised and enforcing mechanisms standardized. Many international cooperation treaties are outdated and excessively time-consuming. Conflicting national laws jeopardize the efficiency of cooperation mechanisms, and local agencies have significantly different enforcement

»The G20's legitimacy and gravitas in global data governance suits the transnational nature of the digital economy.«

capabilities, depending on their available resources and the legal systems they have.

Countries should negotiate a new multilateral agreement to establish the grounds for this framework to work. This includes settling matters of jurisdiction and establishing cooperation protocols while preserving countries' sovereignty. Regulations will inevitably be different in each country, according to governments' priorities and values. Still, an adequate cooperation protocol will allow the coordinated action of law enforcement bodies in case of businesses violating national regulations and trying to escape consequences by storing or handling data abroad.

PROPOSAL 4:
Combine multilateralism with "multistakeholderism"

Even though cooperation among nations is a key element for global data governance success, governments are not alone in this process. The complexity of this issue surpasses multilateralism's limitations. A holistic approach is fundamental to develop global mechanisms of digital cooperation. By acknowledging the interdependence of stakeholders and sectors, the world can move together towards better digital solutions. The combination of multilateralism and "multistakeholderism" creates the proper environment for Global Data Governance.

By engaging all stakeholders to work on an agreed problem set, the global community can develop resilient political commitment around the topic of digital governance. Governments play a central role in this discussion, but they are not alone. The private sector, the academic community, the technical community and civil society must take part in developing the digital ecosystem.

Technological innovations, content production, cybersecurity measures, ethical implications, societal change, economic development, network management and privacy are some of the issues which must be taken into consideration in this discussion. Combining so many aspects and points of view is extremely challenging, but by getting everyone on the same page, solutions arise. It is possible to make the analogy to the climate debate: once the majority of stakeholders accepted that climate change is real and immediate action is necessary, the world shifted towards addressing the issue.

PROPOSAL 5:
Adapt digital assessment methodology

One of the obstacles for efficient multilateral data governance is the absence of quantitative methodologies to rely on during policy-making and to assess the effectiveness of implemented policies. One of the reasons behind that is that countries use different approaches to data collection and evaluation. Therefore, data collection is uneven and comparing evidence from different countries is challenging (The Age of Digital Interdependence, p. 23). Introducing common methodology will bring more clarity into discussions on data governance,

enable even flow of data and ensure consistency into measures taken by G20 member states. The recommended methodology is digital assessment, which has been used by the EU institutions in order to relate human rights issues to existing digital technologies. Digital assessment questions may be formulated in the following way: 'Are there ICT influencing the way the problem is formed' or 'Are there visible trends on how digitalization can change the nature of existing challenges' (Lovelock, 2018, p. 48). This method can be also used to ensure that private data is collected in accordance with internationally accepted guidelines. The Organization for Economic Development and Cooperation (OECD) developed Guidelines on the Protection of Privacy and Transborder Flows of Personal Data that lays out principles of the lawful use and sharing of personal information for the public and private sector. These principles highlight that private data can only be collected with consent, the purpose for data collection should be specified and that personal data cannot be disclosed externally without prior consent (Privacy, Data and Technology, 2018). Adopting digital assessment methodology will enable G20 member states to take advantage of opportunities to ensure human rights and social cohesion in the digital economy.

PROPOSAL 6:
Appoint a special committee on human rights in digital economy

In 2015, the UN Human Rights Council established a position of the Special Rapporteur on the right of privacy who concentrates on specific applications of human rights in data governance, examines and reports back the situation in every country (Donahoe, 2014). G20 can follow this example and appoint a special committee that will include academia, researchers, analysts, and representatives of non-governmental and international organizations, whose responsibilities will include developing relevant guidelines, providing G20 member states with actionable recommendations on enshrining human rights, especially right to privacy, in their respective domestic policies. Under the presidency of Japan in 2019, the G20 supported principles of human values, accountability, safety, and transparency as necessary for the AI regulations implementation (Economy, Employment, and Education in the Digital Age, n. d.). The special committee will further support G20 members in bringing the human aspect of data governance, ensuring multilateral agreement, and converging national regulations on fundamental human rights in the digital economy.

RELATED POLICY IMPLEMENTATIONS

Several initiatives around the world work to establish and improve Global Data Governance. The Internet Governance Forum (IGF), for example, promotes an annual inclusive debate process between governments, the private sector, civil society, and the technical and academic communities. The International Consumer Protection Enforcement Network (ICPEN) connects the consumer protection law enforcement authorities of 64 member countries and promotes their cooperation. And the APEC Cross-border Privacy Enforcement Arrangement (APEC CPEA) promotes information sharing among Privacy Enforcement Authorities in APEC economies. Based on the models of IGF, ICPEN and APEC CPEA, we recommend that law enforcement cooperation mechanisms be strengthened and a multi-

stakeholder approach is combined to the multilateral negotiations currently in place. Besides, the EC has also adopted digital assessment methodology that allows them to identify possible human rights related implications of information and communication technologies (ICT) in a timely manner and come up with solutions that are likely to be accepted by stakeholders (Lovelock, 2018).

CONCLUSION AND ROLE OF THE G20

This Policy Note presents two pillars where multilateral consensus on global data governance can be achieved moving forward. First, countries should recognize that data is anchored in human identity and how it is utilized should not infringe nor encroach fundamental human rights. Second, countries should promote interoperability on a global level to achieve security and efficiency, but this commitment should not come at the expense of sacrificing the policy sphere and sovereignty of the signatories for data governance. Finally, countries should begin to recouple the fragmented approaches to data governance and establish global rules and norms to ensure that the benefits of data governance are benefits that will be experienced by all.

However, there needs to be an effective multilateral forum where this consensus can be advocated in The G20, an international forum of the world's largest economies, is one of the few avenues where multilateral consensus on data governance can be reached. The G20's legitimacy and gravitas in global data governance suits the transnational nature of the digital economy. Apart from connecting heads of governments in annual conferences, it connects ministers and senior officials through the *Sherpa* track, as well as non-state stakeholders through *engagement groups*. This is crucial as lack of trust and communication among key stakeholders creates obstacles to finding a multilateral consensus on data governance. In these forums, consensus on basic principles of data governance within the G20 is expected to ripple through domestic policies and data governance policies of countries can finally start to converge. This is the role that the G20 can see itself playing in consolidating a meaningful consensus on a data governance framework that works for all.

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[29] Article 19.12 of the US-Mexico-Canada Agreement (USMCA), to wit: "No Party shall require a covered person to use or locate computing facilities in that Party's territory as a condition for conducting business in that territory."

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CLIMATE CRISIS & CLIMATE ACTION

Climate Crisis & Climate Action: Introduction

The global climate movement and calls for effective and swift climate action have become the hallmarks of youth-driven activism. The climate crisis is also one of the key areas of interest and activism for members of the Young Global Changers community and our Extended Circle.

In this section we have compiled contributions that discuss the climate crisis and approaches to effective climate action.

The scientific basis for what is required to deal with the climate crisis is not in dispute. Climate science points to the necessity of a swift and radical change of our economies. Most of the technologies that are needed to decarbonize our economies already exist. And while tackling this challenge will require massive resources, inaction will be many times more costly. The pressing question remains: how do we follow through? In the following section, Alex Clark explores some of the opportunities and hindrances.

Many times, debates about how to address the climate crisis center on individual responsibilities. Making conscious consumer choices, flying less, buying sustainably. However, this approach shifts responsibilities from emitting businesses and regulators to consumers with varying degrees of purchasing power. One way to shift the focus back to large-scale carbon emitters – suggested by our authors Karin Baba et al. – is to implement sufficiently high carbon pricing mechanisms to bring the costs of climate change into economic decision-making.

We will also learn from Michael Sivendra, a Young Global Changer who has been working hard to fight climate change in his home country, the Fiji Islands, spreading ideas and educating others. The article allows us to draw valuable lessons from local activism and the importance of empowering local communities. On the other end of the spectrum, Hang Dang will explore the challenges faced by multinational companies and the impact they have through their actions – and inaction – on tackling climate change.

Finally, Mohamed Hegazy turns to Africa and investigates how climate investments can benefit the poorest, the most disadvantaged and at the same time the most affected by the climate crisis.

»Climate science points to the necessity of a swift and radical change of our economies. Most of the technologies that are needed to decarbonize our economies already exist.«

AUTHOR

Alex Clark
2020/21 Young Global Changer & Researcher, Smith School of Enterprise and the Environment, University of Oxford
Social Media: LinkedIn: https://linkedin.com/in/alexfclark/
Twitter: @AlexClarkUK
Keywords: Climate action; net zero; innovation; economics

‘Wake up and change’ is only the first step

Why technologies and individuals aren’t enough to solve the climate crisis

»Some people say that we should study to become climate scientists so that we can ‘solve the climate crisis’. But the climate crisis has already been solved. We already have all the facts and solutions. All we have to do is to wake up and change.«

(Greta Thunberg)[30]

Considering the complexity of the Earth system and the uncertainties inherent in modelling it, climate science has been astonishingly successful in understanding the influence of human activity on this system. A recent meta-analysis of climate models[31] dating back to the 1970s finds predictions to be highly accurate in forecasting average temperatures. Remarkably, ten of the models showed no statistical difference between projected and observed data. As Earth system science has improved, so has the accuracy of the estimated “carbon budgets” remaining for humans to have an outside chance of remaining within certain geophysical boundaries.

In this context, the physical science component of the Sixth Assessment Report[32] (AR6) of the multidisciplinary Intergovernmental Panel on Climate Change (IPCC), published in July 2021, offers a stark warning. Not only does it conclude that the difference in outcomes between 1.5C and 2C of warming are significant and harmful, it also raises red flags on the use of methane-rich natural gas as a “bridge fuel”

»If today's governments don't sink massive resources into solving this challenge … we risk arriving at 2040 … with no realistic pathway to net zero.«

and the continuation of meat-rich diets. The report finds that there is little to no time left for adjusting global development pathways to avoid dangerous temperature rises.

The scientific basis for the pace and scale of decarbonization required to meet the goals of the Paris Agreement is clear. Our accumulated knowledge of human influence on the climate system leads to the inescapable conclusion that rapid, massive and fundamental economic changes are needed. What this implies for individuals, governments, and societies is far less certain and much more hotly debated. Late Harvard economist Martin Weitzman argued[33] – in defiance of conventional wisdom at the time – that even small "fat tail" risks of catastrophic outcomes and climate system breakdown should prompt much greater and faster action than the conservative economic policies that most conventional economic models would suggest. Current research on the dynamics of innovation and technological change[34] hints that Weitzman is right: large-scale government action is not only economically justified, but essential and potentially very effective if we are to deploy clean technologies quickly enough, at the required scale.

So, when it comes to implementation of Paris-aligned climate policies we have some of the answers, but – *contra* Greta Thunberg – not all of them. We do know what needs to happen, and in some cases how to do it. The technical means to decarbonize power generation and road transport, for instance, largely already exist. The cost of producing the zero-carbon electricity required to make progress in these sectors and others are falling rapidly and will likely continue to do so,[35] while the all-in social costs of extending fossil fuel extraction and use are much higher than current market prices reflect, and will only rise in the long term as better alternatives emerge and carbon pricing becomes more widely adopted.

Knowing what is needed is not the same as doing it

But while most of the global energy system can technically be decarbonized with today's technologies, and increasingly at today's prices, the "last third" of emissions will require a step change in investment, and probably some hard policy choices. Every plausible route to net zero emissions – and certainly to "hard" net zero, referring to the removal of all historical anthropogenic emissions from the atmosphere – requires widespread and affordable carbon capture and storage (CCS) technology.[36] Commercial CCS facilities are operational in some places, but are not yet economically viable for most applications and a very long way behind where they need to be, in terms of both scale and cost. Stabi-

lizing global temperatures will eventually require transitioning to negative emissions. Without CCS, unless the cost of direct air capture technologies falls considerably, we don't have a route to doing that yet on a large enough scale. Ultimately, if today's governments don't sink massive resources into solving this challenge and implement sufficiently high carbon pricing to make CCS viable, starting now – with the unprecedented COVID-19 fiscal recovery spending packages presenting a golden opportunity to do so – we risk arriving at 2040 in a moderately low-emissions economy with no realistic pathway to net zero. Placing vague faith in as-yet undeveloped future technologies on which the future hinges, was always a dangerous strategy and this late in the game, is near-suicidal.

Technologies and prices are, of course, not the whole story. Climate action campaign narratives, especially in wealthy countries, place 'raising awareness' on a pedestal in their theory of change. It is one of the cornerstones of the global campaign for fossil fuel divestment, for instance. Certainly, being aware of a problem is often the first step to doing something to solve it. But "wake up and change" is a simple mantra for a very complex problem. The combination of individualism and financial markets upon which so much of modern economic activity is based is not conducive to systemic change of the order the IPCC suggests is needed.

Six considerations for lasting and effective climate action

One: Individuals making lifestyle changes doesn't, regrettably, matter much, even in relatively large numbers. As late physicist David Mackay put it, "if everyone does a little, we'll achieve only a little." To paraphrase, if only some of us do quite a lot, we'll still, probably, achieve only a little. To make a real difference, individual action must push other actors and decision-makers within the system to take similar or complementary actions. This will trigger positive feedback mechanisms mirroring those in the climate system and ultimately reconfigure the rules upon which economic and social relations are based. We need to be much smarter and more empirically driven in identifying the social-behavioral sensitive intervention points[37] that can generate this systemic impact.

Two: Received wisdom on sustainable behavior is typically too good to be true and there are usually trade-offs to be made somewhere. Well-meaning initiatives promoted with incomplete or flawed information can be harmful. The promotion of paper bag usage over plastic bags is one example. Less plastic seems (and is) appealing, but additional deforestation caused by rising demand for paper isn't much good either. The conflation of "food miles" with carbon emissions is another: while there may be other merits to buying food locally, the carbon footprint of the resulting food isn't often one of them,[38] and reducing meat consumption (even very slightly) is generally more effective.

Three: Politics is hard. Today's world is intensely interconnected through trade, migration and finance. Many of the world's largest developing economies are net exporters either of fossil fuels or products created using them, and the incentives for a managed decline of carbon-intensive activity are rarely clear cut. Governments' concerns about the impact of decarbonization on growth, energy costs, competi-

tiveness and employment, and the deeply entrenched interest groups that support these increasingly misguided views (from national oil companies to car manufacturers), continue to have the upper hand in most countries at risk of locking in high carbon development pathways.

Four: Follow the money. The world's electric utilities and car companies have been cashing in on exponential growth in renewable energy deployment and electric vehicle sales, but their fossil-fuel portfolios are, on balance, continuing to grow because it still makes financial sense to play both sides. Similarly, even as they laud the growth of green bonds, financial institutions still provide huge amounts of financing for high-carbon assets,[39] despite the growing risks of making such new investments. The majority of the world's fossil fuel resources and power plants are directly controlled by governments with every incentive to generate as much economic value as possible from them before the music stops. Almost everyone is still busy having their cake and eating it. The intensifying debate on greenwashing[40] in the financial system, particularly through the misleading sale of products labelled as being consistent with ESG principles that are really nothing of the sort, is a case in point.

Five: Climate action has highly localized costs, often concentrated in particular communities that, partly through historical dependence on fossil fuel-based industries and exposure to commodity market volatility, are more likely to be relatively underdeveloped. The fossil fuel industry still employs tens of millions of real people dependent on it for their livelihoods, and it is used by billions for a vast array of everyday tasks. "Wake up and change" is not much of a choice for most of China's three million coal miners,[41] and not easy for the government either – partly reflected in the apparent contradiction between Xi Jinping's 2060 carbon neutrality announcement in September 2020, and China's approval of almost 40 GW of new coal-fired power plants in 2020 (more than in 2017–19 combined).[42]

Six: Check your privilege. Decision-makers in less-developed countries with limited financial resources (particularly those on the front lines of climate change with little role in causing it but everything to lose), still face harsh trade-offs with immediate consequences, between meeting basic needs of rapidly expanding populations, and investing in low-carbon infrastructure. Simply telling such countries and their people to change is not particularly helpful unless these tensions are acknowledged.

Looking ahead: COP26 and beyond

We don't need to model the climate system in perfect detail to know what the monu-

»Decision-makers … still face harsh trade-offs … between meeting basic needs of rapidly expanding populations and investing in low-carbon infrastructure.«

»Declaring individual action as the key to progress, is a dangerous game.«

mental task facing humanity today looks like. In many areas recent progress on technology and deployment has been good. In others, looming and increasingly desperate question marks remain on how to get to net zero emissions. Placing the onus on individuals, and declaring individual action as the key to progress, is a dangerous game, however. While it suits the corporate giants of consumerism very well, placing the climate problem at the feet of individuals is ethically and empirically inconsistent with how social and economic systems work. On the other hand, national governments demonstrated at the COP25 climate negotiations[43] in 2020 and COP26 negotiations more recently that they are still obstacles to change, even with most major oil companies now calling for carbon pricing. At COP26 in Glasgow this November, this must change permanently, but we must also remain clear-eyed in understanding what is required. The climate challenge is not unsolvable, but Greta's call to action is only the first step on a long and winding road. Success will depend on smart, diversified, pragmatic and above all, inclusive, strategies.

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AUTHOR

Karin Baba
2019 Young Global Changer & Manager, PwC Japan
Social Media: LinkedIn: https://linkedin.com/in/karin-baba-09b21638/
Twitter: @Karin_Kalini
Keywords: Carbon pricing; net zero emissions; environmental justice

AUTHOR

Eimear Duff
2019 Young Global Changer & Senior House Officer at St James's Hospital, Dublin, Ireland
Social Media: LinkedIn: https://linkedin.com/in/eimear-duff
Twitter: @Eimear3D
Keywords: Carbon pricing; net zero emissions; environmental justice

AUTHOR

Heena Gambhir
2019 Young Global Changer & News Anchor/Deputy News Editor, Times Now
Social Media: LinkedIn: https://linkedin.com/in/heenagambhir/
Twitter: @HeenaGambhir
Keywords: Carbon pricing; net zero emissions; environmental justice

AUTHOR

David A. Trejo Pizzo
2019 Young Global Changer & Exponential technologies advisor, Buenos Aires City government, Argentina
Social Media: LinkedIn: https://linkedin.com/in/dtrejopizzo/
Twitter: @dtrejopizzo
Keywords: Carbon pricing; net zero emissions; environmental justice

AUTHOR

Stephanie E. Trpkov
2019 Young Global Changer & Executive Director, Intech Ventures Croatia; Energy Sector Consultant, World Bank
Social Media: LinkedIn: https://linkedin.com/in/karin-baba-09b21638/
Keywords: Carbon pricing; net zero emissions; environmental justice

Putting a price on carbon in a post-pandemic world

In a world inundated by shocks such as the global pandemic and climate-related disasters, we are at a critical moment in history. There is a strong consensus that we as a society must do more to prepare for and withstand future global crises. Where climate change is concerned, many countries have committed to reach net zero emissions by 2050 and carbon pricing has been widely accepted as an essential policy instrument to combat the impacts of climate change. However, ideas on the concrete steps needed to implement the systemic transformative actions vary drastically across the globe. That variation of approach is evidenced in the carbon tax systems.

But what is carbon pricing?

Carbon pricing is a monetary value i. e., price placed on carbon emissions, in order for the costs of climate impact to be reflected in the production and consumption of goods and services. This would help create opportunities for low-carbon options and mitigate global climate change. A carbon tax is a form of carbon pricing. Another option is a permit-based emissions trading system (ETS). The European Union created the EU ETS, the world's first major carbon market on which companies are allowed a limited number of emission permits. It helped the EU put a cap on the level of greenhouse gas emissions. China also started its national Chinese emissions trading system in February 2021.

Katharina Lima de Miranda of the Kiel Institute for the World Economy (IfW) and Dennis J. Snower of the Global Solutions Initiative advocate for the implementation of the "Recoupling Dashboard," which will provide a new theoretical and empirical basis for assessing well-being, beyond GDP (Lima de Miranda and Snower 2020). Environmental sustainability is a key indicator. Furthermore, world leaders such as German Chancellor Angela Merkel have long recognized the challenge, stating: "We have a huge task to reach the climate targets of 2030. Carbon pricing is the best option."

Sadly, there is often a long road between political recognition and implementation. There are in total 64 carbon pricing instruments operating in 2021, covering just over a fifth of global greenhouse gas emissions.[44]

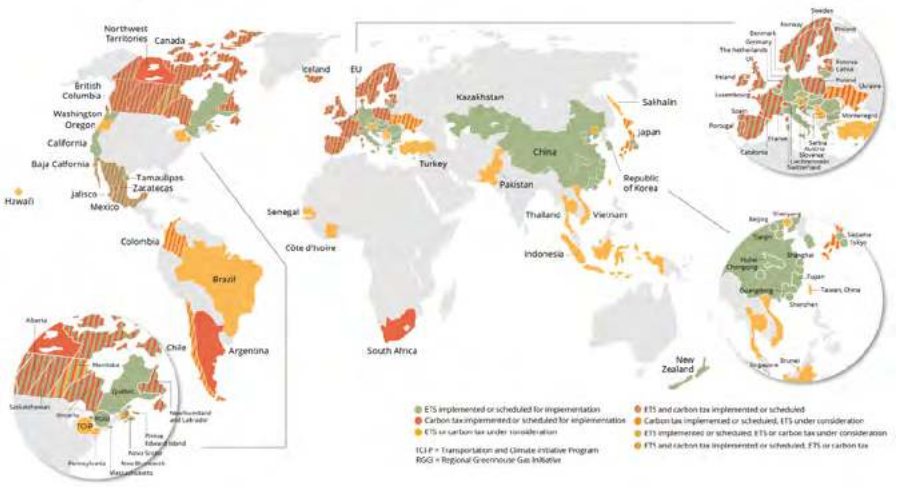

FIGURE 1: Map of carbon taxes and emissions trading systems

Source: The World Bank. "State and Trends of Carbon Pricing 2021"

Carbon pricing map 2021[45]

The map shows relatively few geographical areas with a fully implemented Emissions Trading System or carbon tax, while others do not even have it under consideration.

Challenges

While carbon pricing is a unique solution, the effect is still far from the desired impact, as most carbon prices are currently below the levels needed for significant decarbonization to be achieved. The World Bank report distressingly points out that despite the urgency, global emissions have continued to rise, and current climate policies from governments as well as the private sector continue to fall far short of what is needed to reach the temperature goals of the Paris Agreement.

Despite climate change being a global problem, solutions need to incorporate local and national contexts. There is no one-size-fits-all design for the carbon tax scheme. Locally oriented carbon pricing can help compensate for time lost as efforts to secure common, global agreement continue. This is lagging for reasons that may include:

- a lack of funding or access to capital markets,
- political focus on more short-term issues,
- lack of technical capacities for preparing, planning and implementing carbon pricing measures as part of a local strategy for addressing climate change and achieving sustainable development.

A just transition is essential

The current system of cheap and easy emission of carbon is obsolete. The concept of a Just Transition advocates a switch from an extractive economy to a regenerative one, which addresses the longstanding issues of social and environmental injustice of the present pollution-heavy industrial structure of the economy. In that case, Carbon pricing as a climate policy instru-

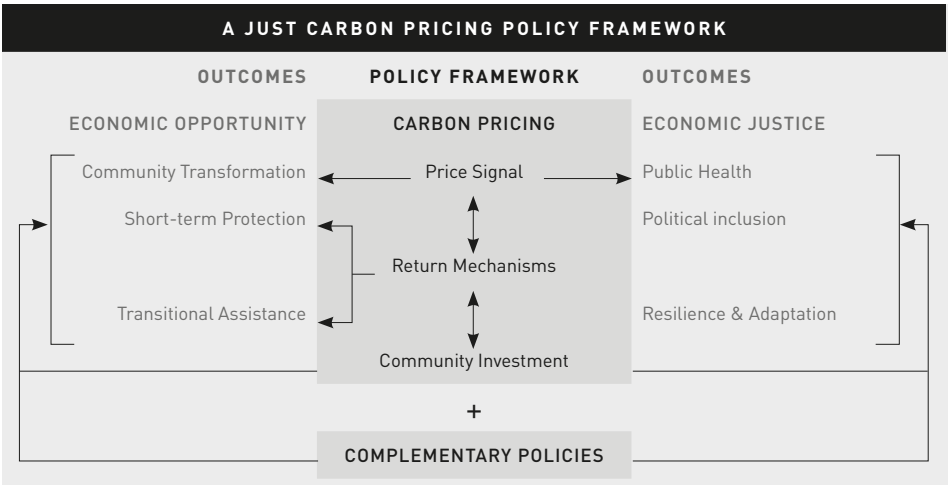

FIGURE 2: A just carbon pricing policy framework

Source: CLIMATE XCHANGE – Carbon Pricing in a Just Transition

»Carbon pricing would not merely be about emission reduction, but integrated with social and environmental justice.«

ment would not merely be about emission reduction, but firmly integrated with social and environmental justice.

An illustrative policy framework for establishing a just carbon pricing can be seen in the diagram above:

Carbon pricing supports the development of policies that are fair and do not unwarrantedly burden the poor in developing nations. Thus, working with all relevant stakeholders to design and implement policies to enable a just transition in low-income economies is a critical component to carbon pricing design.

Recommendation and conclusion

Frameworks for climate action, including for carbon pricing policies, exist in many geographies. However, the pace leaves a lot to be desired. There is an urgent need to scale the scope and ambition of these instruments.

The "Recoupling Dashboard" proposed by Lima de Miranda and Snower should be further examined and implemented, because it outlines an empirical basis for mobilizing action by government, businesses, and civil society to reconcile sustainable economic development with well-being and social progress.

Enhanced cooperation and collaboration is essential to address the climate emergency that transcends national borders.

»Achieving the goal of net zero emissions by 2050 entails decisive actions on all levels, across all disciplines.«

Given the urgency of the climate emergency, the upcoming COP26 in Glasgow should not be another opportunity for problem-stating and finger-pointing. It should be a platform for deploying solutions through highlighting best practices, as well as identifying potential global linkages of each instrument implemented locally. Achieving the goal of net zero emissions by 2050 entails decisive actions on all levels, across all disciplines. The time for such decisive, collaborative action was yesterday.

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[45] "The large circles represent cooperation initiatives on carbon pricing between subnational jurisdictions. The small circles represent carbon pricing initiatives in cities. In previous years, Australia was marked as having an ETS in operation. However, the Safeguard Mechanism functions like a baseline-and-offsets program, falling outside the scope of the definition of ETS used in this report. Therefore, the system was removed from the map. Rio de Janeiro and Sao Paolo were marked as considering the implementation of an ETS based on scoping work done in 2011 and 2012 respectively. Given there have been no updates since, the these were removed from the map."

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AUTHOR

Ken Fullerton
2017 Young Global Changer & Senior Consultant, ARTD Consultants (Sydney, Australia)
Social Media: LinkedIn: https://linkedin.com/in/kenneth-fullerton-01a2a4b8/
Twitter: @KenFullerton
Keywords: Climate change; activism; pacific; resilience; solidarity

AUTHOR

Sivendra Michael
2017 Young Global Changer & Founder, AC; Programme Specialist (Gov4Res), UNDP Pacific Office in Fiji
Social Media: LinkedIn: https://linkedin.com/in/sivendram/
Twitter: @sivendram13
Keywords: Climate change; activism; pacific; resilience; solidarity

A Pacific Young Global Changer fighting climate change

How people and nations from the Pacific are standing tall to fight climate change

Every day we read about inspiring changemakers who are trying to make a difference for their communities. We reflect on their ideas, think to ourselves about how we can contribute, or start discussions about similar ideas. This was exactly how Sivendra Michael[46] started his journey a decade ago. Living in a region that is severely affected by climate-induced disasters, Sivendra began his advocacy on climate action with his peers. "There are thousands of people getting displaced, including my communities, from cyclones and climate change. I cannot bear the thought of not doing anything," he proclaims.

He is currently based in Fiji and is working for UNDP's Governance for Resilient Development in the Pacific project[47], but his passion is rooted in doing good for his community. Ken Fullerton[48], a 2017 Young Global Changer[49], caught up with Sivendra to learn about his journey into climate activism and his visions for the future.

What inspired his passion to take action?
Sivendra understands the threat that the climate crises pose to the people and communities in the Pacific, who have for

»I want my daughter to have a place to call home.«

decades been living on the frontlines of devastating climate disasters. "I want my daughter to have a place to call home," Sivendra shares.

He says the stories and experiences of his family, community, and country are what fuels his passion. "I grew passionate about sharing narratives about local communities in Fiji and drew inspiration from other climate activists locally who were also concerned about what the future would be like if our current generation does not do anything about it."

Sivendra acknowledges his roots and recognizes the communities that have given him a purpose. "I thank the Turaga ni Koro (village spokesperson) and the people of Votua, Nawaqarua, Yalalevu and Namasau for their loloma (love and trust) and support towards this journey," he says.

He also appreciates the importance of "integrating community knowledge and wisdom" so that community-led programs and initiatives gain support and have a higher likelihood of success.

Now, his passion for understanding and solving complex climate change challenges has transferred to his studies. He became the first Fijian to graduate with first class honors in Economics at the University of Auckland, before receiving a doctoral studies scholarship to complete a "very personal" PhD[50] focusing on the resilience of small businesses in Fiji's Ba province.

Recently, Fiji has also been hit hard by the global COVID-19 pandemic, which has greatly impacted the country's ability (and budget) to fight climate change. The World Health Organization (WHO)[51] notes there have been almost 50,000 confirmed cases and over 520 deaths. While Sivendra understands the need for the government, organizations and individuals to direct resources towards fighting the pandemic, he believes this should not diminish the importance of combating climate change.

»My work as an activist and advocate on SDG 13 – Climate Action is deeply rooted in my passion for working with young people to defend our island homes.«

"In the last year alone, we had two massive tropic cyclones hit Fiji, Tropical Cyclone Yasa and Tropical Cyclone Ana, which were rated as Category 5. Their impact cannot be ignored."

What climate change initiatives has he been involved in and what have they achieved?

While juggling his PhD studies and the responsibilities of being a father, Sivendra has managed to design and implement innovative programs that encourage others to learn about and take action on climate change.

"My work as an activist and advocate on SDG 13 – Climate Action is deeply rooted in my passion for working with young people to defend our island homes," he says.

For example, through the Valuing Voices[52] project, in which Sivendra and his supporters combine art with activism and story-

telling to promote *artivism,* "a word instilled in me by the great Moana Maniapoto."

Music videos, documentaries from maritime tours, theatrical performances and social media campaigns have been used to spread important messages that locals can relate to and understand (often as a result of negative personal experiences with climate change).

"It is based on an understanding that diversity of voice leads to better governance for everyone," Sivendra explains.

Another important initiative for Sivendra has been his involvement in the British Council's Active Citizens[53] program which commenced in 2016. "Words are not enough to express how life-changing this journey has been," says Sivendra, who was selected to lead its rollout in the Pacific. Active Citizens was designed to support young people to take action on issues they are passionate about to build "core values of trust and understanding within and between communities." He has played a leading role in rolling out the program to more than 10 Pacific countries and has helped train over 10,200 Active Citizens over the last five years.

"The work for Active Citizens Pacific has never been so critical as it is now. A lot of our work has moved from the climate change, sustainability and oceans space to health," he says, adding "and supporting Fiji's efforts to combat the COVID-19 pandemic."

What has he helped achieve?

Sivendra likes to point out two significant outcomes that young people have played a small part in achieving through their campaigning and initiatives, apart from getting others involved and interested in climate change issues.

In 2017, the Fijian government announced steps to phase out single-use plastics by 2020 as a result of a major 'Ban the Plastic Campaign' that was led by young people and later gained the support of civil society organizations. A 10-cent levy on single-use plastics was introduced and then increased from 10 cents to 20 cents in 2019 "to discourage consumers from using single-use plastics and to increase awareness for the use of recyclable bags." As a result, the number of plastic bags used by Fijians has dropped significantly from approximately 70 million in 2010 to around half a million in 2018, a year after the levy was introduced, according to the Secretariat of the Pacific Regional Environment Programme (SPREP)[54].

Sivendra defines active citizens as "people who feel inspired, people who feel motivated and empowered to make a difference, and those who have the drive and the know-how to make sure ideas don't just remain ideas."

»Acknowledging that 'change can happen through us, and not just to us' has been a fundamental approach when setting up new campaigns and adaptation and mitigation projects.«

»There is a genuine need for transformative action.«

While he did not set out on his path to achieve individual recognition, Sivendra was honored to receive the University of Auckland's 2019 Award for Most Outstanding Contribution in Service and Leadership[55 & 56]. The award is in honor of his charity work and dedication to raising awareness around climate change both in New Zealand and his home country, Fiji.

How does he overcome challenges?

Sivendra's path, and the path followed by many other young climate change activists in Fiji and across the Pacific, has not been plain sailing, with several hurdles throughout the journey. Being persistent and remaining true to your values is fundamentally important. At the same time recognizing and respecting differences are important "as it brings together diverse people with unique experiences, skills and ideas, which we as young people can learn from," Sivendra says.

"Acknowledging that 'change can happen through us, and not just to us' has been a fundamental approach when setting up new campaigns and adaptation and mitigation projects," he says. At first, getting local buy-in and funding was not easy, and he "had to use international success and impact stories to get initial funding."

Sivendra points out that another key to his successes has been "approaching local delivery partners for partnership in the very initial stages" when planning for a new campaign or initiative. Today, he works with 41 partners across 10 Pacific countries but to get the early funding and support still remains a challenge.

"Most times, I had to ask global partners for funding grants to start projects in Fiji, which later were supported by local community organizations and growing."

Why is collaboration and networking so important?

Sivendra credits networking as a crucial tool in his armory as a young leader. "Without networks and relationships, the movements by young people will not be as strong as they are now to be able to continue to empower and inspire." He intends to continue campaigning and engaging with young people to ensure the youth are more recognized and have a greater say. "We as young people should continue to push boundaries and make our voices heard, as it is our generation and the generations to come that will be impacted by climate change!"

It is important for young people to be involved in key decision-making processes. Having represented Fiji and young people on the international stage also affords Sivendra an opportunity to build on his networking, raise awareness and garner support. Over the last two years, he has done exactly that via his involvement with the Youth Observer Constituency of the United Framework Convention on Climate Change (YOUNGO) and participation at the World Climate Change Conference and other pre-forums.

"In these spaces," Sivendra notes, "the key objective is to ensure that voices of young people are heard and included not only in negotiation text but also outside these spaces." He also believes that young

people are not powerless, and their voices should be heard widely.

A call to action

Beyond representing Fiji on the international arena, Sivendra aims to continue his role in the Active Citizen's initiative and as a Young Global Changer alumnus. Recognizing that "there is a genuine need for transformative action," his objective is to "upscale through the inclusion of other partners" and to see the "program taken up by universities as an introduction course." He believes this is important because "the work we do is important and needs further leverage and these efforts can help us achieve that."

"To make this happen, we need to be ambitious in the way in which we align our economic development with low carbon growth in order to improve the resilience of countries affected by climate change and to help build their capacity to do this by themselves," he says.

Change is necessary and is needed now from the developed nations, Sivendra says. He adds that even if the entire Pacific region were to transition to renewable solar power, it would still not be enough to achieve the 1.5-degree target set out in the Paris Agreement[57] on climate change. Ultimately though, Sivendra believes that local-level, grassroots actions and campaigns will have the biggest positive impacts on climate change.

"I still believe that my purpose is to give back to the communities that gave me everything. In the Pacific, they say that 'it takes a community to bring up a child' and as their child, I want to be their voice," Sivendra says.

Passion, dedication and commitment to addressing a major global issue are important values that are evident in Sivendra in the way he communicates as well as the work he does. Encouraging others to help combat climate change,and promote citizen activism, Sivendra's strong desire is "for young people to be bold and believe in positive social changes."

To learn more about Sivendra follow him on LinkedIn or get in touch via email (Sivendra.Michael@gmail.com).

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AUTHOR

Hang Minh Dang
2020/21 Young Global Changer & PhD Candidate, College of Business & Economics, The Australian National University
Social Media: LinkedIn: https://linkedin.com/in/hangdangminh/
Keywords: Climate change actions; multinational companies; science-based targets; climate risks; business case

Standing on giants' shoulders:

The role of multinational companies (MNCs) in climate change actions

Climate change is a systemic and global challenge that requires collective action from all stakeholders around the globe. While much attention has been paid to countries and industries' climate change mitigation and adaptation targets and strategies, corporations have also been under great pressure to take the lead in the fight against climate change. Big multinational corporations are part of the problem, as they are responsible for a great deal of greenhouse gas (GHG) emissions, for example, 35% of all energy-related carbon dioxide and methane came from 20 fossil fuel companies (Heede, 2014). At the same time, with large resources and capabilities, multinational companies (MNCs) are key players to foster and scale up green innovations to tackle climate change. This article outlines why MNCs need to step up their climate change actions and how business leaders are successfully doing so at the current state.

The business case of MNCs for climate change actions

The science has been clear about the catastrophic impact of climate change if GHG emissions are not reduced in the next few decades. Physical risks of climate change have been and will be a challenge to business performance and operation. Exposure to natural disaster risk is associated with a 1.8% reduction in return on assets, and lower and more volatile earnings and cash flows (Huang, Kerstein, & Wang, 2018). Extreme weather and slow onset events will likely cause damage to capital and assets, which creates disruptions to the global supply chain. For example, after a flooding disaster in Thailand in 2011, the global hard-disk market experienced a sharp supply shortage and price hikes. Companies such as Hewlett Packard, as a result, suffered revenue declines in the last quarter of 2011, and between 10,000 and 15,000

businesses (including MNC subsidiaries) were negatively affected across the country (Surminski, 2013). Needless to say, actions for climate change mitigation and adaptation can be pre-emptive moves by MNCs to reduce physical risks.

»Actions for climate change mitigation and adaptation can be pre-emptive moves by MNCs to reduce physical risks.«

Second, increasing climate change policies on a global level require MNCs to uniformly comply with regulations. To deal with the diverse scope and enforcement of environmental regulations in different locations, MNCs adopt early self-regulation strategies in the form of voluntary pollution reduction that can be even more stringent than local regulations (Aragòn-Correa, Marcus, & Vogel, 2020). MNCs can thus reduce the regulatory risks and create the first-mover advantage in low-carbon technologies, products and services. If companies refuse to follow environmental regulations or they practice "greenwashing" (i. e., making misleading claims about their environmental actions and impacts), they are likely subject to greater scrutiny and lose legitimacy (Berrone, Fosfuri, & Gelabert, 2017). Rising pressures from responsible investors, customers and NGOs require firms to take on emission reductions. The Carbon Disclosure Project (CDP)[58] is a case in point. It represents institutional investors with $106 trillion in assets to ask top companies to disclose their climate impacts and targets since 2001. After the 2015 Paris Agreement, MNCs are among the top green bond issuers, including Apple ($1.6 billion), ING bank ($1.3 billion), Toyota Finance ($1.25 billion) (Shishlov, Morel, & Cochran, 2016). Climate change actions by leading companies create peer pressure for other MNCs to follow suit and maintain their legitimacy.

How can MNCs contribute to climate change actions?

There are various strategies that business firms can adopt to start reducing GHG emissions. However, leading MNCs on climate change actions have practised setting science-based targets, responsible supply chain management and climate-related financing.

An increasing number of over 1,000 global companies have set science-based targets to reduce their emissions. Companies are joining the Science-based Targets initiative (SBTi)[59], which seeks to align corporate emission targets with the global pathway to limit the temperature rise to below 2 degrees grounded in climate science. Having uniform science-based targets can help businesses develop a roadmap of how much and how fast they need to reduce their GHG emissions to achieve the global climate change target set by the Paris Agreement. As an example, Danone[60] – a world-leading food company – had its science-based targets approved in 2017. The company pledged to reduce emission intensity by 50% in all scopes and achieve a 30% absolute reduction of scope 1 and 3 emis-

sions by 2030 from a 2015 baseline. With clarity and guidance from SBTi, Danone was able to increase their commitments to net-zero emissions by 2050 and sign the Business Ambition for 1.5°C pledge. As such, setting science-based targets is a strong first step for MNCs and the private sector to commit to climate change mitigation.

Under legitimacy pressure, MNCs are responsible for regulating their supply chain. As a big purchaser, MNCs can exercise their power as buyers to require good environmental conduct from local suppliers. This incentivizes climate-friendly practices across the supply chain, including those in developing countries. For instance, MNC-led standards were found to increase the best environmental practices among local farmers in South Africa with the "no-deforestation" policy from palm oil buyers (the majority are MNCs) covering 96% of palm oil production (Grist, 2014). As a food company depending on agricultural product sourcing, Danone works closely with over 58,000 farmers worldwide and promotes "regenerative agriculture" that protects soil, empowers local farmers and encourages animal welfare. Host-country governments should demand high environmental standards among MNCs and induce local firms towards green innovation to catch up with the frontiers.

The third avenue for MNC contribution to climate change action is direct investments in green technology and capacity building. With large financial resources, MNCs have a strong capacity for research and development (R&D). The top 1% of MNCs account for half of global R&D spending (Patchell & Hayter, 2013). Setting an example in climate change mitigation, Danone North America contributes USD 6 million in research expenditures on an initiative with The Ohio State University and Cornell University to identify ways to help regenerate soils and increase soil carbon sequestration. For climate change adaptation, IBM developed a software system to analyze weather, rainfall and water data for the company's own use and also to help local management of flood threats (Averchenkova, Crick, Kocornik-Mina, Leck, & Surminski, 2016). The complexity and uncertainty of climate change make adaptation costly, especially when MNCs lack local knowledge. MNCs, governments and communities' partnerships may explore and deliver effective adaptation measures. Though MNCs' adaptation efforts may be limited due to local complexity, they can contribute to building resilience and helping communities adapt and thrive in vulnerable regions.

»Climate change actions by leading companies create peer pressure for other MNCs to follow suit and maintain their legitimacy.«

In short, we may stand on the shoulders of giants in the fight against climate change. The "giants" term is not a mere reference to the size and influence of MNCs, but to the global climate regime, the strong pressure from investors, civil society, NGOs, and the advances of climate

»Setting science-based targets is a strong first step for MNCs and the private sector to commit to climate change mitigation.«

science and technology development so far. Building on the progress of governments, responsible investors and public awareness on climate change action, MNCs and the private sector can no longer fall back on the business-as-usual case but should quickly take stock and transform into low-carbon and climate-resilient business models. As these "giant" actors work together, it gives us hope for winning the battle against the super "wicked" problem of climate change.

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AUTHOR

Mohamed Momtaz Hegazy
2020/21 Young Global Changer & Director, Transport for Cairo
Social Media: LinkedIn: https://linkedin.com/in/momomtaz
Keywords: COP26; green climate finance; international development assistance

Decarbonizing Africa is about the smallest guy:

As global capital shifts towards climate friendly investments, we need to innovate how we make it reach the poorest

If you felt that Climate Change is the most pressing global issue to be addressed by leaders in 2021, it is likely a reaction to the sheer amount of news of ecological collapse happening around us: A town called Paradise burned to ashes (How Paradise Went Up in Flames – The New York Times, n. d.)! The Australian continent obscured by clouds of smoke! Venice flooded! As sea levels continue to rise, New York may be next to flood. Or Dhaka. Or many more. Reports have linked conflict, and resulting cross-border migration, to the effects of climate change (The Great Climate Migration Has Begun – The New York Times, n. d.).

Greta Thunberg claims "we already [to] have all the solutions" to avert further damage through the immediate stopping of fossil fuels. Yet, investments based on fossil fuel extraction and burning are underway in the developed and developing world alike,

»Despite recent advances, the technology does not yet exist to cost-effectively replace many of today's uses of hydrocarbons.«

despite a need to stop all investments now. (International Energy Agency., n. d.) World Leaders should be pressed to ensure the transition starts immediately, globally and comprehensively (Masson-Delmotte et al., 2021). The critical issue is the total mobilization of legal, financial, and diplomatic resources towards finding a balance between sustainability and wealth inequalities, worldwide.

»10 years ago, high-income countries agreed to mobilise USD 100 billion per year by 2020 to assist lower-income countries tackle climate change through mitigation and adaptation.«

Under any scenario, the transition towards a zero-carbon economy will take decades. The economic transformation towards a full transition will have real economic losers at local and global levels: be it current major players in energy finding their potential profits undermined, or emerging countries finding their paths to development thwarted. Fossil-fuels made the developed world rich. How can a transition be enforced in a global -rather than national- context; given present-day inequalities and aspirations? The world is in a true tragedy of the commons.

"Despite recent advances, the technology does not yet exist to cost-effectively replace many of today's uses of hydrocarbons." So says the leader of the asset-management firm BlackRock (Larry Fink & Blackrock, 2020); which manages one in ten dollars worldwide. In an open acknowledgement of the urgency of the climate crisis he predicted a significant reallocation of capital away from fossil fuel dependent investments; and announced a number of initiatives to minimize his own climate change related risks.

The government of Australia had been promoting fossil fuel friendly policies for decades despite the countries' vulnerability to climate change. The United States experienced in the 2010's an unprecedented economic boom: the first full decade without a at least a year in recession in American History. It also happens to be the decade where the US became a net exporter of oil & gas due to the Innovation of fracking and exploitation of abundant shale oil reserves. Last year, Saudi Arabia floated a part of Saudi Aramco to investors as part of an initial public offering. These same shares have have few buyers, and thus decreasing value, as the predicted re-allocation of capital takes place. (Saudi Aramco Is the World's Most Profitable Oil Giant. For Investors, It's One Big Yawn | Fortune, n. d.) This is how capital markets would pull risk forward; finding that the net cost of climate change outweighs benefits to be derived by continuing to live on fossil energy.

Not all capital is created and traded in global capital markets. The next decades will also see the continued rise of Africa. While most countries will stabilize demo-

graphically by mid-next decade, Africa is expected to propel the world's population towards 10 billion by 2050; it is expected to house one in two humans by 2100. Most of those newborns will eventually live in Africa's growing cities. African urbanization is unique: Cities are growing horizontally as the continent urbanizes before it industrializes. (Lall et al., 2017) If Africa is to industrialize independently of climate change causing hydrocarbons, technology to cost-effectively outperform today's use of hydrocarbons is paramount.

I work in the urban mobility domain. Transport is a significant contributor to global emissions; and growing. Impacts go beyond global warming; but touch very local issues of citizens health, access to social networks and economic opportunities and quality of life. Dense cities which promote walking, cycling and public transport have proved themselves sustainable, economically competitive and desirable. Sprawling cities based on highways, long distances and individualized mobility developed in the fossil-drunk 20th century and are increasingly struggling with their own transition. Urban development in much of Africa – and Asia – is following the latter -to avoid- model rather than the former desirable compact city paradigm.

A big cause is the ubiquity of hydrocarbon enabled mobility: Private cars; shared taxis; for-hire motorcycles. Citizens are allocating their capital accordingly: In cheaper housing at the edge, relying on existing mobility options. This is unsustainable, as it locks them into a long future of energy-dependent travel. It also relies on decade long mortgages and life-long savings and reflects a form of small-guy capital allocation.

»The headline target remains unmet, not enough finance has been mobilised. The distribution of said finance across public and private money, and across re-payable loans and grants is a further point of discontention.«

10 years ago, high-income countries agreed to mobilise USD 100 billion per year by 2020 to assist lower-income countries tackle climate change through mitigation and adaptation (Independent Expert Group on Climate Finance, 2020): Aiding investements in more expensive but available technologies that that skip hydrocarbons (think electric public transport running on renewable energy) and adapting to a hotter, more volatile climate (think flood protection systems and extreme heat resilient technologies).

The headline target remains unmet, not enough finance has been mobilised. The distribution of said finance across public and private money, and across re-payable loans and grants is a further point of discontention. (Gurzu, 2021) COVID-19 induced an ongoing debt crisis across developing

»How do we move a Boda-Boda motorcycle taxi driver in Kampala to invest in that more expensive electric bike?«

nations, which is further hurting development as local economies deteriorate. Increasing credit from north to south is no longer an option, it is an imperative.

To enforce a global transition that strikes the balance between economic growth and sustainability considering the impacts of COVID, the G20, G7 and other global governance forums need not just increase amounts and the relative size of grants, but further innovate in how capital is channeled towards clean energy investments. The real challenge is not how to sway the biggest guys on the block; such as Asset-Management firm BlackRock or large publicly funded mega-projects. It is how to sway the other nine dollars in ten; up to the smallest guy on the planet: How do we move a Boda-Boda motorcycle taxi driver in Kampala to invest in that more expensive electric bike? The answer lies in linking his needs and choices with the flows of global capital.

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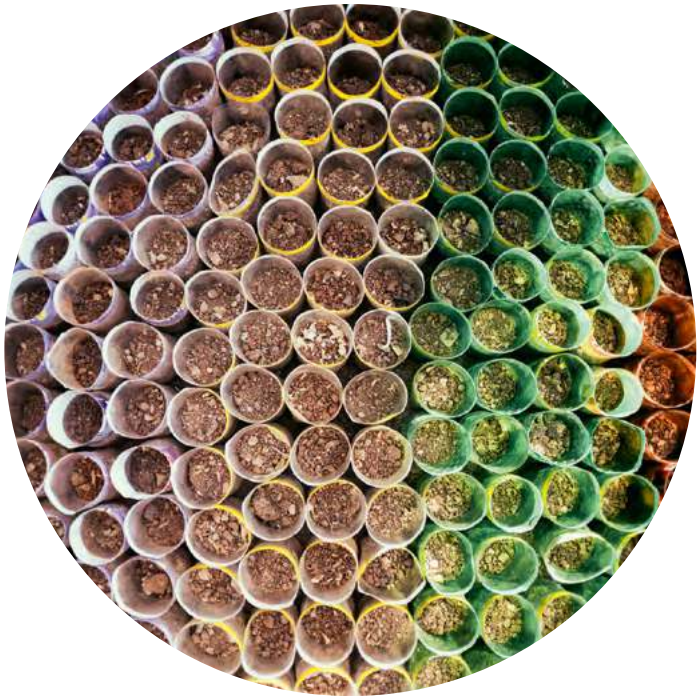
TOWARDS SOLUTIONS: PROJECTS & PRACTICES



Towards Solutions: Projects & Practices: Introduction

For change to happen, it is important to recognize the weak points, the flaws and deficiencies in existing structures. It is also important to develop ideas for progress, a theory of change and steps towards their implementation.

As part of the Young Global Changers program, we aim to identify young perspectives that add to the debate around these issues. We also aim to identify concrete practices and projects by young people – to learn from them and draw lessons from them, but also to investigate structural and systematic factors that enable and advance these practices, as well as factors that stand in their way.

In this section, several Young Global Changers describe their own projects and how they approach the recoupling agenda. Joyce Treptow points out the close link between social, economic, and environmental issues, and presents a concrete project that is being implemented in South Africa which centers on a "people-powered" grass roots approach.

Brianna Kerr and her colleagues at Kua Coffee have been pursuing an initiative to make the world greener as well as fairer by creating a circular coffee business that collects and recycles used coffee grind. It also directs all their profits back to the coffee farmers.

Dea Wehrli argues for an inclusive design and business approach with a project that aims to improve working conditions for self-employed informal dismantlers of electronic waste in the city of Delhi in India. At the core of her initiative is a participatory inclusive and human-centered design process which puts the workers and their demands at the center and aims to create safer workspaces and supporting infrastructure – materially and socially.

Finally, Answara Kovithal, Ji Yoon Han and Renan Magalhães present a policy brief in which they identify measures that global forums like the G20 should implement to develop frameworks for the localization of economic growth, to foster local development and decentralize decision-making while including local and non-state actors.

The articles in this section highlight the relevance of local projects and underline the importance of empowering local communities. At the same time, these projects, activities and proposals point to further

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steps and practices that can help transform our economic activities and align – and recouple – them with environmental sustainability and the needs and demands of individuals, communities and societies.

AUTHOR

Joyce W. Soila Treptow
2020/21 Young Global Changer & Fellow, The United Nations University - Maastrich Economic and Social Research Institute on Innovation and Technology (UNU-MERIT)
Social Media: LinkedIn: https://linkedin.com/in/soyla/
Keywords: Poverty; impact; Sub-Sahara Africa; sustainable entrepreneurship; SDGs

Homegrown solutions for 'problems without passports':

An essay of people-powered change towards a future full of hope

Global challenges "without passports" are on the rise. Our resources are exhausted. We need to work together and respond with innovative and scalable solutions. The clock is ticking – we need to act now!

The problem? Through globalization, we as individuals and countries have become interconnected. As a result, we are facing global challenges that do not regard national boundaries, which the former United Nations Secretary-General Kofi Annan called "problems without passports" (Anan, 2009). These global problems, such as global warming, biodiversity loss, migration, poverty, health and financial crises, present undeniable risks for our planet earth and its people. Being in a globalized world means sharing the same fate, and the problems have enormous implications for our communities and the global community at large.

Climate change is a complex phenomenon whose direct and indirect impact affects sustainable development at the global level. Notably, it is hitting communities in the Global South the hardest. We see poor communities in rural regions of

»Global challenges are on the rise. Our resources are exhausted. The clock is ticking – we need to act now!«

»How would you motivate a poor person who earns a dollar or less a day to take care of his environment?«

Africa, South America or even Asia who are highly dependent on natural resources for their survival. They have to deal with the consequences of climate issues such as food insecurity due to soil degradation and desertification, and of course, with scarce resources.

Hence, the poor and marginalized – not knowing better – have been forced by circumstances to overfish, hunt protected animals, or even cut down trees illegally. Yet, how would you motivate a poor person who earns a dollar or less a day, with children to feed and bills to pay, to take care of their environment? How do you motivate anyone to do something for their environment when the challenges seem too big and too hard to solve?

The relationship between the environmental crisis and economic development issues is intertwined, and so we need a fresh and innovative approach to respond. It is within this progressive paradigm, which promises the reconciliation of environmental and economic concerns among poor communities at the bottom of the economic pyramid, that the South African NGO WildTrust has emerged.

In November 2018, I participated in a summer school on 'Green and Social Entrepreneurship for Biodiversity Conservation and Local Development" co-organized by the Center for Development Research (ZEF) of the University of Bonn, Germany. During the summer school, my fellow participants and I worked with WildTrust's CEO, Dr Andrew Venter, and were able to gain insights into some of the NGO's flagship projects. This essay is about hope – it is about stories of change. These stories are about otherwise unseen and unheard environmental champs and changemakers who do a great deal to survive and create change in their environment.

Since its inception, WILDTrust has been one of South Africa's largest and most influential environmental NGOs (WildTrust, 2018). WILDTrust is structured around three programmes: WILDLands deals with the wildlife economy, ecological restoration and sustainable communities' intervention. Second, WILDOceans, the marine-focused programme, supports marine biodiversity conservation, and third, WILDEntreprise is a social enterprise that manages all economic development initiatives emerging from the WILDTrust activities (WildTrust, 2018). Due to the limited time, we were able to catch a glimpse of some of WILDLand's projects.

© Lisa Freudenberger | Bettle on leaves.

WILDTrust is all about action, not just words. When Dr Venter talked about community-based conservation, he referred to those 'homegrown' innovative and impact-driven solutions that his team and all involved communities are working on to protect the fragile natural environment while creating economic opportunities for vulnerable people. It was already fascinating to hear the positive names of the different projects like 'Trees for Life' or 'Recycling for Life'. 'Trees for Life' is a project for local community members (tree-preneurs) who grow indigenous trees on a large scale and trade them to WILDLands in exchange for cash or support items (WildTrust, 2018). As you will see in the next section of this essay, these positive project names and people involved at all levels are examples of hopeful narratives to motivate us to think creatively and act boldly in these times in which social, economic and environmental problems and their consequences are intertwined (Mauch, 2019).

'Recycling for Life' – Waste as an opportunity

South Africa, just like the entire African continent, has a waste problem. Factors such as population growth, urbanization and income growth have increased the growth of waste generation in South Africa (Polasi et al., 2020)

South Africa has much plastic waste in both marine and terrestrial deposits that is damaging the environment. Unfortunately, the country's waste management and recycling infrastructure cannot handle this problem. According to a report by the United Nations Environmental Programme (UNEP), out of the total domestic waste generated by households in 2018 (12.7 million tons per year), around 4 million tons of this waste was neither collected nor treated through the formal waste management system (Polasi et al., 2020). Consequently, almost one-third of the garbage was dumped illegally.

© Marwa Shumo | Gogos house: collected plastic waste.

Recycling for Life is WILDLands' project helping to manage the waste problem in low-income communities that are cut off from the municipal waste infrastructure. Waste is a hazard to people's health and the environment, clogging waterways and poisoning rivers, lakes and soil.

Recycling for Life empowers communities and individuals (waste-preneurs) to collect waste in and around vulnerable communities that lack waste-collection

»These are examples of hopeful narratives that help us think creatively and act boldly in these times of converging crises.«

services, so they can recycle it and trade it with WILDLands in exchange for cash. In South Africa, we visited a female waste-preneuer called Gogo in a township around Pietermaritzburg. A WILDLand's truck picks up the garbage from Gogo and other waste-preneurs for recycling and reselling. Gogo is 66 years old, lives in a small tin-roofed house with her seven grandchildren aged 7–15 years, who were orphaned by HIV/AIDs. Her monthly pension is around USD 60, and she is the sole breadwinner in her family. The HIV and AIDs crisis is taking a toll on Africa's future. Current UNICEF numbers show 3 million children and adolescents living with HIV in 2018, around 90 per cent in Sub-Saharan Africa (UNICEF, 2019). The burden of this crisis is disproportionately affecting adolescent girls and elderly women.

According to UNICEF, elderly women in Africa continue to be among the most vulnerable and marginalized society members. Yet, by taking care of their grandchildren orphaned by HIV/AIDS, the social and economic burden increases immensely (UNICEF, 2006, 2018). As a result, Gogo and thousands of families have learned to embrace waste collection as their source of livelihood. Interestingly, Gogo is not a beneficiary but a supplier for WILDLands. According to the Gates Foundation (2021), only 63 per cent of adults in developing countries have a bank account; around 1.7 billion people are excluded from formal financial services such as savings, payments, insurance, and credit (Gates Foundation, 2021). However, all actors involved with the WILDLand's system have to have a banking account. Hence, Gogo and all waste-preneurs use mobile banking accounts, a simple yet powerful instrument of empowerment, integrating them into the formal financial system with all its benefits and giving them ownership of their money.

The collected waste is transported to WildEntreprise recycling centres. Most of the processes, such as sorting at the recycling centre, are done manually; in the final step, the sorted waste is resold to local recycling processors. During our visit, three women were sitting in the hot sun sorting plastic bottles, a picture that contrasts starkly with technological advances in other parts of the world. In 2014, researchers at Ludwig Maximilians University in Munich developed a technique to automatically sort different types of plastics for recycling – around 1.4 tons of plastic per hour (Langhals et al., 2014).

© Joyce Treptow | WildLands: women sorting plastic bottles.

'Recycling for life' has brought dignity to waste-preneurs. Through the initiative, they have earned respect in their communities to clean up the streets – which is hard work – and exploit the associated economic opportunity. Waste-preneurs collect waste and monetize it!

We also visited a river restoration project at Wilgerfontein River, which was once a dumping site but is now celebrating its renaissance as a source of hope and income.

Mr Ntuli, the project manager onsite, was born there and glowed with pride and enthusiasm while talking about his project. He loves his "calling" and his team of "Enviro-Champs," a name that says it all: young people who have no jobs or income for one reason or another and have found a career in the river restoration team.

Are there better ways to sustain biodiversity in Africa than wealthy "trophy" hunters killing wildlife?

WILDTrust has also produced documentaries and global awareness campaigns on animal exploitation in the wild and in captivity. The award-winning documentary "Blood Lion" exposes the tragedy and exploitation of lions and other wild animals in South Africa. Images in this documentary feature film, including the physical and emotional mistreatment of lions, are sad and disturbing. It is terrible to see how greedy and cruel humanity can be! As I grew up in the Kenyan savannah, wildlife is very close to my heart. I admire WILDTrust's courage to create global awareness around exploitative wildlife interactive tourism practices. A selfie with that lion cub is not cute. No, it is torture for the cub. The cubs are separated from their mothers after birth and are tamed; that is not fun, not cool, just cruel!

The preservation of nature, biodiversity and ecosystems is not a luxury – it is essential for life

At the end of the trip, we visited iSimangaliso Wetland Park in St Lucia, South Africa's first world heritage site. At iSimangaliso, WILDTrust's initiatives combine forest and aquatic restoration with community development. For example, community members are trained to be tour guides or park managers, creating a sense of ownership and responsibility for the wildlife and the environment. As a result, animals such as elephants, Kudus, cheetahs and lions have been reintroduced through the combined efforts of WILDTrust, partner organizations and governments, and most important of all, the involvement of local communities.

WILDTrust sets an example for all those NGOs with grassroots solutions that seek to make a real and impactful change in their communities. We often read and hear the critique that the United Nations Sustainable Development Goals are too ambitious to accomplish. I agree they are; however, I believe we can meet these global challenges by combining our efforts on domestic, regional and global levels. We need more organizations like WILDTrust to serve as partners, multipliers and catalysts. WILDTrust is transforming South Africa with 'homegrown' solutions and innovations that are practical, cost-effective, and replicable. WILDTrust equips poor people with a voice and a choice – two assets that help them achieve success today, tomorrow and the day after while preserving the envi-

»I applaud this inclusive approach towards a more hopeful future. It is now or never, for there is no planet B.«

ronment. I applaud this inclusive approach towards a more hopeful future. It is now or never, for there is no planet B.

Disclaimer: The findings, interpretations and conclusions expressed here are those of the author.

The author gratefully acknowledges funding and support from the Volkswagen Foundation and the Center for Development Research (ZEF) of the University of Bonn and all the partners[61]. You can find further impressions and information on the summer school at https://socialenviropreneur.wordpress.com/

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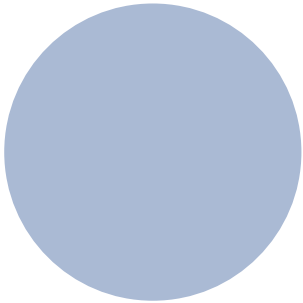
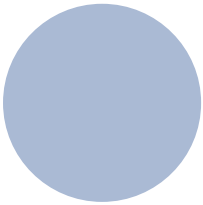

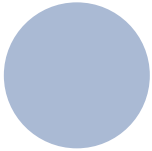

AUTHOR

Ken Fullerton
2017 Young Global Changer & Senior Consultant, ARTD Consultants (Sydney, Australia)
Social Media: LinkedIn: https://linkedin.com/in/kenneth-fullerton-01a2a4b8/
Twitter: @KenFullerton
Keywords: World positive coffee; sustainability; Australia; Uganda; climate change

AUTHOR

Brianna Kerr
2019 Young Global Changer & Co-Founder & Head of Impact, Kua
Social Media: https://linkedin.com/in/brianna-kerr/
Twitter: @kuacoffeeau: #worldpositivecoffee – #worldpositivebusiness
Keywords: World positive coffee; sustainability; Australia; Uganda; climate change

How can a cup of coffee change the world?

Why consumers should give more thought to the food and drinks they consume

According to the International Coffee Organization (ICO)[62], around 1.4 billion cups of coffee are enjoyed every day around the world. That's certainly a lot of coffee, and while many people love the taste and even struggle to start their day without a warm cuppa, not many stop to think where their coffee has been sourced and how sustainable these supply chains are.

Brianna Kerr[63], a Young Global Changer[64] from 2019, and her colleagues are working to change this. Together, they are involved in running Kua[65], a social enterprise that sources coffee from smallholder farmers in Uganda to market and sell to households, businesses and workplaces across Australia. Already, they are achieving impressive results, having sold two tons of coffee

»Reimagining how our linear economy works is necessary because we live in a world with finite resources and those finite resources which are being consumed are contributing to climate change.«

»Nothing for them, without them!«

in 2020. They are currently on track to sell ten tons in 2021 despite the impacts of the COVID-19 pandemic.

What makes Kua coffee different?

Since economy and society are embedded in the natural environment, there is an inseparable connection between environmental sustainability[66] and human well-being. Awareness of environmental problems and the effects of our daily consumption of products such as coffee is an important requirement for the recoupling[67] of economic and social progress. "Reimiginaing how our linear economy works is necessary because we live in a world with finite resources and those finite resources which are being consumed are contributing to climate change," says Brianna, co-founder and Head of Impact at Kua.

So what makes the Kua coffee brand and business different to other coffee brands and providers? To begin with, Kua coffee has a strong circular economy focus across all aspects of its operations. Brianna and her team's focus is on improving the well-being of all those who touch their coffee, including growers, drinkers and their team; promoting the circular economy for all material inputs and resources starting with their coffee and packaging; and fighting for climate justice, both in Australia and Uganda.

"The concept of Kua is pretty simple" says Brianna. "We do world-positive coffee to make businesses and individuals think a little differently about where their products come from and where they end up. Whilst most companies have footprints, we're striving to leave a handprint: a net-positive impact on society and the environment."

The challenges of COVID-19

While it can be difficult to grow a new business at the best of times, the COVID-19 pandemic has brought about its own unique set of challenges. Government-enforced lockdown restrictions have forced millions of people across Greater Sydney and New South Wales to work from home, which has greatly impacted Kua's ability to provide "world-positive coffee" directly to businesses and workplaces. As a result, says Brianna, the Kua team themselves did "experience a period of hibernation" which forced them "to think a bit differently about how we can still get world-positive coffee to consumers."

Their solution has been to develop "working from home coffee packs" made from 100% compostable packaging. The packs are low-impact, as consumers can dispose of them in their compost bins or local council food organics and garden organics (FOGO) waste collection services.

Recently, Kua become a certified carbon positive organization after undertaking a "thorough product footprint assessment with Shine at MIT in the United States and offsetting our footprint of 200% with the Trees for Global Benefit program in Uganda, in the community where we source coffee."

A new 'business as usual'

While the loss of human lives as a result of COVID has been tragic, the pandemic has forced both business owners and managers to consider the way in which they work, how they attract and retain staff and their

© Kua | Women sorting dried coffee beans in Uganda.

impacts on the environment.

"What COVID has done for a lot of businesses is shake up how they think about the workplace but also their values. It made them ask the question 'what does this new world look like?' A lot of businesses started to think more seriously about their obligations in relation to climate change, social procurement [and] sustainable supply chains. What we found is that many businesses in Australia were coming back to work with an appetite for change."

Tendering processes for business supply contracts are adapting too and many have circular economy and sustainability focus areas that any successful tenderer must adhere to and promote. Examples of questions businesses are increasingly having to consider and respond to, which Brianna and her colleagues are noticing, include: "So what differentiates you? What do you do in relation to sustainability? What do you do in relation to the Sustainable Development Goals (SDGs)? Do you have a Modern Slavery Statement?

Brianna acknowledges that Kua is in a strong position to respond to such criteria, and now that they are more well-known and "have a track history" are increasingly being seen as an attractive organization to work and partner with. Recent feedback from PwC, a global accountancy and new partner of Kua, testifies to this. Feedback Brianna has received suggests they are excited to work together, support a small social business and help grow the circular economy.

»Think and problem solve like a business but lead with the heart of an impact organization. «

Their positive impact

Brianna and her team's positive impact has been considerable. To date, almost 350,000 coffees have been enjoyed in workplaces and households across Australia, and over six tons of coffee grounds have been diverted from landfill and repurposed in community gardens. It's estimated that every kilogram of repurposed coffee grounds eliminates 0.6 kilograms of carbon dioxide emissions, equivalent to preventing-more than 3.6 tons of carbon dioxide (CO_2) emissions.

Kua also helps to connect the dots between smallholder farmers in Uganda and consumers in Australia through powerful storytelling and the use of innovative virtual reality technology. As Brianna explains, "In conjunction with some incredible experts at the University of New South Wales in Sydney, we were able to create an immersive virtual reality experience to help take people to Uganda. Our customers put on the headset and are transported to the coffee plantations on the misty slopes of Mt Elgon. It's pretty amazing to watch their reactions – it really does help close the producing-consuming gap."

Circular profits

Not only does Kua promote positive circular economy activities through its work and partnerships but also through the profits it generates. 100% of Kua's pofits are invested in community-led resilience projects delivered by partner organization ECOTRUST[68]. The reason that this is important to Kua, is that "by 2050, 50% of the worlds coffee growing regions are going to be wiped out by climate change, a devastating statistic when you consider that 125 million people rely on coffee for their livelihoods," she says. "Organizations need to not only think about the 'here and now' of coffee but the future of coffee. Kua takes this responsibility very seriously through its reinvestment activities."

Their financial support is dedicated to farmers that undertake activities such as planting trees, digging contour trenches and planting Napier grass for slope stabilization to mitigate landslide risk. Kua also supports the Trees for Global Benefits program[69] to sequester carbon from the atmosphere, which provides Ugandan smallholder farmers with an alternative source of income and thus promotes their engagement in environmentally friendly practices like agro-foresty, integrated soil and water conservation, land contouring and terracing and afforestation.

In 2020 alone, Kua's financial support benefitted a total of 135 farmers implementing soil and water conservation activities on at least 26 hectares with 10,000 meters of Napier grass along contours and terraces on Mount Elgon, located on the border of eastern Uganda and western Kenya.

Some words of advice

Although Brianna professes to be "no expert," some advice that she offers concerning sustainable development and human

© Kua | Two coffee farmers Kua is working with in Uganda.

rights is "nothing for them, without them!" Essential in achieving change, she believes is the need to "collaborate, listen and co-design solutions with those that are at the centre of your work. Check yourself constantly and be cognizant of the ways that your biases and experiences can influence your work and others."

Another challenge is to "think about the entire system when designing solutions for part of the system. That's sustainability." Consider Kua, or other social enterprises, and how they work at the nexus of social and environmental change, acknowledging that one doesn't come without the other – a systems approach to change.

Innovative thinking is also required. "Think and problem solve like a business but lead with the heart of an impact organization. These two worlds are best when combined, not separated", she says. Strive to "connect the dots between where your products come from and where they end up" and "test new business models to help respond to the changing needs of people around the world."

»Courageous leadership, innovation and synergy to overcome these challenges.«

© Kua | Brianna and Darcy in the community garden in Sydney working with composted soil.

A call to action

As a Young Global Changer, Brianna recognizes the responsibilities this entails. Both as an individual and as social business entrepreneur, she is passionate to learn more about "how you can generate change at a local level."

Reflecting on her experiences, she proudly states, "What I love about platforms like the Global Solutions Initiative is that there are people who are doing interesting stuff all over the world and there is so much to learn from knowledge exchange and what other people's experiences are [in relation to development]. While these challenges look very different in every location, and contextualizing and localizing these is very important, there is much to learn from how other people are doing these things."

She encourages others to think about how they can contribute, no matter how big or small, as we continue to live in a world striving to overcome many complex, multi-dimensional challenges, including "modern slavery, digital security, extremism [and] the increasing wealth gap." What is needed is "courageous leadership, innovation and synergy to overcome these challenges", says Brianna. "We need to come together now more than ever or we'll fall apart!"

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AUTHOR

Dea Wehrli
2019 Young Global Changer & Co-Founder of E[co]work; Research Associate at Empa (Switzerland)
Social Media: LinkedIn: https://linkedin.com/in/dea-andrea-wehrli-344b30a5/
Keywords: Waste; inclusive; informal sector; circular economy

AUTHOR

Dr Deepali Khetriwal
Co-Founder of E[co]work; Director of Sofies Sustainability Leaders Pvt Ltd, Bangalore (India)
Social Media: www.ecowork.international
LinkedIn: https://linkedin.com/company/31028850/
Keywords: Waste; inclusive; informal sector; circular economy

AUTHOR

Michael Gasser
Co-Founder of E[co]work
Social Media: www.ecowork.international
LinkedIn: https://linkedin.com/company/31028850/
Keywords: Waste; inclusive; informal sector; circular economy

© E[co]work | Two women sorting small parts of electrical scrap in Delhi.

E[co]work: An inclusive circular economy

A solution for the legal, physical and digital inclusion of the informal sector

Background

Based in densely populated residential areas, the current practices for recycling electronic waste (e-waste) are polluting the environment and the surrounding neighborhoods. E-waste is one of the fastest-growing waste streams worldwide[70, 71, 72]. In the example of India, but similarly in many other countries, 90% of the e-waste is processed by marginalized, informal sector workers, typically under unsafe and environmentally polluting conditions with severe health and environmental implications, the loss of valuable resources such as precious metals and the inadequate processing of plastics[73, 74, 75]. There is a worldwide consensus that the integration of the informal sector into the official waste management system is a key requirement to improve its operation[76] and to avoid pollution and health hazards to environment and people. Also, governments are increasingly seeing the need for legislation and controlling systems, as can be seen by the drastic increase in regulations.

However, implementation on the ground lacks the transformative bridge for people in the currently established informal sector who live and depend on the small margins they get from collecting, aggregating and dismantling e-waste. The pressure on the sector is growing, but the restrictive rules and costly and difficult authorization procedures are forcing the micro-entrepreneurs to stay informal and continue unsound recycling practices. Moreover, the COVID lockdown has severely impacted the business. However, it has also highlighted the

© E[co]work | Two women in Delhi stripping electric cables of their isolation.

© E[co]work | Visual of the working station in the co-working space E[co]work is currently planning.

importance of health as well as the need to move to industrial areas, where businesses were allowed to start operations earlier. Thus, there is an urgent need for a solution to formalize the sector in order to secure jobs and livelihoods. This is where our solution comes in: the E[co] work Space. E[co]work uses the basic concept of co-working spaces, well known to freelancers and desktop workers, and adapts it to meet the needs of micro-entrepreneurs in the waste sector while also integratingsafety, health, environmental and legal requirements. E[co]work combines a legal work environment, services for formalization and training to ensure higher productivity in an infrastructure-as-a-service model. It creates an interface to formal downstream markets by integrating a digital market and traceability software. The concept is not only tailored to micro-entrepreneurs but also by itsusers through a participatory design and implementation approach. With this, we aim to create a worldwide replicable business solution for the transition and integration of informal micro-entrepreneurs with the formal sector. A first E[co]work Space is currently in development in Delhi, India.

»We aim to create a worldwide replicable business solution for the transition and integration of informal micro-entrepreneurs.«

A visionary solution

The E[co]work project is designed as an inclusive solution for informal micro-entrepreneurs with the aim of enabling their integration with the formal sector. E[co]

»A tangible solution to secure livelihoods through green jobs, provide business support to entrepreneurs and avoid environmental hazards of improper waste disposal.«

work shall become a worldwide replicable solution for transforming currently predominant inefficient, unsound and mostly informal recycling practices into a safe, sound and socially equitable circular economy. It focuses on the physical and digital inclusion of the urban poor by offering a safe and affordable work environment and business support services to e-waste micro-entrepreneurs. Furthermore, it brings dignity, prosperity and safety to the informal recycling community while ensuring effective and safe material processing. It provides a tangible solution to secure livelihoods through green jobs, business support to entrepreneurs and it avoids the environmental hazards of improper waste disposal.

As an incubator, it generates new formal businesses and bridges the gap between producers/PROs and the informal sector. Most important the replicable and scalable concept helps divert hazardous waste treatment away from peoples' backyards and ensures the environmentally sound management of end-of-life electronics. This not only helps reduce adverse impacts of emissions to air, water and soil, but also facilitates a circular economy by better integration of material into the product value chain.

With E[co]work we aim for 3 main goals:

Goal 1: Proof of the E[co]work business concept as an inclusive business solution

The objective of the E[co]work project is to provide an example of a functioning business model of an E[co]work Space that can be replicated in India as well as other countries. The pilot shall provide proof of the merits and validate the concept and services as a solution for the integration of the informal sector using an incentive-based and socially inclusive approach. If expectations are met, the concept shall be disseminated to other cities and countries and could even be adapted to other waste streams.

Goal 2: Successful integration of informal micro-entrepreneurs in the formal value chain

Waste is a resource for inclusive development. Micro-entrepreneurs have been active in the recycling sector for a long time and thus they have a lot of valuable experience and knowledge to contribute to a sustainable recycling ecosystem. Their integration in a circular economy ensures that livelihoods of the urban poor can be

»Waste is a resource for inclusive development.«

safeguarded and improved, counters the common negative view the informal sector is faced with and improves the recovery of raw materials in the Global South.

Goal 3: Better e-waste management and improved work conditions

Through the provision of a safe and healthy work environment, e.g., proper working tables, good lighting and ventilation, the working conditions and environment shall be improved, leading to better health conditions and the prevention of injuries. Better e-waste management shall be further enhanced through a set of different business support services, trainings, safe disposal of hazardous fractions, enhanced traceability of e-waste and creation of new market access and incentives through digital opportunities.

E[co]work is not only an innovative project, it's a business solution looking at the informal sector as a customer for whom we need to provide services and tailor-made design. This is also why we have applied a participatory design process, and hence from the start, the project has been designed not only for but with its target users. The E[co]work solution combined with such an inclusive project design approach has to our knowledge never been tried before. It provides immense potential for improving the livelihoods and health of millions of people, reducing environmental burdens, contributing to a circular economy and the achievements of the SDGs.

Participatory design approach

The process of adapting the model of coworking spaces to the unconventional target user of micro-entrepreneurs in the waste sector was conducted through a participatory, human-centered design approach. The approach was applied for two key reasons: one to understand and deep dive into the needs and the challenges that the micro-entrepreneurs face. And second, to co-create the E[co]work Space with the end-users to reach maximum impact. The methods applied included a number of trust-building and participatory activities such as a design workshop, group discussions and visualizations. The participatory process was valuable to understand current networks and interdependencies within the informal sector and helped to crystallize key risks for a successful implementation.

»The project has been designed not only for but with its target users.«

Among others, findings revealed that services considered as most important address mainly market, legal and business opportunities, while key concerns evolve mostly around the economics of the space and logistics. It showed that the E[co]work concept has merit, as there is an extensive overlap between the micro-entrepreneurs' needs and legal requirements. The process was accompanied by a series of unexpected events like political riots and COVID-19, which contributed to project delays. This led to impatience and to weakened willingness to participate. Adherence to the project time plan and better expectation management could have prevented this. However, the highly flexible work culture of the informal sector makes a strict time

© E[co]work | The E[co]work team talks to micro-entrepreneurs in an actual warehouse space.

plan challenging. To conclude, while the use of a participatory process can provide key information and insights for a successful project implementation, special caution is advised regarding time management and stakeholder expectations. More details regarding the participatory design approach can be found in the market baseline study and user insight report.

Further research and next steps

With the insights gained from the previous work, we are now pulling our efforts and strengths together to create the first-ever E[co]work Space in Delhi. With this pilot, we aim to answer following main research questions:

- Does the E[co]work concept work as an inclusive solution and bridge between the formal and informal sector? Can it integrate the informal sector into the formal value chain?
- What changes does E[co]work induce concerning the circular economy, environmental pollution, health and safety for the local community?
- What will the economic impacts be for a dismantler and his/her family?
- What technology and business services will prove useful to adapt and provide at E[co]work?
- Can E[co]work survive as independent business model? What are the limitations, challenges and risks?
- What framework conditions are needed and what considerations need to be made for a successful implementation and potential replication?

© E[co]work | Visiting a warehouse with micro-entrepreneurs; in the warehoouse the co-working space could be established.

Partners and organizational structure

The E[co]work project builds on many years of experience in the e-waste sector by the partners and team members. Two of the co-founders are associated with the partner and co-host Empa, the leading Swiss competence centre on e-waste and secondary material recovery research. Empa has been leading the Swiss development cooperation engagement on e-waste in developing countries for more than 15 years. Specifically, this means access to knowledge and experience for capacity building, e. g. how to dismantle e-waste in an environmentally sound manner, how to go from worst to good practices in metal recovery, metal composition of e-waste, health risks, etc.

Co-Founder Dr. Deepali Sinha Khetriwal is heading the partner organization Sofies India and has profound knowledge and many years of experience in the e-waste sector in India and internationally. Employed by Sofies and working on the E[co] work project, Ibrahim Mansoori brings in specific knowledge of the local conditions and the very important trust and connection to the informal e-waste sector in Delhi, having several family relatives working there.

To allow for the implementation and operation of the pilot space, the E[co]work Association, based in Switzerland, along with a private limited company in India, were founded. This structure ensures the equal involvement and shared responsibility in the implementation of E[co]work. The foundation of the legal entities also ensures the continuation of the project and is proof of the high commitment and interest of the

founders for the long-term vision of a safe, inclusive and healthy e-waste management system. In the future, the E[co]work Association shall act as the umbrella organization to disseminate the model and support the local and international organizations in its replication and adaptation.

Team

As individual team members, we combine extensive experience in project implementation in similar emerging economies in the waste sector, leadership and start-up experience. Our strong commitment to work for an improved and sustainable resource management and to support the acceleration of the circular economy in a safe and healthy manner are reflected in several pioneer projects. This includes among others the successful start-up of a zero-waste store in Switzerland and developing the capacity building activities of the StEP Initiative, a UN-supported forum on the e-waste problem. Together we are an energetic and highly motivated team with an immense and broad knowledge reservoir, capable of enabling change for a safe, healthy and socially inclusive resource management.

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AUTHOR

Anaswara Kovithal
2020/21 Young Global Changer & Masters in Public Policy candidate, Hertie School
Keywords: Value chain development; decentralizing development; social cohesion; local economic development; Social and Solidarity Economic Model (SSE)

AUTHOR

Ji Yoon Han
YGC Extended Circle Member & Masters in Public Policy candidate, Hertie School
Keywords: Value chain development; decentralizing development; social cohesion; local economic development; Social and Solidarity Economic Model (SSE)

AUTHOR

Renan Mahalhães
YGC Extended Circle Member & Masters in Public Policy candidate, Hertie School
Keywords: Value chain development; decentralizing development; social cohesion; local economic development; Social and Solidarity Economic Model (SSE)

Localization for an inclusive growth:

A Social and Solidarity Economic (SSE) approach – A Policy Brief

Abstract
In times of global uncertainty, not only the loopholes in global health have been exposed but also the fragility of global economic conditions. To examine the requirements for stimulating inclusive growth and social cohesion, this brief draws on the concept of Social and Solidarity Economy (SSE). It intends to discuss what can be the role of G20 in the localization of economic development while proposing three guiding principles to empower subnational governments and build resilience: 1) build up secure, competitive digital infrastructure, 2) create conditions to foster local economic development, and 3) decentralize decision-making and bring local actors to the international table.

Challenges
Sustainable Development Goal 8 calls for sustained, inclusive, and sustainable economic growth.[77] Currently, as nations are grappling with how to best stimulate and invest in their economies, they need to create a new, more inclusive normal, where more voices have a seat at the table. This needs to start with more support for small and medium-sized enterprises (SMEs). The OECD estimates that the share of microenterprises in sectors most affected by economic fallout from COVID-19 is 60%, whereas the share of SMEs and microenterprises in total employment in the business economy is 45% and 55%, respectively.[78] The policies needed to revive these industries require a model that centers on these microenterprises.

The Social and Solidarity Economy (SSE) is an umbrella concept that amalgamates economic, social, environmental, political, communitarian, and holistic dimensions. It is seen as a citizen-led alternative to mere profit-oriented growth. The SSE has defin-

ing characteristics of community-centeredness, democratic self-management, and solidarity within and beyond organizations and enterprises. We examine how local governments and cities can be drivers of this model through three key areas:

1. Reduce Infrastructure Gaps in Rural Regions
2. Local Economic Development
3. Local Democracy and Decentralization

The role of the G20 in implementing the SSE is to recognize its historical difficulties with democratic participation and openness in its workflows, and utilize the immense potential in the subnational counterparts. The G20 is host to approximately 64% of the world's population, therefore it has substantive power to set the standards for a new normal. The G20 must act as an example, being the first to institute these recommendations. Additionally, it must engage in knowledge- and resource-sharing with emerging economies and developing countries to ensure that the world economy is resilient and in sync.

»The G20 is host to approximately 64% of the world's population, therefore it has substantive power to set the standards for a new normal.«

Proposal 1: Reduce infrastructure and human capital gaps in rural regions

Regional inequities are becoming aggravated as the world becomes more reliant on digital intensive businesses as key drivers of economic growth and development. Rural regions tend to be less digitally connected on average, even in advanced economies.[79] While many G20 countries boast almost universal access to the internet, there are discrepancies in both access and quality of infrastructure across a number of demographics, preventing truly inclusive economic growth. The OECD found that there is a substantial discrepancy between cities and rural regions on both access and quality dimensions, with 56% of rural households having access to higher quality fixed broadband connectivity, compared to 85% of urban households.[80]

This impedes rural inhabitants' ability to access education, public services, and communication services, making it difficult for rural regions to develop human capital that will empower them in building the SSE. The rural-urban gap exacerbates existing inequality gaps between gender, income, and other vulnerable members of society. If G20 members do not work to reduce the digital divide, a substantial proportion of its workforce may not be able to participate in the digital economy, constraining labor productivity. This in turn will result in lagging economic growth, a steep increase of social security costs, and political unrest as people are left behind by a transformed economy.

There are several measures the G20 could take to address regional inequities. The first is that G20 members must prioritize the development of digital infrastructure in rural regions by making rural coverage a condition of spectrum auctions.[81]

The second measure the G20 can take is to promote private-public partnerships at the local governance level to encourage more affordable connectivity. Co-investments with private companies can help mitigate the costs for the government.[82] Overall, this will result in increased connectivity, leading to inclusive, sustainable and sustained economic growth as they empower and include rural and remote regions.

Proposal 2: Foster local economic development

G20 Riyadh Declaration recognizes the role of MSMEs in economic recovery and emphasizes on their integration into global value chains through streamlining compliance criteria and accelerating digital inclusion.[83] However, the capacities and the constraints of an informal labor market of 2 billion people still remains unaddressed. To align with the principle of SDG 2030 of "leaving no one behind," the localization of growth is extremely important. With weakening traditional sources of work and the expansion of an informal contract economy, bottom-up interventions responding to local needs emerge as key strategies to create decent jobs where they are most needed. Hence, we need the concept of Local Economic Development (LED). The LED approach goes beyond traditional growth indicators and can be defined as a territorial approach to a participatory development process. Through partnerships between people, private and the public stakeholders, the process enables the joint design and implementation of a common development strategy.[84] LED incorporates tailored cultural, social, local and territorial dimensions, an approach normally ignored in traditional analysis. We explore LED through three components: Local Value chain development, access to financing, and integration into global value chains.

Local value chain development

Multilateral and national development strategies tend to be top-down, involving large-scale industrial projects or infrastructure investments. Local economic development strategy is based on a bottom-up, flexible, community-based approach. SMEs play a major role in most economies, particularly in developing countries where they account for more than 70% of business and 40% of GDP[85]. Hence, we focus on transitioning the informal economy and incorporating them formally into the local value chain. A Value Chain Development (VCD) approach would involve creating institutions and programs targeting tailored production, consumption,

»A value chain development not only enables the utilization of local comparative advantages but also addresses social exclusion through the inclusion of actors traditionally ignored or neglected by national governments.«

market structures, and information. Since these chains are tailored to the community, they not only enable the utilization of local comparative advantages but also address social exclusion through the inclusion of actors traditionally ignored or neglected by national governments.

The VCD approach can be implemented through community development models, co-operative societies, micro-institutions, self-help groups, and home-based value chains. These are some examples of clustering that will enable small and medium-sized enterprises to enjoy efficiency and flexibility gains from economies of scale that usually benefit only large companies. The low capital requirements needed for forming certain types of cooperatives can be beneficial for informal workers seeking to engage in enterprise activities. The *"Kudumbashree"* state-run model for poverty alleviation in the South Indian state of Kerala bases itself on strong local value chains at the household and community level.[86] By forming household and local women-led democratically run micro institutions, the program has convinced 4 million women who are at home to utilize their skills in traditional labors and become active participants in the value chain.

Access to finances: Innovative and blended financing models

At its core, local governments can promote microfinance models and credit societies at neighborhood levels, which are the optimal financial instruments for addressing both domestic supply and demand. This has been a policy instrument successfully used in Senegal, Kenya and Bangladesh. Other tools that the G20 can make accessible to local governments are tax incentives, private capital investment and alternative ways of financing through joint ventures, leases and municipal bonds. At a multilateral level, the United Nations Capital Development Fund (UNCDF) has reduced the risk and mitigation capabilities of local governments through direct local financing tools of the Local Development Fund.[87] The direct local financing method should be combined with existing G20 mechanisms created in the past like the Global Infrastructure Hub (GIH) to lower barriers to investment, increase the availability of investment-ready projects and match potential investors.[88]

Integration into global value chains

Increasing SME capabilities to participate in global value chains directly has been the cornerstone of B20 declarations in Antalya. The digital economy could foster direct involvement in international trade via internet-based platforms. G20 members should also commit to reducing trade costs and encouraging all WTO members to fully implement the Trade Facilitation Agreement, which has the potential to reduce global trade costs.[89] There should also be a key focus on reinvigorating U20 platforms to scale up impacts of such value chain initiatives globally and enable them in technological and innovative capacity through accelerators, grants or other supportive tax policies.

Proposal 3: Decentralize the decision-making process

So that proposals such as those presented here can take place, local governments must have a higher degree of involvement in the decision-making process. To create a framework for the systematic empowerment of regional and local governments and

increased city-to-city cooperation, the G20 must:

Integrate local governments into national decision-making bodies

Local authorities play a key role in executing the international agenda, although they are locked out of decision-making processes that directly impact them. States must empower their local counterparts to participate in these processes, build consensus, minimize disputes over institutional frameworks, and incorporate the SDG agenda into local development plans. Bottom-up approaches must be valued over policies created only by national governments, which are unaware of local needs and priorities.[90] The achievement of inclusive sustainable development will depend on the coordination between national and local authorities, as well as the political and financial support provided to the latter so they can develop and execute the necessary policies.

The G20 must work towards including local government actors in national decision-making bodies and councils, giving visibility and legitimacy to local actors as leaders in national and international dialogue. Additionally, local authorities must be empowered with financial resources and more decision-making power to execute policies.

Increase resources and support for city-to-city networks (C40, U20)

City-to-city networks such as the C40 and the U20 are examples where local authorities act not only in the local implementation of development strategies, but also in the setting of global development objectives. It is a great example of incorporating communities in bottom-up, participatory processes. This allows cities to engage with diverse partners in creating more sustainable economies, receiving technical, political, social and economic support. It also allows cities to benefit from experiences developed in similar contexts so that they can then adapt to the local reality. By learning from other countries, cities become more motivated to develop their own solutions and share them.[91]

The G20 has the potential to be the protagonist in a globalization network based on cities and the solidarity between them. The G20 needs to act as a support channel and as a means of maximizing the logistical, technical, and financial resources for the establishment of these partnerships. It must allow local authorities to propose projects and enable them to tap into international funds, allowing technical cooperation between cities and international bodies.

Conclusion

The aftermath of COVID-19 has taught us how dissociated economic growth has been from social, political, and environmental prosperity. The new world order

»The G20 has the potential to be the protagonist in a globalization network based on cities and the solidarity between them.«

post-pandemic should balance economic success with social justice. If the values of solidarity, co-operation, and resilience have saved us in hours of crisis, they can indeed be drivers of a cohesive growth. Enabling an SSE approach through resilient and accessible infrastructure, localized economic frameworks, and decentralized institutions, the G20 can create traceability and accountability to the existing gaps in global governance. Along with the existing UN task force and European External Action Service, G20 can prioritize SSE principles by building on the existing Argentinian presidency agenda by mapping and auditing SSE practices. Urban 20 and United Cities and Local Governments have already created a platform within G20 frameworks to connect local, regional, metropolitan governments, and non-state actor voices across the world and share best practices. The G20 should also focus on reframing the narrative of monitoring growth to include dimensions of solidarity, agency, and prosperity. The SAGE Index dashboard could be a step in the right direction for governments to measure well-being beyond economic growth. This combined bottom-up inductive governance can be the future of multilateralism in a reluctantly globalized world.

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About The Young Global Changers

As described in this publication we are continuing to see a trend in most advanced and emerging economies where economic prosperity and growth is decoupling from social prosperity and environmental sustainability. The Global Solutions Initiative aims to address this trend by generating proposals to align economic and political activities with environmental sustainability and social prosperity – putting human needs and thriving societies at the center.

With the Young Global Changers program, the Global Solutions Initiative aims to identify young people who are involved in projects that embody this approach. The program draws specifically on young researchers, entrepreneurs, intrapreneurs, activists and organizers to find concrete examples, projects and initiatives of "recoupling in practice", to identify and learn from best practices but also to understand which organizational, structural and systemic factors foster recoupling and which stand in its way.

Since 2017, the Young Global Changers program has attracted over 350 students and young professionals from more than 110 different countries.

The overarching goal of the Young Global Changers program is not only to connect these inspiring young people from around the world during the Global Solutions Summer School and other workshops and events but to create an engaged global network of young individuals with innovative ideas and direct these towards social transformation and recoupling.

»Create an engaged global network of young individuals with innovative ideas.«

© GSI: Ruthe Zuntz | Young Global Changer takes notes during the Summer School 2019.

Imprint

YOUNG GLOBAL CHANGERS
VOLUME 01 – JANUARY 2022

Global Solutions Initiative Foundation gemeinnützige GmbH
President: Prof Dennis J. Snower, PhD
Secretary General: Dr Markus Engels
Managing Directors: Agnes Michalik, Susanne Staufer

www.global-solutions-initiative.org
contact@global-solutions-initiative.org

Editorial Team
Ole Spies (person responsible according to German Press Law, V.i.S.P.), Laura Herde, Rémy Weber

Layout
werk + satz., Gunnar Driesner

Editing
Ellen Thalman

Acknowledgement
This publication was made possible through the generous support of the Volkswagen Foundation.

About this publication

We need to fundamentally rethink our economic activities, towards a better alignment – a re-coupling – of our economic and political activities with social prosperity and environmental sustainability. To this end, the Young Global Changers program is bringing young voices into debates around global problem solving. The program draws specifically on young researchers, social entrepreneurs, intrapreneurs, activists and organizers from around the world to find concrete examples, projects and initiatives of "recoupling in practice".The authors argue for a better inclusion of youth and upcoming generations in decision-making processes, provide assessments and ideas on how to address pressing global issues and present concrete projects and initiatives that aim for more and better "recoupling". The contributions to this volume have been developed as part of, or in relation to, a series of summer schools held between 2019 and 2021.

About the Global Solutions Initiative

The Global Solutions Initiative is a global think tank network that develops policy recommendations for action on the most pressing issues of our time, as addressed by the G20, G7 and other global governance forums. The policy recommendations and strategic visions are developed through a disciplined research program by leading think tanks and science organizations and discussed and refined in policy dialogues among decision-makers from academia, politics, business, and civil society.

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