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H.E. António Guterres UN Secretary-General

Secretary-General's remarks to the High-Level Replenishment Conference for the Peacebuilding Fund, January 26, 2021 We need a renewed approach to multilateralism and international cooperation.

An approach that goes beyond crisis response and boosts longterm investments in prevention and peacebuilding, hand-in-hand with our efforts to deliver the Sustainable Developments Goals.

To secure a better future, we need to increase support to women and young people as agents for peace and stewards of inclusive development. Without their full participation, neither peace nor prosperity can be sustainable.

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Sustainability Between Justice and Urgency

We are experiencing the allgoes-with-everything crisis: climate change, pandemics, zoonoses, species extinction, shrinking resources, a widening gap between rich and poor, digitalization, disruptions in the economy, the rise of populists and autocrats, and so on.



Dr. Elmer Lenzen Publisher Global Goals Yearbook change the rules of the game in business. A tension between ecological modernization on the one hand, and structural ecologization on the other, is increasingly shaping the sustainability debate. In the process, they become the reason for dispute: Representatives of a modernization agenda tend to focus on reform from within and therefore call for technological innovations and market incentives. Representatives of an ecological turnaround, on the other hand, argue that the fight against climate change must

FRAMING THE DEBATE



More and more people are realizing that business as usual is no longer an option. We need change, and we need it as quickly and as sustainably as possible. UN Secretary-General António Guterres therefore is calling for a "Decade of action." Guterres, together with experts, politicians, and business leaders, knows that the 2020s are the make-or-break years for sustainable development.

Despite some successes in development and environmental politics, progress is far from sufficient to achieve real sustainable development. While we now know relatively well what needs to be done and changed in many areas, the changes are not progressing fast enough. Until now, economics have largely ignored planetary boundaries and most sustainability problems. At least this is changing: Key concepts such as "purpose," "growth," and "value" are being rethought and reassessed. This, in turn, will radically change the rules of the game in business. take precedence over everything else and call for disruptive sufficiency and degrowth solutions.

Our Common Future

At first glance, this is a typical discussion between different interest groups and their influence on current developments. At second glance, however, it is also a fundamental discussion about the question of who gets the sovereignty of interpretation over the shaping of our future. If the future belongs to our children, don't they also have to decide about it? This implies the reinterpretation of the concept of intergenerational justice.

The term is not entirely new, as it already appears in the most frequently quoted sustainability definition by the Brundtland Report Our Common Future from 1987: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

What is new, however, is the question of discourse sovereignty derived from this definition. The geographer, environmental, and urban researcher Sybille Bauriedl describes this very aptly: "For 50 years now, the urgency of securing the long-term basis of human existence - and human existence itself - has been pronounced. The study 'Limits to Growth' (Meadows 1972) was only one wake-up call of very many. The Fridays for Future movement brought the increasingly comprehensive crisis diagnoses back onto the public agenda, calling for the sustainability goals of intergenerational equity and global justice. Since then, more and more terms have entered the environmental debate that are used synonymously. The most discursively powerful terms are currently 'socio-ecological transformation,' 'degrowth,' 'green growth,' 'just transition,' and 'climate neutrality.' >>

What these terms have in common is that they invoke the positive utopia of a world with prosperity for more people without irreversible environmental degradation and consider a shift toward emissionminimized modes of production to be possible. However, the paths to the goal are very different: They include a new social contract, common good economics instead of capitalist appropriation, or decoupling economic growth from environmental consumption."

"We have to ask ourselves why we live too much in today and for today," German Chancellor Angela Merkel recently said. She recommended the Brundtland Report not only as a contract between generations, but also as a blueprint for a social contract and a goal of the state. Merkel believes that this broader view also provides a good justification for the current court decisions on climate issues.

Generational justice – from a factual concept to a controversial concept

Hans-Jürgen Urban and Christoph Ehlscheid presented an excellent essay on intergenerational justice in 2020, excerpts I quote below: "Intergenerational justice is a core vocabulary of the contemporary debate on the present and future of the welfare state. Terms such as 'generational solidarity' and 'generational war' provide a framework within which a variety of interpretations of generational relations operate.

"Welfare state discourses often speak of 'welfare state generations.' This refers to the 'exchange and interrelationship of age groups linked by flows of benefits and funding.' Accordingly, the employed from the middle generation finance the retirement income of the older generation in the form of pensions and annuities from their earned income through contributions and taxes.

"The concept of 'equity' is also ambiguous. The theories of philosophers John Rawls and Michael Walzer have been particularly influential. According to Rawls, the task of justice theory is to find 'principles of social justice' on which a society can agree Best known for this is his dictum of 'justice as fairness.' Constitutive of Rawls' concept of justice are two principles: According to the principle of liberty, everyone has an equal right to the same endowment of basic freedoms; and according to the principle of difference, economic and social inequalities are permissible only if they confer the greatest possible benefits on the least advantaged."

To whom do we owe solidarity?

Rawls is also one of the most important representatives of modern contract theory. The models of fair and intergenerational justice are based on a common idea of a social contract. This is understood as a concept to morally and institutionally legitimize statal systems. Every citizen automatically joins this contract by birth or naturalization. And therein lies a problem for some: "Why should we feel bound by a social contract that we have never actively signed? To whom do we owe solidarity in the first place?" asks economist Marcel Fratzscher provocatively in an interview in the weekly ZEIT, and he answers this himself: "We have noticed by now that we live in a global world. None of the major challenges today, neither the climate crisis nor the pandemics, can be solved nationally; they do not stop at borders. So we can't be indifferent to what people are doing in Asia, for example. Today, however, two-thirds of the world's population live there, almost 40 percent in China and India. Climate protection helps them, too; it helps even more the countries in Africa that are poorest, and in those countries, in turn, the very poorest. They're the

first to be hit by the droughts and the floods, so we owe them solidarity."

From the discourse of inequality to the discourse of generation

Back to Hans-Jürgen Urban and Christoph Ehlscheid: "The new capitalism is not only more unequal and individualistic than its predecessor. It is also in a systemic 'economic-ecological pincer crisis.' Capitalist economic growth has mutated from problem solver to problem driver. While it traditionally contributes to increasing prosperity and defusing social distribution conflicts, today it forces the unequal distribution of income and wealth and the overexploitation of nature. It promotes social division by increasing the wealth of the rich and at the same time pushing more and more people into precarious living conditions. And it takes up so much of nature's resources that its regenerative capacity is overtaxed. Therefore, traditional strategies to stimulate growth do not lead out of the crisis, but further into it.

"Instead of this, the idea of an inclusive concept of justice includes not only intergenerational money flows but also the distribution of other social goods in any generational balances in the sense of Michael Walzer, and combines the justice criteria of the respective spheres of distribution into an integrated distribution model with as few contradictions as possible:

- Securing the standard of living as a cross-generational promise of benefits
- ► Generationally fair use of nature

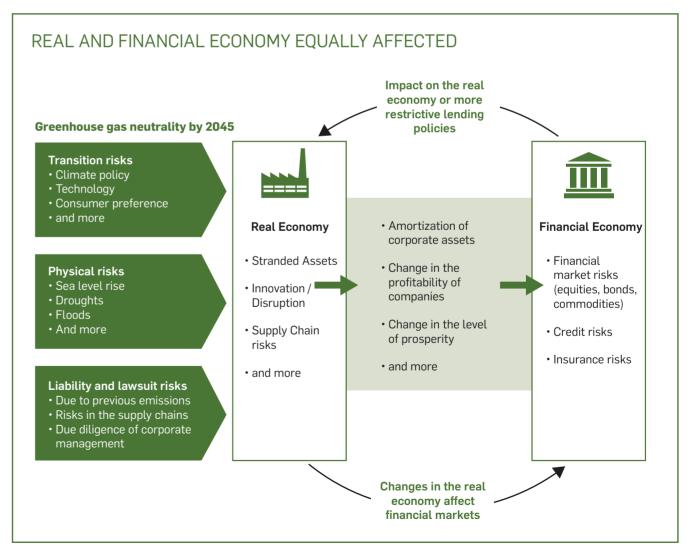
"The planetary limits of utilization at the same time mark the limits of material value creation and thus the framework within which intergenerational distribution processes must operate."

You can't do business in a broken world

Industry and trade have a decisive role to play in this process. They have the money, the know-how and the capacities to make sustainability more widespread. Doing so is not just a question of morality or purpose; it is also about profit and the realization that the source of prosperity could dry up. The following graphic shows the scope and risks using the current climate discussions as an example:

Embracing this means a real rethink in companies. "The business of business is business" said Nobel Prize winner and economics professor Milton Friedman. meaning that companies should focus on making money.

What is wrong with this sentence? It is simply too simplistic: The economy is part of society, which in turn is part of the planet. If we ruin that, then neither society nor the economy will function. So companies need to look at their impact



FRAMING THE DEBATE



on the environment and on society. >>

Source: Germanwatch



Linda Lacina of the World Economic Forum rightly says: "Putting the planet over profits isn't a 'nice-to-have' - it's a must have for businesses looking for long-term survival. Nearly half of GDP is dependent on nature. But while more and more leaders are embracing that simple principle of stakeholder capitalism, there's still more work to do and plenty of leaders talking about change and coming just short of taking action. No leader wants to be consciously disruptive, she says. They're parents and citizens, too. I think that they are often trapped in a paradigm which they can't get out of."

Katrin Muff is an internationally recognized thought leader on transformation and sustainability. She is the director of the Institute for Business Sustainability in Lucerne, and in a newspaper interview she complements Lacina's

forementioned thoughts: "Apparently, this is also convincing more and more people in the boardrooms. Recently, 180 CEOs of well-known US corporations such as Amazon and Walmart vowed in a Statement of Corporate Purpose to benefit their employees, society, and the environment in the future – instead of just their shareholders. Is the economy just becoming green and good?

"In companies that set out in this way, four things change. First, the internal culture, which is reflected not only in new criteria for promotion, but also in concrete corporate goals. Climate goals, for example, must be verifiable. If a company promises to become climate neutral by 2050 but has no short-term implementation plans, nothing happens. Secondly, something like this can only be achieved together with others. And to do that, a company has to see itself as part of society instead of just focusing on itself. It's about more.

"Thirdly, we need a supervisory board that is fit for the future. The same type of person should not always sit on it; more diverse supervisory boards bring strategic corporate issues more strongly to the table. At a supervisory board meeting, questions are no longer only asked about return on sales and risk minimization, but also about new business areas that help improve society or solve environmental problems. This is the fourth point: How does all this show up in new services and products?"

Metrics can create momentum for stakeholder capitalism

Setting clear metrics for management that align with company purpose is an important step for boards. "Business leaders are increasingly implementing business models that create value based on stakeholder needs," says Klaus Schwab, Founder and Executive Chairman of the World Economic Forum. "While there's increasing momentum towards stakeholder capitalism, many businesses are also looking for practical solutions to help them fully understand and address the concerns of all their stakeholders."

A new white paper, "The Future of the Corporation: Moving from Balance Sheet to Value Sheet," provides analysis about the important role boardrooms and corporate governance play in addressing the environmental, social, and governance (ESG) challenges their companies face. This includes leadership-level actions, such as aligning company purpose and incentives with transparent goals and KPIs, increasing board diversity, and adopting the common stakeholder capitalism metrics to measure and manage global risks and opportunities related to business, society, and the planet.

Note: The text passages by Urban and Ehlscheid were published under the Creative Commons license "CC BY-NC-ND 3.0 DE -Attribution - Non-Commercial - No Derivative Works 3.0 Germany." Authors: Hans-Jürgen Urban, Christoph Ehlscheid for Aus Politik und Zeitgeschichte/bpb.de

THE MAKE-OR-BREAK DECADE HAS BEGUN

In our current issue of the Global Goals Yearbook, we examine the called-for Decade of Action on three levels:

1. Framing the debate

In this section, we trace how the sustainability debate has evolved from an inequality discourse to an equity discourse. Such models of justice need rules and policy prescriptions. We therefore report on the Green New Deals in Europe and the United States and the introduction of metrics, reporting standards, and the expanded concept of materiality. Common to all aspects is the attempt to translate the broad field of sustainability into numbers. After all, numbers are considered facts, they can be checked, and that is how judgments can be made. In the second part, we look at the question of concrete implementation in operational management processes and internal control systems.

2. Zooming in

The pandemic has revealed the vulnerability of the interconnected world: Building up the economy in the form it was before the pandemic is no option. The economic recovery plans offer a true chance for sustainable transformation in the sense of the UN development goals. We have defined the eight transformation areas that we will explore more actively. All best practices will be assigned to these topics. In this edition we will cover the aspects of sustainable purpose, "leave no one behind," the circular economy, net-zero strategies, and sustainable cities.

3. Looking around

We will only solve global challenges together. This requires a solidary and cooperative world community. The concept of "rule of law" is therefore regarded as a guiding principle in international politics. It finds its concrete expression in multilateralism. In this Yearbook, we shed light on the origins and development of this concept. Although multilateralism has suffered considerably recently - not only, but also because of ex-President Trump. EU Commissioner Joseph Borrell therefore explores the question of how to revive multilateralism in a multipolar world. Finally, Stefan Brunnhuber of the Club of Rome looks at the tensions between democracies and autocracies and their ability to find solutions to Agenda 2030.



The Green New Deals: **Europe and the United States** in Comparison

Ionathan Fordvce the SustainAbility Institute by ERM

The American Green New Deal

The Green New Deal resolution was delivered by Democrats Alexandria Ocasio-Cortez and Edward J. Markey on February 5, 2019, under the title "Recognizing the duty of the government to create a Green New Deal." The resolution was non-binding, meaning that even if Congress approved it, nothing would materialize into law. On March 26, 2019, the resolution was denied in a 57-0 vote with many criticisms focusing on the ability to fund the deal and the potential for increased taxes and the deal's subsequent impacts on the economy.

Since this development, and differing from the Green New Deal, US President Joe Biden revealed a \$2.3 trillion infrastructure plan to address climate change. The plan includes \$174 billion to boost the electric vehicle market and \$100 billion to update the country's electric grid and make it more resilient to climate disasters.

The key focus areas of the Green New Deal were around decarbonizing the economy through the phasing out of fossil fuels and transitioning to 100 percent renewable energy. The resolution also aimed to fix societal issues such as economic inequality, poverty, and racial injustice. Some of the key takeaways from the resolution were:

• Achieve net-zero emissions through a fair and just transition

In response to growing concerns about climate. biodiversity loss, pollution, and growing inequality, government bodies in Europe and the United States have proposed (and in some cases – adopted) "Green New Deals." The aim of these deals is to decarbonize and keep the climate crisis to a minimum while creating employment and ensuring a just transition.



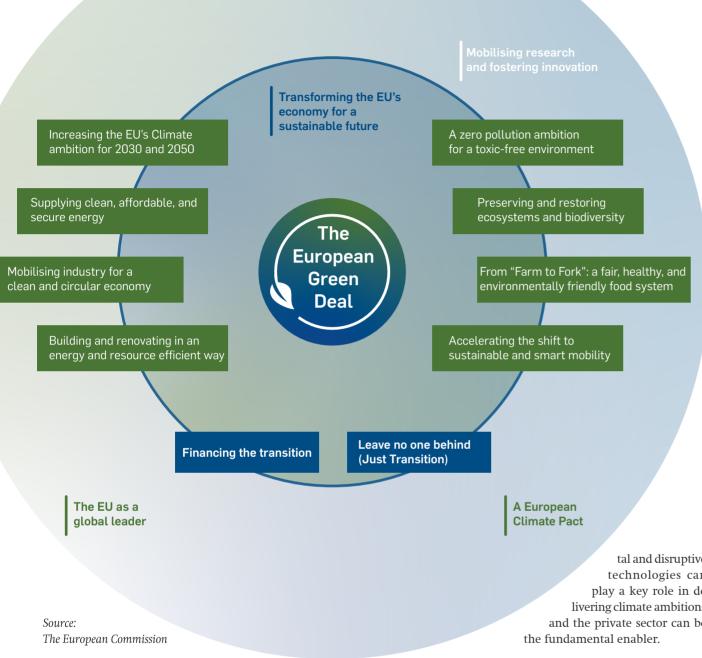
- Create new high-paying jobs
- Invest in infrastructure to sustainably meet the needs of the 21st century
- Promote justice and end inequality

The European Green New Deal

On December 11, 2019, the new European Union Commissioner, Ursula von der Leyen, presented the European Green Deal. The Green Deal resets the Commission's commitment to tackling climate change while also transitioning the economy toward a new growth strategy. "Our goal is to reconcile the economy with our planet, to reconcile the way we produce, the way we consume with our planet and to make it work with our people," von der Leyen stated. The deal was adopted in 2019 and includes 50 policy measures with a legally binding target of reducing EU emissions to net zero by 2050. The four key ambitions of the Green New Deal are:

- 1. EU to become climate neutral by 2050
- 2. Protect humans, animals, and plants by cutting pollution
- 3. Help companies become world leaders in clean products and technologies
- 4. Ensure a just and inclusive transition.

The deal covers 10 policy areas, which are depicted below with an accompanying roadmap for legislative release dates: >>



What is the corporate relevance of these policies?

In both Green Deals, there is a call for private-sector involvement. The role of the private sector in these policies can be categorized into five core themes.

• Innovation and digitalization

Fostering sustainable innovation and creating new business models present an opportunity for business to differentiate and capture new markets. The EU is encouraging entrepreneurship and innovation through tax-reform incentives that could encourage sustainable behavior.

Leveraging digital innovation is a key focus of both deals; the EU emphasizes the need for digitalization in the fight against the climate crisis and to transform the economy to meet their ambitions. Digi-

tal and disruptive technologies can play a key role in delivering climate ambitions, and the private sector can be

The focus of both these policies is around reducing GHG emissions, and consequently there is significant appetite for low-emission technologies and sustainable products. The private sector will be able to capitalize on the new markets and jobs that will emerge in the face of the transition to decarbonize these economies.

Collaboration

Climate change is a global issue, and cross-border collaboration and action

is necessary. Both deals back the need for international partnerships to tackle what is a global, borderless crisis. "The involvement and commitment of the public and all stakeholders is crucial to the success of the European Green Deal" (EU Green Deal, page 22). Green alliances form part of the EU strategy in terms of collaboration as they look to strengthen sustainability policy globally. The focus here is for partnerships in Africa, Latin America, the Caribbean, Asia, and the Pacific. To foster collaboration, the Commission introduced the European Climate Pact, which brings together regions, local communities, civil society, and businesses to give them a voice and space to share and develop climate information and ambitions.

Digitalization is a key driver of climate action, and with smart infrastructure comes the need to implement crossborder collaboration. If there are international leaders who do not share each other's ambitions, issues such as carbon leakage become a risk, and the vision of these policies becomes ineffective. Collaboration will also necessitate redefining trade policies to ensure that imports comply with the standards of the respective nations in terms of their sustainability ambitions.

• Transparency

A significant component of any green policy is the need for more robust and transparent sustainability reporting. The desire for reliable data is imperative to the ambitions of both policies and is something that organizations need to be conscious of in terms of the impacts of these policies on their operations. The EU in particular has outlined 50 policies that form the basis of their Green Deal. Additionally, the new European Climate Law underpins the EU Green Deal. The Art of Alignment highlights investors' calls for a standardized methodology that will encompass sustainability reporting and deliver trustworthy data. The report suggests robust data can help organizations better communicate long-term value, understand sustainability, and improve stakeholder communications. In so doing businesses can avoid green-washing and make sustainable investments more tangible and accessible, which will drive capital toward them.

Investment

The magnitude of investment required (€260 billion annually in the EU) to deliver the ambitions of these policies requires the mobilization of both the public and private sectors. The use of sustainable investment funds is vital to driving sustainable transformation.

One way to do this is through effective carbon pricing. The idea is that this will stimulate behavioral changes and foster public and private investment as climate risks are priced in. The CDP has extensive data on carbon pricing and believes that by putting a price on carbon, decisionmakers are able to effectively make the transition to a low-carbon economy a core part of business.

Long-term signals are crucial for driving capital to green investments. Importantly, the classification of green investments and transparency of data is needed to encourage capital inflows. In the EU, the rulebook is set by the EU Taxonomy. Investments that are easily identifiable as sustainable make it easier for investors to know which are credible, and thus to invest their capital. The EU currently provides 40 percent of the world's climate finance, and the hope is that through policies like these, more countries and regions will deliver the investment that is needed.

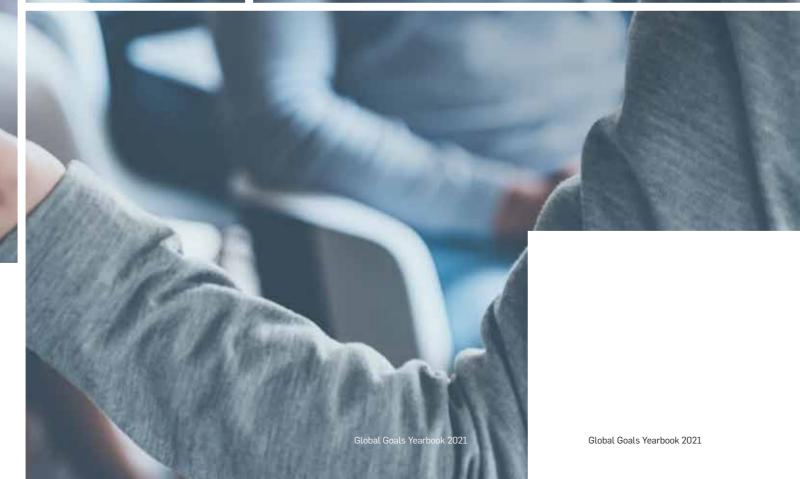


• Just transition

Ensuring a just transition is prevalent in both pieces of policy. The visions of these policies are grand, and with any change of this magnitude, trade-offs need to be managed to ensure nobody is left behind. According to an article published by SustainAbility, "Benefits for All: Engagement for a Just Energy Transition," under-resourced communities bear the brunt of climate change. It is the role of all stakeholders, including business, to ensure the transition is just; in the EU, this will be backed by the Just Transition Mechanism. This will focus on the social and economic costs of the transition in the areas that are most impacted, and it will support business in projects, reskilling redundant employees, and the creation of new workplaces.

Governments are calling for privatesector mobilization and support in tackling the climate crisis. There is an opportunity for business to play an active role in transitioning the world toward a low-carbon economy while ensuring no one is left behind. The deals propose radical changes that present a huge opportunity for business to innovate and create new markets, while also making a significant contribution to the fight against the climate crisis.

Measuring Stakeholder Capitalism



The World Economic Forum released a set of universal environmental, social, and governance (ESG) metrics and disclosures to measure stakeholder capitalism that companies can report on regardless of their industry or region. Organized around the pillars of principles of governance, planet, people, and prosperity, the identified metrics and disclosures align existing standards, enabling companies to collectively report non-financial disclosures.





Madeleine Hillyer World Economic Forum

he report, Measuring Stakeholder Capitalism: Towards Common Metrics and Consistent Reporting of Sustainable Value Creation, comes at a pivotal moment. The social unrest, economic inequalities, and racial injustice exacerbated by the Covid-19 pandemic has accelerated demand from business, governments, standards bodies, and NGOs for a comprehensive, globally accepted corporate reporting system.

"This is a unique moment in history to walk the talk and to make stakeholder capitalism measurable," says Klaus Schwab, Founder and Executive Chairman, World Economic Forum. "Having companies accepting, not only to measure but also to report on, their environmental and social responsibility will represent a sea change in economic history." >>

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These metrics will provide clarity to investors and other stakeholders and ensure capital is aligning to drive progress on the SDGs. That's stakeholder capitalism in action.

Brian Moynihan, Chairman and CEO of Bank of America, and Chairman of the International Business Council The stakeholder capitalism metrics and disclosures, developed in collaboration with Deloitte, EY, KPMG, and PwC, reflect an open consultation process with corporates, investors, standard-setters, NGOs, and international organizations. They are designed to provide a common set of existing disclosures that lead toward a coherent and comprehensive global corporate reporting system.

In parallel to this work, the World Economic Forum has also collaborated with the Impact Management Project to bring together the efforts of the five leading independent global framework and standard-setters (CDP, the Climate Disclosure Standards Board, the Global Reporting Initiative, the International Integrated Reporting Council, and the Sustainability Accounting Standards Board) to work toward a comprehensive corporate reporting system and a statement of intent that works as a complement to the common metrics released today.

Companies see the importance of social, climate, and other non-financial factors as critical for their long-term viability and success. Some 86 percent of executives surveyed by the Forum agreed that reporting on a set of universal ESG disclosures is important and would be useful for financial markets and the economy.

Expert views

"Companies have to deliver great returns for shareholders and address important societal priorities," says Brian Moynihan, Chairman and CEO of Bank of America. and Chairman of the International Business Council. "These metrics will provide clarity to investors and other stakeholders and ensure capital is aligning to drive progress on the SDGs. That's stakeholder capitalism in action."

"As the UK works in partnership with Italy toward hosting the COP26 climate change

conference in Glasgow in November 2021, I welcome the work of the World Economic Forum's International Business Council in creating a set of common metrics for reporting sustainable value creation," says Mark Carney, Finance Advisor to the UK Prime Minister for COP26 and United Nations (UN) Special Envoy for Climate Action and Finance. "Through this work you are demonstrating to shareholders, stakeholders and society at large that the private sector is committed to measuring and improving its impacts on the environment as part of the transition to a low-carbon future. I encourage governments, regulators, the official accounting community and voluntary standard setters to work with the IBC toward creating a globally accepted system of sustainability reporting based on this project's groundbreaking work."

"The disruptions of 2020 have underscored the critical importance of organizations managing and reporting their impact on the economy, the environment and society, and their increasing connection to long-term enterprise value creation," says Punit Renjen, CEO, Deloitte Global. "Deloitte is pleased to have led the development of the Principles of Governance pillar and collaborated on this project with so many respected organizations. We hope our work supports organizations as they move toward consistent reporting of ESG metrics and disclosures in mainstream annual reports, as ultimately, this is how the business community will make greater progress against the Sustainable Development Goals."

"The time is now for companies to broaden their engagement with stakeholders," says Carmine Di Sibio, EY Global Chairman and CEO. "The combined impacts of climate change, Covid-19 and economic inequality contribute to the urgency for businesses to embrace long-term, sustainable value creation and prioritize the needs of people and

planet and the creation of broad-based economic prosperity."

"As businesses become more acutely aware of their role in addressing societal and environmental issues, moving toward a common set of ESG-focused metrics will help ensure that we all collectively make a difference where it counts," says Bill Thomas, Global Chairman and Chief Executive Officer, KPMG International. "Reporting on ESG factors like carbon emissions and human rights and other key metrics will not only help inform investors while helping companies control their full corporate value, it has the power to realign capitalism for the benefit of broader society."

"Robust non-financial reporting is a crucial element of the systemic economic reform the world needs to address issues like climate change and social inclusion, and we were pleased to be able to collaborate on this initiative and lead on the Planet pillar of this work," says Bob Moritz, Global Chairman, PwC. "Stakeholders - including investors, but also policymakers, consumers, and employees need more rounded, comparable, and robust information to make decisions. Get that information flowing, align market incentives against performance on these metrics, and a better tomorrow becomes possible."

Companies are encouraged to report on the full set of metrics in their mainstream reporting. Measuring Stakeholder Capitalism: Towards Common Metrics and Consistent Reporting of Sustainable Value Creation recommends a "disclose or explain" approach when certain metrics are not feasible, not relevant, or difficult to implement immediately. The report also recommends that each company apply its own view of dynamic materiality, reporting on what is deemed material to its business and stakeholders. The metrics are centered on four pillars:



PROSPERITY



strategy, and accountability. This pillar includes criteria measuring risk and ethical behavior.

FRAMING THE DEBATE



Reflects a company's purpose,



Report

Measuring Stakeholder Capitalism: **Towards Common Metrics** and Consistent Reporting of Sustainable Value Creation

Published

22 September 2020 https://bit.ly/3hLQRdL

Non-financial Reporting?

he sustainability-related pressure on the financial industry and economy is massively increasing. Although there is much accordance on what sustainability reporting seeks to achieve, there is still confusion about the fragmentation in the multiplicity of initiatives, standards, and stakeholders to achieve these goals. Finally, there are signs of improvement: Increasing state regulation is beginning to address the challenge of turning businesses toward a zero-emissions and zero-exploitative future.

In the course of the pandemic recovery plans, sustainability issues are becoming even more relevant: Covid-19 proved to be a catalyst for ruthlessly exposing flaws and weaknesses in the system. Environmental, social, and governance (ESG) aspects are - in the eyes of many - the right answer to reboot the economy as well as to add resilience to businesses and societies.

Sarah Kaplan, from the Canadian law firm McCarthy Tétrault LLP, writes: "Governments are looking to 'build back better' by investing in green infrastructure and emission-reduction initiatives, or by issuing sustainability bonds - measures that are designed to drive post-Covid economic recovery and growth. Industry is also looking to find its innovative edge and competitive advantage in a lower-carbon economy - announcements from companies committing to net-zero carbon emissions are now a regular occurrence."

In the end, the pandemic might not only have damaged the economy, but

also probably changed our behavior in many ways. Online meetings are replacing business trips. City center retail is clearly losing out to online platforms. And those who are rich have more of an educational advantage than ever before in a digital school landscape, etc.

responsive risk management approaches has put a spotlight on ESG as an important factor not only in creating value for organizations, but also enabling them to be more nimble in dealing with risks to business, such as climate change. In particular, the pandemic has highlighted the need to quantify and manage these risks. Diversity and inclusion are also being increasingly seen as essential to boosting the value of companies."

Simplification is a must

The question, therefore, is no longer *if* companies have to change to adapt to the new demands, but how we can measure them if they really do. Since the turn of the millennium, a confusing landscape of sustainability reporting initiatives has emerged: to meet the evolving information needs of the investment community and to respond to the growing expectations of other stakeholders. As a result, these initiatives call out for regulators to harmonize and streamline ESG disclosure standards.

The establishment of a globally accepted ESG standard, for example, would enable all of us to assess and compare companies' sustainability performance in a more meaningful and efficient way. One thing is clearer than ever before: The race to establish ESG reporting standards must also be a race toward simplification.

The international community is now (finally) moving in this direction. Yet, an ironic footnote remains: The struggle to

FRAMING THE DEBATE



Again Sarah Kaplan: "The need for more

overcome fragmentation is itself complicated, fragmented, and diffuse. But it is going in the right direction! A visible step toward this was the 2021 publication Common Metrics for Stakeholder Capitalism by the World Economic Forum (WEF).

THESE ARE THE MAIN DRIVERS:

1. The financial sector

Probably the biggest source of momentum has come from the investors. They have been looking at ESG for a long time, but for years sustainable investments were marginalized. Today, the situation is changing at a dramatic pace. BlackRock CEO Larry Fink stands for this change: Fink was one of the first leading investors who recognized the sign of the times. In his annual letters to BlackRock, Fink is turning up the heat. In January 2021 he wrote: "We strongly support moving to a single global standard, which will enable investors to make more informed decisions about how to achieve durable long-term returns."

The private investors are also finally being joined by state actors. In particular, central banks, prudential regulators, and stock exchanges are all now fully engaged in these debates.

2. The European Union

The European Green Deal is a significant roadmap for a sustainable EU economy. EU leaders want to achieve this goal by viewing climate and environmental challenges as opportunities in all policy areas and by making the transition equitable and inclusive for all. At the heart of this is an investment plan under which the European Commission aims to spend €1 trillion within a decade.

The Commission has announced a draft directive on Sustainable Corporate >>

Governance and Sustainable Supply Chains for the second half of 2021. The legislative package is completed with an amendment to the directive on nonfinancial reporting. This legislative initiative is to be seen in the context of the European Green Deal and the (Covid-19) Recovery Plan, and it aims to anchor sustainability even more firmly in corporate governance.

The push for a global ESG standard

Ever since a European task force was created for Europe to define its own ESG reporting standards, the momentum toward the standardization of sustainability or non-financial reporting has been building fast. The push toward a global ESG standard will bring together the existing frameworks.

Even those responsible for creating the big standards have recognized the signs of the times and are relying now more strongly on "cooperation" instead of the previous language of "interoperability," "complementarity," and "concurrence." WEF Chair Klaus Schwab says: "We are working together with standard-setting agencies and governments, not to create a competition, but to create a generally accepted common framework of metrics. It needs a key number of companies to report, but to then integrate this in standard-setting."

At the content level, therefore, no major surprises are to be expected. With areas such as climate change, environment, labor rights, health and safety, as well as human rights due diligence, central topics are already clearly identified. The real game changer, however, lies in the field of materiality: Materiality is an ambiguous concept. In the end, it is always a question of the observer. Different stakeholder groups perceive the materiality of sustainability items differently. Investors, for example, have a narrower view than those who examine the SDGs.

THE MATERIALITY DISCUSSION ENCOMPASSES AT LEAST THREE DIMENSIONS:

1. Materiality referring to reporting standards

The reporting specialists at Datamaran rightly pointed out in their blog recently that we need to distinguish at least three levels in each company case: There are general questions, sector-specific questions, and company-specific questions. Only when we interpret the requirements in such a tailor-made way do we get a meaningful reporting architecture. Datamaran writes: "Looking at sectorspecificity, EU standards should cover three layers: sector-agnostic (applicable across sectors), sector-specific (ensuring the necessary level of detail per sector), and entity-specific (depicting the entity's unique situation). The third layer demands that reporting entities 'own' their double materiality assessment process. Hence, the sector-agnostic and sector-specific standards do not replace a materiality assessment, which companies will be required to conduct."

2. Materiality referring to issues

Traditionally, materiality is defined by issues that are material to a company and other issues that are subordinate. But this is only the internal view. From an outside perspective, the question is: Who defines materiality? The investor? That is the classic ESG lens. Or is it about the interaction between the influence the company has on its environment and the environment on the company? This means that all sustainability-related facts that are necessary to understand the company's business performance, situation, and results must be published, but also information that is necessary to understand the company's impact on society. This is the current perspective

TARGET ARCHITECTURE



Source: Sustainable Finance Research Platform, Mercator Stiftung

MATERIALITY DEFINITION

COMPREHENSIVE MATERIALITY

Considering a wider scope of stakeholders e.g. the environment or future generations.

DOUBLE MATERIALITY

Companies have to report about how sustainability issues affect their business and about their own impact on people and the environment.

STAKEHOLDER MATERIALITY

Stakeholder engagement to involve organization or people who may be affected by company's decisions.



FINANCIAL MATERIALITY

Financial materiality identifies issues that are reasonably likely to impact the financial condition or operating performance of a company and therefore are most important to investors.

> Source: Own data and EU Commission, Guidelines on non-financial reporting: Supplement on reporting climate-related information (2019/C 209/01)

GRI

BIODIVERSITY AS A PRIORITY IN AGRICULTURE. FISHERIES, AND FORESTRY

	Companies listed in the EU	Non-liste Germany
Number of companies	32	11,597
Number of employees	ca. 12,000	ca. 120,00
Annual turnover	ca. €2.1 bil.	ca. €17.3
Total assets	ca. €3.3 bil.	ca. €45.3

Source: Sustainable Finance Research Platform, Mercator Stiftung

FRAMING THE DEBATE





of EU legislation. Or do the relevant stakeholders chosen and questioned by the company set the direction? Then we are at the Global Reporting Initiative and UN Global Compact approach. Or does an even broader understanding of materiality need to be used, including views from areas that cannot express themselves, such as nature, biodiversity, and future generations? That would be the view of the SDGs.

3. Materiality referring to the companies concerned

This materiality aspect has a significant impact on the number of companies affected. Let us take the topic of biodiversity: Experts agree that we need to pay much more attention to species protection. We must not only consider biodiversity in terms of financial or double materiality, but at least in terms of stakeholder materiality.

In reality, however, only the big listed companies from the agriculture, fishing, and forestry sectors are currently covered by this kind of mandatory disclosure - if at all. In Europe, for example, we talk about a mere 32 companies with total revenue of approximately €2.1 billion. If we expand this scope to all companies in these sectors that have an impact on biodiversity, then we are talking about completely different dimensions. The figures are not available for the whole of Europe, but a study by the Mercator Foundation found that there are around 11,600 companies in Germany that are subject to reporting requirements and generate annual revenues of €17.3 billion. Mind you, this is only the topic of biodiversity, only related to the sectors of agriculture, fisheries, and forestry, and only for Germany. Other topics, such as climate protection, plastic mountains, diversity, etc., would generate further scopes and lists of concerned companies.

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What does this mean for reporting obligations?

1. Sustainability reporting

There is ample evidence, however, that the information which companies are reporting is not sufficient. Reports often omit information that investors and other stakeholders think is important. Reported information can be hard to compare from company to company, and users of the information are often unsure whether they can trust it.

Problems in the quality of sustainability reporting have knock-on effects. It means that investors lack a reliable overview of sustainability-related risks to which companies are exposed.

Investors increasingly need to know about the impacts of companies on people and the environment. They need to know this partly to meet their own disclosure requirements under the Sustainable Finance Disclosure Regulation. More generally, if the market for green investments is to be credible, investors need to know about the sustainability impacts of the companies in which they invest. Without such information, money cannot be channeled toward environmentally friendly activities.

Finally, problems in the quality of reporting create an accountability gap. Highquality and reliable public reporting by companies will help create a culture of greater public accountability.

2. Human rights reporting

The UN Guiding Principles on Business and Human Rights (UNGP) have been a global instrument for remedying and preventing human rights violations in business contexts since 2011. To this end, they are being transposed into national law ("supply chain law"). In parallel, the EU is working on a Europe-wide law. At the end of January 2021, the Legal Affairs Committee of the European Parliament voted on its positions on the planned supply chain law and called on the Commission to submit a law. EU Justice Commissioner Didier Reynders has announced such a law by the summer break. This supply chain law would be the second European law on labor and human rights after the law on conflict minerals. What is new is that it will also include other categories, in particular requirements for suppliers to comply with the Paris climate targets.

The EU wants to create uniform regulations for the internal market and relies on a risk-based approach: This means that sectors and countries are assessed in a differentiated manner. Problem zones are designated as high-risk zones. This also has consequences for the number of companies affected: Unlike the German approach, there is no minimum size for companies in the Brussels simulation. What counts is the vulnerability to risk. Thus, says Axel Voss (MEP, EPP Group), a company with 50 employees could become subject to reporting requirements if, for example, it sources its goods from 1,000 farmers in a high-risk zone. On the other hand, all companies that work mainly with suppliers from Europe will probably get by without any requirements.

Brussels urges in a statement: "Companies that want to be prepared for upcoming regulations must now review their human rights and environmental due diligence processes. Assessing whether their existing processes are in line with the UNGP and OECD guidelines will help identify gaps and channel resources to drive sustainable change. A structured human rights due diligence process is critical to ensuring human rights compliance across companies' operations."

3. Climate reporting

If we want to be climate neutral in Europe by 2050, a lot still has to happen. To achieve this, we must measure, reduce, and measure again. Here, it is above all the investor network of the Carbon Disclosure Project (CDP), the Task Force on Climate-related Financial Disclosures (TCFD), as well as the Science Based Targets initiative jointly launched by CDP, WWF, the World Resources Institute, and the Global Compact that are giving companies steam. A KPMG survey shows that TCFD recommendations are already widespread in the oil and gas and automotive sectors. Other sectors that are also critical are still hesitant. These include, in particular, the construction and materials, forestry and paper, food and beverage, and transport and leisure sectors. Here the pressure will increase. We can see this well in the example of the real estate sector: Climate aspects are leading to a comprehensive reassessment of many properties on the European market. Experts see the consideration of sustainability criteria alongside the central parameters of return and risk as a third pillar in the evaluation of real estate investments in the future.

"Properties that do not meet the latest sustainability standards will become much less attractive to investors and fund managers in the future. No one wants to invest in ecological and social legacies any more. If real estate becomes uninteresting as an investment object against this background, it loses value," says real estate valuer André Heid.

Here too, however, the reporting practice is sobering: "A large part of the companies do not yet seem to have any clarity about which key figures are to be used and reported for measuring progress in the context of climate reporting. As a result, the goals set appear less credible and tangible," analyses Nicolette Behncke from PwC. Added to this, fewer than one in three companies relates the climate-related key figures used to established financial key figures or operational performance indicators – for example, analyses emissions - to turnover. "However, if this information is not presented transparently, it is difficult for stakeholders to understand, compare, and critically appreciate the significance of the respective key figure for the company," Behncke continues. Nevertheless, a trend can be observed of linking the

climate targets of individual companies to the global 2°C target with the help of science-based targets. This shows a growing awareness in the business world that a majority of companies recognize the need to contribute their fair share toward efforts to reduce emissions.

4. ESG reporting

In Europe, around €13 trillion is invested in investment funds, a good 4 percent of which observe sustainable criteria. However, the effects of these sustainable investments, which have been growing steadily for years, are hardly discernible. One reason for this is the lack of a uniform definition of sustainability. The EU wants to change this with a taxonomy for "sustainable finance." In Germany, the Sustainable Finance Advisory Board of the Federal Government recently submitted 31 recommendations for a sustainable financial system. These include integrated and forward-looking corporate reporting, sustainability-oriented financial products, as well as research and systematic knowledge-building with a view to changing competence requirements for managers with supervisory authorities, in the financial and real economy, in financial

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consultancy, and in the public. Another important recommendation of the advisorv board is to create transparency on the contribution of all financial products to the global development agenda, the SDGs, and the Paris climate targets.

Christian Hell of KPMG in Germany says: "Worldwide, more and more companies are reporting on sustainability issues, and they are doing so in greater detail. Drivers are often regulatory requirements, but also the increasing demands of capital providers – sustainability is becoming more and more important for the equity story." It is therefore hardly surprising that the focus of reporting is shifting, with more and more reference being made to potential business risks. The trigger for this is climate change. Here, companies are increasingly seeing financial risks - whereas a few years ago they were still concerned about associated reputational risks. "We assume that other sustainability issues such as human rights, diversity, or appropriate remuneration will soon also be recognized in their financial dimensions."

5. SDG reporting

In 2015, the global community adopted the UN Sustainable Development Goals. Since then, the SDGs have gained a high profile in sustainability reporting. Greater stakeholder pressure on companies to be more transparent about supply chain impacts, labor standards, and diversity may have influenced this leap in reporting. It is also likely that more companies now have a better understanding of the SDGs. Nevertheless, SDG reporting is mostly unbalanced and often disconnected from corporate goals: A KPMG study suggests that corporate reporting on the SDGs focuses almost exclusively on companies' positive contributions to achieving the goals and does not make negative impacts transparent. Only 10 percent also talk about setbacks (balanced reporting).

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Insights into the New **EU Reporting Obligations**

In the last weeks we saw European climate objectives set, with both a climate taxonomy and a Cooperate Sustainability Reporting Directive (CSRD) being approved. Now you will have to take a moment to briefly guide us through all these decisions! We have a climate strategy, we have a taxonomy, and we have reporting obligations. How are they all related?

Christoph Töpfer: That's true, they are basically all connected, but it is difficult to actually classify the individual processes. The actual points of contact repeatedly represent a challenge, even for those who are closely connected with the processes. With its introduction of the European Green Deal in 2019, the Commission put forward a massive work program. The various subsections are currently being worked through, one by one, and in a tight time frame at that. Now to the classification: The recently adopted European climate law states that the European Union will achieve greenhouse gas neutrality by 2050. InSince the EU Commission's introduction of the climate taxonomy and the CSRD, discussions concerning an upcoming European reporting standard have shown no signs of dying down. Who, what, when, and about what will be reported on in the future? Three interviews with experts.

terim goals will also be set for 2030. The EU reporting obligation — known as the CSRD, the Corporate Sustainability Reporting Directive — as well as the EU taxonomy for green and sustainable economic activity are tools that will significantly contribute to reaching these overarching goals.

Perhaps we could hone in on these two instruments?

Töpfer: The EU taxonomy is a classification system that enables financial market players in particular to assess whether the activities in which they would like to invest are environmentally friendly and if they would even be sustainable in a greenhouse-gasneutral economy. Is that green or just a transitional solution? This taxonomy has now been adopted through a legislative act that is primarily focused on climate change. Taxonomies regarding other climate objectives will follow.



However, the reporting obligation is just a fundamental tool. In order to make sustainable investment decisions, one needs good and comparable data from companies, information concerning their sustainability and environmental efforts. Information about the sustainabilityrelated risks to which the companies are exposed are especially important. According to the EU Commission's analysis, the current reporting obligations have not fulfilled these requirements, which is also in line with our assessment at the UBA [German Environment Agency]. Investors aren't the only ones interested in the data. Other target groups such as non-governmental organizations, public authorities, and, of course, customers want to have access to this information.

A very important point of discussion is the aspect of materiality. There are different approaches – the classical investor's perspective or double materiality: Which is favored by the European Commission. What is meant by "double materiality"?

Töpfer: Understanding the concept of materiality is key. It determines when and what information is to be included in the report. There is also the classical perspective of financial reporting, which

requires information that is pertinent to decision-making in terms of financial effects for the companies or which entail corresponding risks. So that is what is meant by the term "financial materiality."

Then we have the opposite perspective, which concerns the effects of a company's activities on its surroundings, the environment, and society with its products and services. That is materiality from the perspective of the environment and sustainability. This information is just as relevant and is increasingly being requested by investors.

The European Commission would like to see both of these perspectives reflected in the reports. This is what they refer to as "double materiality." The German CSR Directive Implementation Act (CSR-RUG) is much more restrictive in this regard. The debate on the term "materiality" came up quite often in the German context because people asked themselves: If we were to picture this as a Venn diagram, do we only report on the points that intersect or do we have to report on both areas in their entirety? Now we have a clear statement. The intersecting areas are no longer the issue, the focus has to be on both perspectives from here on out.

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Christoph Töpfer

was a member of the EFRAG Task Force responsible for preparing the European sustainability reporting standards.

Understanding the concept of materiality is key. It determines when and what information is to be included in the report.

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central message of the Non-Financial Reporting Directive is plain and simple. In the future, auditing bodies within the company will be required by law to give equal consideration The company has a to financial and non-financial statements. Up until now, supervisory boards were able to get out of their responsibilities in this regard. They did fulfill their official audit obligations, compliance or risk but they had an auditor perform a limited assurance review which, up until now, was sufficient. However, in the future, management the auditing committee must give equal consideration to both perspectives, meaning that the committee now needs to department in place. guarantee the involvement of "non-financials" in the internal control system and in risk management. This also has to do with the assessment of adequacy and effectiveness - a real But whether it works and can actually

or code of conduct

is usually not

investigated.

But whether it works and can actually implement its responsibilities in the spirit of company rules

A joinow-up question to ejjectiveness. What exactly is new here? Many readers are not yet familiar with the term. You often hear the term "materiality" and we are familiar with the term "adequacy" from the discussion surrounding due diligence. But perhaps you should explain the idea of effectiveness.

What will the regulations change for CEOs and supervisory boards in

Kai Michael Beckmann: Sanctioning is an issue here. The

terms of liability?

Beckmann: In order to understand what effectiveness means in this context, the term adequacy needs to be clear. Adequacy here simply means that something is present. The company has a compliance or risk management department in place. But whether it works and can actually implement its responsibilities in the spirit of company rules or code of conduct is usually not investigated. However, assessing effectiveness does just that. Let's take Volkswagen and the diesel scandal as an example. Compliance and risk management departments were in place, yet they couldn't avoid the scandal. The control mechanisms weren't effective because they were eclipsed by a corporate culture in which goals, other than sustainability, took precedence.

Global Goals Yearbook 2021

If supervisory boards take effectiveness as a given, they must assign completely different tasks to the internal auditors or hire an external auditor, and this is why the directive will initially also provide for an initial mandatory limited assurance audit. Finally, once the rules have been tightened, a reasonable assurance audit will be required, thereby ensuring that the audit standards of the non-financial statements correspond to those of the annual report. This is a completely new approach and will present many companies with big challenges, because the integration of sustainability and ESG of risk and compliance management and internal control systems is still quite rudimentary in many German companies. about the direct alignment of financial and non-financial reporting. However, from my perspective, the chairperson of the board will play an increasingly larger role, not least because the capital market will make significantly more demands on companies — also due to the new EU taxonomy. Companies will also be asked which concrete ideas and strategies they have in place in order to prove their future sustainability. And not just on paper. In reality as well. It's obvious that the chairperson carries the responsibility.

Doesn't the buck stop at the CFO in that respect?

Beckmann: At the moment, where the numbers and reporting are the main concern, the Chief Financial Officer is certainly in demand. After all, we are talking





Kai Michael Beckmann

is Division Manager Governance, Risk, Compliance, & Sustainability at Mazars Germany; Head of Sustainability

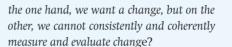
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Does double materiality actually equate to SDG materiality or is that not taking it far enough?

Alexander Bassen: The Sustainable Development Goals were adopted by the United Nations in 2015 and comprise 17 goals that the international community has agreed to, along with 169 sub-targets. These were originally intended for states to measure their performance. However, they are now increasingly being implemented by companies to measure their own performance in relation to societal challenges. It's not necessarily the case that double materiality is covered by this.

The SDGs are concerned with very, very different areas — from poverty and hunger to questions regarding the environment and water as well as social questions, such as urban development. When you use SDG materiality as a basis, it becomes important to work out what type of influence companies have on the SDGs with their activities or products. Certain companies are already reporting on this very essential question. However, when we take a closer look at the reporting, individual SDGs are often singled out and are usually those in areas where one is making a positive contribution as a company. Of course, it is interesting to see the whole picture. Positive contributions are made by companies as well as negative ones, which necessarily exist, because the SDGs also contain conflicting targets. Aspects surrounding growth often cause problems not only with environmental standards but also with social standards. Obviously, these target conflicts need to be addressed within the context of an overall view, otherwise you don't have the complete picture.

In the area of climate change, you work with the "currency" of CO_2 equivalents. It's not nearly as defined or as easily measured as in other areas, such as biodiversity and social topics. How do we solve the problem when, on



Bassen: That certainly is one of the central problems. However, you have to admit that we are significantly further along than we were a couple of years ago.

The EU is currently trying to determine this with the help of taxonomy. So far it has been done for climate questions, climate change mitigation, and adaptation. The EU has also set six environmental goals, including circular economy or biodiversity, which you just mentioned. Measurements are currently being compiled for these goals and are also meant to become the standard for reporting. These are, to the extent possible, always scientifically based. In the cases of climate change mitigation and adaptation, you orient yourself on the Paris Agreement. This also means that we have to work much closer with scientists from other disciplines in the future. Otherwise, we will end up with the usual amounts, such as tons of waste thanks to tons of manufactured cars. That is not sufficiently complex.

So far, the taxonomy and CSRD have only been suggested by the EU Commission, but the time specifications are very concrete. If we still want to achieve anything by 2030, we don't actually have much time for discussions. What do you think the rest of the procedure will look like?

Bassen: From an EU perspective, the taxonomy will not be an issue because it will be enforced directly by the EU and won't have to go through the national parliaments. It has to be approved by the Council, but that was already done on April 21. The CSRD, the reporting obliga-

tions for companies, however, must go through the national parliaments, and they usually have hearings beforehand to listen to their stakeholders. However, this time the EU Commission has already indicated that certain areas will have no wiggle room for national variations. For example, in the future, the reporting must be undertaken in the management report. A company can of course make a separate sustainability report, but that no longer meets the CSRD's requirements.

In that way, the EU Commission has already determined the boundaries of the discussion. According to the timeline, the directives from this year will most certainly be brought through the European Parliament followed by the usual two years for the national implementation.

Currently there is only one climate taxonomy. And we spoke earlier about further areas of materiality. That encompasses much more than climate. Does that mean that there still need to be many more taxonomies?

Bassen: Yes, that's true. The first two climate objectives - climate change mitigation and adaptation and the climate taxonomy – are just the first step. The other climate objectives will follow this year. The question obviously remains: With all this talk about sustainability, what will happen to the social objectives that obviously remain extremely relevant? A social taxonomy is already in the works. It will take a little longer because the technical evaluation criteria need to first be identified. But I am certain it will come through next year, at the very latest, since the societal pressure behind it is great and the necessity is there.

Prof. Dr. Alexander Bassen

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has been Professor of Business Administration, in particular Capital Markets and Management, at the University of Hamburg since 2003. Furthermore, he has also been a member of the German Council for Sustainable Development since 2013.

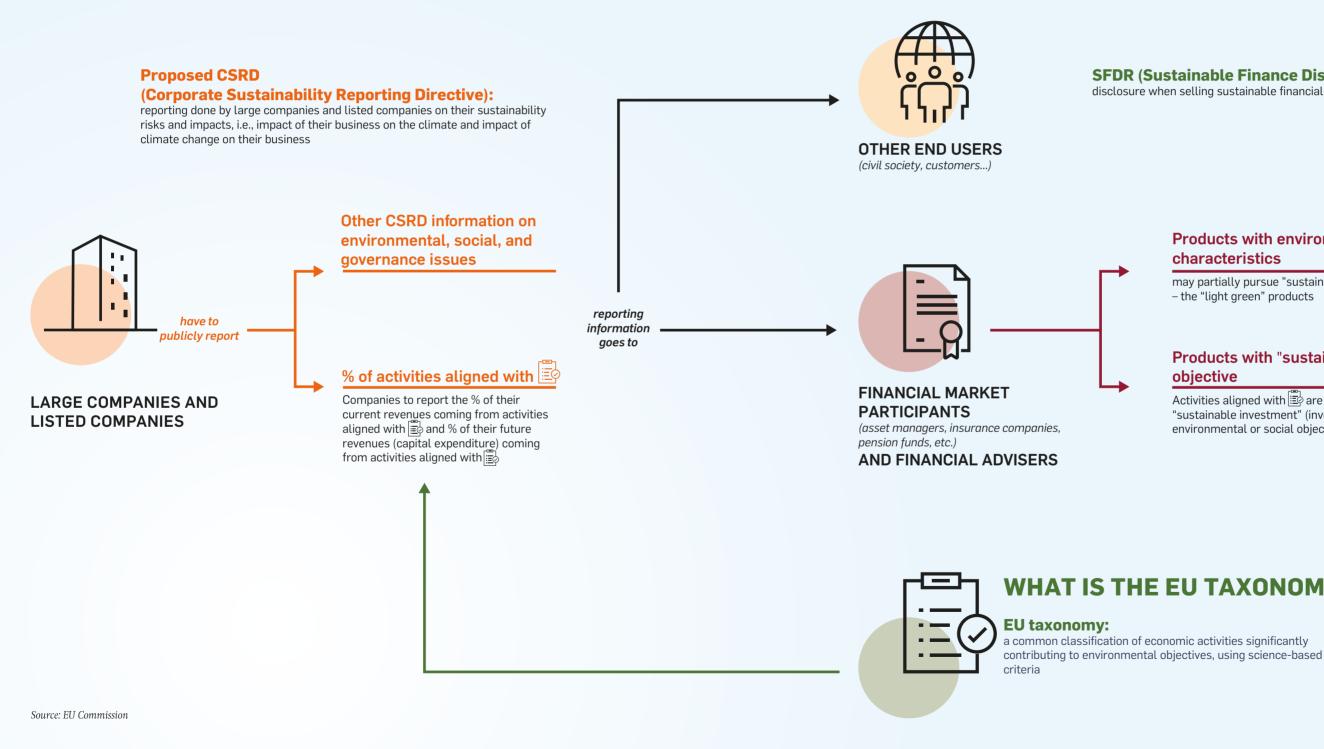




However, when we take a closer look at the reporting, individual SDGs are often singled out and are usually those in areas where one is making a positive contribution as a company.

HOW DOES THE EU TAXONOMY FIT WITHIN THE SUSTAINABLE FINANCE FRAMEWORK?

Two examples when the taxonomy will be used: in disclosures of financial products and reporting by large companies and listed companies





SFDR (Sustainable Finance Disclosure Regulation):

disclosure when selling sustainable financial products

Products with environmental or social characteristics

may partially pursue "sustainable investment" as objective - the "light green" products

Products with "sustainable investment" objective

Activities aligned with are included in the definition of "sustainable investment" (investment contributing to an environmental or social objective)



A World

Where Profits Are Derived from True Value Creation, not Value Extraction

The world faces critical challenges: climate change, pandemics, nature loss and growing inequality, among others. Therefore business faces major changes: *Vision 2050: Time to Transform* from the World Business Council for Sustainable Development (WBCSD) lays out a new framework to guide business action in the decade ahead. We spoke about it with Julian Hill-Landolt, Director, Vision 2050 at the WBCSD.

Aking progress toward your Vision 2050 demands several critical and complex systemic transformations. That comes with the UN Year of Ambition, the World Economic Forum's call for stakeholder capitalism, and other initiatives for a change of course in the economy. Are these competing ideas or how do they fit together?

Julian Hill-Landolt: The systems that may have worked for 1 or 2 billion people simply aren't fit for purpose if we want to live in a world in which 9+ billion people can live well, within planetary boundaries. In the words of Bill Gates, "We need to transform everything." These transformations are critical and complex, and they span from the way that we create and use energy and things, to the wavs we move around, to the foods that we eat, the homes we live in, and indeed even the goals and rules that define the way our economies work. Given the level of systems transformation required, we need as many organizations as possible working to engage their constituencies in the urgent task at hand. And we need them to be clear about the necessity, the

effort required, the costs involved and the opportunities along the way. The SDGs provide the world with a foundational framework and all initiatives need to ensure that they align with the achievement of the SDGs. WBCSD works with multinational businesses, and so that is who our work is designed to be engaging and actionable for. Vision 2050: Time to Transform is a framework for business action in line with the urgency of the challenges that we face as global societies – it provides business with a uniquely comprehensive guide to making transformation happen. At the same time, Vision 2050's nine pathways are specifically designed to make the SDGs actionable for business.

"Culture eats strategy for breakfast" is a famous quote from legendary management writer Peter Drucker. As an analogy, we can say that unpredicted events such as pandemics, disruptions, etc., throw every plan off kilter – even the SDG strategies and Vision 2050. How will you deal with disruptions and unpredicted events? Will you have to refresh the refresh?

Hill-Landolt: Another famous quote, attributed to both Eisenhower and Churchill, is that "Plans are worthless, but planning is everything." The future cannot be predicted, but it unfolds as a result of our actions and reactions. One way in which to exert some control over how the future unfolds is to plan for the things that might happen in the future - both those changes that are highly likely and harder-to-predict disruptions. Systems change as a result of pressures exerted by macrotrends and disruptions, as well as new innovations. During our work to refresh Vision 2050, we spent quite some time thinking about the way in which these factors could shape the next 10 years - how they might make it easier or harder to achieve our vision, how they might increase or alleviate existing sustainability challenges. >>

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»Stakeholder capitalism is not about a world without profits, it is about a world where profits are derived from true value creation, not value extraction.«

Vision 2050 asks companies to take these factors into account as they plan their own strategies, as it is only by developing ideas about how they might react to change that they can have a chance of reacting well when the change happens and their plans have to be adapted to the new reality. The Covid-19 tragedy has made companies much more aware of the need for this kind of scenarioplanning as part of good risk management and business practice.

"Build build build!" With these words, Boris Johnson announced his "new deal" to boost the UK economy. It's the old mantra that the economy has to keep growing. Now you say: Stop! The concept of capitalism needs to be discussed. You go even further and demand that capitalism be reinvented. Aren't you taking on a bit too much?

Hill-Landolt: With respect, that's absolutely not what we have said! We have said that there are three strategic business mindsets that need to change if we are to unlock the kinds of transformations we are talking about at the rate and scale required. One of those mindsets is around capitalism, and yes, we have said that it needs to be reinvented. But we have not said stop! Quite the contrary – as the World Business Council for Sustainable Development, we are absolutely committed to capitalism – its innovative power and tremendous reach are essential for driving the changes the world needs. But we are also clear that the current dominant model of capitalism is not delivering the outcomes that society needs, and therefore capitalism must be reinvented (as it has been many times before) so that it rewards true value creation, not value extraction, as today's model does. We are not alone in this view: Many of the world's leading companies are also clear on the need for the rules of the game to be updated so that social and environmental costs and

benefits are internalized and reflected in the relative prices of goods and services, in companies' P&L statements, the cost of capital, and market valuations.

It reminds me a bit of a quote by David Byrne from the music group Talking Heads: "When everything is worth money, then money is worth nothing." Do vou really believe that most CEOs will lightheartedly abandon profit targets and embrace stakeholder capitalism?

Hill-Landolt: No, CEOs will not abandon profit targets. Stakeholder capitalism is not about a world without profits, it is about a world where profits are derived from true value creation, not value extraction. Forward-looking CEOs understand that running companies well, well into the future, will demand that we update the current model of capitalism. It needs to become: stakeholder-oriented (rather than maximizing shareholder value); impact-internalizing (rather than impact-externalizing); long-term (rather than short-term); regenerative (rather than degenerative); and accountable (rather than unaccountable). These are the features that are going to help CEOs run their companies well and profitably into the future. That is why CEOs will embrace these changes.

The homo economicus is not easily replaced by a "mindful mankind." That takes time, but we don't have it. Isn't that a dilemma?

Hill-Landolt: This is a question that applies at a societal level, not just an economic one. Politically, intellectually, and culturally we have failed to act on the information that we have had available. However, while it is true that there is very little time left for us to act and avoid breaching the safe operating space for humanity, it is also true that for some time, momentum has been building to a point where the right level of action can finally be taken. From the begin-

nings of the environmental movement in the 1970s, to the coalition-building efforts of the last decade, we are now at a point where more and more governments, companies, investors – and more broadly the general public – are truly beginning to rally behind the need for transformational change.

What exactly does "mindset shift" mean? At first glance, it sounds very academic. In dayto-day business with quarterly figures, concrete turnover targets, and a generally fast pace, many see this reset button as an indicator that the whole system might not restart properly.

Hill-Landolt: We think that there are core strategic business mindsets that need to shift if we are going to give ourselves permission to invest in, and drive, the transformations and transitions that achieving Vision 2050 will depend on - to advance the actions that are laid out in Vision 2050's nine transformation pathways that cover the essential products and services that business provides to society. In essence, these mindset shifts are what make a move away from "business as usual" possible. At the heart of business as usual is our current model of capitalism, and unless we reinvent that model, we will not see progress at the rate and scale required. Shifting our mindset on the purpose and outcomes of capitalism – moving to a longer-term view of what business exists to do - will allow us to think differently about what it means to be a more resilient business, and why it is important to become a regenerative business. The whole system depends on these mindset shifts, as they are the key to running companies well, well into the future.

In business, we constantly encounter so-called push-pull situations: Typically, organizations push resources to employees with the expectation that they will pull from that. The reality is that most employees are still expecting employers to tell them what to do. We are still far away from a shift in mindset and a new kind of ownership where employees are motivated to "pull in" what they need and "push up" creative ideas and new approaches to solve problems. Such a corporate culture, however, also includes mistakes, setbacks, and delays. You might accept that in the C-suite, but if we go down into the engine room of a company, speed and a zero-error strategy are demanded. That doesn't fit, does it?

Hill-Landolt: WBCSD works mainly with senior leaders – our main touch points are the C-Suite and the sustainability leadership of our member companies. For us, we focus on making sure that these points of leadership within companies are driving the transformations that are required. Vision 2050 was developed with the full support of WBCSD's Executive Committee, and the leadership statement at the front of the report was signed by 42 C-Suite leaders from our member companies. These leaders are fully aware of how challenging transformation is, and that it will involve significant cultural and financial investments within their companies. But while business needs to be bold enough to lead these changes, it must also be humble enough to know that it cannot succeed in driving them on its own. Companies must inspire their ecosystems and value chains to follow their lead, and they must work with policymakers, investors, and customers to ensure that all are aligned and working toward a future in which 9+ billion people can live well, within planetary boundaries.

The aspect of enablers and barriers is very important and not often taken into account in many discussions. It includes psychological barriers (individual level) and structural barriers (company level). What exactly does the "need for system thinking" mean in this context?

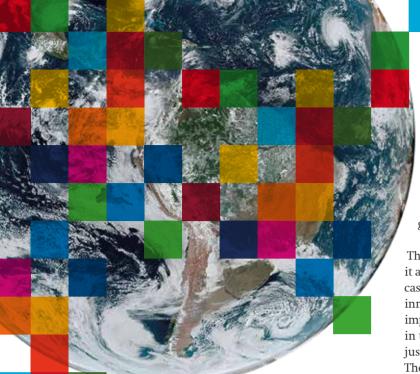
FRAMING THE DEBATE



Hill-Landolt: As mentioned above. it means that business needs to be bold enough to lead, but humble enough to build the kinds of coalitions that are capable of bringing about lasting change. The first thing we did when we set out to bring Vision 2050 up to date was to spend time understanding how systems transform, and it is this understanding that Vision 2050 is built on. That is why, in addition to the nine transformation pathways that map out the specific transitions and actions that business needs to drive, it also guides business as to the mindsets that those actions will depend on, and the enablers of transformation that make the difference between action and impact at scale. Business must steer, support, and contribute to change through its influence on - and interactions with - innovation and technology, individuals and consumption, finance and investment, and policy and regulation. And finally, systems thinking also requires business to think about the macrotrends, disruptions, and innovations that shape its operating landscape.

I would like to quote Peter Drucker once again. In a variation of his well-known phrase, one could say "You can only measure what you imagine." We will measure what we have defined beforehand. That implies that we have understood the issue of sustainability in all its complexity. Aren't we in 2021 overestimating ourselves a little?

Hill-Landolt: Not at all. We know that this is an enormous task. I'm happy to quote from our leadership statement here: "Business can lead. Business can forge the collaborations required to drive change. It can ... but more than that, it must. It is in business's interest to pursue the transformations set out in Vision 2050 - because its long-term success depends on thriving societies to trade with, and a healthy planet for us all to exist on." In other words, it's time to transform.



What Does Good SDG Management Look Like?

By Dr. Elmer Lenzen

The Sustainable **Development Goals (SDGs)** were originally intended to be used by governments to measure their commitment to sustainability. However, they are now increasingly being adopted by companies. Integrating the SDGs into in-house control and management systems is not easy. In this article, we explain the right steps.

Those who commit themselves to the SDGs are committed to society and the environment. Such action is not only done for philanthropic reasons, but also due to self-interest: No company can work successfully in an environment where global problems such as climate change remain unsolved.

This consideration requires adopting a risk perspective, but it also presents opportunities: Companies can find a business case within the SDGs that opens up new markets and creates innovation. Especially in global supply chains, the SDGs offer important opportunities. However, as the responsible manager in the company, you must understand that the SDGs are not just another sustainability standard or reporting framework. They do not include specific metrics. The SDGs provide global goals, and managers must align their internal control and management systems with this compass. That sounds complicated. And in fact, it is. But there are forms of support.

The best known is the SDG Compass. To make it easier for companies to integrate the SDGs into their infrastructures and implement targeted measures, the UN Global Compact - in collaboration with the Global Reporting Initiative and the World Business Council for Sustainable Development (WBCSD) - developed a five-step guide that offers approaches to aligning corporate action along the SDGs and assistance with reporting.

Equally important, in our view, are the WBCSD's SDG Sector Roadmaps. In April 2018, the WBCSD published a set of SDG Sector Roadmap Guidelines detailing a step-by-step methodology for how companies within a given industry can come together and explore their collective potential to advance the SDG agenda.

In the following, we would like to give you some useful tips for implementation. In doing so, we are following the three-step approach of the WBCSD: The starting point is the status quo. Understanding where you stand and honestly admitting your own strengths as well as weaknesses is the most important step. This is where the course is set and can only be changed with great efforts. (Figure 1)

How do you avoid "rainbow washing"?

"Rainbow washing" is the term used to describe undifferentiated reporting using the colorful SDG tiles. The term is derived from greenwashing. It describes the simple assignment of the SDGs to already existing activities, without the intent to improve. A corporate approach to the SDGs must therefore always include goals and measures that demonstrate further development.

The second step consists of developing measures as well as identifying opportunities and risks. In doing so, businesses should ensure that opportunities and risks are of different types so that they cannot be properly addressed using the same methodology. Risks, for example, have the unpleasant characteristic of being recurring, whereas opportunities are usually characterized by their uniqueness and occur only within a limited time window (window of opportunity).

In most companies, the management of opportunities takes place within the scope of corporate and product development, marketing, and continuous improvement processes. Since this is mostly done

Figure 1:

KEY STEPS INVOLVED IN AN SDG SECTOR ROADMAP

	1 Establish current position 옷	2 Identify key impact	3 Call to action
OBJECTIVE	Understand the sector's level of im- pact for SDGs across the value chain	Conceptualize where the sector can make the largest contribution to the SDGs collectively	Inspire the sector and others to take action to reach the SDGs
S	1.1 Map SDGs and current level of impact across the sector value chain	2.1 Identify key impact opportunities to drive progress toward realiza- tion of the SDGs	3.1 Identify barriers, potential solutions, and impact accelerators for the sector
MAIN ACTIVITIES	1.2 Prioritize SDGs for the sector	2.2 Assess sector apportionment	3.2 Identify short-, medium-, and longterm actions to advance SDG
Ŵ			3.3 Monitor, measure, and report progress
OUTCOME	Priority SDGs for the sector to address	Key impact opportunities for the sector	Action plan for the sector
Source: WBCSD (ed.): SDG Sector Roadmaps, p. 12			

FRAMING THE DEBATE



along well-trodden paths, the SDGs and sustainable transformation are not automatically taken into account. Therefore, the opportunities that can arise from following the SDGs are unknown in most companies. However, the topic can be fostered with the help of concrete ques-

tions and methods.

Finally, the third and decisive step is to take your own action. Walk the talk. This phrase indicates that failing to match your behavior with your statements leads to a loss of credibility and trust. This "valueaction gap" is widespread - research suggests that there are many internal and external factors which affect behavior and the reasons behind consumer choices.

The underlying reason for value-action gaps is that people must actively translate their values into actions. It is characteristic of humans to often cause such steps to be delayed, postponed, or even aborted. Therefore, those implementing SDGs into management systems need to identify barriers and take into account potential solutions and impact accelerators.

Step 1 Understanding

First of all, it is about identifying sector champion(s) and learning from their example. This helps in recognizing the relevant SDGs for your sector as well as the current or planned initiatives, >>

Figure 2:

SDG INDUSTRY MATRIX

- ► Financial services
- ► Food, beverage, & consumer aoods
- Climate extract
- ► Healthcare & life sciences
- Industrial manufacturing
- Transportation
- Energy, natural resources, chemicals

VISION 2050: TIME TO TRANSFORM

- Energy
- Transportation & mobility
- Living spaces
- Products & materials
- Financial products & services
- ► Connectivity
- Health & wellbeing
- Water & sanitation
- Food

WEF PLATFORM

- ► Shaping the future of consumption
- ► Shaping the future of energy, materials, and infrastructure
- Shaping the future of investing
- Shaping the future of mobility
- ► Shaping the future of trade and global economic interdependence
- Shaping the future of the internet of things and urban transformation
- Shaping the future of the new economy and society

partnerships, and products that relate to particular SDG targets. You will learn at which stage of the value chain your company interacts with each SDG and which geographies are most relevant for you.

Various initiatives and publications can provide assistance in this regard. This applies in particular to these three:

The SDG Industry Matrix of the UN Global Compact (UNGC) showcases industry-specific examples and ideas for corporate actions that are related to the SDGs. Presented in a series of publications, each matrix highlights the bold pursuits and decisions made by diverse companies for each SDG.

- Vision 2050: Time to Transform of the WBCSD presents a shared vision of a world in which more than 9 billion people are able to live well, within planetary boundaries, by 2050. To achieve this vision, we need transformation at scale, and business needs to focus its actions on the areas through which it can best lead the systems transformation.
- The World Economic Forum (WEF) Platform integrates and aggregates solutions to a complicated and fast-changing world with interconnected problems and challenges.

Each of these initiatives has developed detailed information on selected industries and business areas that can be used for your company. (Figure 2)

And this is how an initial classification of the SDGs can look, depending on the industry (Figure 3):

With all this data, you can assess your current level of positive and negative

impacts (high, medium, or low) for each SDG and the chances for potential business opportunities that are linked to this. The goal is a materiality matrix for trends and to prioritize SDG targets where the sector can contribute the most to minimizing negative impacts and maximizing positive impacts.

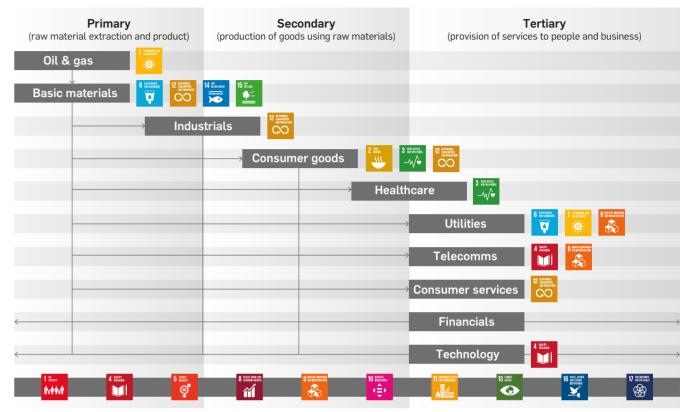
These questions help in the analysis:

- Is this topic a core issue for your company?
- Is it critical that your sector take the lead in addressing this specific sustainability challenge?
- in the sector?
- Does this contribute toward the prioritized SDGs identified in step 1? If so, which one(s)?
- Does it offer potential for impact contribution?
- Will the impact of this deteriorate before 2030 or soon after?
- Is this applicable globally? If not, to which geographies is it most relevant?
- Does it create a rebound effect?
- Is this complementary to other sustainability initiatives you run? If so, which ones? Will your stakeholders support this?
- Will your clients and customers support this?

The results can be transferred to such a table (Figure 4):

Figure 3:

SDGS & SECTORS: MAPPING THE HIGH-LEVEL LINKAGES



Source: Business & Sustainable Development Commission: Corporate Citizenship Sustainability, Simplified, p. 5

Figure 4:

SAMPLE SDG MAPPING TEMPLATE

	SDG1	SDG2	SDG3	SDG4
Relevant SDG targets	1.1, 1.4, 1.5	2.1, 2.3	3.5, 3.6., 3.9	4.3, 4.4
How can the sector contribute	Invest in local com- munities; enhance access to energy; contribute to resil- ience of vulnerable communities to climate risks	Share infrastructure to enhance agricultural produc- tivity	Reduce operational risks; protect workers and community from diseases	Invest in workforce education and talent pipeline programs
Relevant value chain stage	Upstream, core operations	Operations	Operations	Multiple
Direct or indirect impact	Both	Direct	Direct	Direct
Key geographies	Africa, Latin America	Africa	Global	Global
Current level of positive impact	High	Low	Medium	Medium
Current level of negative impact	Low	Low	High	Low
Sector's potential to contribute	Medium	Medium	High	Low
Potential to add business value	Low	Medium	Medium	High

Source: Business & Sustainable Development Commission: Corporate Citizenship Sustainability, Simplified, p. 11

- - Would this happen without any activity

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>>

Step 2 Prioritizing

For many companies, up to 90 percent of their market capitalization is attributable to factors beyond their essential assets. But what if there was even more value to be generated, if only we had better measurement methods?

The assessments described earlier are one step in this direction. The next step is to identify key opportunities and risks, review sector-specific reports and internal partner solution knowledge, identify stakeholder groups for expert input on potential impact opportunities, and agree on the format of engagement.

Now you can shortlist a manageable number of impact opportunities that: (1) are most likely to minimize negative impacts or increase positive impacts; and (2) can realistically be implemented. Apply criteria that all shortlisted opportunities must meet and when they should start, stop, or continue to have the most impact on transformation and innovation.

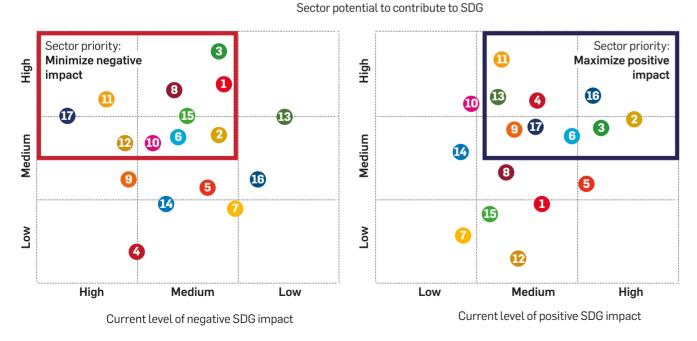
Ask yourself: What level of sector effort is required to implement and realize this action? What types of partners are needed to give this action impact? In what region(s) could this action have the greatest impact?

You also have to consider different time horizons: Short-term actions will typically involve process innovation and show results within one to three years. Medium-term actions will typically take several years. Long-term actions will show results by 2030 and often be based on the success of reaching medium-term targets.

The authors of the SDG Sector Roadmaps write: "A materiality matrix will allow

Figure 5:

SAMPLE SECTORAL SDG MATERIALITY MATRIX



Source: WBCSD (ed.): SDG Sector Roadmaps, p. 15

the sector to prioritize the mapping

exercise results and visually present

areas where the sector has the most

potential to maximize positive impacts

and minimize negative impacts over the

life of the roadmap. Figure 5 presents a

sample matrix where the x-axis scales

from high current negative impact (i.e.,

where the sector currently has adverse

issues that need to be managed) to high

current positive impact (i.e., where the

sector currently has positive impact) and

the y-axis indicates the sector's potential

to contribute to the SDG. The goals fall-

ing into the upper left- and right-hand

quadrants of the matrix suggest where

the sector could have the most material

contribution." (Figure 5)

Step 3 Engaging

A large number of internal and external influencing factors play a role in the development of the corporate SDG strategy. Societal consensus is also fundamental to the success of such a system-changing restructuring. The translation of these assessments into a concrete corporate roadmap includes opportunities and risks. Figure 6 is a good visual sector example, although the risk assessment is missing here. Such a graphic must therefore be further elaborated and improved to be truly complete. (Figure 6)

In further fine-tuning, the more detailed analyses of external and internal barriers play a key role. The authors of the SDG Sector Roadmaps write: "To fully realize the potential of the top impact opportunities identified in step 2, it is important to identify existing barriers that may prevent the sector from fulfilling this potential and the solutions that will help to overcome them. Identifying barriers for each opportunity is the first step in overcoming them and will support the development of a more detailed action plan. Many solutions will also have the potential to be impact accelerators, whereby they will not only overcome a barrier but scale SDG contribution."

Common structural barriers that may arise include: complexity, lack of buy-in, insufficient resources, limited availability of data, insufficient monitoring systems, or lack of leadership.

In addition, there are also psychological barriers. A good overview of this valueaction gap is provided by this listing from the website Effectiviology.com:

The value-action gap can occur due to various causes, such as:

Figure 6:

BASIC MATERIALS

The opportunity	SDG	Illustrating the o
Innovation & market development New products and services that address environmental health chal- lenges (e.g. lower impact chemicals, recycling technologies, certification)	11	 95% of chemical 50% expect brea The global mark certified product Energy requirem processing it. For aluminium even
Efficiency & cost savings Operational efficiency can signifi- cantly reduce costs.	B Winner B Winn	With energy accound has become a critic business enironme
Reputation management Manage potential negative social & environmental impacts Associated with the sector (health effects of chemicals, labour rights, child labour, healthy & safety, pollution etc.)		Adressing chemica inhibit, economic <u>c</u> economic constrai
Risk reduction Promote sustainable management of depleting natural resources (e.g. forests)	3 -√↓ 15 5 €	Independent certif led to measurable stakeholder rights operations. (Green

Global Goals Yearbook 2021



- Failure to generate concrete intentions for acting in accordance with values.
- Failure to recognize opportunities to act in accordance with values.
- Motivational complexities, for example in cases where people have competing values that support different actions.
- Social dilemmas, such as feeling that it's unfair to support a certain value when many other people don't.
- Lack of trust that acting in accordance with values will be effective, for example when it comes to not believing that a certain product will actually be recycled if you put it in the recycling bin.
- Counter-incentives that outweigh the associated values, for example when a product that is manufactured in a more ethical way is more expensive than >>

opportunity

als excutives say they'll innovate around technology over eakthrough / radical advances. (PwC)

ket for FSC certified wood is currently worth over \$5 billion ... ts are now carried by major retailers (GreenBiz) nent forrecycling iron is some 20% lower than for mining & or copper the energy saving is approximately 60% and for

90%. (The Buiness of Mining)

unting for 20 to 40% of operational costs, energy savings tical focus for mines, particularly in today's challenging nent. (Energy and Mines)

cals, waste and pollution problems can promote, rather than groth. Enacting solutions now can avoid longer-term aints. (Global Alliance on Health and Pollution)

ification for ... sustainable management of timberlands has e improvements in the protection of forests, wildlife, and 's ... as well as to the long-term economic viability of forestry nBiz)



competing products (this specific example is a case of an attribute tradeoff, whereby the attribute of the product being more ethical is balanced by it being more expensive).

- Lack of relevant options or increased difficulty of choosing those options, for example in the case of having no environmentally friendly version of a necessary product available for purchase.
- External forces that prompt people to act against their values, such as marketing that encourages people to buy a certain type of unhealthy food.

We must talk

Answers to these questions can best be found through appropriate stakeholder dialog. Such dialog formats can be roughly divided into three parts: the "problem space," the "solution space," and the "organizational space." The goals of the dialog processes are:

- 1. getting to know the initiatives through their presentation of the results of the respective self-evaluations,
- 2. having the participants work out - under guidance and appropriate moderation methods - structural obstacles that stand in the way of greater effectiveness,
- 3. developing suggestions together to promote sustainable action in practice.

You will not find an answer to all open points. Moreover, this process is very time-consuming. In the long run, it is almost impossible for most companies to conduct such stakeholder dialogs on their own and at their own expense. That is why it is worth getting involved in industry initiatives. The exchanges on such platforms can serve as useful aids. Two activities of the UNGC are worth highlighting here:

To support companies everywhere in advancing the ambitions of the 2030

Agenda for Sustainable Development, the UNGC has developed a portfolio of Action Platforms to inspire new and leading approaches to sustainable business. By bringing committed companies together with relevant experts and stakeholders. Action Platforms provide a collaborative space to:

- shape the definition of leadership on critical sustainability issues and inspire continuous performance improvement,
- participate in time-bound action plans to address sustainability challenges and support the achievement of goals,
- engage with stakeholders that have the power and influence to move sectors and peers in the right direction,
- utilize the unique assets of the UN Global Compact to advance the case for responsible business practices globally.

The UNGC has also developed the Global Impact Initiatives, which support companies in embedding the SDGs in their core business. In this way, companies align their activities with Agenda 2030, become more resilient, and develop new business opportunities. Available to participating companies of the UNGC, Global Impact Initiatives are run in close collaboration with Global Compact Local Networks and are designed with a view to generating behavior change across a large number of companies at the local level – achieving maximum impact and scale.

Companies participating in the Global Impact Initiatives will:

- learn from thought leadership content, best practices, and resources,
- access a diverse set of global and local engagement opportunities such as awareness-raising campaigns, trainings, mentoring, and blended learning,
- increase employee engagement and professional development opportunities,

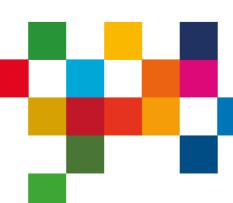
- build a professional network of peers, UN partners, and experts,
- accelerate the integration of the SDGs and Ten Principles into your company's business strategy and operations.
- deliver concrete company-specific outcomes. (Figure 7)

Fiaure 7: **UNGC ACTION** PLATFORMS

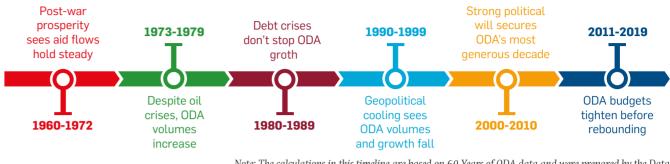
- ► Financial innovation for the SDGs
- ► Peace, justice, & strong institutions
- Decent work in global supply chains
- Pathways to low-carbon and resilient development
- Business for action platform for the ocean
- Water security through stewardship

GLOBAL IMPACT INITIATIVES

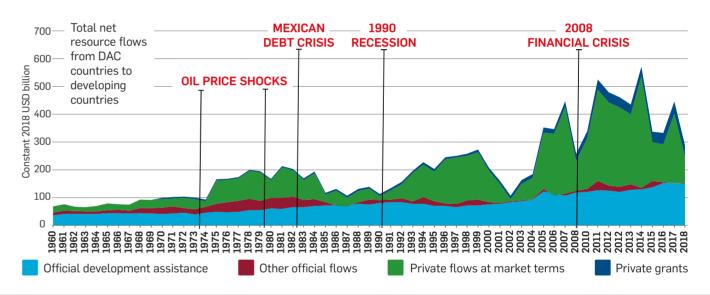
- ► Target gender equality
- SDG ambition
- Young SDG innovators program Climate ambition accelerator



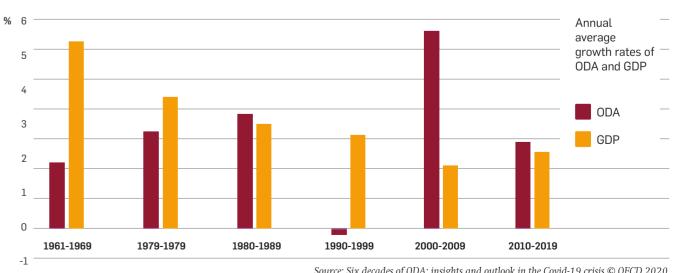
60 YEARS OF OFFICIAL DEVELOPMENT ASSISTANCE (ODA) **RESILIENCE AMIDST ECONOMIC CRISES**



Historically, ODA is the most stable external Resource for Developing Countries ...



... with limited correlation between increase in ODA and GDP



Global Goals Yearbook 2021



Note: The calculations in this timeline are based on 60 Years of ODA data and were prepared by the Data Collection Unit of the Development Co-operation Directorate of the OECD

Source: Six decades of ODA: insights and outlook in the Covid-19 crisis © OECD 2020

Is Covid-19 Slowing Progress Toward the SDGs?

As we move into a crucial decade of action on

achieving serious progress on sustainability, many are hoping the Covid-19 pandemic and subsequent economic recession will serve to reset our priorities toward a greener future in line with the UN Sustainable Development Goals (SDGs).

Tove Malmqvist Research Manager Consulting group GlobeScan However, many experts are not optimistic about the possibility of a green recovery.

Yes, Say Experts

Over half of sustainability professionals believe that Covid-19 will instead slow the rate of progress toward achieving the SDGs, according to a new report, Evaluating Progress on the SDGs, by GlobeScan and The SustainAbility Institute by ERM. Findings from the research also show that sustainability practitioners continue to report poor progress being made toward each of the 17 goals, as well as on sustainable development overall.

Nearly 500 experienced sustainability professionals in 75 countries were asked to evaluate the progress that has been made - on sustainable development overall and on each SDG; to rank the relative urgency of each goal; and to share insights into the priorities within their own organizations. Experts were also asked how the pandemic will affect progress on the SDGs. In addition, the survey tracked expert opinions polled in 2017 and 2019.

When asked to rate the progress to date on the overall transition to sustainable development, more than half of sustainability experts (54 percent) say progress has been poor, with most remaining respondents giving neutral ratings (41 percent). Only 4 percent are satisfied with society's achievements so far. Those who have the most negative views on progress tend to work in the academic and research sector, with European experts being the most negative. (Figure 1)

Global Goals Yearbook 2021

% of experts, 2020

54%

Negative expert perceptions of our collective sustainability efforts so far are also apparent in their assessments of progress on individual SDGs, with majorities rating achievements as being poor on 10 of the 17 goals.

Life below water (Goal 14), Reduced inequalities (Goal 10), Life on land (Goal 15), and No poverty (Goal 1) are seen by experts as the SDGs where society's level of achievement has lagged the most. Proportions of 7 in 10 or higher see progress in these areas as being poor - particularly on Goal 10 (Reduced inequalities).

In contrast, only around one-third of experts believe that there has been poor progress on Industry, innovation and infrastructure (Goal 9) and Partnership for the goals (Goal 17). (Figure 2) >>

Question

Figure 2: Progress on individual goals % of experts, 2020

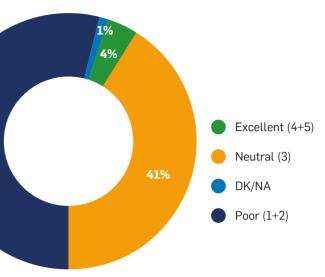
> Industry, Innovation and Infrastructure 21 Partnerships for the Goals 19 Affordable and Clean Energy 17 Gender Equality 16 Quality Education 14 Clean Water and Sanitation 12 Good Health and Well-being 11 9 Responsible Consumption and Production 9 Zero Hunger Sustainable Cities and Communities 9 8 Climate Action Decent Work and Economic Growth 7 6 Peace, Justice and Strong Institutions 6 No Povertv 4 Life Below Water 4 Life on Land 2 **Reduced Inequalties**



How would you rate society's performance to date in having achieved progress toward each one of the Sustainable Development Goals (SDGs)? Please use the 5-point scale provided (where 1 is "poor" and 5 is "excellent").



Figure1: Progress on transition to sustainable development



How would you rate the progress made to date in the transition to sustainable development globally? *Please use the 5-point* scale provided (where 1 is "very poor" and 5 is "excellent").

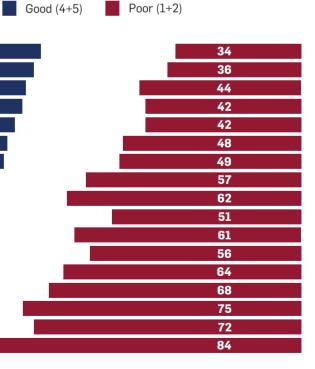


Figure 3: Urgency of SDGs



Question

Which three Sustainable Development Goals (SDGs) do you think require the most urgent action? Please choose at most three goals.

Figure 4: Goal receving most attention within organizations % of experts, 20

, 2020)			
, 2020	Climate Action	44		
Re	esponsible Consumption and Production	24		
	Quality Education	23		
	Partnerships for the Goals	21		
	Industry, Innovation and Infrastructure	21		
	Decent Work and Economic Growth	18		
	Gender Equality	18		
	Sustainable Cities and Communities	15		
	Good Health and Well-being	14		
	Affordable and Clean Energy	14		
	Life on Land	13		
	Clean Water and Sanitation	9		
	Life Below Water	8		
	Reduced Inequalities	6		
	Zero Hunger	6		
	Peace, Justice and Strong Institutions	5		
	No Poverty	4		

Question

Which of the Sustainable Development Goals (SDGs), if any, receive the most attention within your own organization (or within your own work if more applicable)? Please choose at most three goals.

Sustainability experts tend to believe that several goals where progress has been the most unsatisfactory are also the most urgent, which is a cause for some concern.

When asked to assess which goals require the most urgent action, experts overwhelmingly choose Climate action (Goal 13) - a goal that fewer than 1 in 10experts say we have made good progress on achieving. Reduced inequalities - the goal with the lowest overall score in terms of our collective progress – also ranked as one of the most important areas for action, along with Life on land (Goal 15) and Responsible consumption and production (Goal 12).

The perceived urgency of reduced inequalities has increased compared to 2019 in the wake of the pandemic, highlighting the unequal impact experienced by poorer countries as well as more vulnerable populations within countries. (Figure 3)

Within their own work and organizations, sustainability professionals are most likely to be addressing climate action; almost half of the experts surveyed (44 percent) and more than half of corporate sustainability professionals (52 percent) say this is one of the SDGs receiving the most attention within their own organizations or work.

Climate action is prioritized by respondents across most sectors and regions except the academic and research sector and among those based in Africa and the Middle East, both of which focus more on Quality education (Goal 4).

Far fewer (6 percent) say they focus their work on reduced inequalities, despite the relative parallel urgency of this secondary issue. Other goals that are mainly overlooked include No poverty (Goal 1), Peace, justice and strong institutions (Goal 16), and Zero hunger (Goal 2). (Figure 4)

Global Goals Yearbook 2021

The Covid-19 pandemic seems to have further dampened experts' views on our collective progress on the SDGs.

Around one-third of those surveyed say that the pandemic will serve to accelerate headway on achieving the goals, perhaps placing their hope in the potential of Green New Deals or renewed faith in our potential to collectively solve great challenges such as developing vaccines to save humanity. But over half instead believe that the pandemic and its economic impacts will further slow our already dismal progress. Experts in the service and media sectors are more optimistic about the potential impact of the pandemic, whereas respondents



% of experts, 2020



in the academic and research and NGO sectors, along with those based in Latin America, Africa, and the Middle East, are most prone to pessimism – possibly reflecting the limited resources available in many markets, resources that may be directed away from long-term sustainability priorities to cover more immediate needs. (Figure 5)

This diversion from the SDGs toward other, more immediate issues resulting from the pandemic and its economic impacts should be of great concern to all. At this crucial point in time, we need to ensure that our collective efforts on sustainable development are not only maintained but accelerated.

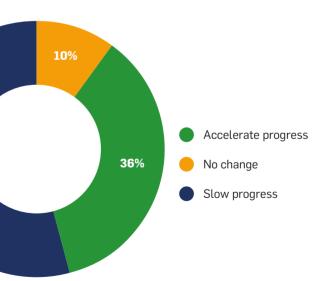


Figure 5: Impact of the pandemic on the SDGs

How will the Covid-19 pandemic and its economic impacts affect society's progress toward achieving the Sustainable Development Goals (SDGs) over the coming decade?

Source: All Charts: GlobeScan-SustainAbility Survey 2021 | Evaluating Progress on the SDGs

oaquin Phoenix's triumphant return to form in DC Comics' 2019 psycho-J logical thriller *loker* presented an interesting double edge to the dynamism of an actor who has often ventured to the furthest corners of both the movie world and his own mind in search of meaningful stimulation and contemplation.

In giving one of the industry's most considered thinkers a platform on which to speak about matters far removed from film scripts and red carpet flashbulbs, he found the project as profitable morally as the colossal box office receipts were for Joker's backers.

In a famous scene in the movie, Phoenix booms, "Do you ever actually leave the studio? Everybody just yells and screams at each other. Nobody is civil anymore; nobody knows what it's like to be the other guy."

As a social commentary, whether you regard the line to be uncannily insightful or perhaps just a Hollywood-laced dose of pernicious garbage, it actually matters not. That's because in the two years since - and despite decades of successfully evading the public gaze when it comes to cheap, gossip-laden, salacious column inches – Phoenix, as a social and environmental commentator, has never been more in demand or better regarded.

He's also never spoken so much sense. In the first instance, the 46-year-old actor is passionately dedicated to the preservation of human rights. His work for Amnesty International circumnavigates

PHOENIX RISING

How Joaquin Phoenix's

career revival has been

an important thing for

the man, the industry

and, perhaps even just

in a very slight way, the

welfare of the planet.

By Frank Grice



women's issues, looks to raise awareness of societal abuse - not least about the ongoing genocide in the Darfur region of Sudan, where over three million people are said to have perished - as well as lobbying governments, throwing his weight behind health organizations, global climate change projects, as well as reaching to support localized environmental and natural world initiatives. There is nothing he won't do to promote change.

"Making a difference is easier than you think," he begins. "The first step is making your voice heard. When you've done that, make it heard some more, and again. Fairness isn't a choice, it's a right, and we will get there if enough people stand behind it."

That drive for fairness is no better summed up than through Phoenix's Peace Alliance, which has raised well in excess of \$100 million for international peace-building initiatives.

- "Peace is such a vague term, and it's been repackaged and repurposed so many times over the years. It's been used for so many different things - environmentally, in war, as an urban delivery mechanism for solidarity ... yet there is no ambiguity in what we mean by it or expect from it.
- "I think sometimes we are overplayed by the expectations of so many organizations and mission statements and plans and everything else. Sometimes we need to just lay out a very simple message and let people use their insight and intelligence to walk their own path. >>

"There is always more than one route to a destination." he adds.

Perhaps what keeps Phoenix so engaged with "the fight" is the fact that his life has been patterned with creative accomplishment and personal heartache in equal measure.

Undoubtedly complex, reassuringly aloof and, it should be said, wonderfully funny (when he wants to be), the philanthropist and campaigner has always been someone smart enough to deconstruct a problem from the inside. "The route to all of us solving the world's ills isn't necessarily by doing more ... by going after these problems in a frenetic way where we're all clamoring for action and attention and praise. I think sometimes the best way to tackle a problem is to really take a step back and have a good look at it.

66 There is always more than one route to a destination.

"Take Covid as an example; for once ... for perhaps the first time ever, the movie industry found itself with time to sit back and ponder its own existence," he says. "And I think, in almost every corner, it didn't particularly like what it saw, and perhaps that's a good thing. We will see in the years to come."

Phoenix first came to prominence in 1986's SpaceCamp. His evolution as a personality as well as an actor would soon find itself played out against a backdrop of the heart-breaking death of his older brother, River, yet it led him to forge a reputation as a thoughtful, emotional, intelligent force the industry could be proud of.

Rather than rally against everything his sibling stood for - the fresh, clean-cut, poster-boy image of early 1990s teen entertainment – Phoenix instead followed a cerebral path that came as naturally to him as breezy, stylish charm did to River.

"We were always very different in that respect. I was always the miserable one," he says, breaking into a slow-motion smile that lights up otherwise somber eyes. "We were just different people going about the same project in different ways. Who knows where we would both be now?" he says, referencing River's untimely death in 1993 at the age of just 23.

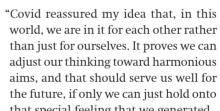
While, you sense, he will never get over the loss of his big brother, he most certainly has focused a career on producing things that are worthwhile in his memory. "He always told me I would be a bigger, better actor than him, despite the incredible heights he was at. He told me I wouldn't quit and I'd keep going, and everything I do has a piece of him in it."

Indeed, the arrival of Phoenix and wife Rooney Mara's first child in September 2020 offered the biggest possible tribute to an acting tour de force who continues to inspire almost three decades on their son is called River.

Phoenix picks and chooses his projects, dramatic or otherwise, in a measured way. He has been known to have long periods out of the spotlight, and he ensures that whenever there is the chance to return to prominence, it will be in a project deserving of the investment. The

successful revival of DC Comics' Joker certainly provided that in 2019 – a role played out with such impeccable artistry that talk of a sequel remains rife. It is also the highest-grossing R-rated film of all time, taking in more than \$1 billion at the box office.

That sort of mass populism goes against the man himself in many ways. He is just as happy taking on small independent projects, and his producer roles (including the upcoming documentary The End of *Medicine*, which explores the link between the treatment of animals and health pandemics - a subject more relevant now than ever before) have reflected a predominant urge to stimulate conversation rather than wealth. He is a philosopher, a deep thinker, the likes of which modern cinema doesn't respect as much as it might; but he does at least redirect those qualities into environmentalism, activism, and philanthropy. Across ambassadorial roles for the likes of Veganuary, PETA, and In Defense of Animals, he is a passionate supporter of organizations that respect the Earth's health, and the welfare of those who reside on it.



"I think Covid enabled us to reconnect to the possibility of sustainability (in preserving life), and change (in being adaptable to the new conditions that were being put in place around us).

"It also showed us that absolutely anyone can stimulate debate, can raise awareness for goodness, can put real pressure on those who have influence. And finally I think we understand better now that conflict is a natural human and animal condition. It is as natural as love and laughter. By accepting and embracing conflict you can then manage how it's played out. You can still obtain peace from resolving it the right way, rather than by force."

Phoenix also raises the notion that real action cannot be a constant. "People

FRAMING THE DEBATE



Covid reassured my idea that, in this world, we are in it for each other rather than just for ourselves.

that special feeling that we generated.

who push for change need to take a break as much as those being lobbied need headspace to make their minds up," he says. "When you push too hard you lose people, so my belief is that if we think harder about the delivery of a message, we are much more likely to see results."

This is a man who clearly possesses a true talent for theorizing over the universe it's a gift to look at the universe, at life forms, at the science of what's around us, and picture the reality of what that is and who we are.

- "The progression we all want for a better environment, a fairer world, needs to be one of those things that ebbs and flows. As society changes or goes through new challenges, it moves in and out of relevance. At the moment the whole world is in conflict with itself – it needs help in ways more meaningful than celebrities singing songs over YouTube.
- "Luckily it has a few billion people willing to get it to where it needs to be -Iam confident of that."





LEAVE NO ONE BEHIND

"We must urgently transition to a green, gender-sensitive, and inclusive economy, and raise global ambition in the fight against climate change. We must eradicate poverty and build a fair globalization that delivers for all. The Sustainable Development Goals offer a path. Let us take it together and uphold our promise to

António Guterres, UN Secretary-General

Four Rings and Three "E"s for a More Sustainable Society

Engage, Educate, Empower: These are the principles Audi has adopted for its social commitment in order to put it on a strategic foundation. Activities range from donations and financial aid – specifically during the coronavirus pandemic – to the promotion of ideas for sustainable mobility concepts, all the way up to encouraging others to work toward a better world.

By Dr. Roxana Codita and Dr. Stefanie Augustine, Audi

resource-friendly production, and re-

sponsible supply chains, and also in-

cludes social sustainability. "We at Audi

have a vision of sustainable mobility that

everyone can use with a clear conscience.

That is why we take responsibility for

the future of our planet," explains Silja

Pieh, Head of Corporate Strategy at AUDI

AG, adding, "Besides environmental and

economic aspects, social responsibility

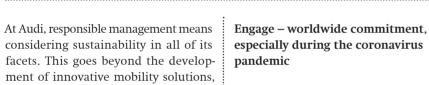
therefore also plays a key role in our

strategy." In so doing, Audi is putting its

social commitment on a broad strategic

foundation, guided by three principles

- "Engage," "Educate," and "Empower."



Audi combines all activities relating to donations and volunteering under "Engage." This heading also encompasses social sponsorship, events, cooperations with nonprofit organizations, and the promotion of projects with a positive social impact. One example of this is the aid made available in relation to the coronavirus pandemic. In 2020, Audi donated emergency coronavirus relief of €600,000 to hospitals near its sites in Germany. The company also provided 10,000 medical masks for the Ingolstadt region and 5,000 medical masks for the Neckarsulm region. "With these dona-





tions, we want to send a signal of solidar-

ity and social responsibility at our home

sites in Ingolstadt and Neckarsulm, and

to thank all of the doctors, nurses, and

other staff of the social institutions and

hospitals for their untiring efforts in this

exceptional situation," said Wendelin

Göbel, Board of Management Member

for Human Resources, when handing

In Mexico, Audi supplied doctors and

nursing staff with vehicles at no charge,

enabling them to commute between

their homes and workplaces without

risk of infection. Audi Mexico also do-

nated protective equipment to various

hospitals and the local Red Cross. Audi

Brussels likewise donated money and

over the donation.



protective medical equipment to hospitals and the Red Cross. In addition, the employees of the Brussels site actively supported the StreetwiZE organization, which specializes in talent development and change management, investing primarily in educational projects for children in need.

Educate - innovative ideas from clever people

"Educate" unites all the training and education programs that Audi offers or supports – not only for employees, but also for business partners and society as a whole, for example through initiatives at Audi sites. For Audi, "Educate" also means helping to shape progress in research and teaching and cooperating with numerous national and international universities. The MQ! Innovation Summit that Audi organizes comes under the category of "Educate," for example. This summit brings together numerous participants from across the world to discuss the mobility of the future. Here, the focus is on the four key aspects of intelligent, networked, social, and ecological mobility. In panel discussions and workspaces, the participants discuss solutions, concepts, and new ideas under the motto of #neverstopquestioning.

Sustainable mobility concepts are also on the agenda at the Audi Hackathon. which likewise comes under the category of "Educate." In 2020, 25 participants spent 30 hours developing new ideas for sustainable urban mobility - from the concept on the drafting board up to the digital prototype. The participants then had to convince the jury in 20minute presentations. The team with the "10MinuteMap" concept was awarded first place. The app shows users where they can find local points of interest such as businesses or cafés within a 10-minute radius of their location and how they can get there as sustainably as possible. "The hackathon showed how we can create new ideas in an unbelievably short time when we bring together different points of view. We need to think sustainably, ecologically, economically, and socially," says Matthias Brendel, Head of Audi Denkwerkstatt.

Empower – achieve more together

With "Empower," Audi hopes to encourage others to advocate sustainable practices and lifestyles. Through various innovation and cooperation projects, the company empowers other players to make the world as a whole more sustainable. Audi acts as a multiplier here and plays the role of a "change



agent." The sustainability agents include employees, customers, and other stakeholders. "Empower" will bring about even more far-reaching and long-term changes - however, without the direct involvement of the company. This will give the instrument a strong impact.

One example of this is the Nunam startup, which is sponsored by the Audi Environmental Foundation. Nunam repurposes old batteries. The start-up company takes used lithium-ion battery cells and batteries and creates a new mobile energy storage system that can serve as a light source for Indian vegetable sellers at a market after dark, for example. The start-up provides the power banks as cheaply as possible so that even the poorest people in the region have access to electricity.

Three "E"s to fulfill the SDGs

With its activities relating to Engage, Educate, and Empower, Audi is also making a contribution to a whole series of Sustainable Development Goals (SDGs), especially Goal 4 (Quality education), Goal 8 (Decent work and economic growth), Goal 9 (Industry, innovation and infrastructure), and Goal 11 (Sustainable cities and communities).

Rebooting Decent Work

Although mainstream media coverage and public interest in sustainability has increased, the pandemic has decelerated progress on the Sustainable Development Goals (SDGs). Workers have felt this most in the progress toward full and productive employment and decent work for all (Goal 8). By making Goal 8 one of the key elements of their recovery strategy, businesses, investors, and asset managers could get that progress back on track and improve supply chain resilience to future shocks.

Control Risks

By James Lewry, Control Risks

The Covid-19 pandemic has been the most far-reaching shock to the workplace since the advent of personal computing. Abrupt changes to supply chains have led to job losses in manufacturing and logistics. Crews of cargo ships found themselves without employers while at sea. In emerging economies, informal workers were impacted most through lost income and received little government help. Pandemic restrictions and rapidly shifting consumer trends raised existential questions about the future of some jobs and sectors. But in other sectors, booms were created, such as the app-based economy, presenting frontline workers who delivered food, goods, and people with health and safety challenges and job insecurity due to an increase in casual or informal employment and zero-hours contracts.

In emerging and developed economies alike, young people were disproportionately affected through the loss of valuable early work experience and compromised education systems. In emerging economies, concerns were expressed about a reversal in the progress on child labor, which is linked to an increase in poverty - a significant hurdle for Goal 1 and ending poverty in all its forms.

This has happened in a world of work already undergoing major changes through increased automation, an emergent energy transition, and rapid economic progress in major emerging markets. Although the pandemic did not create social inequality in the global economy, it did cruelly expose it. More than 1.6 billion informal workers have been at risk of losing their livelihoods worldwide, with income among those workers falling by an estimated 60-81 percent in some regions.

Stakeholders respond

The UN Secretary-General has called for a new social contract that integrates employment, sustainable development, and social protection, recognizing the gap between changes in the world of work and the policies and institutions meant to manage them.

The flood of government support to the private sector in 2020 will unwind in 2021, but its legacy will continue. Taking public money means accepting public scrutiny - businesses' circle of stakeholders will widen. The same trend has created a positive momentum, with several governments, including the United States, putting new jobs and better working conditions at the heart of their economic recovery plans.

Over the past 20 months, we have seen the introduction of, and national debates on, new legislations that are in

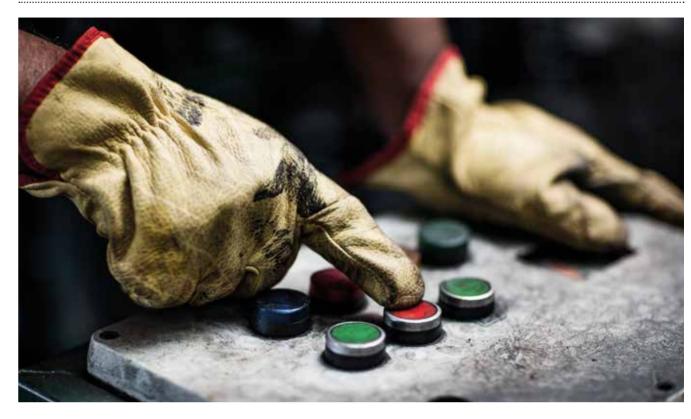
line with the Goal 8 targets, from the EU-wide mandatory human rights due diligence law to adoption of draft human rights legislation in Germany and Switzerland. The explosion in ESG investing has also accelerated investor scrutiny on the social issues that Goal 8 is seeking to address and created a market for social "upside" investing.

The pressure on employers mounts...

Companies already on the path to decent work and sustainable growth fared better during the pandemic than ones who were not. Those companies benefited from more resilient supply chains, the agility to pivot to new markets and opportunities, and the continued financial performance of those businesses. But for those companies that had not aligned fully with the SDGs - or had unsustainable employment practices in their supply chains – there is an opportunity to boost recovery by aligning with Goal 8.

The key aims of a Goal 8-focused strategy pivot around:

- tackling inequality and discrimination, particularly within vulnerable groups such as workers with disabilities, young workers, and migrant workers;
- upholding labor standards and skills development throughout the value chain;



- identifying child and forced labor and using remediation when abuses are found:
- preventing unfair hiring and recruitment practices, particularly of vulnerable groups.

Lessons from the leaders

Faced with growing pressure from investors, governments, and consumers, and the need to recover supply chains and operations, here are three areas that companies aligned with Goal 8 are focused on:

 Understanding material risks and opportunities: Those who performed well in the pandemic understood their supply chain in detail, having mapped their suppliers and the material social risks impacting them. They know where to look, and what to look for. They are more likely to have included decent work and social-impact measurements as part of their sustainability strategies. • Worker-centric due diligence and policy: Leading companies could already answer the question of whether the workers who delivered their packages, made their clothes, or assembled their electronics were paid a living wage, were in debt bondage, or were forced to work long hours with no job security. These companies used due diligence focused on the local risks most material to their workers to ensure risks are understood and managed at the source.

• Collaboration and partnerships: Leading companies were working with suppliers to maintain progress toward decent work and to build capacity with those suppliers in supporting their workers. They are collaborating with suppliers, NGOs, and industry peers to raise the standard of workplace safety and provide independent opportunities for workers to voice concerns and grievances regarding their employment.

Companies that direct their policies to survival mode will end up eroding work-



ers' contracts and conditions, and they are more likely to struggle through the aftershocks of the pandemic and the changes it has accelerated. Whereas those that integrate a values-based approach and address Goal 8 through their corporate strategies by investing in their people and supply chains today will come out more robust and resilient on the other side.





The General Secretariat of the Khalifa International Award for Date Palm and Agricultural Innovation has sought, since the award's establishment in 2007, to bring a consistent vision, goal, and message to the Millennium Development Goals (2000-2015) and the SDGs (2015-2030). The Award has succeeded in developing the infrastructure of date palm cultivation and agricultural innovation sectors at the national and international levels.



By Prof. Dr. Abdelouahhab Zaid, Khalifa International Award for Date Palm and Agricultural Innovation

The Award's main objective is to highlight to the world the great interest of H.H. Sheikh Khalifa bin Zayed Al Nahyan, President of the UAE in date palm cultivation and agricultural innovation. His Highness has made generous initiatives to organize activities to support research in this field and to embrace the UAE's leading role in

supporting creativity and innovation in the agricultural field in general, and date palm cultivation in particular. The Award also pays great attention to environmental protection, fighting poverty, and increasing green areas to achieve sustainable development. In addition to supporting scientific research, it encourages and appreciates the professionals working to develop the date palm and agricultural sectors, in the UAE and worldwide. The Award also benefits from various previous experiences to improve the agricultural and date palm sectors in accordance with the best international practices. This confirms that the Award's vision, mission, and objectives have a great benefit globally

as well as efficient implementation, all within the criteria of Goal 17 (Partnerships for the goals).

Award's activities and achievements

Following the directives of H.H. Sheikh Mansour Bin Zayed Al Nahyan, UAE Deputy Prime Minister, Minister of Presidential Affairs, and the continuous follow-up of H.E. Sheikh Nahayan Mabarak Al Nahayan, Minister of Tolerance and Coexistence, Chairman of the Award's Board of Trustees, all the national efforts were guided to support and develop the date palm cultivation sector by launching a set of initiatives and development projects aiming to enhance food security and achieve sustainable development. These efforts are as follows:

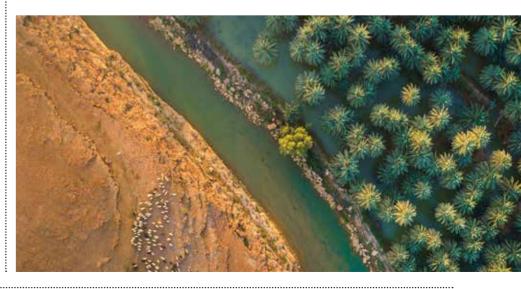
- · Organizing 13 sessions of the Khalifa International Award for Date Palm and Agricultural Innovation (2009-2021) with the participation of 1,648 candidates representing 56 countries.
- · Organizing 3 sessions of the Distinguished and Innovative Farmer Award (2018-2020) with the participation of 192 farmers from across the UAE.
- Organizing 12 sessions of "The International Date Palm Photography" competition with the participation of 3,971 photographers from 54 countries.
- · Organizing 5 sessions of "The International Date Palm Poetry" competition with the participation of 586 poets representing 18 countries.
- · Organizing the annual International Egyptian, Sudanese, Jordanian, and Mauritanian Date Palm Festivals.
- · Organizing the annual Abu Dhabi International Date Palm Exhibition (2015 - 2021).
- · Organizing the International Date Palm Conference every four years (1998-2022) with the participation of 1,754 researcher from 45 countries.

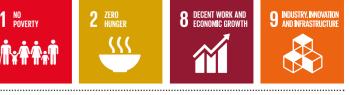
 Organizing a ministerial conference for date-producing countries to develop a framework strategy for the eradication of the red palm weevil (2019).

- Launching the Abu Dhabi Declaration to Combat the Red Palm Weevil and establishing a trust fund under the supervision of the FAO (2019).
- · Establishing refrigerated date stores in Al Wahat Al Bahariya in the Arab Republic of Egypt with a capacity of 4.000 tons (2019).
- Rehabilitation of the Siwa government dates factory in the Arab Republic of Egypt with a production capacity of 10,000 tons per year (2017), as well as the New Valley Dates Complex with a production capacity of 5,000 tons per year (2019).
- Launching the world's largest electronic library, which includes 299 scientific sources in both Arabic and English, specialized in the fields of date palm cultivation and agricultural innovation.

Idea behind the Arab date festivals

The organizing of date festivals in dateproducing areas in Arab countries is mainly based on the Award's vision, which considers the improvement of





job opportunities and living standards of date-producing families. This is achieved by establishing multiple development projects, such as refrigerated date stores, and guiding farmers on how to produce organic dates according to internationally recognized standards, without undermining natural resources. This contributes toward expanding the scope of communication as well as the availability of Arab dates in the global markets. As a result, the Award gained a significant role in achieving various SDGs:

Goal 1 (No poverty) and Goal 2 (Zero hunger)

The Award's General Secretariat has worked for several years hosting date palm farmers from various date-producing countries at date festivals and exhibitions that it has organized in several Arab countries. The aim is to provide an opportunity to small farmers and date producers in the Arab region to participate in festivals and date exhibitions in order to exchange experiences between farmers from date-producing and processing countries. Another goal is to provide the opportunity to export Arab dates to various countries across the world through direct communication with international date-trading organizations, hosted by the Award in each exhibition. This, in turn, has >>

a direct result on improving the reputation of Arab dates internationally, thus increasing the global demand for Arab dates, which has been highlighted in official statements by senior officials working in this sector in Arab countries.

The Award has also worked to improve the quality of Arab dates so as to be in line with the requirements of international markets. The Award has supported and rehabilitated more than 200 date palm farms in the Siwa Oasis in the Arab Republic of Egypt to obtain an organic farming certificate for dates (Ecocert) accredited by the European Union. This, in turn, has contributed to enhancing the competitiveness of Arab dates with other international dates. This all contributes to improving the income levels of small farmers and even eliminates hunger and poverty among the farmers and date producers in Arab countries.

Goal 8 (Decent work and economic growth)

The Arab dates exhibitions and festivals (more than 16 festivals and exhibitions in six countries) contribute to enabling the broad commercial activities of date palm growers, producers, and processors in Arab countries by promoting comprehensive, diversified, and productive rural economies that create decent job opportunities and increase incomes. This has been implemented in the Siwa Oasis in the Arab Republic of Egypt, where the International Festival of Egyptian Dates in Siwa took place for four consecutive years (2015-2018) and contributed to improving livelihoods and increasing productivity capacities. It also led to an increase in the number of date-packaging factories, and this is supported by a number of performance indicators. For example, Egyptian date exports increased during the festival's organization period to 17 percent, while the amount of dates imported from outside the country decreased by about 25 percent. This indicates the contribution of the Award's activities and events toward increasing the economic growth of the date palm cultivation sector in order to achieve sustainable development for agricultural communities. This is because the Award has extensive knowledge, experience, and high-level partnerships with international organizations that it relies upon to support the development of value chains for Arab dates.

Goal 9 (Industry, innovation and infrastructure)

The Award has also contributed to promoting innovation in the agricultural sector, at both the individual and institutional levels, in support of the SDGs. This is achieved by encouraging innovation and providing the opportunity for innovative agricultural entrepreneurs to compete for one of the Award's categories (Pioneering and Advanced Innovations Serving the Agricultural Sector). Each year, the Award organizers receive hundreds of innovative agricultural projects, and the winner receives a trophy, an appreciation certificate, and an amount of more than \$200,000. The number of participants in this category has reached more than 298 from 56 countries. These innovative projects have contributed to improving the quality of life, work systems, and sustainable production levels in the agricultural sector.

Goal 12 (Responsible consumption and production)

The Award has also contributed to creating a balance between the production and consumption systems in the date palm cultivation sector. A more sustainable practice is achieved through knowledge transfer and by holding a series of workshops for the farmers. The Award has hosted more than 30 international experts in cooperation with international organizations in the field of date palm cultivation and agricultural innovation.

Goal 13 (Climate action) and Goal 15 (Life on land)

The Award's projects at the regional and international levels have had a direct pos-



itive impact on the development of the agricultural sector — and date palm cultivation in particular in the date-producing countries — and directly contributed to enhancing climate awareness for workers in this sector. The Award's investments in sustainable farming methods in date-producing countries — by encouraging farmers and promoting traditional farming patterns — have contributed toward better preserving natural resources and increasing the ability of cultural agricultural systems to adapt to climate change.

Goal 17 (Partnerships for the goals)

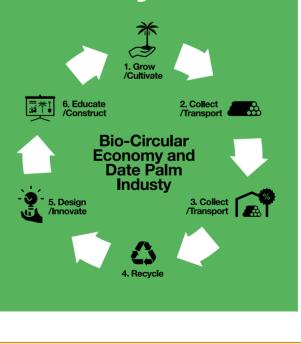
The Award's General Secretariat signed more than 38 memoranda of understanding during the period of 2015-2021 with a number of concerned ministries in the date palm cultivation sector and agricultural innovation. The Secretariat also worked with a number of international organizations, civil society organizations, and private-sector companies on this effort. This has built a framework for partnerships with those ministries and organizations. The aim is to extend communication and cooperation as well as promote comprehensive, diversified, and productive rural economies - including in business areas related to date manufacturing and trading – through the implementation of initiatives and projects and organizing conferences and festivals.

DEVELOPMENT AIMS

By Prof. Dr. Abdelouahhab Zaid and Dr. Sandra Piesik

The Khalifa Award Report has been inspired by 46 contributors from across 21 countries, including adaptation experts. It provides a framework to tackle the major climate change issues such as CO_2 emissions, biodiversity, desertification, drought, and land degradation, which can lead to reduced harvest yields and the deterioration of natural resources, particularly in lower-income countries. By implementing sustainability principles, date palm ecosystems are vital in reversing desertification in desert regions. They can also play a key role in reducing the number of people who face food insecurity across the globe – that number, unfortunately, has significantly increased since the Covid-19 pandemic outbreak. Therefore, the pursuit of a self-sustainable developmental model serves both planetary and human health.

Bio-Circular Economy and Date Palm Industry





As the year 2021 marks the beginning of the UN Decade of Ecosystem Restoration (2021–2030), the Khalifa Award Report, Bridging Boundaries, was framed around the "5 Ps": people, planet, prosperity, peace, and partnerships, which shape the 2030 Agenda for Sustainable Development.

Moving toward the implementation of sustainability enforces the replacement of the traditional "manufacture, use, and dispose" economy with a bio-circular model, where everything that is extracted from nature returns to nature, and in this way we allow the global economy to rebuild in a healthy manner. The date palm industry has huge potential to lead this shift to a bio-circular global economy.

Global date palm production is estimated to be 8 million tons annually. Date palm trees have a vast range of health benefits, in addition to a variety of products that are produced from it and used around the world. Currently, the date palm industry produces a huge amount of unnecessary waste, with an average rate per tree of 23 kilos of waste per year, which significantly contributes to environmental pollution. This could be cut to zero by using second-class dates in consumable products such as chopped dates, date paste, and date honey.

Date palms also produce fibers that can be used in several useful products such as ropes, thermal insulation, and evaporative cooling equipment. This gave rise to the idea of turning date palm waste into a sustainable business. Date palm fibers will have a great impact on the MENA region, which accounts for 90 percent of date palm production. Minimizing the produced date palm waste will require skills, technology, and new jobs. This will tackle poverty and revive investment opportunities in the region and, most importantly, in low-income countries.

As urban populations continue to grow across the world, rural spaces are depopulating. Date palm oasis ecosystems emphasize the importance of linking the rural with the urban, as date palm trees can absorb huge concentrations of CO_2 – every tree can absorb 200 kilograms of CO_2 every year. This means that the 100 million date palm trees in the MENA region can absorb 28.7 megatons of CO_2 per year. In return, this could help lower CO_2 levels and positively impacting climate change.

Unlocking Women's Economic Potential: Merck Initiatives Seek to Level the Playing Field

Gender parity is still a long way off. Not only do women earn significantly less than men on average, but they also sacrifice far more time to (unpaid) domestic activities and caring for sick and elderly relatives, often at the expense of their own health and well-being. Merck, a science and technology company, is pursuing two initiatives in an effort to rectify this imbalance. Although no small task, this undertaking is of great importance to the organization, which offers products and solutions to address diseases that disproportionately impact women, including thyroid disorders, multiple sclerosis, and infertility. Merck is thus positioned to help improve critical aspects of women's health, from awareness and education to access to health and government programs.



By Lynn A. Taylor, Merck

When it comes to women's economic empowerment, one single figure is very revealing: 99.5. According to estimates by the World Economic Forum, this represents the number of years it will take to achieve gender parity in the dimensions of economic participation and opportunity, educational attainment, health and survival, and political empowerment if things continue to move at their current speed.

Inequality and its consequences

Both men and women would benefit from an expedited achievement of gender parity. After all, the gender gap is not only unjust but also has massive economic consequences. Not only do women spend much more time on unpaid work than men, but they are also frequently paid less than men for remunerated labor. Given these circumstances, women's labor accounts for a much smaller share of gross domestic product. By contrast, according to the International Labour Organization (ILO), if women were paid the same as men, they would contribute between 5 percent (United States) and 34 percent (Egypt) more to national income (depending on the country). The ILO also estimates that 865 million women worldwide currently suffer from this inequity.

In addition, women are much more likely than men to be responsible for child rearing or unpaid caregiving, frequently in addition to any paid employment. This dual burden often has a tangible impact on the health and well-being of women who find themselves in this situation. According to a 2011 study published in the American Journal of Public Health, women who care for relatives at home are six times more likely to suffer from depression or anxiety.

Initiatives help drive UN Sustainable Development Goals

Must things stay this way? Merck does not think so. By the mid-2010s, the Executive Board of this German blue-chip company had already moved to advance gender parity for women through its Healthy Women, Healthy Economies initiative as well as the Embracing Carers initiative. These two programs are pursuing complimentary goals: to reduce the health impacts on women caused by the dual responsibility of work and family, and to provide support to unpaid caregivers, whether women or men - objectives that happen to closely align with UN Sustainable Development Goals 3 and 5.

Launched in 2015 as a partnership between Merck and the governments of the United States and the Philippines, the Healthy Women, Healthy Economies initiative is underpinned by one fundamental concept: that unlocking women's potential will lead to more economic growth. With this in mind, the founding partners first considered where women needed the most support – such as access to health services and workplace safety – and developed toolkits to provide to the governments and organizations of the Asia-Pacific Economic Cooperation forum.

A collaborative of renowned partners

Healthy Women, Healthy Economies has programmatically collaborated with the US-based think tank The Wilson Center and a US-based nonprofit working to im-



prove the health of mothers and babies, March of Dimes, giving the initiative a much broader base of support and impact. Merck has built a collaborative among the various initiative partners while also spearheading and guiding the program's focus.



Merck is also driving the Embracing Carers initiative, a collaboration with nine global caregiving organizations that seeks to provide support to women and men in their role as unpaid caregivers and drive public awareness about the challenges they face. Women carry a disproportionate burden of this work no surprise considering that 70 percent of the time, it is women who provide care for parents, grandparents, or inlaws, often without any pay at all. It goes without saying that such a situation has an impact on the carers' economic, mental, and physical well-being.

GENDER Equality

17 PARTNERSHIPS FOR THE GOALS

Eliminating blind spots in research

The program is also working to fill in data gaps and collect adequate research-based evidence. For instance, Merck is supporting the research being conducted by Dr. Felicia Knaul, a renowned economist from the University of Miami (Florida, United States) leading the examination of women's unpaid labor with a current focus on Canada, Chile, China, Mexico, and Peru.

Influence of the pandemic on caregiving

In 2020, Embracing Carers created the Carer Well-Being Index, a 9,000 person survey across 12 countries to determine the current and residual impacts of Covid-19 on unpaid caregivers on their mental, physical, and financial well-being. The survey's findings show that the global pandemic heightened pressures on caregivers, with caregivers averaging 24.2 hours per week on providing care. Caregivers perhaps unsurprisingly experienced a significant mental toll, with 76 percent reporting feeling more burnt out than ever, and 64 percent feeling the pandemic made caregiving harder. With many caregivers feeling unrecognized and unsupported, a key takeaway from this report is the need for support services and resources from all levels of society - governments, private sector, non-profits, and local communities.

Concern for People, Concern for Energy



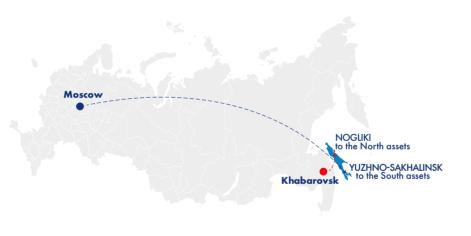
Sakhalin Energy is the operator of the Sakhalin-2 oil and gas project. The company operates onshore and offshore facilities with more than 100 contractors and about 10.000 employees. In the complicated epidemic and economic situation of 2020, it was critically important to arrange efficient management of the company as an organization with a continuous production cycle, a decision-making process to protect personnel and productions assets, and to provide continuous deliveries to customers.

By Valentin Zhovtun, Sakhalin Energy

The battle has begun

When the pandemic was announced in March 2020, a corporate General Coordinating Committee and three Task Forces were created to ensure uninterrupted operation of the company under the high alert mode. Having operated 24/7 throughout the whole period of Covid-19, they are still in place. Also, in order to ensure two-way communication, the company established a 24/7 hotline: Personnel and family members are able to get prompt answers to any questions and concerns.

Together with standard infection prevention measures, Sakhalin Energy proactively introduced temperature checks for everyone at the entrances of the company's production facilities and offices, mandatory use of medical face masks, social distancing, use of hand sanitizers, etc. The company had to enhance measures to prevent the spread of the coronavirus infection, take prompt management decisions aimed at ensuring the stable operation of the company during the pandemic, and take into account the situation on the global energy markets.



New logistics

The Sakhalin-2 assets are located at a significant geographical distance from each other. Three offshore oil and gas production platforms and an onshore processing facility with a compression station construction site are located in the north of Sakhalin. The Prigorodnoye production complex, including the LNG plant, is located in the south of the island. Previously, all personnel arrived at the Sakhalin Oblast Airport in the south and

were then transported by train and plane to the assets.

During the pandemic, for the purposes of minimizing the risks of coronavirus infection, managing ingress into the production facilities, and preventing the spread of infection among communities during personnel transportation, the company developed new logistical schemes. The staff working at the northern assets come straight to the north via Khabarovsk Airport (located at the mainland) to Nogliki

(settlement in the north of Sakhalin). Those who are working at the south facilities arrive at Yuzhno-Sakhalinsk Airport in the south. In this way, passenger traffic for the delivery of personnel on rotation was distributed via the northern and southern hubs. In addition, by actively using air services (charters), the company supported the regional airlines during the economically tough time (occurring due to a significant decline in regular air flights during the pandemic).

Temporary accommodation facilities

The considerably long (about two weeks) latent stage of the new coronavirus posed a serious risk to keeping the production facilities safe and free of infection. To deal with this, Sakhalin Energy promptly established 10 temporary accommodation facilities (TAFs), where each employee involved in the Sakhalin-2 project had to stay under observation for 14 days before entering the assets.

Sakhalin Energy did its best to establish high standards of health, safety, hygiene, and epidemiology in the TAFs. In all areas of vital activities (meals, changing bedding, waste disposal, cleaning of premises), the company adopted stringent procedures to minimize any spread of infection. Mandatory health controls, including double testing for Covid-19, and regular temperature checks were carried out for all people under observation.

In order to use the employees' time in TAFs efficiently, the company arranged on-line training. In addition, the employees were offered access to more than 300 courses on soft skills competences.

Large-scale shutdown

In 2020, the company had planned to carry out a complete shutdown of the entire gas system and perform extensive repairs on the equipment taken out of operation. However, the Covid-19 pandemic introduced its own changes: Many countries, including Russia, limited as much as possible any international transportation routes, which made it impossible to invite foreign contractors and representatives of manufacturing plants to provide their expert support. Sakhalin Energy analyzed potential risks, reconsidered the scope of work, and developed a new approach to implementing the shutdown. The company became the first in Russia to extensively apply what are called "digital twins": Using helmets equipped with broadcasting video devices, specialists at the assets carried out repair operations at the production site, and engineers of foreign manufacturing plants remotely controlled the operations in real time. All works were completed three days ahead of the approved modified schedule.

Psychological support

The changes brought by Covid-19 could have caused stress among the company personnel. To address this, the company arranged the provision of urgent personal psychological assistance to employees. In addition, targeted webinars were arranged to talk through topics such as how to eliminate general stress, hesitancy, and anxietv.

Protecting labor rights

Sakhalin Energy upholds and respects human rights and considers it necessary to ensure that every employee has the opportunity to exercise them. During the pandemic, the company committed to ensure that the labor rights of its personnel were not transgressed.

- · The compensations and benefits provided to Sakhalin Energy personnel were fully maintained for the whole duration of the observation period in TAFs. If any issues associated with Covid-19 resulted in grievances, they were immediately assessed and addressed by the GTT.
- Early voting with regard to amendments to the Constitution of the Russian Federation was organized at remote assets and TAFs in compliance with all epidemiological requirements. It was necessary to allow the exercising of voting rights

B DECENT WORK AND ECONOMIC GROWTH

The project staff arrive by charter flight and proceed to the production sites.



of company and contractor personnel holding Russian citizenship.

Support to the local communities

Sakhalin Energy retained its key charity programs. Based on preliminary evaluations and consultations with the regional government and relevant stakeholders, the company started new charity projects to mitigate the impacts of the coronavirus by supporting non-profit organizations and institutions whose actions were focused on healthcare, education, and social support.

Some initiatives of the company were adapted to the new reality. For example, a new grants competition called "Digital Transformation of Educational and Social Services" was aimed at implementing online formats in the activities of education and social organizations.

Conclusion

Early and elaborate measures, streamlined internal teamwork, and effective partnership with local and regional governments and social institutions helped Sakhalin Energy to confidently face the challenges and firmly protect people's rights in these severe circumstances.

Powering Opportunities for Youth

Investing in young people's education can create a more equitable and inclusive economy and society for all. That is why UNICEF and SAP are partnering to create new ways of learning so that young people have the skills and opportunities they need to reach their full potential.

unicef @

By Tim Rohde, UNICEF

India, 2020: Arpita Barua of Jaipur, a city in the state of Rajasthan, wants to be a wildlife photographer when she grows up. She has just written her class 12 board examination. But, like the rest of the world, Arpita is affected by the pandemic and her future is uncertain.

In these times, the "Rajasthan Career Guidance Portal" gives her hope. The portal was launched by the state government and UNICEF and is supported by SAP. Arpita has discovered a wealth of information using the career portal – colleges, courses, and multiple career streams. She also found scholarships that can support her while in college. She has gained a lot of confidence and is ready to follow her dream. But her story is the exception rather than the rule.

1.8 billion reasons to act now

There is a pressing need to provide young people around the world with access to quality education and digital skills. We are facing a learning crisis for children and adolescents, and Covid-19 has only exacerbated this crisis, with billions of young learners affected by school closures. Today's young people represent the largest cohort ever -1.8 billion - and they will be a dominant force in the decades to come. But 1 in 5 young people aged 15-24 are not employed, educated, or trained. Many are at risk of being left behind in the digital economy. Many are not learning the skills they need to get jobs as a fast-changing global economy demands increasingly specialized skills.

If current trends continue in low-income countries, only 8 percent of their young people will achieve a minimum level of secondary skills, compared to 70 percent in high-income countries.

Joining forces

The challenges are significant, but so are the opportunities. The growth of technology and the increasingly broad range of support from partners bring the potential to deliver learning opportunities anywhere, to anyone, at any time.

Partnerships are at the heart of how UNICEF works, and young people are at the heart of the partnership between SAP and UNICEF. In 2019, the two organizations embarked on a global partnership to address workforce readiness by equipping underserved youth with digital and life skills. The collaboration is reaching young people across Asia and Europe, with initial efforts focused on India, Turkey, and Vietnam.

The partnership brings together UNICEF and SAP's vast, far-reaching ecosystems of businesses, governments, and nongovernmental partners and supports the development of standardized national curricula, workforce readiness programs, and in-depth research to address gaps in secondary education.

Equipping underserved youth with skills

In India, the SAP-UNICEF partnership supports the "Young Social Change Makers" program. The program includes developing an integrated curriculum for life skills and social innovation skills with the government; a Learning Management System for use by teachers and students; the capacity-building of teachers to measure skills; and access to career guidance in order to reach learners.

The program is being implemented in the two states of Gujarat and Rajasthan

in secondary schools. The ultimate aim is to scale the program to more than 1 million adolescents through further uptake of the technical models and resources offered by the state and national government. New life skills and social innovation learning content have already been developed and digitalized. A career portal is also active in 12 states – including a mobile app – and a Life Skills Measurement Tool is available for use by teachers across the country.

In Vietnam, UNICEF, with support from SAP and in partnership with the government, has been scaling the development of digital learning curricula at the secondary school and TVET (Technical and Vocational Education and Training) levels — focusing on learning needs and tackling the digital divide for the most vulnerable adolescents.

To date, SAP and UNICEF have reached more than 1,600 teachers with digital education training. Moreover, UNICEF introduced Augmented and Virtual Reality education solutions in Vietnam's remote mountainous provinces, where students do not have access to teachers qualified in STEM (science, technology, engineering, mathematics) subjects. The partnership also supported the government to develop a "Transferable Skills and Digital Literacy Framework" for pre-schools, upper secondary schools, and TVET education.

In addition, the partnership promoted the digital transformation on a regional level, leading to 10 ASEAN member states making a commitment to foster digital literacy and create access to safe digital learning opportunities for all children and adolescents.

With the support of SAP, UNICEF and Turkey's Ministry of National Education formed a partnership for the "Design and Skills Labs" (DSL) program to help adolescents improve their skills and acquire practical knowledge. This initiative aims to expand vulnerable Turkish and refugee adolescents' access to technical and life skills.



SAP and UNICEF have established two new DSLs in upper-secondary schools and reached more than 350,000 children with ICT skills. A resource pack for teachers was developed to facilitate a successful implementation of the program. The Teacher's Manual has been used during training sessions with 500 teachers and coordinators from all 81 provinces of Turkey. The electronic version of the Manual is also accessible via a portal of the Ministry of National Education.

Reimagined: The future of education

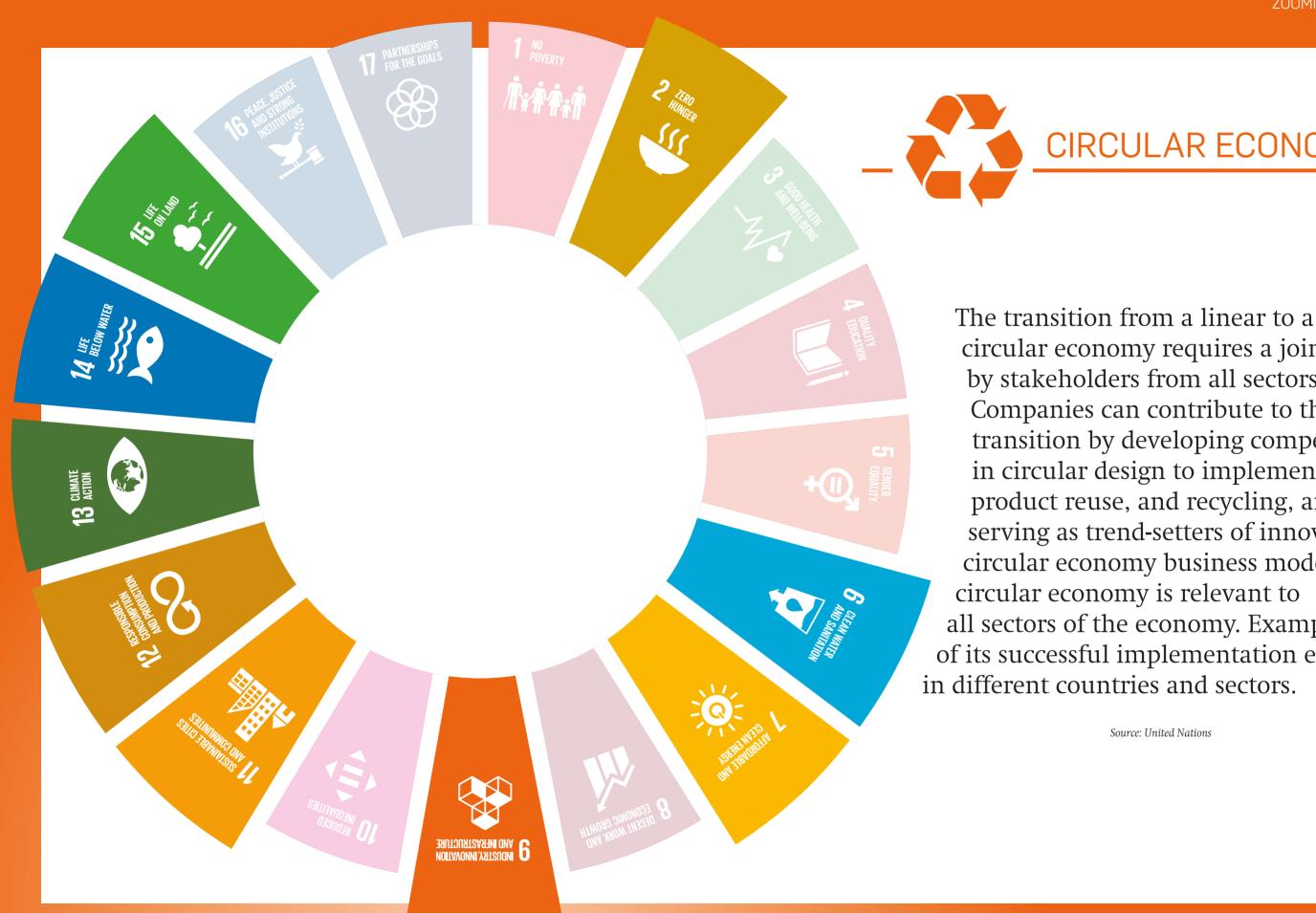
SAP's support has laid an important foundation for this generation of learners and thinkers, like Arpita from Jaipur. After using the career portal, she was admitted to the Bachelor of Arts program at the government-run Brahampuri Kanwar Nagar College, where she studies geography, history, and political science. Arpita has also enrolled in a Rajasthan staterun computer course on information technologies. She is now in her second



Students in Vietnam are excited to gain new experiences with Augmented and Virtual Reality equipment.

year of the BA program and continues to take pictures using her mobile phone, eager to practice her photography skills and capture the diversity of the world with her lens. She has learned that there is a lot of information available about photography online as well as different apps and tools available.

Investing in quality education for young people puts them on a path to fulfill their dreams and live to their highest potential. It also benefits the world because productivity rises and standards of living improve. Preparing young people for tomorrow's world of work supports and benefits them, advances the Sustainable Development Goals, and contributes to a better future for all.





CIRCULAR ECONOMY

circular economy requires a joint effort by stakeholders from all sectors. Companies can contribute to the transition by developing competencies in circular design to implement product reuse, and recycling, and serving as trend-setters of innovative circular economy business models. The circular economy is relevant to all sectors of the economy. Examples of its successful implementation exist

Source: United Nations

Circular Economy – We are Ready for Tomorrow

Sustainability is the CWS Group's business model. A full-service provider in the fields of hygiene, workwear, and fire safety, CWS offers the majority of the products in a service model. The advantage here is that, in addition to the all-round carefree package, the CO₂ emission savings potential also speaks in favor of product rental. Circular business activities within the company form the basis for the sustainability strategy. All the projects, cooperations, measures, and products relating to the circular concept are united under the guiding principle of Think Circular.

By Dr. Maren Otte, CWS Group

Reduce Reuse Recycle Think Circular

CWS CWS.COM

What was still an utopian idea just a few years ago is now increasingly becoming a reality: doing business in such a way that no waste is produced and resources can be responsibly employed, recycled, and reused. This all comes under the idea of the circular economy. The aim is to produce maximally sustainable products and keep them in circulation for longer. A product is maximally sustainable when it does not need to be produced again and can be used for a long time in a way that protects resources.

Saving resources, combating climate change, and curbing emissions are global issues that need to be addressed and resolved together. Private individuals must play their part, but companies also bear responsibility: It is not merely about giving something back to society but also about leaving behind a livable planet for future generations. The anticipated economic damage resulting from the effects of the factors above must also not be underestimated.

Recently, politics has also been intervening and increasingly prescribing regulations and laws at the international and national levels. Since the introduction of the CO₂ tax, companies have been required to regulate their emissions, reduce them, and accept (financial) responsibility for their (unecological) decisions. The financial market is presenting regulations on its side and expects increasingly detailed reporting in the field of ESG meaning that environmental, social, and corporate governance measures and reporting are becoming ever more important for companies.

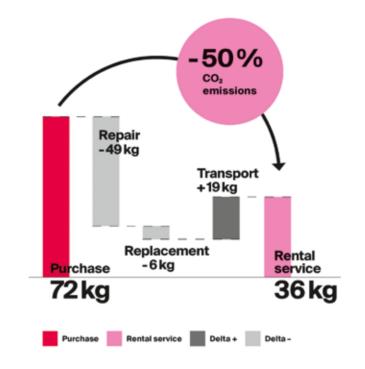
However, the resulting increase in the demand for sustainable and innovative solutions is also creating massive growth opportunities for companies. New markets, new value chains and business models, as well as customer groups are opening up to market participants. The circular economy is the order of the day. This is a long-established system at CWS, where it is offered in a simple model: the rental service. CWS' circular business model is based on being a service company that focuses on the long-term use of the materials employed. Products manufactured once go through long cycles before being reprocessed, repaired, and recycled in a way that protects resources. Circularity is the business model of the future and has been CWS' approach right from the start, which is why all products, projects, and measures in the scope of the circular economy included under the guiding principle Think Circular are labeled accordingly.

Workwear in the service model saves up to 76 percent CO₂ emissions

The development of a decarbonization strategy is a fundamental step for every company. The key question is: Where can CO₂ emissions be reduced? The target figure is net zero. In this endeavor, it is important to consider all options. One is to switch from purchasing to renting items.

A joint study conducted by CWS and the consulting firm sustainable thinking revealed the savings that can be achieved by switching to the service model. On average, the rental service on its own reduces the greenhouse gas emissions that are generated by around 76 percent. If service transport is also taken into consideration, the emissions are halved. The reference value is the greenhouse gas emissions measured based on the clothing requirements of one person





Renting v. buying: Average CO₂ emissions (kg of CO₂ emitted to supply one worker with workwear for one year)

over a period of one year in the classic purchasing model.

Around 72 kg of CO₂ are normally generated per year and worker when workwear is purchased. The rental service reduces the greenhouse gas emissions to 17 kg of CO₂ without transport. This is because worn-out or damaged garments are not thrown away, nor do they need to be produced again, which creates lots of emissions. They are instead repaired or replaced with used items. If the CO₂ emissions resulting from the service vehicles are also taken into consideration, the initial value of 72 kg is reduced to 36 kg of CO₂ emissions per person per year.

The calculation model developed is based on data for repairs, wear, and reuse from four different CWS Workwear collections. All in all, a processing volume of around 550.000 items from four collections were analyzed with regard to their processing in German CWS laundries in 2019.

Repairs are essential for the durability of textiles

In the scope of the circular economy taking quality standards into consideration, the repair and reuse of old clothing results in a considerable ecological advantage. Naturally, every item that does not need to be produced again also does not create extra greenhouse gas emissions. In Germany alone, more than 2.3 million garments were repaired in CWS' laundries in 2019 instead of being retired. That represents a big difference from the linear purchase system. Only very few purchasers repair their wornout clothing. Compared to the rental service, only about half of the necessary



Quality controls at CWS pay close attention to every detail up to 7,000 inspections every day.

repairs are performed. This poses a risk of injury, as workwear is intended to protect the wearer. Consequently, if it is defective, not properly maintained, or used in damaged condition, it is no longer possible to guarantee the wearer's safety. Plus, what is not repaired at home simply ends up in the bin.

The average customer relationship in the rental model at CWS lasts 12 years. During this time, the textile stock is managed and recycled jointly according to needs and wishes. That is how circularity can be successful. We know that the most sustainable garment is the one which does not even need to be bought. That is why we think in cycles and integrate the simple three-step concept of Reduce, Reuse, Recycle into our daily work.

We Think Circular!



A common vision to transform Luxembourg into a circular economy and center of competence in the field

By the High Council for Sustainable Development (Nohaltegkeetsrot) Luxembourg



Moving toward a circular economy is a strategic priority in Luxembourg. Adopting a circular approach - where goods and services are produced and exchanged based on a circular management of materials that take into account the limits and regenerative capacities of the planet - is crucial in view of the country's limited resources. The new strategy provides a common vision of the implementation of a circular economy in Luxembourg and offers practical guidelines to citizens, businesses, municipalities, and state administrations.

A central link in the value chain

The strategy has been jointly developed by the Ministry of Energy and Spatial Planning; the Ministry of the Economy; the Ministry of the Environment, Climate and Sustainable Development; and the Ministry of Finance. "Ever since we carried out a first study in 2014, the Ministry of the Economy has recognized the potential of the circular economy for Luxembourg and the opportunity it represents for companies," said Minister Franz Fayot when presenting the strategy. "In the meantime, many initiatives have emerged and the circular economy has become a government priority. The objective of the strategy and its planned actions is twofold: firstly, to accelerate the deployment of the circular economy at the national and regional level, and secondly, to position Luxembourg as a center of expertise and an international leader in the field."

The circular economy has become a government priority.

For Carole Dieschbourg, Minister of the Environment, Climate and Sustainable Development, the circular economy is an essential link in the sustainable development value chain: "The rapid expansion of the circular economy is a necessary condition for succeeding with our national strategic efforts to fight the climate crisis, protect resources, and promote sustainable finance."

Rethinking the economy

The government has far-reaching ambitions in the field. "This national strategy will make our society more sustainable by rethinking our entire economy from A to Z," says the Minister for Energy, Claude Thurmes. "It will provide Luxembourg's key sectors with a toolbox to bring together public and private players and to develop the vision through concrete projects."

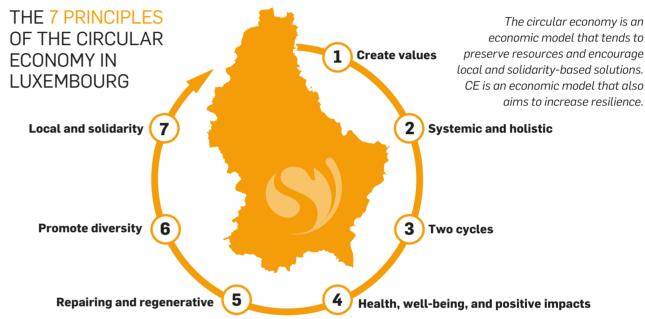
The circular economy strategy includes three main components

It identifies methods and tools in the fields of regulations and standards, financial aspects (e.g., incentives in the form of

subsidies or taxes), and knowledge management (education, training, and public research) where the government can act to stimulate innovation, as well as in the area of digitalization and ICT support.

It proposes a methodology to activate processes and tools in key economic sectors through concrete projects piloted by public bodies but implemented together with other main stakeholders.

It outlines a mechanism for close and continuous consultation between the ministries in charge of the strategy, as well as communication tools aimed at supporting those who are managing concrete projects.



1 Create values

The disruptive circular economic model creates economical, ecological, and social values by its very nature.

4 Health, well-being, and positive impacts

2 Systemic and holistic

The circular economy is based on an interdisciplinary, systemic, holistic, and collaborative approach.

3 Two cycles: the biological and the technological cycle

The circular economy eliminates the concept of waste by relying on two distinct cycles, the biological and the technological cycle. Each product should be configured or designed in

a way to evolve in either cycle. Some materials or products may pass from one to the other cycle.

Health and well-being are an integral part of the circular economy. The circular economy promotes the creation of positive impact on both human beings and nature. Reducing negative impact alone is not considered sufficient for sustainable development.

5 Repairing and regenerative The circular economy is repairing

and regenerative in nature. It pro-



Promoting clean technologies and the transition toward a circular economy is a priority in Luxembourg.

The country offers an attractive economic environment for entrepreneurs who are looking to create value while reducing pollution, waste, and energy consumption.

Health, well-being, and positive impacts

tects and enhances ecosystemic services and promotes biodiversity. The processes of technological cycles must be designed to maintain or even enhance the quality of the resources and products used.

6 Promote diversity

The circular economy promotes diversity of solutions in all aspects, whether technical, economic, ecological, or socio-cultural.

7 Local and solidarity

In Luxembourg, the circular economy encourages local and solidarity-based solutions and encourages proximity cycles.

Conseil Supérieur pour un Dévelopment Durable, csdd.public.lu



Climate change is affecting every country on every continent. It is disrupting national economies and affecting lives. Weather patterns are changing, sea levels are rising, and weather events are becoming more extreme. The Paris Agreement, adopted in 2015, aims to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above preindustrial levels. The agreement also aims to strengthen the ability of countries to deal with the impacts of climate change, through appropriate financial flows, a new technology framework and an enhanced capacity building framework.



CLIMATE CHANGE

CO,

Source: United Nations



Despite Covid-19 being recently recognized as the mother of all crises that has negatively affected the whole world, climate change is still the most crucial and serious matter for Agenda 2030. Accordingly, in addition to undertaking preventive actions and supporting the community during the pandemic, AAIB has focused on attending to climate change and its impacts. The bank has continued to integrate Environmental and Social (E&S) risks into its risk management framework, include renewable energy projects in its portfolio, and offer climate solutions to its consumer banking clients.



By Dalia Noureldin, AAIB

By the time COVID-19 was announced as a global pandemic, climate change has already been a crucial and alarming matter that needed to be placed at the forefront of global agendas. However, the world's spotlight moved away from climate change as the impact of the pandemic wore on. Although immediate action to a disaster that is novel, widespread, affects lives and is accompanied with much uncertainty like the coronavirus was crucial, climate change is not any less of a problem - and the only way to avoid the worst possible climate outcomes is to accelerate our efforts now.

Climate change is becoming the greatest environmental crisis of all time with its impacts that are already too costly for people, planet and overall prosperity. It can no longer just be considered an environmental crisis but also a socioeconomic one. The physical risks associated with climate change could disrupt livability and workability, giving the rise to transition risks including shifts in demand, especially for food and energy. To start with, climate change and its environmental impacts -including floods and droughts- severely impact agriculture and fisheries, which in turn influences food prices and the employees working in these sectors and their value chains. In addition, Typo change mitigation impacts patterns of energy production and energy prices.

Financing sound environmental projects plays an important role in delivering several of the Sustainable Development Goals (SDGs). Given the current climate finance gap, the financial sector needs to act on two fronts: we need to facilitate the transition towards a greener and more sustainable economy as well as to manage Environmental & Social (E&S) risks associated with our financing activities. To encourage the development of a more viable economy, AAIB has been integrating Environmental, Social and Governance (ESG) criteria into its financing activities and its risk management framework.

Environmental and social risk management

According to the Intergovernmental Panel on Climate Change (IPCC), the current business-as-usual scenario will result in a 3-5°C average global temperature increase by 2100. To minimize, manage and where possible prevent the impacts of climate change on the environment and the society rapid, far-reaching and unprecedented changes in all aspects of doing business are urgently needed.

While banks, like any other business, produce greenhouse gases (GHG) directly through their business activities, their significant contribution to GHG emissions is indirect, through their financing and lending activities. To this end, and to manage the Environmental & Social (E&S) risks associated with our clients' activities AAIB has broadened its risk management framework beyond its traditional definition that includes credit risk, market risk, operational risk and liquidity risk to include E&S risks such as climate change, income inequality and more constituting sources of major financial tremors and instability.

Given our intermediary role in the economy along with our commitment to the SDGs, AAIB joined the Equator Principles (EP), which has been the main guideline for determining, assessing and managing E&S risks in project-related transactions in 2009. The framework ensures that projects that fall within its scope are well-developed and operate with respect to international E&S standards. To foster our commitment to the EP, the bank introduced an E&S Risk Policy that is updated continually to ensure coping with emerging E&S challenges and best practices. The Policy is guided by the EP and other internationally recognized E&S standards.

Finance as the engine for development

Since banks are the backbone of the economy, we have a major role in accelerating the much needed transition from a fossil fuel-based economy to an efficiency- and renewable energy-based economy. In AAIB, our goal is to drive long-term sustainable growth with an eye on development priorities, protecting the environment and the community, as well as delivering measurable benefits to the economy.

In a country like Egypt with its strategic geo-climate location and great potential in renewable energy, we have a great opportunity to achieve sustainable and inclusive growth aligned with the 2030 agenda. This can be done through offering products and services that enable transition and adaptation. In this regard, AAIB signed a long-term loan agreement worth EGP 200m with Enara Group's subsidiary Libra Capital to finance renewable energy projects in March 2021.

This comes in light of our role in encouraging institutions and individuals to adopt sustainable practices, being the financing arm for all sectors that affect the environment and society.

Engaging clients in sustainable practices

Believing that actions taken individually and collectively can create a difference, AAIB is working on creating synergies with its customers, encouraging them to move towards sustainable practices and accompanying them in their transition towards more sustainable lifestyles through offering products and services







that meet environmental and financial needs.

With regards to this matter, AAIB introduced its Solar Energy Loan to its consumer banking clients to empower them to adopt more sustainable practices and behaviors, as part of our broader effort to create a market for renewable energy in Egypt. The product aims at contributing to SDG 7 (Ensure access to affordable, reliable, sustainable and modern energy for all) and, consequently, SDG 13 (Take urgent action to combat climate change and its impacts), as well as the objectives of the Paris Agreement on climate change. In addition to climaterelated targets, transition to solar solutions will have a direct effect on health, employment and cost-savings benefits.

Despite the ambition in the 2030 agenda for moving towards a better world, a core focus on the SDGs has been significantly altered, drawing our attention to new realities and ways of life that resulted from Covid-19, which dramatically resulted in the loss of lives and economic misery. However, it still offered some lessons and reasons for hope. First and foremost, the coronavirus shows just how much can be done through alignment and cooperation; how much money can be mobilized in a matter of just days when we focus our efforts on addressing a cause. If just a small portion of the billions of dollars pledged for economic recovery were used to invest "cleaner and greener initiatives" we could get much closer to achieving global climate goals. It also showed how many far-reaching measures from minimizing travel and transportation, enabling remote work, shifting to online serices and other changes in business practices can be taken. It is crucial that we maintain the climate-friendly habits we have had to develop.

Acknowledging that climate change combined with COVID-19 is a double whammy for millions of people, and the urgency of both topics, AAIB will continue playing its role in attending two of the top crises the whole world is facing.

CO₂ Reduction at Bosch: Focusing on the Entire Value Chain

Bosch is pressing ahead with its own climate action targets. Now that the climate-neutral status of the Bosch Group with its more than 400 locations worldwide has been certified. Bosch is giving concrete shape to its plans for what is known as Scope 3. By 2030, Bosch aims to reduce carbon emissions by 15 percent from their 2018 level along its entire value chain, from suppliers to customers – a reduction of 67 million metric tons of carbon dioxide.



By Dr. Volkmar Denner, Bosch Group

The Bosch Group has been climate neutral since 2020. To achieve climate neutrality, we have been systematically applying four levers: increasing energy efficiency, using renewable energies, expanding the purchase of green electricity, and - as a last resort - offsetting unavoidable CO₂ emissions with carbon credits. As our next step, we want to optimize the mix of levers by 2030 while continuing to refine our measures to make a further significant contribution to climate action. A review conducted in 2020 shows that we are on the right track. In particular, we needed far fewer carbon offsets to compensate for our energy consumption in 2020 than we had budgeted. At the same time, we were able to reach our target levels for new clean power and - thanks to improved availability significantly exceed them in the case of purchased green electricity. We intend to continuously improve the lever mix over the coming years in order to reduce our use of carbon offsets and green electricity from existing plants while further increasing our energy efficiency and procurement of new clean power.

In the years up to 2030, we will extend our climate action beyond the company's immediate sphere of influence (Scopes 1 and 2) and also systematically reduce upstream and downstream emissions (Scope 3) by 15 percent. These targets have been confirmed by the Science Based Targets initiative (SBTi). Bosch has thus adopted science-based climate targets across the entire value chain, from purchasing to the product use phase.

With its Scope 3 target, Bosch has deliberately set itself an ambitious goal, as upstream and downstream emissions (448 million metric tons of CO₂) exceed those in Scopes 1 and 2 several times over. This target value was set independently of sales growth, which means the mitigation target will increase steadily as Bosch continues to grow in the future. Our targeted 15 percent reduction in CO₂ emissions corresponds, from today's perspective, to a reduction in the burden on the climate of some 67 million metric tons of CO₂. We are pursuing a threestage approach to ensure we achieve our goals. In 2019, we analyzed all Scope 3 categories in accordance with the GHG Protocol using external databases and then focused on those from which the majority (99 percent) of CO₂ emissions originate.

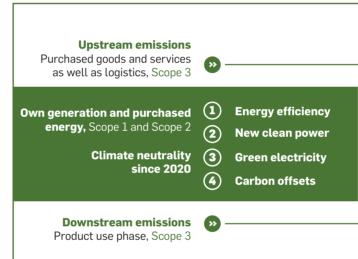
According to the findings, upstream emissions in the Bosch value chain primarily concern goods and services we purchase as well as logistics. Downstream emissions are mainly caused by customer use of our products. However, it is not sufficient to measure a company's specific progress based on database values alone. In 2020, we therefore went one step further and increased the calculation's granularity for the main categories, while also integrating specific parameters into the models.

This finer-grained calculation makes it possible to identify significant drivers within purchasing and in the use of our products, based on which we can derive measures that make an active and measurable contribution to climate action. In this process, we focus primarily on options that lie within our immediate sphere of influence.

- To reduce CO₂ emissions from purchased goods and services, we seek to cooperate closely with our suppliers. Going forward, a supplier's or logistics provider's carbon footprint will be one of the criteria considered before awarding new procurement contracts.
- In the field of logistics, we will focus on transport. Our priority is to optimize purchasing in the product evolution process and in volume manufacturing, while also avoiding airfreight. In addition, by combining more freight, we want to reduce transport, optimize routes and capacity utilization, and thus avoid CO₂ emissions.

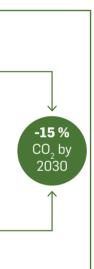
• Bosch products are already designed for energy efficiency, and thus help mitigate climate change during their use. In 2020, we identified additional potential for further reducing CO₂ emissions in the use phase. The corresponding activities can be clustered into three levers, which we can apply in different ways in our various areas of business: boosting energy efficiency, adjusting our product portfolios, and harnessing the transformation of the energy sector.

• Since 2020, we have been using carbon offsets to make all our business flights carbon neutral.











At present, we are deriving specific performance indicators to track the contribution of the measures identified through to 2030. This will also allow us to introduce any follow-up measures that might be needed. By focusing on the key levers, we are ensuring the best possible use of our resources in the interest of sustainability as well as our ability to reach our Scope 3 target by 2030.

At the same time, we are continuously refining our calculation methodology in order to obtain as realistic a picture as possible of our Scope 3 emissions, and thus meet our standards with respect to transparency and completeness. In 2020, for example, we extended our view of mobility solutions-related emissions to take all emissions generated "from wellto-wheel" into account, as opposed to the more limited "tank-to-wheel" perspective. As this approach also encompasses the emissions from fuel production and electricity generation, it provides a more realistic picture of road traffic's overall carbon footprint. Although this refinement of the calculation raises our baseline, we nevertheless remain committed to the ambitious target of a 15 percent absolute reduction in Scope 3 emissions.

For more information, please visit sustainability.bosch.com

Volkmar Denner has been Chairman of the Board of Management of Robert Bosch GmbH and a limited partner of Robert Bosch Industrietreuhand KG since July 1, 2012. His responsibilities include corporate strategy, corporate communications and governmental affairs, and real estate and facilities. He is also responsible for the Bosch Healthcare Solutions GmbH subsidiary and the Bosch business in China.



The majority of people live in cities. This is why it is here that we will decide whether we can make the transition to a climate-neutral lifestyle. The Cities Race to Zero initiative wants to recruit 1,000 cities to participate in a global movement to address the climate emergency.









By 2050, the global urban population is expected to grow by 2.5 to 3 billion (compared to 2009); worldwide, 64 to 69 percent of people will then live in cities. The effects of climate change will worsen access to basic services and quality of life in cities: among them rising sea levels and river flooding, hot spells and the potential spread of disease, increasing droughts and associated water scarcity and air pollution - all will severely affect people's health, livelihoods, and assets

A new CDP analysis of 812 global cities publishing environmental data has found that nearly half lack plans to keep their populations safe from climate threats. Though nearly all (93 percent) of the cities reported facing climate risks, 353 (43 percent) disclosed no adaptation plan. This means a population projected to reach 400 million over the next decade live in poorly prepared cities.

At the same time, urban areas are a major source of greenhouse gases and currently account for about 70 percent of global energy consumption. Therefore, the pace of emission reductions must increase in cities of both developed and less-developed countries. This is also what the Cities Race to Zero initiative is advocating.

"Cities continue to be vital leaders on the frontlines of the fight against climate change," says Michael R. Bloomberg, founder of Bloomberg LP and former Mayor of New York City. "It's critically important that countries meet their climate targets – and go beyond them, as the effects of the crisis are only worsening. The more that national leaders empower cities, states, and businesses, and strengthen their own contributions toward reducing emissions, the more success we will have. We can win the

Race to Zero - but only if we accelerate our climate progress, together."

To build resilience, cities are taking many actions, ranging from tree planting and greening (20 percent of cities) to flood mapping (18 percent). In Berlin, for example, the 1,000 Green Roofs program was launched, Paris is creating "cool islands" to manage the impact of increased heatwaves, and Malmö is managing flood risks by ensuring all new buildings must be 3 meters above sea level.

Mirjam Wolfrum, Director Policy Engagement at CDP Europe, comments: "Environmental action cannot slow down. With Covid-19 stimulus packages totaling \$12 trillion globally, national governments have an opportunity to implement a green recovery in cities. As a first step to managing climate threats, every city must carry out a climate risk and vulnerability assessment to identify the crucial actions they must take. We also encourage cities to set science-based targets to support them on their journey."

What does the initiative want?

Mayors and council leaders from cities of any size and location who are signing up to the Race to Zero campaign are committed to:

keeping global heating below the 1.5°C goal of the Paris Agreement;

· adopting a science-based emission-reduction target consistent with constraining global temperature rise to 1.5°C;

achieving a fair share of a 50 percent global reduction in emissions by 2030 and reaching zero carbon by 2050; and

implementing specific inclusive climate policies in sectors such as buildings, transport, waste, clean energy, food, and nature.

ABOUT CITIES' RACE TO ZERO

C40 Cities, the Global Covenant of Mayors for Climate and Energy (GCoM), and CDP announced a campaign to recruit as many as 1,000 cities around the world to deliver inclusive climate action. consistent with limiting global temperature rise to 1.5°C, as set out in the Paris Agreement, and to initiate a green and just recovery from Covid-19.

It is part of the Race to Zero alliance to mobilize companies, cities, states, regions, investors, universities, and non-state actors that are aiming to halve emissions by 2030 and are individually committed to achieving net zero emissions as soon as possible, and by 2050 at the very latest.



Roland Hunziker, Director, Sustainable Buildings & Cities at WBCSD, refers to the opportunities: With population growth and rising purchasing power in emerging markets, the global building floor area is expected to double by 2050. Although this rapid expansion of infrastructure is a challenge for the construction sector on its path to meeting the goals of the Paris Agreement, it also opens a window of opportunity. The construction sector can provide the boost we need to jumpstart the economy in the aftermath of Covid-19. Today, the construction sector represents 11-13 percent of global GDP and employs 7 percent of the global workforce.

WBCSD has developed the Building System Carbon Framework, which helps to place a focus on the carbon transactions that happen during the process of building and renovating infrastructure, in a simple and transparent way. These carbon transactions can then be discussed alongside cost, time to build, and risk, and reduction targets can be passed along the value chain and trigger innovation to create low-carbon solutions.

Example 1 WUHAN, China

Keeping cities cool

Wuhan is experiencing a silver lining as the dark clouds of 2020 make way for something new. For the city's 11 million residents exposed to searing summer temperatures, respite is coming in the form of large fabric "clouds," which promise to shield them from the blazing sun. By capturing breezes and air movements, the "clouds" gently fan passersby.

Designed by HDA, a Parisian architectural practice that is also behind Miami's Climate Ribbon, which uses similar structures to naturally regulate the temperature of urban spaces, the "clouds" are one of several novel ways that architects, entrepreneurs, and scientists are exploring to keep cities cool without ramping up climate-polluting air-conditioning units. >>

SNAPSHOT OF CITY RISKS **4**||| 25% of cities 93% 43% of cities are facing significant do not yet have an report budgetary capacity climate risks adaptation plan issues as a barrier to adaptation **74%** of cities 60% of cities The top two services under threat from cite substantive risk to climate change are water climate change is supply and sanitation, their water security increasing risks to already and public health vulnerable populations

Source: CDP Report "Cities on the route to 2030"

Already basking in warmer temperatures than the surrounding countryside, cities are suffering from record-breaking highs, which residents are often ill-equipped to handle. The last decade has been the hottest on record, and as millions more swarm to urban jungles, city temperatures will keep rising. Ironically, airconditioning is a big part of the problem, as it uses climate-polluting coolants and pumps warm air right back into the atmosphere.

"Rising temperatures create significant challenges for urban centers, where extreme temperatures are often exacerbated by the urban heat island effect," says Jessica Brown, Executive Director of the Kigali Cooling Efficiency Program at the ClimateWorks Foundation. "Cooler cities lead to positive impacts on human health, air quality, economic productivity,

public safety, energy savings, and quality of life. Simply, when we're hot, we're less productive and economies suffer."

To create the innovative cooling clouds in Wuhan, HDA is working with a wind tunnel laboratory. The project will see them design a series of canopies next to the Buddhist temple of Guiyan that will provide shading and naturally help to ventilate the streets. Many cities across the world are aligning with HDA's thinking, looking to trees, plants, and green spaces to keep residents cool. In Singapore, any greenery lost on the ground has to be replaced with greenery in the sky. Barcelona is promoting the transformation of roofs into gardens, and London plans to become zero-carbon and at least 50 percent green by 2050 through measures that include planting more trees along streets. Cities from

Beijing to Stuttgart are building green "ventilation corridors," which decrease air pollution and alleviate heat.

"The Colombian city of Medellin has lowered temperatures by 2 to 3°C with its Green Corridors urban planting projects," urban researcher Richard Dobbs says. Some 30 green corridors of trees, plants, and bushes were planted, transforming derelict parts of the city into green oases. "We need to invest in sustainable alternatives to air-conditioning — like buildings that make smart use of shading and ventilation and cooling our streets with trees and water."

Keeping urban jungles cool bolsters economies and can also saves lives. The Ahmedabad Heat Action Plan in India, which implements measures that include planting trees and painting roofs, saves more than 1,000 lives a year. "There's an assumption that air-conditioning must be the cooling solution in all buildings, and a large air-conditioning industry is pushing that approach," Dobbs says. But low-carbon solutions can be really effective. "There are huge opportunities everywhere."

Example 2: Turku, Finland

Enabling 1.5-Degree Lifestyles

Having pledged to become carbon neutral by 2035, Finland is now developing a strategic program to transform its economy into one that is based on the principles of circular economy. The city of Turku – a champion in localizing the circular economy – is coordinating the inputs of Finnish cities and regions to the strategic program. The circular economy is gaining traction in cities worldwide as a key element of climate action. The 1.5-Degree Lifestyles framework is a useful tool for cities to connect their climate and circular economy policies to communities' everyday realities and address consumption-based emissions. Developed by the Finnish innovation fund SITRA and IGES, the 1.5-Degree Lifestyles framework quantifies how drastically lifestyle carbon footprints must be reduced in order to meet the 1.5°C target and which lifestyle changes most support this transition. With support from ICLEI and the International Urban Cooperation, Turku, Nagano Prefecture, and Obuse Town (Japan) are kickstarting community engagement processes around 1.5-Degree Lifestyles.

Lifestyle changes only take us so far if city infrastructure and services do not support decarbonization. It is critical for cities wishing to act on lifestyles to first show policy commitments to and investments being made for infrastructure and city services that make the transition to 1.5-Degree Lifestyles convenient and cost-neutral for residents. "The system needs to change and individuals need to change," summarizes Markus Thero from SITRA. This is why Turku's campaign starts by showcasing how "Turku is doing its part to keep the world on track for the 1.5-degree target," for instance through investments in sustainable energy and infrastructure, circular economy innovations, and low-carbon transport, which have already allowed Turku to cut emissions by half. Acknowledging that products and services flowing through cities must also support the transition, Turku is focusing on the engagement of local businesses offering decarbonized innovations by featuring them as 1.5-degree solutions providers as part of the campaign.

Three tools for cities to communicate about 1.5-Degree Lifestyles

With enabling conditions in place, city dwellers will be more prone to engage in 1.5-Degree Lifestyles. Here are three tips from city practitioners and lifestyle experts to communicate about 1.5-Degree Lifestyles to city residents in a way that resonates with their individual aspirations and needs.

Adapt the message to different audiences: "Consumption drivers and motivations include priority needs and practicality, time savings, durability, relevance in everyday life. Oftentimes, the considerations that drive consumption do not include climate action," says Thero. This is why communicating about 1.5-Degree Lifestyles is most efficient when focusing on co-benefits (e.g., cost-savings, health, practicality, sense of community) that are most relevant to different target groups. In the pathways to achieving 1.5-Degree Lifestyles by 2030, SITRA describes four characters with different lifestyles and values. The attributes of these people are based on previous work featured in the SPREAD Scenarios for Sustainable Lifestyles 2050 and SITRA's Motivation profiles of smart consumption; they can form the basis of local campaigns targeted to different consumer groups and their specific aspirations. Different channels for different contexts: 1.5-Degree Lifestyles campaigns will compete



for attention with the billboards and other mass consumption advertisements that currently shape what is seen as affluent. Therefore, it is key to diversify communication channels and reach out to various stakeholders, from religious communities to influencers, depending on the context. Turku's 1.5-Degree Lifestyles campaign is focusing on online engagement of young Turku residents through social media and existing local youth platforms, such as the city's Youth Climate Panel. In the long-term, Turku wishes to have a wide variety of Turku residents as champions of a 1.5-Degree Lifestyle. "We need different people on board, we need them to be messengers," says Liisa Lahti from Turku.

Break down your message: Not everything needs to happen at once. Changing habits takes time, and transitions are most durable when each change has been established in people's everyday lives. In their 2030 pathways, SITRA presents the needed changes in lifestyles spread across a 2019-2030 time frame. They start with low-hanging fruit, easy lifestyle shifts people can implement right away, such as cutting down on meat and dairy products, buying second-hand instead of new, and going on holidays to places accessible by public transport. A lot can also be learned from how Cape Town managed its recent water crisis. Within 18 months, water consumption was halved, mainly through institutional and social shifts," says Paul Currie. "This was achieved in part through communication campaigns showcasing where residents are in the water management system and what sustainable water consumption looks like in practice, for instance through the guide of using 50 liters of water per day."

Sources: This article was produced with the assistance of publications from ICLEI, the We Mean Business Coalition, the WBCSD "Building System Carbon Framework," and the CDP report "Cities on the Route to 2030."



Agriculture Is at the Center of Climate and Food Security Solutions

A commitment to protecting and preserving the source of our food and helping agricultural communities thrive drives Corteva Agriscience



By Henri Moore, Corteva Agriscience

The combination of a changing climate and the interruption of the food system due to Covid-19 has had a devastating impact on the lives of millions of people around the world. The 2021 Global Food Security Index, developed by The Economist Intelligence Unit, reported that agricultural production has become more vulnerable in 49 countries as compared to a year ago. With 113 countries measured in the index, that means that the food security of people in nearly half of the total index is at greater risk.

Although the Index takes into consideration a number of factors, there is no doubt that farmers of all sizes in every country around the world are under significant pressure to grow more food on a fixed, or declining, amount of arable land.

This is the second year in a row that the Index shows global food security in decline, with both high- and low-income countries suffering significant food production challenges. For example, drought and extreme summer growing conditions led to the worst harvests in 50 years in Denmark, Norway, and Sweden.

Although the challenges are great, we at Corteva Agriscience firmly believe that agriculture holds the key to solving global food security and climate challenges, and that the movement begins on farms around the world.

A key part of the solution is strengthening the resilience of farmers to be able to withstand the impacts of climate change through more sustainable agriculture. Soil and water are finite – but there are measures we can take to improve their sustainable use and even increase production to feed a growing global population. In June 2020, Corteva announced 14 sustainability goals that will drive our actions and nearly every aspect of our business as well as increase the resilience of our global food system. These goals span a set of targets for farmers, the land, our operations, and the communities where Corteva employees and customers live and work.

Our goals are consistent with five of the United Nations Sustainable Develop-



CORTEVA AGRISCIENCE SUSTAINABILITY GOALS TO REACH BY 2030

Goals to benefit farmers

- Provide training to 25 million farmers on soil health, nutrient and water stewardship, and productivity best practice.
- Increase the productivity, incomes, and sustainable farming practices of 500 million smallholder farmers cumulatively through 2030.
- Enable farmers to sustainably increase crop yields by 20 percent while also reducing greenhouse gas emissions by 20 percent within cropping systems compared to 2020.

Goals to benefit the land

- Improve soil health on 30 million hectares.
- Accelerate improvement in nitrogen use efficiency (NUE) across global agricultural land. Reduce water

consumption while increasing yields on 2.5 million hectares of seed production and water-stressed agricultural land by 2030 compared to 2020.

10 million hectares of grazing lands and natural ecosystems globally through sustainable management practices and habitat conservation.

Goals to benefit communities

- · Protect the health and safety of people at our facilities and those working in agriculture.
- · Empower women, enable youth, and engage communities in all of the global communities where we have corporate operations and all of the countries where we do business.
- Volunteer 1 million Corteva employee hours to support people and communities globally.

ment Goals, including ending hunger and achieving food security; ensuring availability and sustainable management of water and sanitation for all; ensuring sustainable consumption and production patterns; taking urgent action to combat climate change and its impacts; and protecting, restoring, and promoting the sustainable use of the land.

The goals are ambitious, but they are built on best practices and global frameworks for sustainability. During the first year, our efforts have been focused on establishing benchmarks as well as creating the metrics and tools that we will use to measure and report our work around the world.



• Enhance biodiversity on more than

 Increase supply chain transparency, from farmers to consumers, by leveraging digital tools that enable farmers to create additional value through transparency in agriculture markets, food systems, and communities.

Goals for our company's operations

- Every new Corteva Agriscience product will meet our sustainability criteria by 2025.
- Establish our climate strategy for Scope 1, 2, and 3 emissions, including appropriate reduction targets by June 1, 2021.
- All packaging will be reusable or recyclable.
- Operate every Corteva Agriscience site more sustainably through waste reduction, water conservation, and enhanced biodiversity.

HENRI MOORE

Henri Moore is Vice President/ Head of Global Responsibility at Corteva Agriscience. She is responsible for the development and execution of a Global Responsibility strategy, inclusive of Community Investment, Sustainability, Agriculture Development and Technology Acceptance in over 140 countries.

Driving Responsibility and Shaping Tomorrow's Transportation

Given the Covid-19 pandemic as well as ongoing climate change, we are facing global challenges that have prompted us to further refine our business model. Knorr-Bremse is committed to helping build a more sustainable society and taking more climate action. As the global market leader for braking and other systems for rail and commercial vehicles, we see ourselves as a role model in the mobility sector and aim to express this commitment not just through our products but also through the way we work.



By Frank Markus Weber, Knorr-Bremse

For more than 115 years, Knorr-Bremse has been the industry visionary, driving innovation in mobility and transportation technologies with an edge in connected system solutions. For us, sustainability means giving equal and simultaneous priority to economic, social, and environmental targets, and doing so upon a foundation of good corporate governance. Our ongoing efforts to engage in environmental, social, and governance-related (ESG) activities are reflected by our good third-party ESG ratings. At Knorr-Bremse, we are convinced that sustainability and competitiveness are not polar opposites - they are inextricably linked. Only reliable, sustainable business activity sows the seeds of lasting success. This is why we also support the UN's Sustainable Development Goals (SDGs), focusing on five key SDGs in particular: "Gender equality" (Goal 5), "Decent work and economic growth" (Goal 8), "Industry, innovation and infrastructure" (Goal 9), "Responsible consumption and production" (Goal 12), and "Climate action" (Goal 13).

Knorr-Bremse drives forward extensive climate action measures

We are driving forward our climate action (Goal 13) measures in the context of our new Climate Strategy 2030. By setting our climate goals, we are contributing to the Paris Agreement to limit global warming to 1.5°C, aiming to halve our CO₂ emissions by 2030. This 50 percent reduction is to be achieved through energy-efficiency measures and the owngeneration and purchase of renewable energy. We have additionally pledged to make our own sites carbon-neutral from 2021 onward. To do so, we want to maximize our sourcing of energy from renewables while residual, unavoidable emissions are to be offset by means of high-quality climate protection certificates. For the purpose of offsetting, we have recently signed a cooperation agreement with climate protection organization atmosfair gGmbH. Knorr-Bremse has selected two projects that reached the implementation stage earlier this year: the Clean Drinking Water project

in Kenya, and the Efficient Wood Gas Stoves project in India. Both of these carbon-offset projects are certified to the independent and internationally recognized Gold Standard. These projects contribute to Goals 5, 8, 9, and 13. Additionally, certified environmental management systems are in place at all Knorr-Bremse production sites worldwide to eliminate waste and support closed-loop recycling of materials. At the individual company level, local waste management initiatives (Goal 12), such as our "Zero Waste" program, are



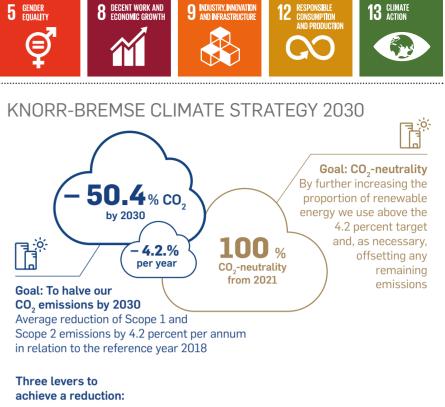
reducing the types and quantities of waste that we dispose of.

Recent adoption of Group-wide human rights policy

In May, Knorr-Bremse made a clear commitment to due diligence with respect to human rights by adopting a Groupwide human rights policy. As a first step, we are concentrating on analyzing the working conditions of people potentially affected by our business activities and on analyzing our employee recruitment processes to identify potential for improvement. Knorr-Bremse is a participant in the United Nations Global Compact, and we are making an additional contribution to due diligence on human rights at all stages in the value chain. For example, 67 percent of the purchasing volume from direct suppliers was assessed according to sustainability criteria – especially human rights governance. Another goal is to recruit more qualified female employees and take concrete steps to further women's careers (Goal 5). Knorr-Bremse made further progress toward this goal in 2020. As well as signing the Diversity Charter, we have adopted a number of measures, including the introduction of a quota for women in management positions, establishing an internal women's network, and continuing to develop existing support measures.

Social matters deeply embedded in our corporate governance

Clear compliance requirements across our entire supply chain, a strict code of conduct, and our corporate values all form the basis of our social commitment. We are gradually applying our supplier code of conduct for suppliers globally (Goal 8) and made significant progress in 2020. As part of our initiative for Goal 8, Knorr-Bremse is globally rolling out the LinkedIn Learning self-directed learning tool in the course of 2021, offering more than 16,000 courses. In the future, the Knorr-Bremse Executive Board's remuneration will be directly linked to attaining ESG targets. This link embeds



Three levers to

Energy efficiency

Improve energy efficiency and switch to low-carbon fuels

sustainability in our management model and in the everyday activity of our managers and workforce. This is how we are defining performance criteria that relate directly to long-term, sustainable economic success and include challenging objectives.

Our key remit for the future: Eco-friendly, safe, efficient mobility

Knorr-Bremse is a keen proponent of environmentally friendly technologies and invests significant amounts in R&D every year to enhance products with regard to EcoDesign principles (Goal 9). As one of our new approaches to innovation, we use an accelerator program involving startups to identify, for example, sustainable technologies. Our Rail division aims to help deliver the rail-borne transportation of the future – a key pillar in an eco-friendly mobility system. The investments announced by the EU are

generation Renewables

Gradually increase share of renewable energy generated on our own



Renewables purchase

Expand renewable energy purchasing, making use of power purchase agreements, green energy products and certificates

a key step toward making rail the green means of transport that moves people and goods in a sustainable and efficient way. Only by investing in infrastructure and digital technologies will the mobility sector be able to contribute to achieving the climate targets. With innovative braking technologies, solutions to further improve rail vehicles' footprint, as well as digital innovations and services, Knorr-Bremse is already playing a part. At the same time, our Truck division is also making a big contribution to reducing global CO₂ emissions, not least by means of lightweight design, which should result in lower fuel consumption by truck fleets. Electric mobility is one of the key levers for achieving internationally agreed emissions targets. Last year, Knorr-Bremse took the next step toward the age of electric mobility by bundling its expertise in the field of e-mobility within the eCUBATOR, our own new development unit.

MAN Gives the People CO₂-free Mobility

Electric drives with battery storage cannot bring about a transformation in passenger transport and the transport sector on their own. In order to provide customers with environmentally friendly commercial vehicles for every situation, MAN is also assessing the potential of hydrogen as an alternative drive technology for clean mobility. To achieve this, the company is cooperating with impressive partners from the worlds of politics, business, and science.



By Stefan Klatt, MAN

Reducing pollutant emissions has been on the agenda of commercial vehicle and engine manufacturer MAN for many years. Although the initial aim was to reduce emissions that are harmful to humans – such as carbon monoxide, nitrogen oxides, and particulate matter – to a minimum, awareness of the harmful impact that CO₂ has on the climate has meant that reducing CO₂ emissions is now a top priority. More and more private-sector and municipal fleet operators want to make a contribution to climate protection and are asking for vehicles with low CO₂ emissions or a zero local emissions propulsion system. In addition, the EU decided in summer 2019 that manufacturers of trucks and commercial vehicles must reduce CO₂ emissions by an average of 15 percent by 2025 and 30 percent by 2030, compared to 2019 levels: "Since the CO₂ emissions from diesel engines are directly related to consumption, this means the following: Zero local emissions alternatives are required because diesel engines alone cannot be made 30 percent more efficient. The EU's CO₂ targets can only be met using low or, better still, zero-emission vehicles," MAN explains.

Customized solutions for every application

Although electric drives with battery storage are considered the most promising technology for passenger cars in terms of preventing CO₂ emissions in traffic, making the correct decision with regard to the appropriate alternative for heavy commercial vehicles is not so simple. The reason: It is not possible to commit to a single type of environmentally friendly propulsion technology because vehicle configurations and operating parameters are too varied. "While a scheduled-service bus in city traffic rarely covers more than 300 kilometers a day, a coach can clock up twice that. And the requirements for a delivery truck that returns to the depot every day are completely different to those for a longhaul transport truck that is out on the road for days or even weeks at a time all over Europe," the company explains.

For this reason, MAN is pursuing various approaches to alternative energy sources and types of drives at the same time as well as developing different solutions for its range of vehicle types and how those vehicles are used. For example, with its MAN Lion's City E and eTGE models as well as the eTGM distribution truck, the company is already supplying its customers with series-produced, batterypowered vehicles for public transport and distribution transport applications. For long-haul transport, on the other hand, hydrogen (H₂) constitutes a good complementary alternative fuel option. The company unveiled its development roadmap in this regard in autumn 2020: According to this, prototype vehicles are to be built as soon as 2021, in line with ongoing predevelopment projects. MAN is testing the use of both a fuel cell and an H₂ internal combustion engine.

Hydrogen as a clean partial solution for heavy commercial vehicles

The benefits are obvious: Firstly, this form of e-mobility is very eco-efficient. Fuel cells do not produce any CO₂ emissions when in use, as they only emit water vapor. Secondly, thanks to the onboard power generation function, their range of around 800 km is great enough for long-haul transport by truck even if the payload is significant. The hydrogen-

based internal combustion engine, on the other hand, offers a more readily available and robust solution on account of the well-established basic technology and could therefore be used as a form of bridging technology. "We take our responsibility toward the environment and society very seriously. As such, we put a lot of effort into developing alternative drive systems at MAN Truck & Bus," says Dr. Frederik Zohm, Executive Board Member for Research & Development at MAN Truck & Bus. "Hydrogen is an interesting solution, but it will require significant infrastructural expansion. We are delighted that we can play our part by developing the right vehicles - as we have demonstrated with our roadmap.

The roadmap envisages that the vehicles will undergo practical testing in cooperation with selected customers in 2023/2024. As part of a "Bavarian fleet," MAN wants to work with Bavarian infrastructure operators and haulage partners to test hydrogen for use in longhaul goods transport. "Bavaria is set to become a pioneering region for hydrogen

technology: Collaboration with MAN to develop hydrogen engines for trucks in Nuremberg. With our high-tech agenda, we are firing up the research turbocharger to develop green technologies. Taking this technological leap is the only way to secure jobs over the long term,' wrote Bavarian Premier Markus Söder on Twitter after visiting the MAN site in Nuremberg in autumn 2020. He was referring to the Bavarian hydrogen strategy "WasserstoffBayern (H2.B)," which is aiming to make Nuremberg a European center of excellence for hydrogen propulsion by having the worlds of commerce, research, and politics all pull in the same direction.

MAN undergoes transformative change to become supplier of alternative drives

In the future, MAN will be working with the Friedrich-Alexander University of Erlangen-Nuremberg (FAU) and the Nuremberg Institute of Technology (THN) in order to research and develop hydrogen-based vehicle drive systems. The





so-called Hydrogen Campus covers the entire value chain of this form of propulsion: from the environmentally friendly production of hydrogen to distribution and infrastructure, from energy conversion back to electricity to how the technology is applied in the customer's vehicle: "For the first time, university scientists and students will be working with a vehicle manufacturer's developers in running a joint laboratory and test benches on the manufacturer's factory premises in order research hydrogen technology. With this hydrogen campus, the MAN diesel engine plant in its current form is paving the way for a successful transition to alternative drive systems," says MAN.

With its research into clean mobility in the commercial vehicle sector, MAN is not only safeguarding the company's future commercial success, but also playing its part in the fulfillment of the UN's Sustainable Development Goals. By making this commitment, the company is focussing on Goals 9 (Industry, innovation and infrastructure), 13 (Climate action), and 17 (Partnerships for the goals).



Symrise Aims at Climate-positive Operations by 2030

Sustainability forms an integral part of the Symrise business model. The manufacturer of fragrances and flavorings, cosmetic active ingredients and raw materials, and functional ingredients for food assumes responsibility beyond the company for customers, consumers, employees, society, and the environment. Numerous ratings, certificates, and prizes – such as the German Sustainability Award, which Symrise has already won twice - deliver proof of this. In addition, the nonprofit organization CDP gave the Holzminden Group a triple-A rating - the highest one - in the categories of climate, forests, and water. This makes the company one of the ten most sustainable companies worldwide.

symrise 🌍

By Christina Witter and Friedrich-Wilhelm Micus, Symrise

Focus on three dimensions of sustainability

Symrise splits its sustainability management into three dimensions: Environment, Social, and Governance (ESG). Symrise has defined its ESG performance as a measure of its success, and it has derived focal points such as biodiversity, climate change, as well innovation and development from this. The Sustainable Development Goals (SDGs) of the United Nations give these dimensions a more

specific definition. In the course of its responsible conduct along the entire value chain, Symrise orients itself to these goals. A particular focus lies on SDG 13. The Holzmindeners have set themselves the ambitious goal of climate-positive operations starting in 2030. Due to its diversified positioning, Symrise must keep an eye on all 17 goals. The company has identified six of these to which it can contribute most: "Decent work and economic growth" (SDG 8), "Responsible consumption and production" (SDG 12), "Climate action" (SDG 13), "Protection of life/biodiversity on land and below water" (SDGs 14/15), and "Partnerships for the goals" (SDG 17).

Of these six core topics, "Climate action" (SDG 13) carries particularly relevance. Symrise needs a healthy climate for long-term success and the continued existence of its business model. This will allow the approximately 10,000 mostly natural raw materials that the company uses for its products to thrive,

both today and tomorrow. Specifically, Symrise positions its six core SDGs as follows.

SDG 13: Climate action

Rich biodiversity and a healthy climate go hand in hand – this is why Symrise has decided to take an important step. Beginning in 2030, business activities are expected to prevent or sequester more greenhouse gas emissions from the atmosphere than they produce. As an intermediate goal, by 2025, Symrise expects to increase its eco-efficiency of greenhouse gas emissions by 63 percent compared to 2016.

The company already managed to improve this efficiency by 13 percent in 2020. To make additional progress, it is examining all processes in more than 100 locations worldwide to see how it can use electricity, gas, and steam most sustainably in production in those places. This may involve using energy from renewable sources or generating their own sustainable electricity. The Group achieved this goal in 2020 by demonstrably covering its external power needs worldwide entirely from renewable sources. It had already achieved this in Germany in 2018. To achieve its goals, Symrise includes climate protection in the planning phase of current projects. It has developed a "toolbox" that it has initially used in the construction of its first "green factory" in Tocancipá, Colombia. Building blocks include solar collectors, systems for water and wastewater management, and environmentally friendly waste recycling. Symrise also includes its partners in its dedication to these goals: 87 percent of its major suppliers have committed to their own climate-protection objectives.

SDG 8: Decent work and economic growth

In addition to its dedication to the climate, Symrise is committed to observing human rights. It pays attention to good work conditions, equal opportunity, and facility safety, both in the company itself and along the supply chain. Suppliers and business partners must acknowledge the company's own Code of Conduct before a partnership begins. By 2025, it expects the share of major suppliers who it assesses based on sustainability criteria to increase to 100 percent.

SDG 12: Responsible consumption and production

Sustainable production processes and the efficient use of natural resources are firmly connected to the core business of Symrise. This starts with the environmentally friendly use of chemicals and extends to the avoidance of waste. Symrise exerts a great influence on this, already in the product development phase.

SDGs 14 and 15: Biodiversity on land and in the water

Because it needs an intact global variety of species for the long-term manufacture of natural products, Symrise actively protects biodiversity. Specifically, Symrise intends to make a contribution to clean oceans by 2025 by preventing or significantly reducing garbage and/or sensitive waste.

SDG 17: Partnerships for the goals

Furthermore, Symrise needs strong partners to help it reach its ambitious objectives. Sustainable partnerships require knowledge transfer and synergies with suppliers, political actors, and local partners. Beyond this, a high level of backward integration ensures secure access to traceable, highquality raw materials.

Learning partnerships among suppliers, farmers, Symrise, and its customers form an additional focal point. Symrise and its partners want to invest €16 million in "Bridging the Gap" over the next four years. This shall counteract the global phenomenon of a lack of **17** PARTNERSHIPS FOR THE GOALS \mathfrak{B}

successors in small-scale agriculture, thereby reducing bottlenecks of certain raw materials. Symrise and its partners continue to develop specific methods for cultivation and harvesting. This enables higher incomes and makes agriculture more attractive to future generations.

Summary

Symrise takes its responsibility for the protection of the climate and living ecosystems seriously. These aspects come with the highest priority since they form the basis for the company's economic success. In light of this, the MDAX-listed Group has set itself ambitious goals such as climate positivity starting in 2030 and the efficient use and preservation of natural resources. Among other indicators, Symrise underpins its position as a visionary pioneer of climate protection with its triple-A CDP rating. The company continues to search for opportunities to thoroughly and profoundly interweave sustainability with its business model along its entire value chain. Close collaboration with its partners bears strategic relevance. Only by combining forces will Symrise succeed in reaching its stated goals quickly. By doing so, Symrise will secure the future for itself, its partners along the entire value chain, and consumers alike.

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Are Covid-19 Recovery Funds Helping the Environment?

In the last year, governments have pledged trillions of dollars in Covid-19 relief, creating what some observers have called a once-in-a-generation chance to make planet-friendly investments – and save the Earth from a looming environmental catastrophe. But, that does not mean the path to a green recovery will be easy.



According to a report launched by the Global Recovery Observatory, only 2.5 percent of all Covid-19 recovery spending will have "positive green characteristics," such as reducing greenhouse gas emissions and protecting natural capital.

The Observatory is tracking the fiscal rescue and recovery spending of the world's 50 largest economies to pin down the level of green spending built into rescue and recovery plans. The study is part of the broader Oxford University Economic Recovery Project, which is supported by the United Nations Environment Programme (UNEP), the International Monetary Fund, and the Deutsche Gesellschaft für Internationale Zusammenarbeit.

Researchers studied funds announced for both short-term "rescue" and longterm recovery. They found that green spending is concentrated in wealthier countries and populations, threatening to reinforce dangerous pre-pandemic inequities.

"Pandemic recovery packages are a massive opportunity to accelerate action on the three crises facing humanity: climate change, biodiversity loss and pollution," says Steven Stone, Chief of Resources and Markets at UNEP. "We must seize it or we risk scarring, saddling future generations with massive debt and a broken planet."

Spending so far

In 2020, \$368 billion was announced in national spending on programs that will reduce greenhouse gas emissions. Although this is a large sum, it pales in comparison to the \$14.6 trillion in total spending announced by the 50 largest economies. Much of that larger number consists of spending that is not expressly green, which threatens to reinforce business as usual patterns of production and consumption that are ravaging the planet, the new report says.

Despite the severity of air pollution, which causes up to 9 million deaths annually, only 16 percent of total recovery spending (excluding the European Commission) is deemed to potentially reduce air pollution. When it comes to preserving natural capital — or the global stock of natural resources — and reversing ecosystem degradation, "only 3 percent of recovery spending is deemed positive."

There are reasons for hope, though, the report says. Numerous countries are bucking trends and making substantial green investments. Poland, for instance, has put forth \$2.1 billion in a recovery push to position itself as a European leader in the production and adoption of electric vehicles. Spain has earmarked more than \$7.2 billion for a recovery plan – "España Puede" – meant to spur a "just and inclusive energy transition" through direct investment.

Recovery requires long-term thinking

Most green spending is concentrated in countries with a history of driving green investment. The report points to Germany's leadership, highlighting its \$8.3 billion investment in green hydrogen. And it said France — through an \$8.4 billion allotment to its sweeping "France Relance" recovery program — has emerged as a leader in green building and energy-efficiency retrofits.

Although some advanced economies and the European Commission account for most of the green recovery spending, the report warns that "for the vast majority of countries, recovery spending has been relatively low and minimally green." The economic ravages of the coronavirus are only exacerbating existing disparities – and recovery spending – between nations. The report points out that ad-

TECH COMPANIES TAKE ON CLIMATE CHANGE

25 technology companies signed a pledge to develop "green digital solutions" that will help the world slash carbon dioxide emissions and digitally transform key economic sectors. Signatories, which include Microsoft, Ericsson, and Vodafone, also committed to becoming carbon-neutral themselves by no later than 2040.

The pact, known as the European Green Digital Coalition, was spearheaded by the European Commission and endorsed by UNEP.

It comes as the world faces what experts warn is a looming climate crisis. The last decade was the warmest on record and, scientists say, unless humanity dramatically reduces its greenhouse gas emissions, the Earth is facing a future of heat waves, food shortages, and mass extinctions.

"We are in a race against time to lower greenhouse gas emissions," says UNEP Executive Director Inger Andersen. "Only digital technologies move at the speed and scale



vanced economies are spending about 17 times more per person than what is being spent in emerging markets and developing economies.

The imbalance among nations reflects inequalities that exist within nations – inequalities that have only worsened during the pandemic. Disparities in health

and healthcare access "led to the disease burden falling heavily on low-income and otherwise marginalized groups," according to the report. Worldwide, those groups have also experienced the bulk of job losses and wage cuts.

UNEP itself is retooling for a Covid-19 recovery. The organization's recently



necessary to achieve the kind of dramatic reduction in emissions that we need to see in the next 10 years."

UNEP's support for the European Green Digital Coalition is part of an effort to use data and digital tools to encourage politicians, business leaders, and consumers to embrace sustainable consumption and production. The initiative is designed to help the world tackle climate change, biodiversity loss, and pollution over the next 10 years.

Digital technology could help reduce the world's carbon emissions by about 17 percent, according to a report from the International Telecommunication Union, a United Nations body. Industry players say artificial intelligence, for example, could help make electric transmission grids more efficient. Blockchain technology could allow concerned citizens to track corporate carbon emissions. And the use of satellites can be further enhanced in monitoring environmental changes, including activities such as illegal logging, mining, and waste dumping, at sea or on land.



launched Medium-Term Strategy for 2022 – 2025 sets out a vision to address climate change, biodiversity loss, and pollution, and it maps out the actions needed to shift consumption and production patterns toward sustainability. It will bolster UNEP's efforts to advance the environmental dimension of the 2030 Agenda for Sustainable Development.





SUSTAINABLE CITIES

The world is becoming increasingly urbanized. By 2030, 5 billion people, 60 percent of the world's population, will live in cities. Rapid urbanization requires new transport, power, water, and waste systems. While cities generate the mayor share of gross domestic product in many countries, they are also responsible for 70 percent of global CO₂ emissions. In this section we name promising aspects how cities



Building a sustainable, inclusive and resilient present and future

As a leading building materials company, we recognize and embrace our responsibility in the development of sustainable cities and resilient communities. We continue to advance toward our commitment to the United Nations Sustainable Development Goals (SDGs) and specifically the five we prioritized that are directly related to our company's business strategy. SDGs 8, 9, 11, 13, and 15 represent our greatest opportunities for shared value creation and offer us the greatest potential for living our purpose of building a better future. We collaborate within and outside our company to collectively work toward achieving the SDGs.



By Martha Herrera, CEMEX

At CEMEX, we believe sustainability is the most meaningful way of doing business. Sustainability is embedded in our strategy, and thus, it is linked to all decision-making processes across our business lines. Our 2030 Sustainability Targets are designed to further enhance CEMEX's economic, environmental, and social performance, and to strengthen our commitment to build a sustainable, inclusive, and resilient present and future for all.

Climate actions (SDG 13)

As of 2020, we have reduced our net CO₂ emissions per ton of cementitious products by close to 23 percent compared with the 1990 baseline. With our 2030 goal, we aim to avoid up to 16 million tons of CO₂ per year, equivalent to the annual emissions of 3 million passenger vehicles.

Our 2050 ambition is to deliver net-zero CO₂ concrete to all customers and geographies. Concrete will continue to have a critical role to play in a low-carbon economy. In 2020, we launched Vertua, our industry-first Net-Zero CO₂ Concrete Solution. This product is an important step in our ambition of achieving carbon neutrality in all our concrete products and geographies. We achieve this through a cutting-edge technology with geopolymers that reduces the carbon footprint by up to 70 percent.

Biodiversity (SDG 15)

In 2020 we continued taking action to enhance the biodiversity in and around our quarries through the implementation of rehabilitation plans and conservation initiatives and the development of local Biodiversity Action Plans for quarries located in or close to high-value biodiversity areas. Our conservation activities provide a valuable opportunity to engage employees and local communities in wildlife enhancement initiatives and foster awareness of how industry and natural habitats can coexist.

Circular economy (SDG 8, SDG 9, **SDG 11**, SDG 13, and SDG 15)

CEMEX has the proven experience, technology, and know-how needed to process, store, and leverage the special

conditions offered by the rotary kilns in the production of clinker as well as to process waste and recover energy from alternative sources in a responsible manner.

Our Alternative Fuels Strategy helps us confront climate change by enabling us to rely less on fossil fuels and thereby reduce the CO₂ intensity of clinker manufacturing. Going forward, we will continue working to reach our targets and seek investment opportunities to identify and transform new sources of waste to replace fossil fuels, all while remaining a prominent industry advocate and leading user of alternative fuels for cement production.

Diversity and inclusion (SDG 8 and **SDG 9**)

We embrace the benefits of our differences and our similarities; with more than 41,000 employees from more than 100 nationalities working as One CEMEX across our operations, our success is rooted in leveraging our diversity to deliver on our vision of building a better future. Launched in 2020, our Global

Recruitment Policy emphasizes providing equal employment opportunities in our company and describes our D&I Position Paper on the subject and our public adherence to the UN WEPs. At CEMEX, we actively promote inclusivity across our operations with our policies, D&I Local Committees, recruitment practices, and training to address unconscious biases across the workplace, marketplace, and community.

Social actions during the Covid-19 pandemic (SDG 11 and SDG 17)

Our Social Impact strategy enables us to embed a total social impact mindset into everyday actions and fully integrate the footprint from its actions cross-functionally into all of our business units. The long-term goal is to accomplish well-being and social welfare as well as generate shared social transformation in more than 5,000 communities in which we have operations. To support our stakeholders worldwide in enduring lockdowns and loss of income, we developed swift action plans across our operations in coordination with local partners and authorities.

Prior to and during the Covid-19 crisis, we have developed solutions through our partnerships, replicated our programs in multiple countries in record time, and scaled efforts to reach out to the most vulnerable people in society.

To date, CEMEX has collaborated with more than 23 million people in more than 5,000 communities in which we operate. Through our four community investment pillars, we guide collaboration and actions that contribute to the transformation of communities globally and create shared value.

- 1. Education and Capability Development for Employability:
- +53,000 youths trained to date
- +6,600 youths reached through education programs, despite the global pandemic

2. Sustainable and Resilient Infrastructure and Mobility:

• +3.6 million people have accessed affordable housing solutions to date • +550 beds were added by developing a building solution for the construction of hospitals in Mexico

- 3. Social and Environmental Innovation and Entrepreneurship:

• In 10 years, the CEMEX-Tec Award has built a unique ecosystem of more

HIGHLIGHTS FROM OUR MULTISTAKEHOLDER COLLABORATIONS

CEMEX SDG Innovators

In 2020, for the second consecutive year, young intra-entrepreneurs from CEMEX were selected to participate in the UN Global Compact's Young SDG Innovators Program. This 10-month accelerated training program enables future change-makers to join peers from across the globe to develop innovative solutions that help deliver on the global Agenda 2030 as well as our company's sustainability objectives. "In order to achieve the SDGs, businesses need to collaborate on developing and innovating their business models. The Young SDG Innovators Program gives me the opportunity to reach out to various fronts within CEMEX and collaborate with the extended network of the UN Global Compact to try to contribute ideas that will add value to the company and have an impact on the SDGs." Gonzalo Daniel García, CEMEX

GCCA

In partnership with the Global Cement and Concrete Association (GCCA), we developed a joint statement to fully document our sector's contributions to all 17 SDGs. We acknowledge that a decade of action is needed to achieve the UN SDGs and that the concrete industry will play an important role in contributing toward achieving these targets.

UN Global Compact – Our leadership in Mexico

CEMEX has been a participant in the UN Global Compact since 2004. Through our leadership as Chair of the UN Global Compact Mexico in 2020, the UN Global Compact led around 19 multistakeholder working groups to support and accelerate the SDG targets in Mexico. This was done in alliance with the federal government and Mexico's Coordinating Business Council.

than 8.600 students, social innovators, community entrepreneurs, and leaders of multi-sectoral initiatives from 90 countries

- 196 MSMEs supported in cooperation with NGOs to navigate the crisis
- 4. Culture of Environmental Protection. Health, and Safety:
- 14,800 environmental promoters have been trained to date
- + 3.6 million m² of hospitals and public spaces sanitized

Project "Impact Assessment": Measure Impacts and Improve Sustainability

This year the A7 highway is undergoing the biggest modernization in its history in order to be able to cope with increasing traffic volumes. New connections are thereby being created: Because the highway is being "roofed over" in urban districts with wide covers in three places, districts that had been separated for years are growing back together, and green spaces with small gardens and parks are being created. One of these covers is Stellingen Tunnel, which was opened for traffic in spring of 2021. The landscaping above ground is ongoing, and the new peace and guiet is a blessing for local residents, who up to now suffered from the loud traffic noise. In the future, the pleasant sound of twittering birds will be heard here instead of the drone of engines.



By HOCHTIEF

As a technical leader. HOCHTIEF has shared responsibility for the infrastructure project and the construction of the joint venture. It is one of many infrastructure projects worldwide in which the Group is contributing to stable and sustainable urban construction.

In search of measurability: Research project for infrastructure projects

As with all construction projects, the work on the A7 highway initially generated noise, dust, and increased emissions of greenhouse gases. Such effects rank among the usual and unavoidable side effects of construction. Can the effects on society and the environment actually be measured, and ideally also reduced? What leverage, if any, does a construction company have for the sustainable design of projects?

HOCHTIEF is looking for answers to the question of measurability and avoidability of impacts, together with socioeconomists of Zeppelin University in Friedrichshafen in a research project. The team, led by Professor Manfred Moldaschl, Head of the Institute for Socioeconomics, investigated the social and ecological impacts of construction for infrastructure projects. They concentrated on two projects in Hamburg in which HOCHTIEF is participating: Stellingen Tunnel and Langenfelde Bridge, which crosses over the A7 highway. They are being built on behalf of DEGES (Deutsche Einheit Fernstraßenplanungsund -bau GmbH), which is supporting the research project.

The objective of the scientists was to identify suitable sustainability approaches and instruments in order to observe and evaluate the impacts. In their methodology, the researchers concentrated on noise measurements at the bridge project and on observations of traffic congestion. They did this because the construction company can – at least partly – have an influence on these elements.

Closures and noise - measuring real impacts

If individual traffic lanes and highway sections have to be closed, this very likely results in traffic congestion, which is costly. It not only costs time but also money. According to a traffic study by INRIX, in 2019 German motorists spent an average of 46 hours in traffic jams. The economic damage is immense: Commuters arrive late to work, materials are delivered late, and traffic has to be diverted. Fuel consumption increases, and hence CO₂ emissions, with direct consequences on the environment and climate.

In the course of the research project, the scientists created a model that monetizes the impacts of closures, and it also had the ability to be modified for other traffic infrastructure projects. Since closing stretches of highway causes considerable social and ecological costs, closures are always reduced to a minimum in

EXPANSION OF INFRASTRUCTURE IN NORTHERN GFRMANY

The A7 highway in the Hamburg region is subject to one of the heaviest traffic loads in Germany: Just accounting for the section between the highway intersection Hamburg-Northwest and the junction Hamburg-Stellingen, 152.000 vehicles pass through every day, and this number is increasing. The expansion of the highway was decided because of this high traffic load, which leads to above-average numbers of accidents and long traffic jams. In its capacity as a technically oriented global infrastructure group, HOCHTIEF not only successfully realized Langenfelde Bridge and Stellingen Tunnel but, in a public-private partnership, also expanded the A7 highway along a stretch of more than 60 kilometers further north. The Group was also recently awarded the contract for the "Altona Tunnel" project - the last of the three "Hamburg Covers" projects under the leadership of HOCHTIEF.

HOCHTIEF projects. They are coordinated and transparently communicated in detail with clients and authorities. In principle, the following applies: Closures only occur if they are absolutely necessary, for instance due to the relocation of traffic lanes or material transportation. Furthermore, they are scheduled to take place outside of rush hour, as far as possible.



Such rules also apply to the topic of noise. However, in order to determine the impacts here, many other factors have to be taken into consideration, for instance the population density in the surrounding areas, a "basic noise level' without construction noise, the wind direction, and also noise-absorbing objects. Noise emissions were measured during construction of the Langenfelde Bridge.

However, there is no obligation to continually document noise pollution on construction sites, which means that the availability of information can vary considerably at other project sites. With regard to traffic figures and the evaluation of congestion, data availability is considerably better. However, in many cases, the scientists came to the following conclusion: An analysis of the impacts is only partly suitable for effectively promoting sustainability on construction projects. The study does provide an analytical instrument for the quantification and comparability of impacts. However, each construction project is unique and always involves new and different requirements – and consequently they are hardly comparable. Furthermore, for an analysis of impacts, appropriate monitoring measures are necessary these have not yet been established.

Logistics, communication, and digitalization: Important instruments for sustainable design

The research project also indicates the following: In particular, well-coordinated construction logistics play a more im-





portant role in ensuring trouble-free construction than impact management does - guaranteeing that the project can proceed without any hitches, because disturbances always have direct negative impacts on the environment and society. In addition to good planning, open communication with all stakeholders is also essential for implementing construction measures - not only with clients but also with subcontractors, local residents, and road users. At HOCHTIEF, logistics and stakeholder management have long since been an integral part of the internal management system, and hence part of the regular project implementation.

HOCHTIEF is also working in many other ways to further improve sustainability performance, also with the aid of innovative technologies. For instance, by using multidimensional works for presentations, digital construction can contribute to trouble-free construction sequence. In pilot projects, water and electricity consumption is being recorded and digitalized in real time to be able to analyze and correct unusual peaks. There is an ongoing campaign in the United States to reduce the amount of time construction machinery is idle. The potential is great: A good 30 percent of the operating time of heavy equipment can be eliminated.

Other current digitalization topics in the Group include projects for robotics, the use of artificial intelligence, and the Internet of Things. Digital innovation is making active contributions toward sustainability, which could considerably reduce impacts in the future.

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Vonovia on Track to Achieve Affordable Climate-neutral Housing Stock

Vonovia is aware of its social responsibility regarding climate protection. In addition to energyefficiency refurbishment and the expansion of renewable energies, Germany's leading residential real estate company is investing in innovations and new approaches – such as seeking holistic solutions for entire neighborhoods. Its neighborhood in Hamburg-Wilhelmsburg is an exemplary project for Vonovia.

NOUON

By Anne Werner, Vonovia

Wilhelmsburg, Hamburg's largest district in terms of area, is located south of the river Elbe and never used to be considered to have urban appeal or be very central. The neighborhood experienced an upswing thanks to the Internationale Bauausstellung (International Architecture Exhibition). At present, Wilhelmsburg-Ost has a population of around 54,000 on an area of approximately 37 hectares, including many young families of migrant backgrounds with children.

The local real estate structure there is largely dominated by two large residential areas: the Korallus Quarter, established between 1950 and 1970 and featuring apartment blocks and high-rise buildings, and the Bahnhof Quarter, built at the end of the 19th century in the Gründerzeit architectural style. Over the past few years, the area itself has seen little benefit from urban development processes. Overall, there is an acute need for buildings to undergo maintenance and modernization work. The apartments lack greenery and play areas, and brownfields dominate the landscape in the Korallus Quarter.

Affordable, climate-neutral housing in the urban neighborhood of Wilhelmsburg: This is the new approach that Vonovia wants to take to turn the district into a popular residential area for young and old alike. People should feel at home and get the full experience of a good social environment. A large majority of the roughly 1,400 residential units, 23 commercial units, and 253 parking spaces and garages owned by Vonovia have not yet been renovated. The measures currently in planning offer a high savings potential in the long term, as the current lack of thermal insulation as well as old windows and heating units leads to excessive ancillary expenses.

Overall, the neighborhood has good prospects, and the vacancy rate is very low. Due to their generous dimensions. apartments are in high demand and are particularly attractive to young families. The Korallus Quarter primarily offers three- and four-room apartments; the Bahnhof Quarter two- to two-and-a-halfroom apartments. In addition to that, there is huge potential here in terms of external areas.

The investments planned by Vonovia will turn the neighborhood into an attractive residential area for families and older residents. To achieve this, Vonovia will implement a modern and cost-effective energy concept with an environmentally friendly and subsidized supply of energy to the neighborhood. Attractive and affordable apartments will be preserved and the current portfolio expanded through special offers and concepts. Important measures include social diversity among the tenants, the expansion of services offered on site, and an upgrade of green spaces and play areas.

Together toward a climate-neutral neighborhood

A holistic urban renewal concept for the future development of the neighborhood that takes the residents into account is currently being designed in a workshop process – four planning teams are developing concept proposals that see the improvement of the neighborhood's environmental footprint as a key criterion. Vonovia's goal is to make its







entire portfolio climate-neutral by 2045. For this reason, an integrated approach that includes electricity and heating in the energy-efficient refurbishment of the buildings will be carried out in Wilhelmsburg.

Around 350 residential units will be heated through a local heating network powered by solar thermal plants on roofs, a cogeneration unit, and a new condensing boiler. The cogeneration unit also generates electricity as part of the power-heat coupling, and this can be obtained directly by the tenants through a customer facility. This adds a renewable energy component to the holistic concept – the gas in stock used to feed cogeneration units and gas boilers will even be replaced by synthetic fuels such as hydrogen. This measure will allow for CO₂ emissions to be reduced to almost zero.

However, the core aspect of the project is the development and expansion of a local heating network that also includes the construction and refurbishment of heating systems in the neighborhood. Renewable energy sources such as photovoltaics or solar thermal plants on roofs are also an important component. This means the burden passed on to tenants can be kept below €2 per square meter.

Overall concept

In the coming years, Vonovia will invest more than €100 million in this energy project. The realization is taking place in three phases.

The first phase, which has already been completed, saw the energy-efficient refurbishment of 334 residential units. Around €31 million was spent to achieve this. In addition to that, 15 loft apartments were expanded vertically. They are supplied with energy conventionally through the installation of their own gas-condensing boilers.

The second phase involves the energyefficient refurbishment of an additional 350 apartments by 2022/2023. This also includes the installation of a solar energy

cogeneration unit and a local heating network for the supply of the units. This way, positive effects in the area of heating and energy supply will be achieved using power-heat coupling, and the primary energy factor will be reduced from 1.11 to around 0.4. Vonovia expects tenants to actively participate by obtaining their energy from the customer facility.

Around 40 additional modern and familyfriendly apartments will be created from the gutting and repurposing of approximately 145 former student apartments built in the 1950s that are now also connected to the heat pump network and solar energy plants. In addition to energy-efficiency refurbishment, this phase will see the creation of 60 to 70 new apartments by expanding into attics. The construction of 10 new apartments is also in the pipeline.

Phase three, which is currently being planned, concerns mainly the Gründerzeit buildings in the Bahnhof Quarter. All in all, this will affect 400 apartments, which will be refurbished following phase two starting in 2023. A further 18 to 20 apartments will be created through expansion, and 14 further barrier-free apartments through infill developments. Around 50 apartments are in the planning as part of new construction projects.

Smart Urban Areas: Future-proof Cities with Solutions from Wilo

Worldwide, more and more people are moving to cities. According to an estimate by UN-Habitat, almost two-thirds of the global population will be living in urban environments by 2030. With its innovative pumps and pump systems, the Wilo Group contributes to turning cities into Smart Urban Areas with the purpose of making life and work in these areas future-proof.

By Ricarda-Marie Pomper, Wilo Group

First and foremost. New York, Paris, London, Istanbul, and Mumbai have one thing in common: They are so-called megacities – that is, cities with extremely large populations. According to estimates by the United Nations in 2018, there are currently 33 such megacities worldwide, and their number is growing. However, the rapid population increase poses growing challenges with regard to the urban infrastructure. This includes a lack of housing, for example, as well as traffic chaos. Yet, there are many more issues to deal with: In the Nigerian metropolis Lagos, for example, the water and energy supply is unreliable, the poorer inhabitants have no access to clean sanitary facilities, and the garbage ends up on the streets. The situation is similar in other large cities, mainly in emerging economies and developing countries.

What's more, climate change is aggravating the already tense situation: For example, in 2018, the metropolitan city of Cape Town was at risk of completely running out of drinking water. "Day Zero" was only just prevented due to drastic saving measures. Furthermore, 90 percent of the urban areas are located near coasts. If sea levels rise, these regions are at particular risk. However, at the same time, the cities are also contributing to climate change, as they are producing approximately 70 to 75 percent of all greenhouse gases.

The interconnected city

In order to render large cities futureproof and livable, we urgently need sustainable solutions. This feasibility is demonstrated by Smart Urban Areas. With this concept, urban infrastructures and many spheres of life will be digitally and intelligently connected. They can be divided up into six zones with different requirements and functions: Recreation and leisure, work and trade, living space, industry, transport and infrastructure, as well as agriculture.

The Wilo Group is one of the world's leading suppliers of pumps and pump systems for building services, water management, and the industrial sector, developing customized, energy-efficient, and smart solutions for different requirements. This occurs across the entire water circuit – from raw water intake and transport up to sewage treatment. "Our intelligent and connected solutions



wilo

LESS POWER CONSUMPTION DUE TO EFFICIENT SYSTEMS

Realistic estimates currently assume that pumps account for about 10 percent of global electrical energy consumption. This is no surprise, since a large proportion of pumps in use are outdated and inefficient. If they are replaced with modern highefficiency pumps of the latest generation, up to 246 terawatt hours of electricity can be saved worldwide. This is comparable to the power of around 80 coal-fired power stations.

contribute significantly to the development of cities toward Smart Urban Areas. Thanks to the significantly lower energy consumption of our systems, we also contribute to slowing down the climate change," says Oliver Hermes, President and CEO of the Wilo Group.

Pump systems against the monsoon in Mumbai

The city of Mumbai in India exemplifies what such a project looks like. With 25 million people living there. Mumbai is the economic center of India and houses the most important port of the country. As the city is in the tropics, 95 percent of the water precipitation occurs during just four months of the year. To prevent floods during the summer monsoon, Mumbai built storm pumping stations. It is the only city in India so far to have done this. These pumping stations are equipped with 29 axial submersible motor pumps from Wilo. Each pump is 6 meters high and can pump approximately 6,000 liters of water per second. If the water levels are too high, these pumping stations discharge the water from a drain or arm of water into the sea. At the same time, automated tide gates prevent seawater from getting into the city. "Our axial submersible motor pump was the optimum solution to meet the requirements within the project," says Rajesh Unde from Wilo India. "Its own weight ensures a self-centering position in the discharge tubes, and it can easily be installed despite its size."

The Narmada-Malwa Gambhir link project

However, whereas some have too much water, others have to contend with too much aridity. Such is the situation in the Indian central province of Madhya Pradesh. With support from the government and other partners on site, Wilo India implemented a project for the irrigation of a total of 50,000 hectares of land in the region. Now, 36 highly efficient vertical turbine pumps transport water more than 500 meters high and



through a pipe network of approximately 600 kilometers. The project provides the population with a sustainable source of income by way of agriculture as well as access to clean drinking water in around 158 villages. "Wilo is thus improving the living conditions in the central province of India. With state-of-the-art German engineering technology, we provide sustainable solutions in the area of irrigation and drinking water supply," says Hemant Watve, Head of Wilo India.

A company with climate protection in its DNA

As the inventor of the first high-efficiency pump, sustainability and climate protection have always been priorities for Wilo. Energy and resource efficiency are key to this. Therefore, the pumps of the company contribute to supplying people all over the world with water in an intelligent, efficient, and climate-friendly way. Furthermore, the Wilo Group is aiming to provide at least 100 million people with access to clean drinking water by 2025.



With the projects in India as well as the innovative solutions for Smart Urban Areas, Wilo is not only improving the worldwide supply of water as well as life in cities and rural areas, but it is also contributing toward meeting the UN sustainability targets. Among others, these are SDG 6 (Clean water and sanitation), SDG 9 (Industry, innovation and infrastructure), SDG 11 (Sustainable cities and communities), as well as SDG 13 (Climate action). "Our work with the precious resources of water and energy, as well as our approach to protecting the climate, require a sustainable mindset and sustainable actions. These are firmly anchored in Wilo's corporate culture," says Oliver Hermes.





SUPPLY CHAIN

Supply chain sustainability and responsible procurement are critical to making global goals local business by ensuring that the extension of a company's operations, products, and services can support the realities of our planet and better serve markets both today and in the future. When supply chains are done wrong - by not taking into consideration the environmental, social, and governance (ESG) performance of suppliers companies leave themselves open to significant operational and reputational environment can be substantial and severe.

Source: UN Global Compact

"A good report shows the link between business and sustainability"

Many rules, many numbers, many questions. In everyday life, reporting is a challenge for many sustainability managers. Thorsten Pinkepank, responsible for sustainability relations at BASF, answers questions about sustainability reporting.



Bv BASF

The EU Commission is currently discussing the introduction of its own non-financial reporting standard. Do you think this is a good approach? And what would you expect from such an EU-wide rule?

How much freedom and how many rules make sense for corporate sustainability reporting is also a crucial question in the discussion among reporting experts in Germany. More freedom means more possibilities for differentiation - more standards mean more comparability. If one is in favor of more comparability, as many users understandably are, for example in the financial sector, a legal standard "only" for Europe actually falls short again, because sustainability is not a topic for one region alone. My expectations would therefore in any case be maximum international connectivity and orientation to existing frameworks such as GRI (Global Reporting Initiative), SASB (Sustainability Accounting Standards Board), IIRC (International Integrated Reporting Council), as well as a dialog on this with international players such as IFRS (International Financial Reporting Standards). With regard to topics, only

a few central criteria should be defined across all sectors. Further sector-specific criteria could be discussed with relevant stakeholders. What is particularly important for reporting companies in practice: a pilot phase for the transition because it is difficult to comply with standards "retrospectively."

The UN Sustainable Development Goals, the SDGs, span over all the frameworks and standards like an umbrella. With 17 goals and 169 targets, these were originally conceived by and for states. But companies should also align themselves with them. What does this mean for the future? Will everything be turned inside out or will old wine simply be poured into new bottles?

The SDGs have indeed become a globally accepted reference framework. In terms of content, they were and are not new – GRI and others have been focusing on most of the topics for some time. Even if the SDGs are addressed to the states, they naturally also have a thematic orientation function for the private sector. It can be seen that they have a structuring effect, especially in connection with "impact reporting." Take a look at the work of the Value Balancing Alliance, for example. The UNGC (UN Global Compact) is also currently working with a group of CFOs to try to harness the SDGs to develop criteria for sustainable investing. I therefore see the SDGs in the context of reporting more as a broader framework for orientation than as a framework for operational reporting.

Various studies show that the quality of many sustainability reports is mediocre. There is often a lack of concrete proof of the measurements and achievements of the communicated goals. What do you think is essential for a good sustainability report?

A report is good if it describes the link between business and sustainability in a comprehensible way. At its core, this includes elements such as materiality, strategy presentation, targets, and associated KPIs. A good report also reflects the analysis of important stakeholders and their expectations - and therefore also takes a stand on critical, controversial issues. I also see transparent alignment with standards and appropriate external scrutiny as a mark of quality. As it



becomes increasingly clear that sustainability plays a central role in both business strategies and customer decisions, I see a trend toward integrated reporting – a path that BASF, for example, has been following since 2007.

How have you managed at BASF to ensure that sustainability is so robustly anchored in the company?

At BASF, we have been thinking about product life cycles for a long time and have done a lot of calculations. In addition, a key element – alongside the integrated reporting process – was certainly a method for portfolio segmentation and management according to sustainability criteria. In simplified commercial terms, it showed that "more sustainable" products are also better business. Quite consistently, at all levels in the company, we increasingly clearly see sustainability as a paradigm of successful corporate management that we must integrate into our day-to-day core and decision-making processes.

BASF is active worldwide, so you have a good overview of developments in the individual regions of the world. What's happening in the world?

Whoever develops the gold standard here is indifferent to sustainable development, but may be a future location factor. We see a dynamic development globally. Competition accelerates progress here, too but ultimately it is still a matter of global cooperation. This is particularly evident in individual or sector-specific topics: BASF, for example, is working with other companies, NGOs, and also governments in the Global Battery Alliance to drive transparency for this value chain with a battery passport as the digital twin of a battery – this must be done together with Asia, Europe, and America.

8 DECENT WORK AND

GLOBAL BATTERY ALLIANCE

13 CLIMATE ACTION

BASF is committed to responsible and sustainable global supply chains for mineral raw materials that, like cobalt, are an important component in the production of battery materials for electric vehicles.

17 PARTNERSHIPS FOR THE GOALS

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For example, BASF is actively involved in the Global Batterv Alliance (GBA) of the World Economic Forum, which it cofounded in 2017. The GBA consists of more than 70 members who are committed to making the value chain for batteries socially responsible, environmentally and economically sustainable, as well as innovative. The GBA is currently developing a battery passport for this purpose. In the future, this "digital twin" will contain information on the sustainability of a battery in order to increase transparency in the value chain.

Together with its partners BMW, Samsung SDI, Samsung Electronics, Volkswagen, and the Gesellschaft für Internationale Zusammenarbeit, BASF is also committed to sustainable cobalt mining. The joint project "Cobalt for Development" aims to sustainably improve working conditions in small-scale mining as well as living conditions for the surrounding communities in the Democratic Republic of the Congo. BASF will contribute the findings from the project to the GBA, for example.

For more information on the GBA please visit www.weforum.org/globalbattery-alliance/home

Protecting Supply Chain Workers during the Covid-19 Pandemic

Building a supply chain strategy that puts workers firmly at the center has proved to be as important now as it ever was before and throughout the Covid-19 pandemic.

By Javier Losada, Inditex

This health emergency has led to a unique set of challenges for all those involved in the global garment supply chain. The impacts have differed in severity and characteristic across all regions. At Inditex, our longstanding focus on the human and labor rights of supply chain workers through our sustainability strategy has only intensified by working closely with key stakeholders to ensure safe and secure work environments.

"Our priority through this crisis has been, and continues to be, the health and safety of our people, the workers in our supply chain, and our customers." Inditex Executive Chairman Pablo Isla

We have articulated our response to these challenges in the supply chain under four pillars, drawing on the UN Framework for the Immediate Socio-Economic Response to Covid-19 as a reference.

Although these efforts play a role in addressing all the Sustainable Development Goals (SGDs), they specifically strengthen our work in the areas of Goal 3 (ensuring healthy lives and promoting well-being for all), Goal 8 (promoting sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all), Goal 10 (reducing inequality within and among countries), and Goal 17 (strengthening the means of implementation and revitalizing the global partnership for sustainable development through aspects such as resource mobilization).

1. Health first

We launched a strategy to strengthen the protection of the health of workers that aligns with our strategic occupational health and safety plan. From the outset of the crisis, we developed this global response to support our suppliers and manufacturers and assist them in implementing specific measures geared toward preventing Covid-19 in the workplace and finding spaces for collaboration.

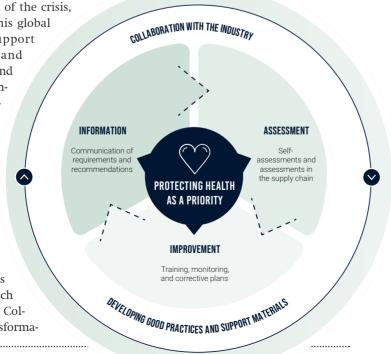
Our involvement in organizations and initiatives such as ACT (Action, Collaboration, Transforma-

tion) and the Bangladesh Accord, both of which have addressed this issue in their agendas, has allowed us to respond to this health crisis with a collaborative approach at the industry level.

INDITEX

2. Protecting people

We have been actively working with various players to set up a global response to address the adverse effects of Covid-19 in order to protect workers





in the sector. One of the key aims has

been to help in the development of so-

cial protection systems and to protect

employment to build industry resilience.

We have played an active role in the

inception and subsequent endorsement

of the initiative Covid-19: Action in the

Global Garment Industry. This initiative

aims to structure an urgent response

to Covid-19 and is geared toward the

protection of the incomes, health, and

jobs of workers by mobilizing funds

from international financial institutions

and supporting the development of so-

cial protection systems in the various

countries. The document governing this

initiative has been agreed by the Inter-

national Organisation of Employers, the

International Trade Union Confederation.

and the IndustriALL Global Union, with

technical support from the International

Labour Organization (ILO) and backed

by various international brands such

as Inditex, business organizations, and

Social dialogue has been one of the fundamental tools to address the effects of Covid-19. By driving relations with Inditex's core stakeholders to develop a collective approach within the sector, we have been able to address challenges common to all of them.

The organizations have set the following priorities:

- appealing to governments and financial institutions to expedite support for workers and employers;
- collaborating with financial institutions, governments, and donors to support the rapid and innovative mobilization of funds to provide support for workers' incomes;
- mobilizing funds to allow manufacturers to ensure business continuity, including paying the wages of all workers;
- fostering respect for the fundamental labor rights laid down by the ILO, as well as the promotion of safe and healthy workplaces;
- supporting the development of social protection systems for workers and employers in the textile industry.

3. Economic response and recovery

One of the most important aspects of the crisis has been to ensure that workers remain in employment and continue to receive their wages.

IndustriALL Global Union General Secretary Valter Sanches notes how "manufacturing suppliers need stability and predictability so that employment and income can be preserved." In line with our responsible purchasing practices policy, we guaranteed the payment of all orders already placed and in production throughout the pandemic. These com-

trade unions.



mitments make it easier for suppliers to meet their obligations. Swift and effective communication with our suppliers has been key to providing visibility and trust in the future of the supply chain.

Additionally, we have worked proactively with various financial institutions and multilateral organizations to improve and expand the financing options available to our suppliers.

4. Multilateral collaboration

The effects of the pandemic have reiterated the need for stable and sustainable relationships with stakeholders that promote mature industrial relations.

In this sense, together with IndustriALL under the Global Framework Agreement that we have held since 2007, we have worked on the worldwide textile industry recovery plan. This commitment was formalized through a joint statement on August 2020. The joint statement bolsters both organizations' lasting commitment to workers' rights to freedom of association, collective bargaining, and social dialogue.

"Our longstanding and fruitful work with IndustriALL for more than 13 years makes our Framework Agreement a strong tool to keep working to protect and promote workers' rights and well-being while supporting the global garment industry during these unprecedented times." Inditex Executive Chairman Pablo Isla

Agenda 2030 is even more relevant in the current context of Covid-19, since the SDGs represent a common point for meeting and agreement among all stakeholders involved in sustainability. They will be fundamental to the reconstruction of health systems, the economy, and society following the crisis. Inditex continues to strengthen its commitment to create economic, social, and environmental value for all its stakeholders, generate the greatest positive impact, and contribute to sustainable development.

Due Diligence: French Law As a Model for Germany and the EU?

The year 2021 has seen an increase in legislative initiatives regulating human rights and the environmental due diligence of companies' supply chains, particularly in Europe. While Germany's Due Diligence Act (*Sorgfaltspflichtengesetz*), also known as the Supply Chain Act (*Lieferkettengesetz*), which was adopted in June 2021, will take effect in 2023, and the European Union's Due Diligence Regulation is expected to be adopted later this year, several regulations on due diligence are already in place in other countries. In particular, the French Due Diligence Act, also known as Duty of Care Law (*Loi sur le devoir de vigilance*), is considered exemplary. A study commissioned by iPoint-systems examined its contents.



By Dr. Katie Boehme, iPoint-systems

As part of the European Green Deal and the coronavirus rescue package, the European Union also intends to enact regulation requiring companies to conduct human rights and environmental due diligence in their supply chains from 2021 onward. European Commissioner for Justice Didier Reynders provided information about the plan in a webinar in April 2020. With this, the EU is joining existing efforts that have already become law in France, for example, with the Loi sur le devoir de vigilance, or in the Netherlands with the Wet Zorgplicht Kinderarbeid, report Dr. Chris N. Bayer and Juan Ignacio Ibañez in the iPoint blog.

Germany recently passed its own Due Diligence Act (Sorgfaltspflichtengesetz),

also known as the Supply Chain Act (Lieferkettengesetz). This was urgently needed because only about one-fifth of German companies even check compliance with human rights in their supply chains; the NGO Initiative Lieferkettengesetz reports on the occasion of the monitoring of the German government within the framework of the National Action Plan for Business and Human Rights (Nationaler Aktionsplan Wirtschaft und Menschenrechte). In contrast, the chair of the German Council of Economic Experts, Lars Feld, warned in the German newspaper Frankfurter Allgemeine Zeitung that the law, which is also supported by the federal ministers Hubertus Heil (SPD) and Gerd Mueller (CSU), threatens to impose massive burdens on the economy.

Yet, massive burdens have not materialized in the frontrunner legislation – the French Due Diligence Act – seen by many as a model for possible EU-wide regulation. In France, companies with more than 5,000 employees in size must draw up, implement, and evaluate plans on how they will protect the health and safety of employees in their supplier companies and also ensure environmental protection on site. They must also identify the direct and indirect risks of harmful effects from their supplier relationships and take precautions to prevent them. Annual reports must also be submitted on this.

The Berlin-based non-profit research agency Development International e.V. has analyzed how the French law works in practice. Commissioned by the software house iPoint-systems, the study evaluated the due diligence reports of 134 French companies on the basis of 42 quantitative performance indicators and a further 14 qualitative characteristics in terms of their compliance with the legal requirements, their compliance with the UN Guiding Principles on Business and Human Rights (UNGP), as well as the quality of the disclosures. The overall result showed that most companies still had significant potential for improvement, particularly in the areas of transparency (a value of 36 percent compliance with the indicators was determined here) and compliance with the UNGP (24 percent). With an overall compliance rate of 66 percent, the law had been observed to trigger reform processes in French companies.

One aim of due diligence is to focus attention on ultimate outcomes of corporate governance. Moreover, companies may learn good practice from each other. In a specialist article for iPoint-systems, the authors of the study point out that there are several obstacles on the way to achieving these goals. In their non-financial reporting, many companies tended to report on supply chain risks and how to prevent them, rather than current harmful impacts caused by suppliers. This very deficiency was also revealed in a 2019 comparative study of non-financial reporting in Germany, Austria, and Sweden, also conducted by Development International and sponsored by iPoint. Country-specific differences emerged: According to Bayer and Ibañez, Swedish companies are particularly open about their own impact on human rights as well as environmental and health impacts in the supply chain.

As suitable means against the inconsistent compliance with human rights and environmental due diligence, the authors recommend a stricter legislation along the lines of the French model. Companies would also be motivated to fulfill their due diligence obligations carefully, among other reasons, because relevant stakeholders could even hold the companies liable if they can prove violations or also false or insufficient protective measures. The discussion in the EU is leading toward such a model. which would then apply to companies of all sizes and sectors, possibly with exceptions for small and medium-sized businesses.

The Reutlingen-based software company iPoint regularly funds studies and projects on due diligence and non-financial reporting. By doing so — and with its software solutions for product compliance, sustainability, risk management, and due diligence processes based on a circular economy approach, as well as





for traceability of the entire product life cycle and supply chain transparency iPoint contributes to Goal 12 (Responsible consumption and production). Most importantly, the solutions contribute to making the environmental and social footprints of companies and products visible. Furthermore, iPoint's software solutions also promote the achievement of Goal 8 (Decent work and economic growth) and Goal 9 (Industry, innovation and infrastructure).

THE UN GUIDING PRINCIPLES ON BUSINESS AND HUMAN RIGHTS

The UNGP were approved unanimously by the UN Human Rights Council in 2011. The principles, which are not legally binding, have nevertheless found expression in a variety of other initiatives and frameworks. The UNGP are governed by three pillars: protection of human rights, respect for human rights, and access to remedy. The protection of human rights primarily addresses the governments, while the second pillar is mainly aimed at companies. This reflects the issue of due diligence. The third pillar assumes a shared responsibility between governments and companies. Governments should take legal and institutional measures to help victims of human rights violations to demand that their rights be respected. Companies are also expected to create opportunities for complaints and, if applicable, to make compensation for human rights violations that have been committed.

Empowering Women and Their Communities Within Supply Chains

Sustainability challenges do not exist in a vacuum. They are often linked to one another, and their interdependencies – including the direction of causality and magnitude – must be considered when crafting appropriate solutions. At Philip Morris International (PMI), necessary trade-offs also occur due to its business transformation. For example, the company's priority is to address its biggest externality by replacing cigarettes with less harmful alternatives. With the growth of PMI's smoke-free business, there is a simultaneous decline of its cigarette business, which translates into a gradual decrease of demand for tobacco leaf. Such change has an undeniable impact on PMI's contracted farmers.



By Jennifer Motles and Anna Kletsidou, Philip Morris International (PMI)

In designing its strategies and programs, it is vital that PMI accurately comprehends, analyzes, and accounts for situations of compromise. The company, guided by its sustainability materiality assessment, strives to minimize trade-offs. However, if appropriately addressed, PMI has found some trade-offs to be a source of innovation, as such compromises press the company to develop plans for tackling the tensions created. By embedding an integrated approach to sustainability within its business, PMI has been able to monitor and tackle multiple issues simultaneously, identifying effective solutions that leverage interdependencies to make progress.

Socioeconomic well-being of tobacco-farming communities

The tobacco that PMI sources is cultivated in many regions of the world, including low- and middle-income countries, where it is typically grown on smallholder farms of less than two hectares. The socioeconomic well-being of these tobacco-farming communities depends on many factors — namely the nation's socioeconomic development, health and educational services, political stability, resilience to climate shocks, access to markets, and public infrastructure, as well as regulatory frameworks and their enforcement. If these factors are insufficiently developed, the population risks being locked in a cycle of systemic poverty, leading to poor working and living conditions, including the use of child labor.

As a global business sourcing tobacco from 23 countries, PMI has an important role to play in addressing systemic issues such as poverty and social issues and the exacerbation of gender inequality that results from it. Further, agricultural development can stimulate economic development outside of the agricultural sector. In turn, it can help alleviate poverty, prevent human rights issues, and contribute to higher paid job and growth creation. Increased productivity of agriculture also raises farm incomes, increases food supply, reduces food prices, and provides greater employment opportunities.

The plight of women in agriculture

In certain sectors, women are more likely to suffer from deeply rooted gender inequalities; agriculture is one of these. Around the world, women participate in agriculture both as members of familyfarming households and as hired wage labor on farms owned and operated by other households or companies. They frequently face structural and cultural barriers such as employment segmentation and gender gaps in earnings, financial inclusion and access to credit, ownership of land and property, and opportunities to receive training or technical support. Though agriculture remains the primary source of income for both men and women in rural areas in developing countries, women are just 13 percent of agricultural land holders globally. Women typically also must balance their financial contribution to the household with domestic responsibilities, which puts additional constraints on their time. Additionally, girls tend to have higher school dropout rates.

To break this cycle and overcome the dropout problem, policies need to be put in place and enforced with the goal of improving educational access and retention while simultaneously reducing gender inequality. Large companies like PMI are in a position to shape and influence gender norms given their often-expansive value chains. That could include taking action in the workplace to reinforce gender equality and women's representation in leadership and decision-making roles or supporting women farmers who produce raw materials. At PMI, the Agricultural Labor Practices (ALP) program is taking on these challenges by putting the women involved in its tobacco supply chain - including field technicians, farmers, and spouses and daughters of workers - at the center of its work to ensure safe and fair working conditions for all people involved in the tobacco farms.

Originally established a decade ago, the ALP program was evolved in 2018 so that PMI could better address the root causes of the issues that impact its tobacco supply chain year after year. Namely, it saw an opportunity to leverage what it had learned about the power of women in tobacco-farming communities to influence positive change in the fight against rural poverty and child labor. For example, women are known for being more open to learn and change, especially when it comes to issues related to their children's well-being and safety in general. By engaging women in awareness-raising programs, PMI saw that it could extend learnings to their families and influence them toward a safer and more inclusive work environment without child labor.

To formalize this, PMI added women's empowerment as one of ALP's guiding principles, stating: "Women are positive agents of change, but they can also be a vulnerable group in many rural environments. We empower women to play an active role in improving the household economic condition but also in enhancing the overall well-being of their children and maintaining a safe work environment."

By playing an active role in sustainably improving the livelihoods and well-being of families and communities, PMI's ultimate goal is to achieve a living income for all contracted farmers and eliminate child labor in its tobacco supply chain by 2025.

Moving from action plan to real change

Today, the ALP team is a diverse group of 26, including 16 women living across six countries, from nine different nationalities, speaking more than 10 languages. Together, they work to empower women on the tobacco farms to play a more active role in their communities through awareness-raising and training, job opportunities, economic empowerment, and social inclusion.

In 2019, PMI began implementing ambitious action plans in several >>



priority countries. To explore how this works in practice, let us take a trip around the world.

1. Targeted training for greater impact: Since the beginning of the ALP program, training and awareness-raising have been key components to ensure fair working conditions and sustainable agricultural practices. Initially, the training was focused on raising awareness on the ALP code requirements, informing farmers and workers of PMI's expectations and of their rights and obligations. Today, the focus is on adapting the training methodology and approach to be more effective and targeted, using real-life examples and creative delivery methods. The objective is to ultimately achieve behavioral change and have a positive impact in communities.

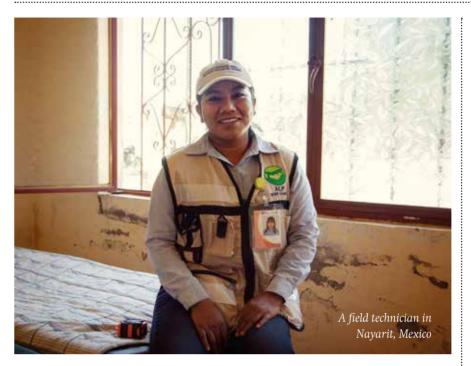
For example, in 2019, three of PMI's suppliers in Turkey, with the support of a local NGO, introduced training for women involved in tobacco-growing activities. The goal was to raise awareness about the mental and physical consequences of child labor and to train the participants on the importance of safe working practices.

Fifty-three sessions were delivered across 17 villages, reaching 1,111 women. The majority of participants stated they will implement the learnings in the next crop cycle. Further, many stated that this was the first time they had attended a women's training, and that they felt "visible" and that their contribution to tobacco production was recognized.

2. Farm-by-farm monitoring: Since the beginning, hiring female field technicians has been a focus of PMI's strategy, despite the fact that this role has been traditionally performed by men. This remains a key priority because it values the additional gender-sensitive insights and expertise that female field technicians can bring to the team, particularly in engaging openly with female farmers, workers, and family members.

For example, cultural paradigms in Pakistan lead to male field technicians not being able to directly engage with women on the farm. This is why, in 2019, PMI's local affiliate took the decision to deploy a team of 10 women ("ALP Monitors") to raise awareness on the ALP standards. The team engaged with more than 250 women across 250 farms. mostly through house visits. During follow-up visits, they recorded significant improvements achieved so far with respect to the ALP requirements. The most important progress was identified in the areas of safe working practices in tobacco growing, especially in the prevention of green tobacco sickness. In addition to improving working conditions on the farms, they conducted health and hygiene awareness-raising campaigns and distributed more than 1,500 sanitation and hygiene kits at homes. This work improved sanitation and hygiene practices not only on the farms but also at home.

3. Empower women entrepreneurs: Research has shown that a greater percentage of women's income is reinvested in their families and communities. Women are indeed more likely to spend their income on long-term investments such as education, health, and household services. Taking this into account for its ALP program, PMI has been testing and rolling out entrepreneurial activities for women involved in tobacco farming in various countries.



2 ZERO HUNGER

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For example, in Malawi, "Village Savings and Loan Associations" (VSLAs) enable women to play an active role in improving household economic conditions and enhancing families' overall well-being. These women save together and take small loans from those savings. The purpose is to provide simple savings and loan facilities in a community that does not have easy access to formal financial services.

PMI began rolling out VSLAs to women farmers and workers in Malawi in 2015. Based on the learnings, it partnered with a number of organizations to transform their scope to become more entrepreneurial by supporting them with financial literacy and entrepreneurial training, seed funding, opening their own bank accounts, gaining access to capital, and connecting them to potential business opportunities. More than 4,300 women constituting 257 groups were given the opportunity to participate and earn additional income that can be invested on family needs. In a country where child labor can be considered a systemic issue, with the International Labour Organization estimating its prevalence at 38 percent, PMI included an additional prerequisite for women to be able to benefit from this initiative: the signature of a "no child labor" pledge. Recent impact evaluation of the initiative demonstrated that the participants were able to make a profit and improve families' livelihoods through activities such as growing and selling vegetable crops.

More recently, PMI partnered with the local NGO ASSIST in India to support "Self-Help Groups" (SHGs) developed by local government. In 2020, the company rolled out a project aimed at building the entrepreneurial capabilities of 200 female members of the SHGs by training them on financial and organizational skills. ASSIST uses a "train the trainer" approach, equipping selected women with knowledge to empower and train others after them. Some 100 women from 11 SHGs, after having received training, have been selected to set up their own microbusinesses. In turn, they will support the funding of microbusinesses for 100 new beneficiaries, creating a positive domino effect. In 2021, PMI plans to train an additional 200 women



5 GENDER EQUALITY

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who can, in turn, further cascade their knowledge and provide funding for 100 additional women.

Women's empowerment enables sustainable development

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The UN 2030 Agenda for Sustainable Development has set a 2030 target to achieve gender equality and simultaneously acknowledges throughout its declaration that achieving women's empowerment, gender equality, and women's human rights are a prerequisite for sustainable development.

When women are guaranteed equal rights and opportunities, and when gender norms and stereotypes that hold women back are overcome, it benefits individuals, their families, societies, and business. Providing women and men with equal opportunities is not only the right thing to do, it is critical for meeting a wide range of SDGs.

Diversity and inclusion are indicators of a society's equity and openness. Upholding equality, diversity, equity, and fair treatment are human rights that are key to unlocking social and economic development. That is why inclusion is at the heart of the UN's 2030 Agenda, with the ambition to "leave no one behind."

Greater gender equality in the workplace benefits all, in multifold ways. PMI is committed to fostering an inclusive culture and enhancing its diversity, including empowering women and achieving gender equality. This is not only the right thing to do, but it also helps to define PMI's culture and is fundamental to achieving its purpose of delivering a smoke-free future. Varied perspectives, experiences, and problemsolving skills always add value but are especially critical in times of change.

PMI is convinced that a diverse and inclusive working environment will only help promote the innovation needed and accelerate the pace at which it is able to achieve its purpose.

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Redefining MULTIL ATERALISM

Today, humanity is confronted with a complex nexus of interrelated security threats. The multilateral system for international cooperation and global governance is under siege at precisely the time we need it more than ever before. The ideas, institutions, and policies on which the system is based is not fit for purpose to handle the complex, cross-border challenges arising from the globalization and financialization of the world economy; the growing power and independence of multinational corporations (MNCs); rising levels of unemployment and inequality; the pressures of political and economic refugees; the depletion of natural resources; the existential climate threat; and, most urgently, the plethora of urgent economic and social problems generated by the microscopic Covid-19 virus.

Milestones of Multilateralism

1648 Westphalian Treaty



The peace agreement that ended the Thirty Years' War in 1648 is described as the moment of birth of the modern state system.

1815 **Vienna Congress**

After the fall of Napoleon, the congress initiated the "Concert of Europe," which was a system to resolve issues peacefully. Ultimately, it prepared the ground for international congresses in the future.

1884

Berlin Conference

By invitation of then-German Chancellor Otto von Bismarck, the conference arbitrarily parceled out African territories by drawing artificial borders on a five-meter-tall map, thus manifesting colonialism and so-called Western hegemony.

1899–1907 **Haque Peace Conferences**

The Hague Peace Conferences were a series of international conferences aiming to regulate the conduct of warfare. In particular, they defined the treatment of prisoners of war and

provided definitions of war crimes as well as regulations for the protection of civilians. The latter paved the way for today's refugee conventions.



1865

Union (ITU)

ITU

International Telegraph

UN Organizations



he global pandemic is the most immediate and visible of these challenges due to its sudden. devastating impact on human health, the global economy, jobs, incomes, food production and distribution, education, travel, and other sectors. It has highlighted and severely aggravated fundamental flaws in prevailing economic policies. It has spurred rising levels of unemployment, economic inequality, and insecurity around the world. These, in turn, are reinforcing the retreat from multilateralism and democracy and fueling polarization and tensions within nations. The impact of these threats is far more visible and tangible to billions of people than the threats to national security envisioned at the time the UN was established. They are also much more complex. And they all dwindle into relative insignificance in comparison with the fast-approaching, existential threat of global climate change.

1. Characteristics of the global crises

The multidimensional crises confronting humanity today share a number of defining characteristics. All of them are global in origin and magnitude. None of them can be effectively addressed by individual nation-states operating independently of one another. The solutions for each and every one of these problems require profound changes in the relationships between nation-states and in the structure and functioning of multilateral institutions. This is selfevident with regard to issues such as Covid-19 and climate change, but it is even true for issues such as unemployment, which have been traditionally regarded as strictly national in origin and remedy. More than two-thirds of the factors impacting on unemployment

within countries stem from the conduct of other nations and the global system.

These challenges come at a time when there is a loss of confidence in traditional institutions of governance, a decline in governability, and a general crisis of leadership. People have lost confidence in their governments and, by extension, the intergovernmental organizations to which they belong. National political parties, business, the media, and even scientific institutions are confronting a mounting trust deficit. Democratic values and the rule of law are under attack. Nationalism, populism, and isolationism pose a growing threat to the global order. The distance between global institutions and the people has widened, in spite of the increasing efforts of the United Nations system to play a more direct role in tackling global challenges.

There is a compelling need to redefine our conceptions and reinvent our institutions for multilateralism. The notion of multilateralism as a system by which nation-states manage interstate relations no longer captures the entirety of the global game. Conceptually, we need to reshape the principal objectives of multilateralism and expand participation to include a much wider range of stakeholders.

But let us not prematurely dismiss the potential contribution of nation-states. It was only five years ago that 193 countries united in adopting the 17 Sustainable Development Goals (SDGs). The unanimous adoption of Agenda 2030 is an unprecedented historical commitment to operationalize and realize in practice the idealistic principles set forth in 1948 in the Universal Declaration of Human Rights. During the same month when the SDGs were being adopted, another land-

People have lost confidence in their governments and, by extension, the intergovernmental organizations to which they belong.



mark of multilateralism was achieved by 197 nations with the adoption of the Paris climate accord to curb the release of greenhouse gases.

A more effective multilateral system is absolutely and urgently needed. Criticism of the present system fails to take into account the extraordinary changes in global society, which make the current institutional framework increasingly inadequate. Whatever its shortfalls, its achievements have been enormous, and the need for a multilateral system is greater today than ever before.

Since the founding of the League of Nations and its rebirth as the United Nations, there have always been ambiguities, conflicting viewpoints, and competing concepts regarding the purpose and nature of the multilateral system. At its inception, many viewed it primarily as an instrument to maintain the balance of power between potentially conflicting states in a world where empires were still legitimate. They regarded multilateralism as a buffer against a fracturing of the world by a proliferation of small states striving for ethnic or national homogeneity. Legal experts emphasized its role as a mechanism for preserving peace and supporting international relations through international laws, rules, regulations, and systems for arbitration. Others promoted its virtues as an international system for establishing technical standards for coordinating global services such as the postal system, telecommunications, and weather monitoring. And some envisioned it as the embryo for a future world government that could gradually emerge as humanity outgrew the narrow distinctions of nationality and embraced universal values and a shared common human identity. >>

1920 League of Nations

The founding of the League of Nations was an initiative of the victorious powers at the end of World War I. It was the first intergovernmental organization to foster peace and cooperation among member states. Though US President Woodrow Wilson was one of the driving forces of its founding, the United States never became a member of the League of Nations.

1944 Bretton Woods Agreement

At the end of World War II, the Bretton Woods Agreement set up a new global monetary architecture by replacing the gold standard with the US dollar as the global currency. It also paved the way for two international finance institutions: the International Monetary Fund, which monitors the creditworthiness of countries, and the World Bank, which acts as a lender for development projects.

1945 • 1945 United Nations

The United Nations was established as the successor to the League of Nations. Its mission is to promote peace, security, and sustainable development in all parts of the world. It operates through five organs: the General Assembly, the Security Council. the UN



Secretariat, the International Court of Justice, and the Economic and Social Council. There are also 15 specialized UN agencies. The UN was founded by 55 nations in 1945 – including many, such as India, that were still subject nations within the imperial system. None could anticipate at the time that within 15 years, the entire global system of empires would virtually dissolve into thin air, emancipating onethird of humanity, and that the number of nation-states would eventually multiply more than three-fold. None could foresee that the Universal Declaration of Human Rights, which was established as a set of idealistic principles without legal status or means of enforcement, would in subsequent decades acquire increasing power in international law and eventually serve as the foundation for the 17 Sustainable Development Goals, which were adopted unanimously by 193 nations in 2015.

These circumstances illustrate the radical changes that have taken place in the world since the birth of the UN 75 years ago. They underline the necessity for the continuous evolution of multilateral institutions to keep pace with the ongoing evolution of the global community that it was established to serve and protect. In the context of the dramatic changes that have taken place, a review and assessment of international institutions is required to identify needs and opportunities to realign their mandates, structures, strategies, policies, and funding in order to enhance their capabilities to preserve peace and promote human security in its broadest sense.

2. Transformations of the global community

Reshaping multilateralism requires taking into account fundamental changes in the world system. First, the international system is much more inclusive than ever before. For the first time in the history of mankind, it encompasses nearly the whole of humanity. When the UN was founded, 750 million people – almost a third of the world's population at the time - lived in territories that were non-self-governing. Regions that were once considered on the periphery are now becoming center stage. The number, variety, and diversity of stakeholders acting globally; the volume of international interactions and transactions taking place; and the interdependence and complexity of the engagements have expanded beyond imagination. Membership totals on Facebook now approach three billion users, making it the largest community in the world and challenging the notion of the nation-state as the most representative model of democracy. Though national, religious, and ethnic identities persist, there is an increasing emergence of a common global identity, a global sense of community, a shared global commons, and a shared global culture – not a culture of uniformity, but of increasing richness and diversity.

A second fundamental change is a deep mutation in the nature of conflict. Wars used to be a matter of competition between powers. Today, weakness is replacing power as the source of conflict and war. Conflict situations today reflect manifestations of state weakness in the form of political instability, ethnic or religious strife, administrative incapacity, economic breakdown, natural calamity, or environmental degradation. The greatest threats confronting humanity now primarily result from the flight of political refugees, economic refugees fleeing shortages of jobs or food, and environmental refugees fleeing drinking water shortages, floods, or rising sea levels. These diverse causes of insecurity are turning the international environment upside down. They >>

1946 World Health Organization (WHO) United Nations Educational, Scientific and Cultural Organization

Food and Agriculture

Organization (FAO)



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1947 General Agreement on Tariffs and Trade

GATT is a set of multilateral agreements to coordinate tariffs, subsidies, and quotas. It introduced "negotiation rounds" to international agendas, which is what we see today in the climate negotiations.

1948

human rights. Though

been integrated into

various treaties and

national legislations.

not legally binding, it has

Universal Declaration of Human Rights

The declaration was proclaimed by the UN General Assembly in Paris as a milestone in the history of

1948 International World Union for Meteorological Conservation Organization of Nature (WMO)



1950 UN High Commissioner for Refugees (UNHCR)

(IUCN)

1951 International Organization for Migration (IOM)

1957

Treaty of Rome Signed by France, Italy, Western Germany, and the Benelux countries, the treaty established the European Economic Community, which later led to the European Union.

> 1961 Organisation for Economic Co-operation and Development (OECD)



represent more imminent, tangible, and dangerous threats to global peace than superpower rivalry.

A third change is mobility. The international system used to be based on the idea of territory, fixed physical boundaries, and physical property. Today, the territorial notion of politics has been altered by a wide range of non-material, extra-territorial, increasingly fluid, and rapidly changing cross-border factors, including information flows, financial flows, trade, intellectual property rights, technological dissemination, the spread of social movements such as Fridays for Future and Black Lives Matter, the onset and course of the pandemic, and the looming consequences of global climate change.

A fourth change associated with the other three is the growing complexity and interdependence between all the dimensions of multilateral relations. The major crises confronting humanity today are multi-sectoral with respect to both their causes and the requisite solutions. Conventional disciplinary boundaries between economy, politics, technology, society, and ecology are illusory theoretical constructs. Piecemeal strategies and policies implemented by specialized, sectoral institutions at the national and global levels are inadequate to address them. These challenges transcend prevailing theory and models in the social sciences and defy solution that apply conventional thinking and strategies. Specialized, siloed organizations are ill-equipped to address complex, multidimensional issues.

The world today is also increasingly integrated. As society has expanded horizontally to encompass the whole world, its various dimensions, sectors, The UN system was established to serve its member states and the world community rather than to exercise

authority over them. For its mission, it depends far more on trust and confidence than on power.

and activities have become increasingly interrelated and interdependent with one another. The multilateral system has to be reshaped to address a far wider range of issues as inseparable dimensions of a complex and increasingly integrated global system. It also has to be empowered with the required mandate, authority, resources, and commitment of member states to meet the global challenges to human security. It has to overcome the perceptual and conceptual barriers erected by disciplinary silos to decipher the complex interactions and interdependencies between different fields of social existence and to transcend the piecemeal, specialized actions of narrow sectoral institutions, policies, and programs.

3. Building trust and confidence in the UN system

The evolution of the global community has been supported by a growing awareness of the shared values and common destiny that bind together all human beings. In the measure that awareness has grown, relations and cooperation between people and nations have grown exponentially. Those born after 1995 have come into a world in which people everywhere are interconnected as never before and more conscious of their shared humanity than earlier generations, which were often divided by history, war, nationalism, ethnicity, and religion. Their human relationships have been dramatically altered by instant global interconnectivity. The growing sense of "we the people" is the ultimate basis on which the UN system is founded – and on which it will evolve in the future.

Strengthening multilateralism is absolutely essential for humanity to ef-



fectively address the global challenges confronting the world today. Yet, some UN member states and large portions of humanity either underestimate its importance or rely on unilateral and bilateral initiatives that undermine its power to serve humanity. The UN system was established to serve its member states and the world community rather than to exercise authority over them. For its mission, it depends far more on trust and confidence than on power. Anything that enhances public trust and confidence in the multilateral system enhances its capacity for effective service. Anything that diminishes public perceptions impairs its functioning as well as that of the tens of thousands of UN staff, whose motivation is strongly influenced by public perceptions of the UN system.

In a June 2020 survey by GlobeScan, citizens of 27 representative member states expressed nearly twice the level of trust in the UN system (26 percent) than in national government (15 percent). But both of these figures were far below the ratings for medical professionals (82 percent), scientific and academic institutions (73 percent), and NGOs (41 percent). Even large national companies rated higher in trust (28 percent). These figures reflect a general decline in respect for, and trust in, all types of social institutions in times of great uncertainty about the future. But they also highlight an opportunity that can be leveraged to strengthen the UN system and enhance its effectiveness through strategies that strive to build confidence and trust among the citizenship of member countries. While governments view with one another across conference tables, a growing sense of solidarity among ordinary citizens may be the best way to reinforce the foundations of the system. >>

1964 • Group of 77

The G77 was founded by 77 developing countries to promote and bundle the interests of the Global South and provide it with more bargaining power. It was the first time that the Global South had embarked on such an initiative.

1971 World Economic Forum

Also known as the Davos Summit, this annual conference gathers political and business leaders to discuss global economic and political issues and to network with one another. The WEF has recently become a trendsetter on important sustainability issues. 1964 United Nations Conference on Trade and Development (UNCTAD)

1966 International Covenant on Civil and Political Rights (ICCPR)



1970 World Intellectual Property Organization (WIPO)

WORLD WORLD INFELLECTUAL PROPE ORGANIZATION

1972 United Nations Environment

Programme (UNEP)

UN @ environment

1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)



4. Broadening the stakeholder base of multilateralism

A new form of multilateralism or plurilateralism is needed that effectively engages a substantially larger number and wider range of stakeholders. The last three decades have brought about radical changes in the number and variety of institutions actively engaged at the global level that possess the knowledge and capacities essential for addressing global issues. Non-state actors are playing an increasingly important role in analyzing problems, shaping political discourse, and influencing public opinion in global society. Subnational structures, interparliamentary unions, megacities, MNCs, pressure groups, scientific institutions, and CSOs are all stakeholders and players in global affairs.

Business has been transformed by the establishment of global supply chains. The number of MNCs multiplied from 7,000 in 1970 to 82,000 in 2008, with 230,000 foreign affiliates by 2014. The largest MNCs exceed the wealth and influence of many nation-states and have assumed the role of global social systems. The world's leading financial institutions have become linked as elements of an increasingly integrated global financial system. Academies, universities, and research institutes have established international networks for collaborative action.

International civil society institutions have multiplied exponentially and are now forging networks to multiply their reach and effective power. The international movement to abolish land mines was initiated by six NGOs and was only later embraced by national governments. NGOs such as Fridays for Future have generated greater awareness of the climate threat than years of pronouncements by the Intergovernmental Panel on Climate Change. From an estimated 28,000 NGOs in the world at the beginning of the 21st century, today there are about 10 million, representing a 350-fold multiplication in two decades. Today, there are approximately 41,000 active international organizations from 300 countries and territories. This includes intergovernmental (IGOs) and international non-governmental organizations (INGOs), with about 1,200 new organizations being added each year.

This wide and expanding range of stakeholder institutions possesses an enormous breadth of knowledge, organizational capabilities, and technological resources. They also represent the aspirations and interests of "we the people" - in many cases more directly and effectively than the institutions of national government. But only a few of the very largest have an effective voice at the international level. Multilateralism needs to be redefined to give voice to, engage, and harness the capabilities of a much broader range of stakeholders. At a time when many nation-states are turning inward and re-forming into blocs, leadership in thought is needed to redefine the concept and practice of multilateralism to include all legitimate stakeholders representing the human community.

5. Democratization of power

The present multilateral system is severely limited in another respect. Although democracy was devised to empower citizens at the national level and give them a more direct voice in governance, in practice few of the actions of national governments — even in mature democracies — very accurately reflect the will of their own people. The size of populations, the intermediacy of political parties, the professionalization of politics as a career, the influence of lobbying and special interest groups, and the inordinate power of business and money in politics present nearly impenetrable barriers that prevent the general population from effectively influencing decision-making on issues of fundamental importance to all humanity. This has been further complicated by the corporatization and politicization of the media as instruments of special interests.

What is true of politics at the national level is far more true when it comes to the representation of citizens on global issues. National politics is primarily concerned with domestic issues, and global issues are debated primarily from the perspective of their impact on nation-states and special interest groups rather than from that of the global community. The current system of multilateralism does not provide humanity as a whole with a direct voice in global affairs. Indeed, very little information is available to access the views of humanity on issues of pressing concern to the whole world, such as the pandemic, climate change, the international financial system, the role of multilateral institutions, and management of the global commons.

There are, of course, important exceptions at both levels. Mass demonstrations by women across America protesting the nomination of an ultra-conservative member to the Supreme Court, and hundreds of thousands of citizens in Minsk – the majority women – calling for the resignation of Belarus' president, and the massive protest that recently led to the resignation of Kyrgyzstan's president are illustrative. Their impact is multiplied by the growing influence and reach of social media protests such as Black >>

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Multilateralism needs to be redefined to give voice to, engage, and harness the capabilities of a much broader range of stakeholders.

1975 Group of Seven

In response to issues concerning energy and financial crises as well as the growing power of emerging markets, the largest economies and industrialized nations in the world formed the G7 as an interest group.

1987 Montreal Protocol

The Montreal Protocol was the first multilateral environmental agreement to protect the world's ozone layer from greenhouse gases, which are responsible for ozone depletion.

1992 Earth Summit

The United Nations Conference on Environment and Development, also known as the Earth Summit or the Rio



Summit, was the first major international conference on global environmental issues. It introduced the concept of sustainability into global political discussions.

> 1994 World Trade Organization (WTO)



1988

Intergovernmental Panel on

Climate Change (IPCC)

1998 International Criminal Court (ICC)



Lives Matter and the MeToo movement, which has circled the globe. These spontaneous, informal social movements are indeed exercising growing influence at the national and global levels. But they have yet to acquire the organizational capabilities or institutional access necessary to systematically participate in the multilateral system.

The adoption of the 17 SDGs by 193 countries was itself the result of an unprecedented effort to democratize decision-making processes through public consultations and engagement with civil society and other stakeholders around the world. These global goals have legitimacy beyond politics because of the unprecedented participatory process and the crowdsourcing of ideas from so many different groups, based on information communication technologies. An estimated 30 percent of the goals and targets included in the 2030 Agenda originated from crowdsourcing ideas contributed by stakeholders around the world. As a result, various sectors of society are taking ownership of the SDGs and aligning their activities with them, especially in developing countries, where they see the value of this overarching framework to leap forward.

Efforts are already underway to expand the scope for non-state stakeholders to contribute to the implementation of the SDGs. The UN Global Compact, the International Chamber of Commerce, and the SDG Business Forum engage business. Local2030, a multi-agency initiative, works across the UN system, bringing together the UN system, local authorities, and national governments to develop and implement solutions that advance the SDGs at the local level. UN Youth Strategy works to scale-up global, regional, and national actions to meet young people's needs, realize their rights, and tap their possibilities as agents of change. Such efforts, which are now largely confined to the implementation of Agenda 2030, need to be taken much further to provide an audible voice for shaping global agendas and to support the co-creation of effective solutions for all major issues by member states, UN officials, the private sector, local authorities, and other partners.

Multilateral institutions must devise new and more effective ways to bridge the vast distance and surmount the barriers that separate "we the people" from decision-making in international affairs. It is not sufficient to work with top-level representatives of countries, business, and a few leading CSOs. They need to devise mechanisms to more actively and formally engage and collaborate with parliamentarians, local authorities, the private sector, large CSO networks, youth and religious groups — people at all levels and in all fields of political, economic, and social engagement.

6. Accelerating social evolution

It took centuries for the institutions associated with "balance of power" multilateralism to evolve, and it took the horrendous tragedy of two world wars to compel even a partial change in those institutions to accommodate the aspirations of a much broader section of humanity. Today, we do not have the luxury of continuing to progress at such a slow, hesitant pace. The challenge before us is to transform the long, slow process of social evolution into a conscious process of rapid social transformation. Nothing less will be sufficient to address the pressing challenges confronting humanity today. Nothing less can prevent a further retreat and deterioration of the vital >>

Global Goals Yearbook 2021



2000 **Millennium Summit**

The summit was the largest-ever meeting of world leaders to discuss the role of the UN at the turn of the 21st century. The Millennium Development Goals were adopted at the summit and are the predecessors of the Sustainable Development Goals.

2002 Johannesburg Summit

Ten years after the Rio Summit, the follow-up event in Johannesburg, South



Africa, set the stage for a true multistakeholder approach by recognizing that the economy is an essential factor in solving global problems.

2015 **Sustainable Development Goals**

Paris Agreement Both the adoption of the SDGs as well as the Paris climate accord are milestones for global sustainability. The SDGs define 17 global goals to end poverty, protect the planet, and ensure

peace and prosperity by 2030. The Paris Agreement imposes a legally binding obligation to all states to keep alobal warming below 2°C.

2000 **UN Global** Compact

(UNGC)

2002

(Global Fund)

2006

S The Global Fund

Council (UNHRC)

The Global Fund to Fight AIDS.

United Nations Human Rights

Tuberculosis and Malaria

for Vaccines and Immunization (GAVI)

Global Alliance



institutions of multilateralism evolved so patiently and painstakingly over the last 100 years - institutions that are so essential for safeguarding the future of humanity.

After 1990 it appeared to many that the need for multilateralism was no longer urgent or imperative. The resulting shift in focus from arms control to trade and globalization was accompanied by a slow retreat from multinationalism.

It is now evident that this was a grave error. The concept of security is being steered in the wrong direction. More than ever before, the threats to peace and human security arise precisely in the undefined and unregulated no-man's land between the boundaries of nationstates and the protections afforded by the institutions of global governance and rule of law.

The urgency and intensity of global challenges today compel us to advance the development of the multilateral system based on the values enshrined in the Universal Declaration of Human Rights and the goals affirmed in Agenda 2030. The imminent risks and unavoidable costs of further delays far outweigh those of continuing to meander aimlessly into the future.

7. Shift from competitive national security to human security

We need a paradigm shift in thinking that views the full spectrum of global problems together and addresses them as the real threat to global security. We need to shift our thinking from the current competitive security paradigm to the more comprehensive, inclusive focus on human rights, the environment, employment, poverty, food security,

Such a paradigm shift to a more inclusive and collaborative global cooperation is essential to meeting the world's human security needs at the local, national, and international

levels.

education, health, and other dimensions of peace and human security.

Covid-19 is a wakeup call to transform our systems. The total annual expenditure of 34 UN agencies engaged in the full gamut of governance, law, peacekeeping, health, education, refugee, and myriad other activities was less than \$50 billion in 2016, equivalent to less than 4 percent, or 9.6 days, of global military budgets and about 0.057 percent, or 5 hours, of world GDP. We are still entrenched in the old model based on the flawed belief that our security depends primarily on a strong military. There is a perversity in the way we are allocating capital. No country can be safe without a stable and vibrant economy, sufficient jobs for all jobseekers, and a strong social policy framework. The nations that have proven the most resilient in the face of the Covid-19 pandemic are those which have already shifted to a broader conception of security that also encompasses economy, ecology, health, education, social welfare, and well-being.

A major paradigm shift is urgently needed for a more inclusive, representative, participative, multistakeholder system of global governance that is reflective of the aspirations and values of an increasingly informed and interconnected global community, equipped to understand and respond to the speed and complexity of the issues we face, and committed to realizing the comprehensive agenda of human security goals set forth by the world community. This is the most appropriate leadership task of the UN system and its member nations on the 75th anniversary of its founding.

Such a paradigm shift to a more inclusive and collaborative global coopera-

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tion is essential to meeting the world's human security needs at the local, national, and international levels. Nobody is safe in a world of pandemics, weapons of mass destruction, and climate change unless and until we are all safe.

The needed paradigm shift does not represent a derogation of national sovereignty in its true sense, but rather a strengthening of the only true basis for sovereignty itself, in two respects: First, because sovereignty implies power over ourselves, and we cannot exercise power over things that are beyond our control. Enhancing global cooperation will enhance the power and freedom of all nations, just as democracy enhances the power of all citizens.

Second, sovereignty begins with - and is founded on - the rights of the people, and its institutions derive their legitimacy from the will of the people. Human security is not possible without economic, social, and ecological stability and resilience.

The paradigm shift to an inclusive, global human security perspective is essential to reshape and refocus the purpose and function of our global institutions to address the full spectrum of humanity's security needs. A Green New Deal for some countries may temporarily reduce the immediate impact of the pandemic and other threats on specific populations, but it cannot prevent their recurrence.

A comprehensive and inclusive Global Green New Deal is the only viable strategy to address the vulnerabilities generated by the nexus of global challenges and create secure foundations for resilience in the future. Anything less is inadequate.

How to Revive Multilateralism in a Multipolar World?

Josep Borrell Fontelles Commission Vice-President Coordinating the external action of the European Union

> We all know that multilateralism is essential to our world vision but that it is also facing strong headwinds. However, with the new US administration in office, there is a real opportunity to work for its revival, even if it is not an easy task: first, because there are differences all over the world about how to rebuild it; second, because in a multipolar and fractured world, the geopolitical basis for multilateralism is changing; third, because Europe, like other global players in the world, will have to work in a more assertive way to advance its interests in a more transactional world.

What I mean is that if you want to advance some key principles on the world stage, you need to throw your political weight behind them and not simply rely on their moral value. For example, since Europeans want to defend the principle that borders cannot be changed by the use of force, they adopted sanctions against Russia over its attempt to do just that in Ukraine. Those who violate the key principles must pay a price for their behavior. That is why — following my last visit to Moscow — I proposed to approach EU-Russian relations using three actions: to push back when

66 The world today is becoming more multipolar and less multilateral.

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Russia infringes international law, to contain when Russia wants to weaken our democratic system, and to engage when we have an interest in working with the Russian regime.

The world today is becoming more multipolar and less multilateral. The challenge for Europe is to reconcile both dimensions — adapting to the new distribution of power while working to mitigate the political fracturing of the world into competing poles.

Over the last three decades, we have seen a rapid transformation in the distribution of power around the world. We went from a bipolar configuration between 1945 and 1989 to a unipolar configuration between 1989 and 2008, before entering into what we today could call "complex multipolarity."

Economically, for example, we have three dominant poles: the United States, China, and the European Union. However, politically, the structuring is more complex: first, because an emerging Sino-American bipolarity is increasingly structuring the world system; second, because there are important political and military powers that are not necessarily strong economic powers (such as Russia, or Turkey at the regional level); third, because there are actors in the middle of the fork, such as the EU, who carry a strong economic weight but are political poles in the making. The ambition of what we call "geopolitical Europe" is precisely to close the gap between economic power and geopolitical influence.

Let us be clear here. The development of Europe as a political pole is not contrary to the defense of multilateralism, but a basic condition for its effective defense. In the first place, multilateralism is above all a methodology designed to regulate world relations on stable, >> transparent principles that apply equally to all, regardless of size. This means that, regardless of whether you are a smaller country or a great power, the rules are the same. However, as George Orwell imagined in *Animal Farm*, we know that even if states are formally equal, some are more equal than others.

Multilateralism is not a magic wand. However, it can mitigate the power differences that exist between states by binding them using common rules. That is why Europe and the vast majority of states worldwide endorse it.

Now, multilateral rules do not fall from the sky. They reflect a state of play and very often the preferences of the most powerful. If, for example, we want to win the battle of the European Green Deal, we will have to put in place a carbon border adjustment mechanism (CBAM), which is indispensable but also controversial: indispensable because, without CBAM, we will face carbon leakage and comparative disadvantage for our industries; controversial because many countries see it as a protectionist mechanism, which it is not. Therefore, it must be WTO compliant. We must build strong alliances with like-minded states and convince the most reluctant of them to join us in this endeavor.

We need to think in terms of balance of power while advancing our interests. We are a principled Union, but principles alone are not enough to make a policy – and even less a successful policy. This is the main lesson we need to draw from the current global scene, where power politics is on the rise.

The second reason for the crisis of multilateralism is that the liberal values of 1945 are on the defensive in our changing world. Alternative narratives are challenging "the West" in every field,

whether it be the economy, health, history, individual liberties, or human rights. Russia, China, and others see any discussion on human rights in their spheres of influence as an infringement on their sovereignty – whereas for the EU, human rights are universal values and a cornerstone of our foreign policy. If Russia now tries to bypass the Union and deal directly with member states, it is also because the EU matters and hinders Russia's goals. In fact - and contrary to what is generally believed – there is no contradiction between playing power politics and promoting values. On the contrary. Showing that you will not abandon your principles is a sign of strength.

The foundation of multilateralism in 1945 and its resurgence after 1989 was not exclusively Western, but resolutely liberal. In this multilateral and rulesbased order, we Europeans were comfortable because it essentially reflected our preferences and interests. In tomorrow's world, the situation will be more difficult because there are competing claims and visions as to how the international system should look. The liberal voice is simply one voice among others. The states that challenge this view want to transform multilateralism from within and redefine it. They are investing in multilateral institutions to roll back this liberal vision.

In the face of this, Europe urgently needs to demonstrate the existence of a European point of view and forge alliances with like-minded states. In its conduct, it must be capable of forging issue-based coalitions and be more assertive, reactive, and agile. For, once again, the balance of power does not always work in our favor. Europe defends a diversity of viewpoints and has no hegemonic ambitions. At the same time, it must ensure that this does not lead to a generalized relativ-

66 We have three objectives when it comes to shaping multilateralism: to consolidate what works, to reform what no longer works well, and to extend the scope of multilateralism to new areas.

ism in which everyone does what they want within their own borders. That is why our commitment in international organizations such as the Human Rights Council is very important.

There is a third reason for our work toward becoming a political pole in a



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multipolar world. It is the need for us to defend our priorities on how to shape the multilateral system. On this we have three objectives: to consolidate what works, to reform what no longer works well, and to extend the scope of multilateralism to new areas. That is the main message of the new strategy on multi-



lateralism, which was recently endorsed by the Commission and by me as High Representative. It offers concrete ideas on how the EU intends to revitalize and modernize the rules-based international system in key priority areas — from trade and investment to health, climate change, and rules on emerging new technologies. The strategy highlights the commitment to invest in creative partnerships — not least with regional organizations such as the African Union, ASEAN, and others — and to strengthen collectively the UN and other multilateral forums.

Indeed, the challenge is not so much to change international rules but to ensure their implementation. We can no longer be content, for example, to defend the WTO without modernizing its procedures, particularly with regard to state subsidies. Finally, there are new subjects such as digitalization and artificial intelligence for which we urgently need to define new global standards. We need to be in a position of strength to do this. In addition, to achieve this we need to define a common position, develop arguments, and build alliances.

All this to say that we are not obliged to choose between multipolarity, which is a given, and multilateralism, which is an ambition. Accepting multipolarity means facing the reality of a world that is diverse, and also fractured and conflictual. To defend multilateralism is to reject fatalistic viewpoints and rally around our strengths and partners to make the global game more fluid, while always bearing in mind the interests of Europe and the values that underpin them.

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societies" or more autocracies?

Freedom House stated that over the last 14 years, 64 countries have experienced a decline in their ratings regarding human rights, fair elections, rights of minorities, and the rule of law, and only 37 countries have experienced a net improvement with respect to these aspects. Considering the world population, 39 percent live in free countries and territories, 25 percent live in partly free countries and territories, and 36 percent live in countries and territories that are not free. If we attribute half of the population living under partly free political conditions to the free regions

Open Societies versus **Digital Autocratic Experiments**

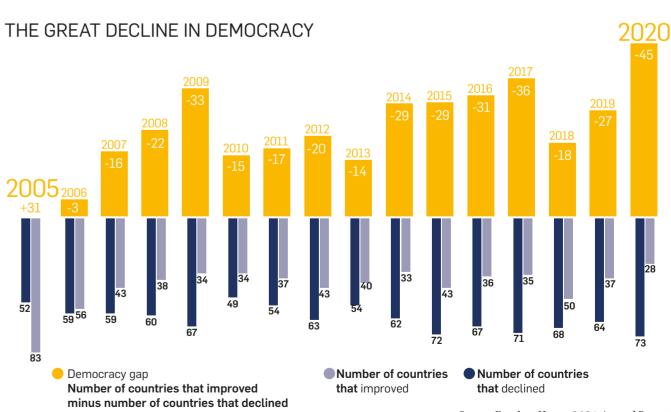


Prof. Dr. Dr. Stefan Brunnhuber Professor for Sustainability and Psychology Member of the Club of Rome

Introduction

Considering the course of events over the past decade, it is obvious that Western democracies, sometimes also called the "free world," are facing fundamental challenges. Far from liberal democracy marking the "end of history," this system of governance is coming to be replaced by alternatives, primarily autocracies. This transformation is occurring hand in hand with increasing global challenges such as global warming, asymmetric wars, unprecedented inequality, forced migration, pandemics, the unknown impacts of automation on the traditional labor force, etc. In their book titled That Used To Be Us, Thomas Friedman and Michael Mandelbaum asked: "What if the US declared itself to be China for one day in order to solve all the challenges we are facing, and then decided to shift back to an open democratic system in order to enjoy all its benefits?" In other words, what is the right political agenda for the 21st

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century? Should there be more "open

and countries, and the other half to those that are not free, respectively, it can be said that, although approximately 50 percent of the world population lives in free countries and regions, the remaining do not. At the end of the Cold War, it looked as if authoritarian and totalitarian regimes were on the decline. but the current trend shows the opposite. Regarding the percentage of the world that was free, 2020 received the lowest ranking in more than a decade. These empirical findings reflect a statement made by Vladimir Putin, the president of the Russian Federation, in which he claimed that "liberalism is simply outdated." The following graph illustrates this: >>

Source: Freedom House, 2021 Annual Report

Problem-solving in the Anthropocene era

In open societies, the state legitimizes itself by enabling, safeguarding, and balancing the often conflicting forms of individual freedom and responsibility of each of its members.

Currently, these autocratic experiments enjoy significant support – not only within prominent autocratic countries, but also within the Western "free world." In some countries, support for an autocratic agenda is even higher than support for the "free world." Much has been written about this shift in acceptance of autocracies on the one hand, and their lack of legitimacy on the other, but one of the main reasons for this hype about autocracies is the fact that its advocates believe that the system of autocracy is capable of solving problems such as poverty, unemployment, global warming, inequality, corruption, and loss of biodiversity in a better manner as compared to open societies. Finding solutions to the abovementioned issues is a high priority for all humanity, and it appears that autocracies are able to do a better job in curbing these issues. Empirically speaking, the autocratic system has its attractions: fast political decision-making, a rapid rollout of solutions, and streamlined scaling of the economy. However, after examining the autocracy system more closely, it is observed that there are self-limiting factors built into the autocracy itself. The question arises as to which of the two contrasting alternatives has a relative competitive advantage to cope with the upcoming challenges of the Age of the Anthropocene, which is characterized by the limits set by planetary boundaries, spillovers, and all-time interconnectedness. In this era, the human species has taken the driver's seat, not only in determining the course of the planet leading to global warming, reduction of biodiversity, pandemics, etc. – but also by offering ways of life for humans in large coordinated societies and for meeting human socioeconomic needs. This an

era in which there is no real exit option, plan B, or restart button. To summarize, of the two systems discussed — open societies and autocracies — which of them is doing a better job in solving global challenges?

The nature of an open society: Human-centered and open to revision

Historically, "open societies" - first described by the Austrian philosopher and founder of critical rationalism, Karl Popper (1945 - 2013) – are a conceptual response to the experiences of German fascism and Russian Stalinism, in which individual human rights were violated on a vast scale. Open societies reflect a societal and constitutional order in which personal freedom and reciprocal criticism provide not only the foundation of individual well-being, economic welfare, and peace, but also superior tools for solving problems and pursuing truth and coherence in both science and religion. In open societies, the state legitimizes itself by enabling, safeguarding, and balancing the often conflicting forms of individual freedom and responsibility of each of its members.

Although historically the concept of an open society has been a contribution of the West, it is a political agenda that can be applied to any country in the world. In an open society, individuals engage in a critical, open, fearless, and public dialogue to solve problems. Each member of such an open society knows that this quest for a better life should be human-centered, open to revision, failure-friendly, and built upon reciprocal tolerance and trust. They are also aware that this search for personal freedom will potentially enable greater creativity, happiness, wealth, health, and truth than any alternative. The open so-

ciety is built upon pluralism, reciprocal respect, and humility, in the awareness that our knowledge will always be incomplete, biased, and potentially misleading. This requires an ongoing fair, critical, and fact-based public debate; investigations by a critical and independent press: autonomous scientific endeavors that search for the truth and facilitate a better understanding of life's miracles and magic; and an education system that unleashes the creativity of each and every individual. Open societies install checks and balances that prevent the abuse of power. In open societies, the prices of goods and services are generated in a free, fair, and regulated market system with product liabilities and entrepreneur responsibility, without hiding the truth about the social and ecological externalities. Moreover, they are societies in which a social security system is operational, that is, nobody is left behind, minorities' rights are respected, and the votes of the majority are accepted. Open societies formulate and if need arises, implement – laws to replace elected political officials if they fail to perform their duties. Open societies protect human rights and are built upon the conviction that the coexistence of other opinions, the creativity of individuals, and the institutionalized forms of criticism guarantee a life with overall greater levels of personal freedom

This ideal concept of the Western world enjoyed broad reception in the years following the fall of the Berlin Wall in 1989. A further significant influence on the narrative of political debates in the West has been the convergence hypothesis. This hypothesis posits that free trade with autocratic regimes organically leads to a global convergence of the rule of law, the protection of minorities, the separation of powers, human rights, and

truth, and wealth.

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free markets. Therefore, according to this hypothesis, this Western value system is ultimately being implemented worldwide, making open societies themselves more stable and secure. This narrative even justifies the deployment of the military in humanitarian interventions (R2P: Responsibility to Protect). However, it seems that this form of expansive liberalism with its missionary proselytism has been taken too far. The flaw of this convergence hypothesis is that it is no longer falsified. Every time an autocratic regime takes a supposed misstep, it is assumed that the regime is "not yet there" or that its journey toward an open society still needs more time. However, it has been demonstrated with evidence that these were not missteps autocratic regimes simply followed a different narrative. For example, in 1989,



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the fall of the Berlin Wall was used as a symbol in the West to proclaim the end of communism. Regarding China, 1989 was the year of the suppression of the popular uprising in Tiananmen Square, which signaled the strength rather than the demise of communism.

However, open societies' understanding of democracy and human rights is subject to Western sovereignty with its claim to universal validity. If you visit a country with a high rate of poverty, illiteracy, and hunger, you may conclude that it is worth fighting for universal human rights. However, at the same time, you may acknowledge that there can be a temporal prioritization and geographical weighting of different values. Thus, the aims of overcoming poverty and hunger, providing housing for every indi- >>



vidual, and ensuring universal access to basic education and health facilities will quickly take precedence over ascertaining the rights of freedom of expression, freedom of the press, and geographical mobility across national borders. The people living in open societies in Europe, the United States, and other Western countries need to admit to themselves that there may be societies that have other priorities and preferences. For example, there are societies in which its members might not think it is highly important that everyone has freedom of expression, but whose concern is instead that their children will no longer starve, will go to school, and have access to potable water.

The autocratic system and its constraints

Whereas in open societies, we witness shared, balanced, and controlled forms of political power, autocratic regimes rely on reduced or no constitutional constraints to their political power, which is exerted by the chosen few, by one party, or even by a single person. We can distinguish between communitarian forms of autocracies (China) with a one-party system; paternalistic autocracies (Russia), which emphasize the ruling individual — often described as a benevolent autocrat — over institutions; and tribal or feudal forms of autocracies (Gulf states) with a prominent family or clan structure, often including military and/or religious fundamentalist traits. The common trait among all these types of autocracies is a focus on the nation's security, stability, and economic welfare, which outweigh the need for the political participation of citizens, individual freedom, and human rights in the traditional Western sense. All types of autocracies have the population's approval for the ruler's decisions, which is higher than that in most, if not all, Western democracies and open societies. Autocracies prefer to synchronize, correct, and align their citizens with solidarity, homogeneity, and the subordination of individual rights to collective narratives that determine the political agenda.

Consider the example of China. In Chinese culture, successfully copying the master is considered a special learning achievement. The more flawlessly this process is accomplished, the greater is

the person's learning curve and their reputation in society. This "copy and paste" culture means that the person who succeeds in imitating their superiors enjoys a head start because they can avoid the entire burden of imagination, invention and production, trial and error, and failure, and can instead concentrate completely on the imitation process. Additionally, the autocracy in China is impressive in its magnitude and the speed with which decisions are sometimes implemented. The reductions in the rates of poverty, the growth of the middle class, rising enrollment in education institutions, increased productivity, and the overall increase in life expectancy in China seem to demonstrate the superiority of the autocratic system as compared to the clumsy decision-making in open societies. The same seems to be true for other autocracies that we are currently witnessing in Europe, Africa, and the Americas.

However, at the same time, a number of other cultural achievements are lost or never attempted in the first place, and critical debate, error-friendliness, public discourse, individual judgment, and autonomous thinking are characteristics that can only flourish in an open society. Autocracies must rely on copying and imitation strategies because the original results of critical judgment are not available firsthand. It is generally assumed that, because we are living in an uncertain and complex world, we need more critical thinking and less copying, more independent thought than imitation, and more freedom and critical autonomy than control and domination. The autocratic ruler must rely on knowledge and information that is only accessible to them through critical judgment. They pretend to possess knowledge that they are not able to generate from within. Instead, it needs to come from other sources. For example, considering basic research, the low number of patents and publications and the insufficient R&D infrastructure in countries and territories under autocratic rule support this argument. For example, most researchers working in China have been educated in open societies and represent a hidden import of Western values and standards into autocracies. They play the role of game changers in autocracies from within by making them more open (while sending their kids to Swiss high schools).

Cannibalizing, parasitic, and self-limiting factors of autocracies

My argument is that the autocracies currently in operation all over the world are flourishing on the basis of preconditions they did not generate themselves. These autocracies are self-limiting and cannibalizing, demonstrating that they will end sooner rather than later, as they are dependent on knowledge that originally came from the free world.

The aspects of price allocation in free competitive markets; a rigorous debate on facts in an interdisciplinary scientific discourse; free public speech; a free, critical, and investigative press; a creative and pluralistic cultural scene; and the building of social capital based on interpersonally generated trust and reciprocal tolerance — they all draw on a human- and person-centered approach and are superior to any attempt to regulate society through a collective, non-democratic, top-down process. Lifelong political leadership or wielding political power for decades without the possibility of being replaced by an elected representative is not a sign of power, but of the weakness of the system in question. This shows that this system has abandoned a public and critical debate to impose and implement its will.

The multiple critical feedback loops that maintain balance in an open society and provide sufficient flexibility to respond to asymmetric shocks (such as global warming or pandemics), which themselves require decentralized, uncensored information, are poorly developed in autocracies. It must be noted that the censorship imposed by autocracies does not facilitate criticism. Whereas criticism is inclusive and a fundamental component of any open society, as it honors different arguments and tries to improve the status quo, censorship creates an ingroup/out-group scenario of those who follow the ruler's mandate and those who rebel against it. Autocracies are places where films and media, publishing houses and Wikipedia, curricula for schools and universities, and even history is censored, resulting in citizens who have no memory and humans who have no critical mind. In this case, censorship is exclusive and moralizing.

In autocracies, the process of searching for truth, freedom, fairness, and so forth is replaced by autocratic knowledge and a political party agenda that the leader pretends to have charted themselves but which in reality relies on the quest for truth that is generated elsewhere, namely in open societies. Autocracies are too homogenous and too synchronized in a top-down manner to respond and operate in a complex, non-linear world, where uncertainties and incompleteness determine the decisions of daily life. This is true for politics as well as for the corporate world. This is also true for individuals, small and large groups >>

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Lifelong political leadership or wielding political power for decades without the possibility of being replaced by an elected representative is not a sign of power, but of the weakness of the system in question.

The illusion of control: Autocratic regimes are convinced that they can control not only human behavior on a large scale, but also the course of a society as a whole.

and entities, and large institutional bodies. Political clan structures, in which family members of the original ruler of the autocracy are chosen to rule the country or the territory without any kind of external auditing, signify that the innovation and creativity of the best and brightest people are never developed, and that the lack of involvement of a critical third sector leads to systemic corruption. Further examples demonstrate that a critical mind is superior to a mind that is subjected to mechanisms of collective control.

Open societies, in contrast, are driven by a dynamic and decentralized process led by critical and freethinking individuals who are prepared to fail and sufficiently encouraged to take personal responsibility in entrepreneurship, in the unknown and rigorous journey of scientific discovery, in the creativity of cultural expression, in an open fearless public debate about their own doubts, uncertainties, and incomplete knowledge, in day-to-day decision-making in the private sphere, and in setting political agendas.

Despite the acceptance of autocracies by the respective populations due to their economic and political power and sheer magnitude, autocracies are built on at least two forms of illusions, which lead to these autocracies being self-limiting, parasitic, and cannibalizing: the illusion of control and the illusion of knowledge and wisdom. Both of these illusions lead to the false assumption that the political control of autocracies and the power they exert over the dissemination of knowledge enable them to manage the challenges of the 21st century, making them superior to open societies.

The illusion of control: Autocratic regimes are convinced that they can control not only human behavior on

a large scale, but also the course of a society as a whole. Facial recognition programs, the unchecked application of artificial intelligence, social credit systems, large-scale state interventions and regulatory efforts, a closed internet, and public video surveillance are examples of how autocracies claim to control and command a societal process that open societies organize in a completely different way. However, autocratic political systems lack external feedback loops, such as a critical media and press, free and independent lawyers, or an autonomous civil sector providing indispensable wisdom to cope with challenges in the near future. Without this formation of social capital, which only occurs when free and autonomous humans decide to collaborate, autocratic systems find themselves much less in control as compared to open societies when faced with external and internal challenges.

The illusion of knowledge and wisdom: Autocratic regimes are convinced that they are able to generate enough wisdom and knowledge from within to rule society and tackle systemic challenges. However, this autocratic knowledge is an illusion, because these regimes rely on the information and knowledge generated in open societies, which is then misused and instrumentalized for the purposes of autocratic systems. The knowledge, wisdom, and information acquired by individuals in open societies to solve problems are superior to the knowledge, wisdom, and information generated firsthand in autocracies. A one-party system is unable to generate wisdom in the way open societies do so, that is, in a decentralized, human-centered, critical, and failure-friendly manner. For example, a failed state-driven real-estate investment program requires a point of view that allows the program to be corrected. In an autocratic system, the only reliable source of information that the political apparatus has is its own political party programs. Contrastingly, an open society can rely on free price formation in free markets, a critical investigative press, and a research community that provides empirical evidence on how to proceed in correcting the errors in the program. In open societies, there is more than just one voice. These multiple voices guarantee progress, determine solutions to problems, and lead to the path of collective prosperity. When scientists get a bonus if they offer courses on political party programs - where ideology and party membership are more important than competence or professionalism. where spending on domestic security is higher than on defense and the military. and where even the constitution itself is subordinated to the party program - it cannot be assumed that such a system is ready to cope with the global challenges of the 21st century. No party program, no military regime, and no ideology whatsoever can replace the wisdom generated in open societies. In other words, the societal immune system or early

This argument can be taken one step further. Autocracies function only because they are able to fall back on achievements they have not guaranteed or generated themselves in the first place; they lack the endogenous factor for critical self-correction, which is key for the development of knowledge in open societies. On the other hand, open societies accept the opinions of right- and left-wing populists, while also considering the aspects of closed homogeneous ethnic habitats, knowing that nobody is 100 percent wrong and that each position will have to justify itself in the light of reciprocal criticism, open public debate,

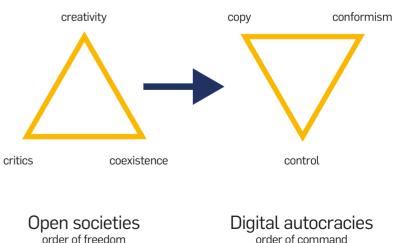
warning system is weak in autocracies,

as top-down commands prevail in the

process of decision-making.

a free press, and free and autonomous research and development. If this test fails, a position will be proven false and disgualified within the open society. In this sense, autocratic systems are parasitic and self-limiting. The importance of their political influence is abolished as soon as they are confronted with all the cultural achievements that are characteristic of open societies: individual criticism, creativity, and the coexistence of heterogeneous ethnic and socioeconomic groups. In autocracies, basic research takes place, patents are filed, prices are created in markets, and journalists do their work. Thus, such operations are already unacknowledged islands of "open social relations" within an autocratic dystopia. The following graph illustrates the findings:

OPEN SOCIETIES VERSUS DIGITAL AUTOCRACIES: WHY AUTOCRACIES ARE PARASITIC. CANNIBALIZING, AND SELF-LIMITING



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Conclusion

Illiberal democracies, controlled democracies, and one-party democracies - all of which can be considered as autocratic regimes in one sense or another - are not identical to the understanding of democracy and the rule of law in open societies in the West, even if they bear a similar name. These autocratic regimes represent a historical experiment that was highly promising but soon started showing its negative consequences. Although this experiment may sound great at first, it is a regressive response to the challenges of the 21st century. Contrastingly, open societies thrive on the idea of a liberal order based on a humancentered approach. They are not driven by the leftist narratives' notion of a >>

Over the last centuries, the course of history has shown that the more perfectly a human-centered approach is accomplished, the better the results.

forced equality, nor by an exclusionary ethnic identity of right-wing narratives. Both these narratives - if they assume an authoritarian character – depend on the illusions of being able to control societies and their citizens and of possessing information, knowledge, and insight about processes that do not belong to them. The free movement of goods, basic R&D activities, critical press reporting, and the unleashing of human creativity presupposes an order of freedom and is only really created in open societies. Anyone who refuses to understand this relationship between liberal democracy and progress will not survive the challenges of the 21st century. If the world was made up solely of autocratic systems, we would have neither real scientific progress nor objective and critical news, nor maximum creativity and cultural diversity.

Thus, it boils down to the question of governance through control, conformism, and copying versus governance through criticism, the coexistence of heterogeneity, and creativity. The course of history will show which model proves more successful in coping with the challenges of the 21st century. The existing evidence suggests that autocratic systems are second-best to open societies in dealing with the problems of the 21st century. Although it is true that open societies appear to be more fragile on the outside, they demonstrate greater internal robustness due to autonomous and self-critical individuals. They appear clumsy and slow in their decisionmaking at first sight, but demonstrate flexibility and tolerance for failure if necessary and re-correct themselves. In a fully connected and complex world with increasing uncertainty, non-linear adverse feedback loops and spillovers, asymmetric shocks, and unknown unknowns, the competitive advantage of autocracies – both in terms of geography

and time – will fall short or prove to be a nonstarter. They remain parasitic as they depend on open societies, cannibalizing themselves as they have to import relevant information generated only in open societies, consequently remaining self-limiting in nature.

Despite the backlashes and backward steps, historically, it has always been a person- and human-centered approach that has enabled greater wealth, greater social achievements, more scientific discoveries, and greater health than any other form of political system. Over the last centuries, the course of history has shown that the more perfectly a human-centered approach is accomplished, the better the results. This does not mean that there have not been failures and that there has not been abuse or misguidance regarding a human-centered approach. However, any time a society favored individual creativity, criticism, and the coexistence of heterogeneous groups, honoring and protecting minorities and individual freedom, more wealth, health, and freedom has been achieved. I believe that open societies are more resilient because they are more error-friendly, more adaptable, and more restorative, which in turn is possible because they are more critical. They are able to mobilize their own self-healing powers in ways that are not available to autocracies. Thus, open societies do not need an agenda for world peace or global governance, but simply have to demonstrate their attractiveness through their own exemplary character.

There is a need to admit that autocracies do not automatically become open societies with their inherent canon of values through the mere presence of open societies. Rather, it is the other way round: Autocracies need open societies in order to make themselves more stable by usurping the knowledge and discus-

sions of open societies to consolidate their own power.

As long as the free world does not mimic and copy these autocracies, we will come out of this historical phase ahead. This rising influence of autocracies will once again demonstrate that there is never an end of history or an end of ideology, but that the free world faces ongoing challenges that may never end. However, in the meantime, we must admit that we need both systems by considering the current status of the world. Open societies have generated sufficient knowledge and wisdom through public debates, a free

investigative press, uncontrolled creativity, price signals in a free market system, uncensored information, and rigorous scientific discourse in social and basic science, all based on a person-centered approach; consequently, autocracies use these cultural achievements to roll out and scale-up solutions to major challenges in their own countries (e.g., global warming, eradicating poverty, etc.).

Subsequently, the clash between open societies and autocracies will lead to the development of a non-hegemonic era, in which asymmetric and reciprocal interdependency predominate, rather than



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another era of imperialism, in which each proponent is convinced that their worldviews have to be adopted by the other. To rephrase the bon mot of the famous biologist E. O. Wilson: "Autocracies are an interesting experiment, but they have got the wrong species and the wrong time."

Extended and updated version of the Cadmus article (Brunnhuber, 2021)

Global Goals Editorial Board



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The Global Goals Yearbook helps to advance corporate transparency, promotes the sharing of good business practices, and, perhaps most significantly, gives a strong voice to the regional and global stakeholders that are at the heart of the sustainability agenda.

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Our mission is to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations.

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The UNSSC Knowledge Centre for Sustainable Development was established to equip the UN and its partners with the knowledge, skills, and behaviours to implement the 2030 Agenda for Sustainable Development as well as the Paris Agreement under the United Nations Framework Convention on Climate Change.

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•We focus on empowering stakeholders and facilitate integrated and transformative action for sustainable development.

•We support the UN Development System reform process.



The World Business Council for Sustainable Development (WBCSD) is a global, CEO-led organization of over 200 leading businesses working together to accelerate the transition to a sustainable world. WBCSD helps its member companies to become more successful and sustainable by focusing on the maximum positive impact for shareholders, the environment and societies.

Its member companies come from all business sectors and all major economies, representing a combined revenue of more than US\$8.5 trillion and with 19 million employees. WBCSD's global network of almost 70 national business councils gives our members unparalleled reach across the globe. WBCSD is uniquely positioned to work with member companies along and across value chains to deliver highimpact business solutions to the most challenging sustainability issues.

The Club of Rome is an organisation of individuals who share a common concern for the future of humanity and strive to make a difference. Our members are notable scientists, economists, businessmen and businesswomen, high level civil servants and former heads of state from around the world. Their efforts are supported by the Secretariat in Winterthur, Switzerland, the European Research Centre registered in Constance, Germany and National Associations in more than 30 countries.

The Club of Rome conducts research and hosts debates, conferences, lectures, high-level meetings and events. The Club also publishes a limited number of peerreviewed "Reports to the Club of Rome". the most famous of which is "The Limits to Growth".

The Club of Rome's mission is to promote understanding of the global challenges facing humanity and to propose solutions through scientific analysis, communication and advocacy. Recognising the interconnectedness of today's global challenges, our distinct perspective is holistic, systemic and long-term.



CDP is a not-for-profit charity that runs the global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts. Over the past 15 years we have created a system that has resulted in unparalleled engagement on environmental issues worldwide.

To achieve this. CDP. formerly the Carbon Disclosure Project, has built the most comprehensive collection of self-reported environmental data in the world.

Our network of investors and purchasers, representing over \$100 trillion, along with policy makers around the globe, use our data and insights to make betterinformed decisions. Through our offices and partners in 50 countries we have driven unprecedented levels of environmental disclosure.

Over the past 15 years CDP has created a system that has resulted in unparalleled engagement on environmental issues between investors, companies, cities, states and regions worldwide. CDP's data enables our network to link environmental integrity, fiduciary duty and public interest to make better-informed decisions on climate action.



The macondo foundation is a non-profit organization. It supports the following charitable purposes: The promotion of nature conservation, environmental protection and coastal protection; the promotion of tolerance in all areas of society and international exchange; the promotion of animal welfare; the promotion of development cooperation; the promotion of civic engagement.

Since 2018 the macondo foundation is patron of the Global Goals Yearbook in support of the Sustainable Development Goals (SDGs) and the advancement of corporate sustainability globally. As a grassroots publication it offers proactive and in-depth information on key sustainability issues and promotes unique and comprehensive knowledge-exchange and learning in the spirit of the SDGs and the Ten Principles of the Global Compact.



Awards



Bronze Medal, 2019 12th Axiom Business Book Awards, Category "Business Ethics"



Silver Medal, 2016 10th Axiom Business Book Awards. Category "Philantrophy/Nonprofit/ Sustainabilitv"



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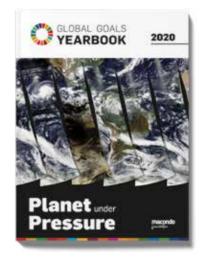
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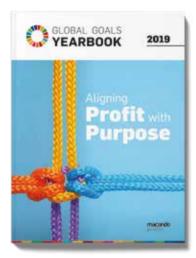
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