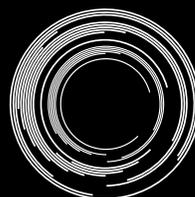


# #globalcommons

## The Opportunity of the Commons



GLOBAL ENVIRONMENT FACILITY  
INVESTING IN OUR PLANET



Global Commons



ALL LIFE ON EARTH DEPENDS ON CLEAN AIR AND WATER, BIODIVERSITY,  
AND HEALTHY FORESTS, LAND, OCEANS AND A STABLE CLIMATE.  
THESE GLOBAL COMMONS—THE ECOSYSTEMS, BIOMES AND PROCESSES  
THAT REGULATE THE STABILITY AND RESILIENCE OF THE EARTH SYSTEM—  
ARE THE VERY FOUNDATION OF OUR GLOBAL ECONOMY AND MODERN SOCIETY.  
TODAY, THEY ARE FACING AN ALL-TOO FAMILIAR TRAGEDY OF OVER-  
EXPLOITATION AND RAPID DEGRADATION.



# A DEFINING MOMENT

We stand at a defining moment for the future of the planet and human well-being. The Global Commons—the ecosystems, biomes and processes that regulate the stability and resilience of the Earth system—are being stretched to breaking point.

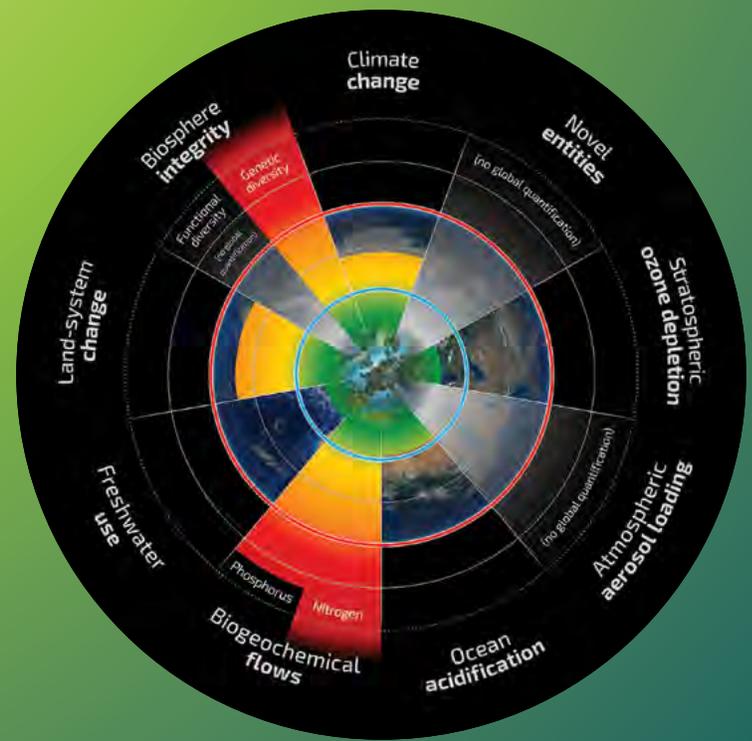
Scientists warn that the “planetary boundaries”, that have ensured the stable conditions that have enabled all civilizations to form and prosper over the last 11,000 years are being strained, and in some cases, exceeded. Indeed, they add, we have forced our way out of the Holocene geological epoch—the only one known to be able to support a growing world population of 7.4 billion—to begin a new one, the Anthropocene.

## Johan Rockström, Executive Director Stockholm Resilience Centre

*Goodbye Forever, Friendly Holocene*

“It is time to re-evaluate our economic and political models for the Anthropocene. The starting point must be our very notion of the global commons... Industrial societies now wield astonishing power. Earth's future is in the balance and we must handle it with care and respect.”

Several of the planetary boundaries have already been breached. These include; biodiversity, now being lost at a rate unprecedented in the last 65 million years; land use change, where nearly a third of forest cover has been cleared worldwide and almost a quarter of the total land area under human use is being degraded; and climate, where atmospheric concentration of carbon dioxide now exceeds 400 parts per million, their highest level in 800,000 years. Meanwhile greenhouse gases are also acidifying the oceans, changing their chemistry faster than at any point in perhaps 300 million years.



Source: Steffen et al. 2015. Planetary Boundaries: Guiding human development on a changing planet. Science Vol. 347 no. 6223

# CHANGING RISK PERCEPTIONS

It is increasingly being recognized that a deteriorating global environment poses significant risks to prospects for future economic growth and development. In the World Economic Forum's 2017 Global Risk report, environment-related risks feature

among the top-ranked global risks. Specifically, four of the top five perceived risks in terms of impact identified in this year's Risk Report were environmental risks. Ten years ago, none of the top five risks were an environment risk.

## **Christiana Figueres, Former Executive Secretary of the UNFCCC, Convener, Mission 2020**

*Why 2020 is a Critical Milestone on Our Journey to a Climate-Safe World*

“ We are at a precarious point for the fate of the global commons. Our actions on climate protection over the next few years will determine whether we continue on a path of exponentially growing national disasters, or pivot onto a path toward a safer, more prosperous world. ”

## **Dominic Waughray, Senior Director and Head of Environmental Initiatives of the World Economic Forum**

*Three Wicked Problems of the Commons*

“ Someone will have to do all this, and soon, or these wicked problems will come home to roost, and we will never properly address the competing challenges of managing our global commons and ensuring needed economic development. Then, as ever, it is likely to be the poorest people who will lose out. ”

## **Sunny Verghes, Co-Founder and Group CEO, Olam International**

*What is the Point of Agribusiness, If it Doesn't Do Good*

“ The global agri-sector is at the nexus of some of the most intractable challenges the world faces—food, water, energy security, inclusive growth and sustainable growth. Do we want to contribute to the problem or become part of the solution? ”

# CHANGING GLOBAL RISK PERCEPTIONS: FROM ECONOMIC AND SOCIAL TO ENVIRONMENTAL

## Top 5 Global Risks in Terms of Likelihood

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
1st	Asset price collapse	Asset price collapse	Asset price collapse	Storms and cyclones	Severe income disparity	Severe income disparity	Income disparity	Intractable conflict with regional consequences	Large-scale involuntary migration	Extreme weather events	Extreme weather events
2nd	Middle-class instability	Slowing Chinese economy (<5%)	Slowing Chinese economy (<5%)	Flooding	Chronic fiscal imbalances	Chronic fiscal imbalances	Extreme weather events	Extreme weather events	Extreme weather events	Large-scale involuntary migration	Natural disasters
3rd	Falling and falling rates	Chronic disease	Chronic disease	Commissariat	Rising greenhouse gas emissions	Rising greenhouse gas emissions	Unemployment and underemployment	Failure of national governments	Failure of climate-change mitigation and adaptation	Major natural disasters	Cyberattacks
4th	Oil and gas price spike	Global governance gaps	Fiscal crises	Biodiversity loss	Cyber attacks	Water supply crises	Climate change	Large military buildups	Intractable conflict with regional consequences	Large-scale demographic shifts	Data fraud or theft
5th	Chronic disease, developed world	Retrenchment from globalization (emerging)	Global governance gaps	Climate change	Water supply crises	Mismanagement of population ageing	Cyber attacks	High structural unemployment or underemployment	Major natural catastrophes	Massive incident of data fraud/theft	Failure of climate-change mitigation and adaptation

## Top 5 Global Risks in Terms of Impact

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
1st	Asset price collapse	Asset price collapse	Asset price collapse	Fiscal crises	Major systemic financial failure	Major systemic financial failure	Fiscal crises	Water crises	Failure of climate-change mitigation and adaptation	Weapons of mass destruction	Weapons of mass destruction
2nd	Retrenchment from globalization (developed)	Retrenchment from globalization (developed)	Retrenchment from globalization (developed)	Climate change	Water supply crises	Water supply crises	Climate change	Rapid and massive spread of infectious diseases	Weapons of mass destruction	Extreme weather events	Extreme weather events
3rd	Slowing Chinese economy (<5%)	Oil and gas price spike	Oil price spikes	Geopolitical conflict	Food shortage crises	Chronic fiscal imbalances	Water crises	Weapons of mass destruction	Water crises	Water crises	Natural disasters
4th	Oil and gas price spike	Chronic disease	Chronic disease	Asset price collapse	Chronic fiscal imbalances	Diffusion of weapons of mass destruction	Unemployment and underemployment	Intractable conflicts with regional consequences	Large-scale involuntary migration	Major natural disasters	Failure of climate-change mitigation and adaptation
5th	Pandemic	Fiscal crises	Fiscal crises	Extreme energy price volatility	Extreme volatility in energy and agriculture prices	Failure of climate-change mitigation and adaptation	Critical information infrastructure (total) shutdown	Failure of climate-change mitigation and adaptation	Severe energy price shock	Failure of climate-change mitigation and adaptation	Water crises

■ Economic ■ Environmental ■ Geopolitical ■ Societal ■ Technological

Source: World Economic Forum, *The Global Risks Report 2018, 13th Edition*

# THE WORLD IS RESPONDING

Up to now, the transition into the Anthropocene—momentous though it is—has been largely ignored, figuring little in public policy or private discourse. Fortunately, there are signs that this is beginning to change.

The Sustainable Development Goals, adopted by the world's governments in the autumn of 2015, are designed to set development and growth on a new track, ending poverty and increasing prosperity, while safeguarding the global commons. So is the Paris climate agreement, struck the following December, which aims to bring net emissions of greenhouse gases down to zero in the second half of the century. Countries will submit updated climate plans—called nationally determined contributions (NDCs)—every five years, thereby steadily increasing their ambition in the long-term.

Multi-Stakeholder sustainability platforms have also proliferated in recent years, including the Bonn Challenge—which brings together 40 countries, the private sector and civil society around commitments to restore around 150 million hectares of degraded land—and RE100, an energy-related collaborative, global platform in which leading businesses are encouraged to set a public goal to procure 100% of their electricity from renewable sources of energy by a specified year. Other initiatives focusing on delivering concrete action in specific areas include The Tropical Forest Alliance 2020 (TFA 2020), the Trash Free Seas Alliance, and C40, a network of the world's megacities committed to addressing climate change. This momentum reflects a growing recognition from business of the economic opportunities that exist.

## **Peter Bakker, President, World Business Council for Sustainable Development**

*A Wealth of Opportunities*

“Business is in a unique position to observe and intervene in many issues facing the global commons — from reducing emissions and addressing climate change, to stopping ocean pollution and fixing broken food systems. Across the world, companies are stepping up to meet the challenge.”

## **Ngozi Okonjo-Iweala, Co-chair, Global Commission on the Economy and Climate**

*It's Time To Be Smart About Financing Clean Development*

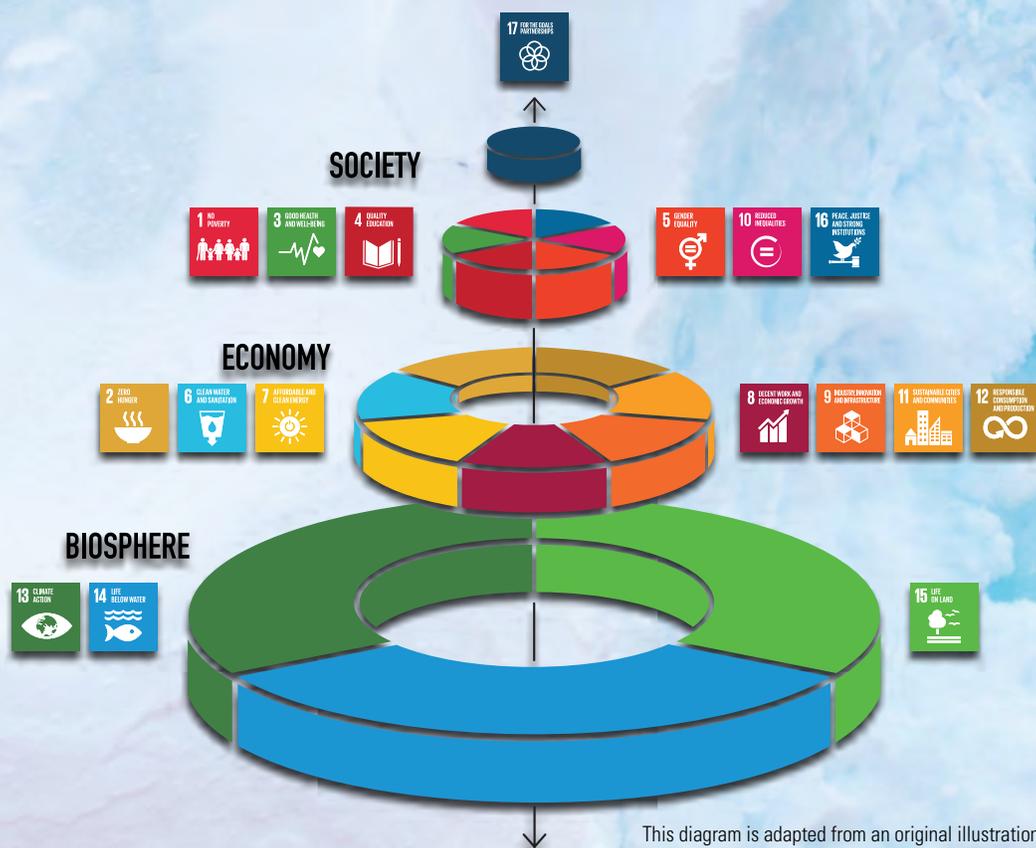
“The question is therefore not whether the transformation to a low-carbon future will happen, but how quickly it will take place.”

## **Mark Malloch-Brown, Chair of the Business and Sustainable Development Commission**

*Transforming Globalisation*

“What we need—and urgently—is a radical shift in perception by the private sector to view the global goals as the greatest economic opportunity any generation has had, rather than a burden and constraint to growth.”

# THE GLOBAL ENVIRONMENT— A FOUNDATION FOR THE SDGs



**Nebojsa Nakicenovic, Deputy Director General/Deputy CEO, and Caroline Zimm, Research Assistant, Transitions to New Technologies, IIASA**  
*Leave No SDG Behind*

“Jointly implementing all the SDGs would contribute both to further human development and to safeguarding the commons and the stability of the Earth systems. Importantly, joint implementation that avoids silo-type thinking would be cheaper and faster than tackling them separately.”

# A RADICAL TRANSFORMATION OF KEY ECONOMIC SYSTEMS IS REQUIRED

Despite the progress made, incremental steps will not suffice. The only hope lies in transformational—and permanent—change.

To stay within the planetary boundaries, a radical transformation of key economic systems will be required to significantly reduce their environmental footprint.

Four systems are of particular importance: the food system, the energy system, the urban system, and the global production/consumption system, where the current “take-make-waste” model has nearly quadrupled global waste creation since 1970.

A transformation of these four economic systems can change the course of the planet, and safeguard the health of the global commons.

The necessity of making our societies and economies more sustainable and less inequitable is not just to avoid disaster, but to build lasting prosperity. Operating within planetary boundaries is not just the only way to ensure healthy economies, but has the potential to provide much greater and better-shared growth. **That’s the opportunity of the commons.**

**Andrew Steer, President and CEO, World Resources Institute**

*Taming Bigfoot*

“Four revolutionary shifts in social and economic life are needed to tame Bigfoot-style economic impacts and safeguard the global commons: transforming cities, re-thinking food and agriculture, decarbonizing energy systems, and transitioning from linear approaches to production, design, use and disposal of materials to circular economic models.”

**Inger Andersen, Director General, IUCN**

*The Natural Way Forward*

“Despite such tremendous forces of transformation as climate change and dramatic socioeconomic inequality, there are credible and accessible political, economic, cultural and technological choices that can promote general welfare in ways that support and even enhance our planet’s natural assets.”



## *The Food System*

The world will require about 70% increase in food production to meet dietary demands from a world population of nine to ten billion by 2050. Producing sustainable food while dealing with land use and degradation will be essential. A concentrated focus on global commodities with a significant deforestation footprint, on food security goals in areas of rapid agriculture expansion, restoration of fisheries, and to a certain extent, expanded efforts on land restoration, will contribute significant environmental gains while reversing the negative effects of land and costal habitat degradation.



## *The Energy System*

Decarbonization of the global energy system is of critical importance for a 1.5–2 °C future global temperature increase, in line with the Paris Agreement. The energy system represents 68 percent of global GHG emissions, and despite recent improvements only 23 percent of energy is provided by renewables today; and 1 billion people still lack access to electricity. By 2040 energy demand is projected to increase by 30 percent. In the face of these trends, deployment of renewable energy needs to accelerate sharply, as do energy efficiency improvements, all while increased energy demand—including from what is needed to close the electricity gap, especially in Sub-Saharan Africa and South Asia—is being met.



## *The Urban System*

In the next 15 years, 70% of new infrastructure to be built will take place in urban areas. Currently, cities emit more than 70% of global GHGs and are also particularly vulnerable to climate change (rising sea levels, storms, floods, heat waves). Low-carbon and resilient infrastructure could make a significant contribution to the global reduction of GHG emissions while enhancing urban development. Such investments could generate annual GHG savings of 3.7 Gt by 2030; a significant share (perhaps 15%- to 20%) of the overall contributions to the Paris Agreement. Also, low carbon infrastructure—particularly in the buildings efficiency, public transportation and waste management sectors—could save cities an estimated US\$17 trillion globally by 2050.



## *The Production/ Consumption System*

Today's economies are dominated by linear approaches to the way products are manufactured, used and disposed of, which means we extract natural resources, process them into products and packaging, and sell the products to consumers who ultimately dispose of them in the trash. In the last four decades, global materials use has tripled, from 23.7 billion tonnes in 1970 to 70.1 billion tonnes in 2010. What results from our linear "take-make-waste" industrial production and consumption systems is immensely unsustainable material resource use and productivity waste that are leading to widespread degradation and accumulation of waste and toxic materials in the environment.

# BUILDING A MOVEMENT FOR THE GLOBAL COMMONS

In October 2016, over 200 leading environment, development and system design thinkers met in Washington, DC to discuss how mobilization of leadership, technology, science, innovation and communication can help bring about the transformation in economic systems that the planet needs.

The participants came together around a “shared purpose” included in a summary of key “principles” (see page 10).

The Dialogue was convened by the Global Environment Facility (GEF) and the International Union for the Conservation of Nature (IUCN), in partnership with the International Institute for Applied Systems Analysis (IIASA), the Stockholm Resilience Centre (SRC), the World Resources Institute (WRI) and the World Economic Forum (WEF) Environmental Systems Initiative.

This booklet includes quotes from each of the partners and other participants. They are taken from a series of articles in the online Guardian newspaper, where senior figures are exploring the state of the commons and how to address it.

The articles, and other contributions from well-known leaders in the sustainable development community, are featured in a special “GEF Partner Zone” as part of the paper’s Development 2030 Campaign. It can be found online at [globalcommons.earth](http://globalcommons.earth).

The October dialogue and online series is just the beginning of what promises to be a vigorous, authoritative—yet constructive debate about one of the defining issues of our time.

For more information  
[thegef.org/globalcommons](http://thegef.org/globalcommons)



**Peter Thomson, UN Secretary-General's Special Envoy for the Ocean**

*Reversing The Ocean's Accelerating Decline*

“ We shouldn't underestimate the powerful attraction of a “sustainable blue economy”, which – I firmly believe – will feed and support the lives of our children and those who come after them. Getting it right... is vital not just for SDG14, but for the future of the global commons, and humankind itself. ”

**Mary Robinson, President, Mary Robinson Foundation—Climate Justice**

*Climate Change Isn't Fair*

“ We are custodians of our planet, a global commons that, by 2050, will be home to some 9 billion people. It is our duty to live in such a way that the precious, life sustaining environment which keeps us is passed to future generations in at least as healthy a state as we received it from those before us. ”

**Nicholas Stern, Chair, Grantham Research Institute on Climate Change and the Environment at LSE, and President, British Academy**

*Only Green Growth Can Bring Prosperity*

“ The agenda that preserves our global commons is also the only sustainable route to growth and poverty reduction. But action with real pace and scale is urgent: the window of opportunity is narrow. The decisions we make over the next 15 years will determine what kind of world we will have for the rest of the century. ”

**Erik Solheim, Executive Director, UN Environment**

*The Care Horizon*

“ The answer to the tragedy of the commons is the answer to how we bring it within this horizon. We are smart enough, and have resources aplenty to solve our problems. We need the will and motivation—personal and political—to do it. For that to happen, we need to make an appeal within the care horizon. ”

# MOVEMENT FOR THE GLOBAL COMMONS

## STATEMENT OF PRINCIPLES

### Our Lessons from Science

Life on Earth as we know it depends on what all humans share: a stable climate, healthy oceans, and the species, ecosystems, biomes and processes that provide the stability and resilience of the planet.

This is the Global Commons. For the past 10,000 years, the Global Commons has served as the foundation for dramatic growth in agriculture, cities, economies and cultures—in short, for civilization to emerge.

The prospects for sustainable development rest squarely on the integrity of the Global Commons, which is now being compromised.

The message from science is clear: humans are pushing the Global Commons to the limits of their coping capacity. We are facing a tragedy of the commons on a profound, global scale that only we can overcome.

### Our Shared Purpose

At this critical juncture for the survival of the diversity of life on earth and the systems upon which humanity depends, we are catalyzing a movement to defend, enhance and sustain our Global Commons through:

- protecting the diversity of life on earth;
- developing innovative solutions that reflect the interdependence of all systems, including food, urban, energy, production and consumption, freshwater and oceans;
- engaging broadly, from communities to corporations to cabinets.

Because never before have we understood our place in the Global Commons as we do now; never before have we had the tools, knowledge and creativity that we do now; and never before have we had the shared purpose and will to act that we have now.

And because never again, will we have the opportunity.

### Our resolve to achieve systems-level change

While time is short and the risks immense, the goal of a diverse, stable and prosperous planet is still within reach if we act now with a boldness that matches the unprecedented scale of the challenge.

With the Sustainable Development Goals and the Paris Climate Agreement, the world's nations have provided momentum and direction that must be seized.

But incremental progress will not be enough. Only with disruptive, systems-level change can we hope to get on the right path. Our focus should be a complete overhaul of key economic systems and development pathways:

- Our food system must be dramatically reshaped in a way that enables it to meet a 60–70 percent increase in global calorie demand—from aquatic and land-based sources—by 2050 while at the same time dramatically shrinking its footprint on the global environment.
- The world's cities to a significant degree hold the keys to success for the Global Commons. The coming decades will see a sharp burst in cities' growth. This is a once-in-a-lifetime opportunity to create the compact, connected and coordinated cities that the future requires.
- Decarbonizing the world's energy systems is a sine-qua-non. Recent data suggesting that global energy-related GHG emissions have plateaued despite continued economic growth are welcome, but the underlying power demand is still on the rise, and we are still a long way away from a radical shift towards a carbon-free energy system.
- The move from a “take-make-waste” to a circular economy must be radically accelerated. Today's linear approach to production, consumption and disposal of products is highly resource inefficient.

For each, we must continue to develop a compelling story about needs and opportunities for the Global Commons and work with those who can amplify the message; we must help unleash and leverage technology, and we must build and support emerging coalitions for change both from the bottom-up and the top-down.

### Our mutual and individual roles

Only a broad and truly diverse movement can solve the problem of the Global Commons. No individual, organization, business or nation can succeed on her own. We must all play our part to catalyze change and build the movement. Some are champions who deliver the message, engage, excite, and help build momentum. Others are drivers who bring the evidence forward and point towards scalable solutions. Enablers provide the financing, the policy frameworks, and the necessary technical support. And conveners create the platforms for dialogue, facilitate discussion, and bring in new actors.

Our bottom line for safeguarding the Global Commons is the following: It is urgent, it is needed for people and planet, and the world will be so much better for it—so let's get on with it!

**Mario Molina, Nobel Prize Winner for Chemistry for Work on Ozone Depleting Substances**

*Protecting the Climate and the Ozone Layer Together*

“ *The Montreal Protocol is, therefore, indeed a unique, planet-saving agreement. And it is still getting stronger, and playing a critical role safeguarding the global commons of the planetary system.* ”

**Cristiana Paşca Palmer, UN Assistant Secretary-General; Executive Secretary, Convention on Biological Diversity**

*Science Can Help Forge A New Deal For Nature*

“ *The global community has a unique window of opportunity to define the post-2020 global biodiversity framework. It will need bold commitment and determination, innovative approaches and transformative processes to ensure that such a new deal will be effective.* ”

**Paul Polman, CEO, Unilever**

*Our Food System Is Broken: We Must Repair It*

“ *There is an urgent need for a new, independent coalition of public and private stakeholders that can combine leadership and vision with the technical depth necessary to solve these complex challenges. But there is no time to waste... We now need to turn our efforts towards repairing today's broken food system and make it work for the long-term benefit of people and planet.* ”

**Naoko Ishii, CEO and Chairperson, GEF**

*Safeguarding the Global Commons is the Wisest Investment We Can Make*

“ *Operating within the planetary boundaries is not just the only way to ensure healthy economies, but has the potential to provide much greater and better shared growth than sticking to business as usual. Safeguarding and enhancing the global commons is therefore the wisest investment we can possibly make.* ”

***We invite all to join and contribute.***

# THOUGHT LEADERS ON THE GLOBAL COMMONS

The following articles appear in the GEF-Guardian Partner Zone:

- **Inger Andersen, Director General, IUCN**  
*The Natural Way Forward*
- **Peter Bakker, President, World Business Council for Sustainable Development**  
*A Wealth of Opportunities*
- **Daniella Ballou-Aares, Partner, Dalberg Global Development Advisors**  
*Investing \$20tn To Change The World*
- **Sharan Burrow, General Secretary, International Trade Union Confederation**  
*Sustainability Must Create Good Jobs*
- **Kathy Calvin, President and CEO, UN Foundation**  
*Making Change Decisive*
- **Daniel C. Esty, Hillhouse Professor of Environmental Law and Policy, Yale University; Co-author Green to Gold**  
*Climate Action Needs Green, Not Just Red Lights*
- **Sofia Faruqi, Manager, New Restoration Economy, World Resources Institute; Eriks Brolis, Conservation Business Lead, The Nature Conservancy;**  
*Reviving Land Makes Businesses Grow*
- **Christiana Figueres, Former Executive Secretary of the UNFCCC, Convener, Mission 2020**  
*Why 2020 Is A Critical Milestone On Our Journey To A Climate-Safe World*
- **José Maria Figueres, former Co-chair of the Global Ocean Commission and Co-founder of Ocean Unite**  
*From Decline to Recovery: A Rescue Package for the Ocean*
- **J. Carl Ganter and Eileen E. Ganter, Co-founders, Circle of Blue**  
*Saving A Thirsty Planet Must Be Based On Reality, Not Perception*
- **Antonia Gawel, Head of the Circular Economy Initiative at the World Economic Forum; Mathy Stanislaus, Policy Advisor to the World Economic Forum Platform for Accelerating the Circular Economy;**  
*How To Make Economies Create More Value And Less Waste*
- **Luc Gnacadja, Former Executive Secretary, UN Convention to Combat Desertification**  
*How To Slow Migration and Save The Climate*
- **Celine Herweijer, Partner, Innovation and Sustainability; Will Evison, Assistant Director, PwC**  
*It's Time To Set Clear Targets For A Safer Earth*
- **André Hoffmann, Vice-Chairman, Roche Holding Ltd.**  
*The Purpose of Business? It's Not Just About Money*
- **Jonathan Horrell, Director Global Sustainability, Mondeléz International**  
*How Food Companies Can Protect Forests And The Oceans*
- **Rupert Howes, CEO, The Marine Stewardship Council**  
*Incentivising Sustainable Fishing Through Certification*
- **Naoko Ishii, CEO and Chairperson, GEF**  
*Safeguarding The Global Commons Is The Wisest Investment We Can Make*
- **Mary Ellen Iskenderian, President and CEO, Women's World Banking**  
*Give Women Credit And Meet The Global Goals*
- **Jeremy Jackson, Senior Scientist Emeritus, Smithsonian Institution, Professor Emeritus, Scripps Institution of Oceanography**  
*We Only Have 20 Years To Save The Oceans*
- **Cecily Joseph, Vice President, Corporate Responsibility, Symantec**  
*Women Are At The Heart Of Making Business—And The World—Sustainable*
- **Yolanda Kakabadse, Former President, WWF International**  
*Turning The Tide On Ocean Degradation*
- **Homi Kharas, Senior Fellow and Co-Director, Global Economy and Development Programme, Brookings Institute**  
*Middle Class Prosperity Can Save The Planet*
- **Naina Lal Kidwai, Member of the Global Commission on the Economy and Climate**  
*Connected, Shared And Electric: The Road To Sustainable Transport*
- **W. John Kress, Distinguished Scientist and Curator of Botany, Smithsonian Institution**  
*Seven Steps To Avoid The Irreversible Degradation Of Nature*
- **Peggy Liu, Chairperson, JUCCEE**  
*Changing How A Billion People Eat, Through Games*
- **Carlos Lopes, Professor, University of Cape Town and Member, Global Commission on the Economy and Climate**  
*Africa's Impala-like Leap Into A Green Industrial Economy*
- **Thomas Lovejoy, Professor of Environmental Science and Policy, George Mason University**  
*Crossing The Living Boundary*
- **Chris Luebke, Arup Fellow and Director; Jonelle Simunich, Senior Strategist, Global Foresight, Research and Innovation, Arup**  
*Re-Designing Urban Systems To Replenish Spaceship Earth*
- **Amy Luers, Executive Director, Future Earth**  
*Wanted: Clear Targets To Save The Global Commons*
- **Mark Malloch-Brown, Chair of the Business and Sustainable Development Commission**  
*Transforming Globalisation*

- **Catherine McKenna, Minister of Environment and Climate Change, Canada**  
*How The World Rallied To Repair The Ozone Layer*
- **Henry McLoughlin, Director, Corporate Development;**  
**Dipender Saluja, Managing Director, Capricorn Investment Group**  
*How Clean Technology Is Accelerating Low-Carbon Prosperity*
- **Andreas Merkl, Former President, Ocean Conservancy**  
*How New Technology Can Help Prevent Environmental Crises*
- **Mario Molina, Nobel Prizewinner for Chemistry for Work on Ozone Depleting Substances**  
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- **Carlos Nobre, Member, UN Scientific Advisory Board for Global Sustainability; Juan Carlos Castilla-Rubio, Chairman, Space Time Ventures**  
*The Amazon's New Industrial Revolution*
- **Ngozi Okonjo-Iweala, Co-chair, Global Commission on the Economy and Climate**  
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*Science Can Help Forge A New Deal For Nature*
- **Rolph Payet, Executive Secretary, Basel, Rotterdam, and Stockholm Conventions**  
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*How Sustainable Business Practices Help The Bottom Line*
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*Our Food System Is Broken: We Must Repair It*
- **Kevin Rabinovitch, Global Vice-President, Sustainability, and Chief Climate Officer, Mars, Inc.**  
*Three Steps To Setting Business Targets For A Healthy Earth*
- **N.H. Ravindranath, Professor, Indian Institute of Science, Bangalore**  
*Losing Ground In A Warmer World*
- **Kate Raworth, Author, Doughnut Economics, Senior Visiting Research Associate, Environmental Change Institute, Oxford University**  
*How To Tell If A Company Really Protects The Global Commons*
- **Mary Robinson, President, Mary Robinson Foundation—Climate Justice**  
*Climate Change Isn't Fair*
- **Johan Rockström, Executive Director, Stockholm Resilience Centre**  
*Goodbye Forever, Friendly Holocene*
- **Guido Schmidt-Traub, Executive Director, UN Sustainable Development Solutions Network**  
*Three Challenges We Must Overcome To Secure The Future Of Food*
- **Paul Simpson, CEO, CDP**  
*How The Low Carbon Economy Is This Century's Biggest Business Opportunity*
- **Erik Solheim, Executive Director, UN Environment**  
*The Care Horizon*
- **Phaedon Stamatopoulos, Director, Refining and Bank Products, Argor-Heraeus SA**  
*A Golden Opportunity To Cut Mercury Pollution And Pay Miners Fairly*
- **Andrew Steer, President and CEO, World Resources Institute**  
*Taming Bigfoot*
- **Nicholas Stern, Chair, Grantham Research Institute on Climate Change and the Environment at LSE, and President, British Academy, IG Patel, Professor of Economics and Government, London School of Economics and Political Science; Naoko Ishii, CEO and Chairperson, GEF**  
*Only Green Growth Can Bring Prosperity*
- **Per Espen Stoknes, Chair, Centre for Green Growth, Norwegian Business School**  
*Three Steps To Achieving A Sun-rich Future*
- **Pavan Sukhdev, Founder-CEO, GIST Advisory, and President, WWF International**  
*Embracing The SDGs' Complexity*
- **Jahda Swanborough, Lead, Environment Initiatives, World Economic Forum; Aengus Collins, Practice Lead, Global Risks, World Economic Forum**  
*Environmental Threats Are The Greatest Risks We Face*
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*Reversing The Ocean's Accelerating Decline*
- **Ralph Thurm, Managing Director; Bill Baue, Senior Director, Reporting 3.0**  
*How To Share Out The World's Resource Pie Sustainably*
- **Nigel Topping, CEO, We Mean Business**  
*Just Managing*
- **Keith Tuffley, Former-CEO, the B Team, CEO, NEUW Ventures**  
*Business Is On Thin Ice—As I Found In An Antarctic Crevasse*
- **Sunny Verghese, Co-Founder and Group CEO, Olam International**  
*What Is The Point Of Agribusiness, If It Doesn't Do Good?*
- **Mathis Wackernagel, CEO and Co-founder, Global Footprint Network**  
*Humanity Uses 70% More Of The Global Commons Than The Earth Can Regenerate*
- **Dominic Waughray, Senior Director and Head of Environmental Initiatives of the World Economic Forum**  
*Three Wicked Problems Of The Commons*
- **Fokko Wientjes, Vice President, Nutrition in Emerging Markets & Food Systems Transformation, Royal DSM**  
*We Need To Reimagine Food And Agriculture To Eradicate World Hunger*
- **Park Won-Soon, Mayor of Seoul and President of ICLEI Local Governments for Sustainability**  
*Achieving The Urban Dream*
- **Elizabeth Yee, Vice-President, City Solutions, 100 Resilient Cities**  
*Cities Must Embrace Nature To Survive*
- **Durwood Zaelke, President, Institute for Governance and Sustainable Development**  
*How Changing Refrigerants Will Help Slow Down Global Warming*

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## ABOUT THE GEF

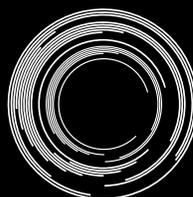
The Global Environment Facility (GEF) was established on the eve of the 1992 Rio Earth Summit to help tackle our planet's most pressing environmental problems. Since then, the GEF has provided \$17.9 billion in grants and mobilized an additional \$93.2 billion in financing for more than 4,500 projects in 170 countries. Today, the GEF is an international partnership of 183 countries, international institutions, civil society organizations and the private sector that addresses global environmental issues.

The GEF's 18 implementing partners are Asian Development Bank (ADB), African Development Bank (AfDB), Development Bank of Latin America (CAF), Conservation International (CI), Development Bank of Southern Africa (DBSA), European Bank for Reconstruction and Development (EBRD), Foreign Economic Cooperation Office—Ministry of Environmental Protection of China (FECO), Food and Agriculture Organization of the United Nations (FAO), Fundo Brasileiro para a Biodiversidade (FUNBIO), Inter-American Development Bank (IDB), International Fund for Agricultural Development (IFAD), International Union for Conservation of Nature (IUCN), United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP), United Nations Industrial Development Organization (UNIDO), West African Development Bank (BOAD), World Bank Group (WBG) and World Wildlife Fund U.S. (WWF-US).

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