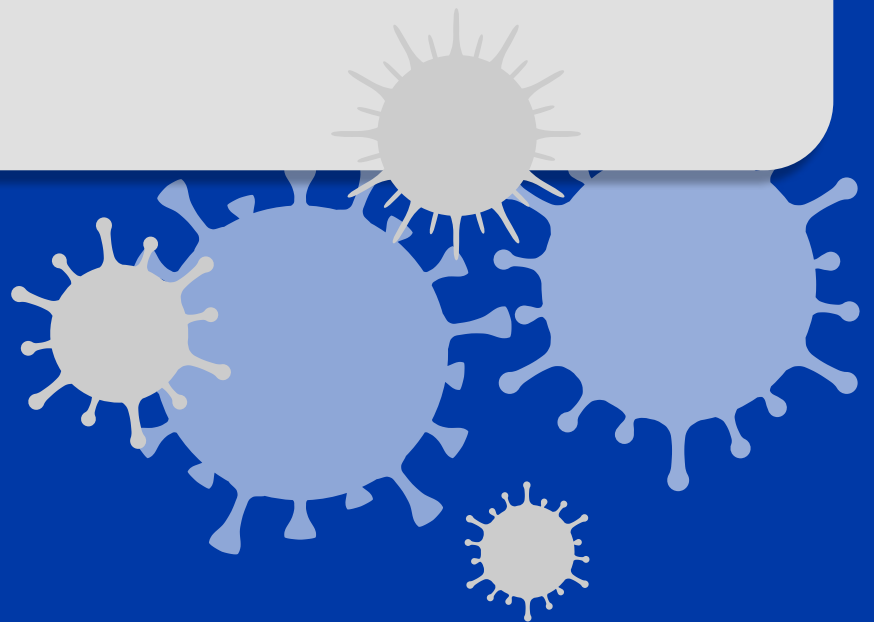




**MILKEN
INSTITUTE**
CENTER FOR
STRATEGIC PHILANTHROPY

A Turning Point for Planetary Health

MATTHEW LURIE, PHD



GIVING SMARTER IN THE AGE OF COVID-19

ABOUT US

About the Milken Institute

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For the past three decades, the Milken Institute has served as a catalyst for practical, scalable solutions to global challenges by connecting human, financial, and educational resources to those who need them. Guided by a conviction that the best ideas, under-resourced, cannot succeed, we conduct research and analysis and convene top experts, innovators, and influencers from different backgrounds and competing viewpoints. We leverage this expertise and insight to construct programs and policy initiatives.

These activities are designed to help people build meaningful lives in which they can experience health and well-being, pursue effective education and gainful employment, and access the resources required to create ever-expanding opportunities for themselves and their broader communities.

About the Center for Strategic Philanthropy

The Milken Institute Center for Strategic Philanthropy advises philanthropists and foundations seeking to develop and implement transformative giving strategies.

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EXECUTIVE SUMMARY

For the first time in modern history, we are in the midst of a crisis in which every person on the planet is impacted by a universal threat that has weakened economies and sickened or killed millions of people. And it's far from over. Although a global crisis of this type is indeed rare, it is not unfamiliar. Prior to COVID-19, climate change and biodiversity loss occupied the main stage as the largest threats to human existence. In fact, human encroachment on wildlife is believed to be the primary driver of the COVID-19 outbreak. Unfortunately, the singular focus on the pandemic has deprioritized the importance of reversing climate change and biodiversity loss to protect the Earth. Although it is necessary to deal with the immediate implications of the COVID-19 crisis, we must not lose sight of other work that will save our planet. Earth is our collective home, and it provides the precious resources that we depend on to survive and thrive.

Although the full impacts of COVID-19 on Earth's systems have yet to be determined, we know that the pandemic has slowed down and paused work to save the planet. It has sidelined conservation fieldwork and environmental research writ large as the economic downturn has decreased funding streams. To ensure continued progress toward solving climate change, conservation, and other environmental issues, we must invest in the people who valiantly perform this work and support the education initiatives that make environmental science possible. Philanthropy is in a prime position to take such action.

Environmental disasters will continue to happen, and the ongoing COVID-19 crisis will create unprecedented challenges in disaster response. This report explores the intersectionality between environmental health and COVID-19, along with several systemic environmental issues that deserve new or renewed attention. The challenges and solutions described herein highlight the need for philanthropic action, but the public and private sectors must also step up. Given the complexity of environmental issues and the added complexities of COVID-19, a multi-sector and multi-dimensional approach to execute solutions is necessary. In this report, we propose long-term solutions to

- address new environmental disasters during COVID-19;
- ensure that COVID-19 recovery measures are environmentally sound;
- maintain momentum on climate change solutions; and
- prevent future pandemics caused by zoonotic diseases.

Last but not least, this moment must be leveraged to analyze and correct the ways that social inequity and the marginalization of specific populations have led to a cycle of degradation that could be irreversible. Here, we identify several areas where conservation philanthropy can break the cycle to achieve environmental outcomes that are equitable and just.

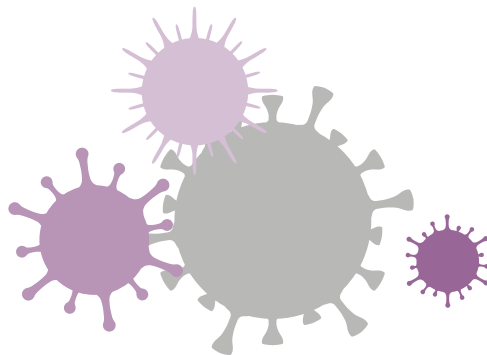
This Giving Smarter Guide is intended to provide an overview of potential strategic starting points for philanthropy and impact capital to help solve these issues. In addition to offering recommendations specific to the COVID-19 response, the Center for Strategic Philanthropy also presents questions that philanthropists should consider at the start of their journey into the environment field.

INTRODUCTION

The year 2020 was supposed to be a super year for nature.¹ Globally, the private sector, country governments, and civil society finally seemed ready to build a path toward a sustainable future and address biodiversity loss and changing climate due to human activities. However, in a matter of weeks, COVID-19 took the planet by storm and quickly became the most urgent threat facing human life today.

Unfortunately, the urgency of environmental issues did not go away. The COVID-19 outbreak and the resulting devastation is a profound wake-up call for humans to live more sustainably with the environment. COVID-19 and other zoonotic diseases can be directly and indirectly linked with the health of the environment. We now must seriously consider a global New Deal for Nature²—one that asks humanity to enter a social contract with nature to ensure sustainability.

Is it still possible that 2020 can be the super year for nature and progress toward better environmental outcomes? The answer is a resounding yes, and we must act for the health and well-being of our planet and its inhabitants. Addressing environmental issues will require fundamental transformational and systemic change across sectors, and philanthropy can play an influential role in catalyzing that change.



THE VALUE PROPOSITION FOR SAVING THE PLANET

There is no shortage of justifications for protecting the environment. The most important argument is that Earth is our home, and by destroying the environment, we are willfully destroying our home. The vast diversity of life—commonly referred to as biodiversity—largely drives the majesty of our planet. The various species and habitats provide numerous ecosystem services, including the oxygen we breathe, water to drink, food, energy sources, and building materials. The environment is estimated to provide approximately \$44 trillion of economic value, which is nearly half of the world's gross domestic product (GDP).³ Environmental health is also closely tied to human health, as demonstrated by the direct correlation between increased pollution due to industrialization and increased rates of respiratory disorders.⁴

GLOSSARY

Biodiversity

Short-hand for “biological diversity,” or the variety of life on Earth. From a scientific point of view, the term may include genetic-, species-, and ecosystem-level variation for a particular area. Civil society and policymakers use biodiversity as an umbrella term in discussions of species and habitats for conservation and restoration.

Ecosystem Services

The contributions or benefits of ecosystems to the well-being of humans. Ecosystem services may provide products (e.g., food, medicine, building materials, and freshwater), beneficial processes (e.g., pollination, water purification, storm protection, and soil productivity), or non-material benefits related to human culture (e.g., mental health and well-being, recreation, and religious practices).

Climate

The average weather (e.g., temperature, precipitation, and wind) over time periods ranging from months to millions of years and part of a complex system among Earth's ocean, land, atmosphere, and living organisms.

Climate Change

In current environmental literature and public discourse, climate change commonly refers to the collective changes to Earth's climate due to humans, mainly the release of greenhouse gases from fossil fuels.

Unfortunately, the environment, biodiversity, and the ecosystem services they provide are increasingly in peril. Direct and indirect threats range from obvious assaults such as deforestation, pollution, and overharvesting of resources, to those that are less obvious, for example, the ways our collective diets and consumer behavior trickle down to habitat degradation, wildlife displacement, and unsustainable supply chains. Even before the COVID-19 crisis (and for the first time), the [World Economic Forum](#) Global Risks Report 2020⁵ listed environmental issues as the top risks needing attention. The report cites extreme weather events, human-made environmental damage, significant biodiversity loss, and natural disasters, with a longer-term focus on climate change, as urgent threats facing humanity.

Protecting the Environment Requires an All-Hands-on-Deck Approach

The interconnection between the environment and every aspect of our lives warrants a systems-level approach to protecting the environment. Further, climate change and biodiversity loss cannot be addressed, let alone reversed, overnight or in isolation. We must set long-term and sustainable goals that require coordinated action by stakeholders from all sectors. Philanthropy can catalyze strategic efforts and serve as an honest broker across stakeholders to drive the required systems changes.

Environmental Issues Are Threat Multipliers

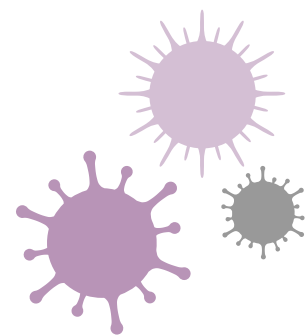
Environmental issues are threat multipliers for many social problems—that is, they complicate philanthropy's efforts to achieve other important objectives. For example, climate change is increasingly tied to public health risks such as heat-related cardiopulmonary illness, asthma complications, several infectious diseases, and mental health issues.⁶ Further, landfills, waste dumps, vehicle traffic, and factories are repeatedly placed in lower-income neighborhoods, leading to pollution and worsening public health risks for already vulnerable populations.⁷ Deployment of synergistic approaches can address threat multipliers. For example, philanthropists interested in reducing risks to health in urban systems could consider dedicating resources for climate change mitigation and adaptation. Here, outcomes such as increased renewable energy dependence, improved walkability, and decreased vehicular traffic, and advocacy for plant-rich diets will not only benefit a low-carbon transition but also reduce health risks due to air pollution and certain diets.

THE IMPACT OF COVID-19 ON THE FIGHT TO SAVE THE PLANET

COVID-19 has led to positive, but likely short-lived, effects on some aspects of environmental health. Reduced air pollution from vehicular traffic and industry has temporarily cleared the skies over major cities. Wildlife can be seen in parks and urban areas absent the presence of humans. Greenhouse gas emissions dropped early in the pandemic, previewing what we could achieve with significant behavioral change. In addition, because COVID-19 was likely transmitted to humans from animals,⁸ much-needed attention is being placed on the human relationship to wildlife, particularly in the context of renewed focus on wildlife trade, biodiversity, and habitat encroachment. Although these indicators are encouraging, it will be a long time before nature is healed. Much work remains to reverse the current trajectory of planetary health properly.

Unfortunately, COVID-19 has also had some observable negative impacts on the environment. Plastic use is at an all-time high, and stay-at-home orders have disrupted waste management systems. Funding for frontline conservation efforts has dried up as ecotourism has halted and public and private funding has slowed, which has led to increased poaching in some areas. Similarly, environmental research that supports wildlife and habitat conservation, climate change mitigation, improved food systems, and environmental health has faced funding reductions and travel restrictions.

Because we are still in the midst of the COVID-19 crisis, it is too soon to definitively determine whether COVID-19 has or will impact Earth's systems and, therefore, global climate change or biodiversity and ecosystem loss. The research and human capacity needed to conduct these rigorous assessments require time and resources, and it could be years before we have a comprehensive understanding. Ongoing shutdowns and funding reductions will likely slow the pace of these assessments. In the meantime, it will be imperative to make strategic progress toward desired environmental outcomes and to reverse some of the harmful effects on our environment by adopting a new normal during and after COVID-19.



PHILANTHROPY AS A CATALYTIC FORCE TO SAVE THE PLANET

History has shown that governments tend to deprioritize environmental commitments during times of financial and public crises as they work to mitigate immediate needs.⁹ Philanthropy is presented with an unprecedented opportunity and an obligation to help society build back better in the face of COVID-19, filling a critical gap to continue momentum on addressing many environmental issues.

Although it usually amounts to a fraction of government and private investment in these areas, philanthropic capital is more nimble and can have an outsized impact when deployed strategically. [Giving USA](#) reported that in 2019, approximately 3 percent of all US philanthropy, or \$14.1 billion, was dedicated to environmental and animal welfare organizations combined.¹⁰ This amount is a drop in the bucket of capital needed to address environmental issues. For example, [Project Drawdown](#) estimates that \$23-26 trillion is needed to address climate change sufficiently.¹¹ Although philanthropic capital cannot solve climate change or any other environmental issue on its own, philanthropists can (and must) partner with a diverse group of stakeholders across sectors to achieve a meaningful impact. For example, philanthropy can motivate proof-of-concept studies linking the environment and health, which can then be used by governments to inform policy. It can fund boots-on-the-ground efforts to reduce habitat and species loss, and enable conservationists to work directly with community leaders to understand the factors that drive traditional land use, overharvesting of natural resources, and encroaching urban development. Philanthropy can also help to broker agreements between governments and communities to set goals to improve environmental resources.

Solutions already exist to tackle every environmental challenge that humanity faces, and philanthropy can help accelerate and scale these solutions.

However, since the COVID-19 crisis emerged, very few large-scale donations to save the environment have been publicly announced. Understandably, the focus has shifted to the protection of frontline health-care workers, disease interventions, and community support. However, an unprecedented amount of uncommitted philanthropic capital could be activated to address a suite of environmental challenges directly and indirectly related to COVID-19. Social investors have a significant opportunity to leverage philanthropic capital and to apply strategic thinking and efficacy metrics to ensure the best results.

Bolster Local Communities

Every day, frontline conservation workers mitigate the worst environmental impacts. They urgently need support. As a result of the COVID-19 pandemic, poaching is rising in Africa, Asia, and other regions,¹² and rangers and enforcement agents are making tough calls about their safety and animal protection. Ecotourism around the world has halted,¹³ removing a key funding source for conservation-related employment and related projects from the table.



Conservation-oriented organizations (e.g., non-governmental organizations [NGOs], zoos, and government offices) are operating with minimal staff or have closed entirely. Further, people with “on-the-ground” or “in-the-water” knowledge about species and habitats are dying.¹⁴ This effect is particularly troubling because indigenous lands and waters, and the individuals who steward them, safeguard approximately 80 percent of Earth’s biodiversity.¹⁵ There are numerous opportunities for philanthropists to have an immediate and lasting impact on the environment during COVID-19 which also support people’s livelihoods and boost local economies. Philanthropic actions could support frontline conservation workers by

- providing direct financial assistance to support frontline conservation workers through emergency operation grants with flexible requirements and timelines;
- giving financial and technical assistance to conservation-oriented NGOs to identify new mechanisms for funding revenues and program overhead, particularly in communities that have depended on sustainable ecotourism and volunteers; and
- offering financial and technical support to indigenous communities as they deal with food and health security during COVID-19 so that they can continue to safeguard Earth’s ecosystems, particularly in remote or resource-poor areas.

SPOTLIGHT

International Anti-Poaching Foundation (IAPF)

The [IAPF](#) was founded in 2009 and operates in southern and East Africa. The focus of the organization is ecosystem preservation through training and operations. The operational model is Akashinga, a community-driven conservation program that empowers disadvantaged women to restore and manage networks of wilderness areas. Training is conducted under the LEAD Ranger initiative, building field-based indigenous leadership and instructional capacity across Africa’s conservation industry.

Promote Environmental Education

Classrooms, academic institutions, and outdoor education initiatives (e.g., nature centers, zoos, parks, and camps) are a training ground for environmental scientists and conservationists to learn foundational knowledge and professional skills. For others, they are a place to learn about environmental issues and promote social, academic, physical, and psychological health.¹⁶ However, as the pandemic creates uncertainty for schools and students around the world, many of these programs and their benefits are disappearing. In the US alone, four million K-12 students missed environmental and outdoor science education in the spring due to COVID-19, and two-thirds of environmental and outdoor science education organizations are at risk of closing by the end of 2020.¹⁷





SPOTLIGHT

North American Association for Environmental Education

The [North American Association for Environmental Education](#) supports leadership and excellence in environmental education, provides technical assistance to partner organizations, makes investments to advance the field, and builds the capacity of environmental educators in Canada, the United States, and Mexico. The organization also provides numerous resources, tips, and tools for environmental educators during COVID-19.

Historically marginalized groups, particularly students of color and students from low-income families who rely on these programs for environmental education, will feel these losses disproportionately. Philanthropy can ensure that current generations receive fundamental information about the environment by

- promoting the value of environmental and outdoor education to policymakers, civil society, non-science educators, and families, and by drawing appropriate connections between the intersection of nature and COVID-19;
- providing financial assistance to ensure that outdoor education programs and initiatives can remain open with proper staff, infrastructure, and curriculums; and
- subsidizing costs via scholarships, fee waivers, transportation grants, and community partnerships for students to participate in virtual or physically distanced environmental science or outdoor education programs, particularly in marginalized communities where access to resources is lacking.



SPOTLIGHT

Zoological Society of London (ZSL)

[ZSL](#) is an international conservation charity working to create a world where wildlife thrives. From investigating the health threats facing animals to helping people and wildlife live alongside each other, ZSL is committed to bringing wildlife back from the brink of extinction. ZSL's work is realized through groundbreaking science, field conservation around the world, and engagement of millions of people through two zoos, ZSL London Zoo and ZSL Whipsnade Zoo.

CONVERSATIONS ON SOCIAL EQUITY, JUSTICE, AND INCLUSION IN ENVIRONMENTAL PHILANTHROPY

The environment field needs to begin a conversation to explore the systemic connections between the inequities of our global systems and the environment. The drivers of environmental decline (e.g., exploitation of resources, pollution, climate change) are, to a large extent, driven by histories of systemic racism, oppression, and power differentials around the world, the frameworks of which are still present today. Further, the impacts of environmental decline disproportionately affect certain populations, with vulnerable and underserved communities regularly facing the worst impacts and lacking resources for recovery. Even the environmental field itself displays a lack of diversity and disproportionate barriers to entry for many groups of people, the implications of which are not well understood but likely far-reaching.

Philanthropy has a duty and obligation to catalyze change and explore its own role in perpetuating these systems. The first step is to start a conversation and ask questions.

- What are the systemic connections between racism and exploitation of vulnerable communities to the environmental issues that the world faces today, such as climate change, pollution, and habitat loss?
- How and why do the impacts of environmental stressors affect certain vulnerable or marginalized populations more? How can these conditions be uncoupled?
- Why is there a lack of diversity in the environmental field? What can be done to improve it?
- What role has philanthropy played in reinforcing social inequities in the past generally or in the environment space?
- How can social equity, justice, and inclusion be incorporated into environmental philanthropy moving forward?
- What questions do philanthropists need to ask of themselves to move the conversation forward?

While change will not happen overnight, philanthropists can take some immediate actions to get the ball moving in the right direction.

- Work with other philanthropists, civil society leaders, and environmental justice organizations to develop a meaningful call to action, concrete next steps, and achievable milestones.
- Provide immediate financial support to people of color, indigenous, minority, and underserved leaders who are striving to address environmental issues in the regions you care about.
- Examine your existing environment portfolios and identify places where social equity, justice, and inclusion can be incorporated and where you are uniquely poised to make a meaningful impact, rather than just dilute the problem.

Provide a Lifeline to Environmental Science



Around the world, many environmental scientists are making difficult decisions about whether they should collect the data they can or to abandon field sites and pause lab work to obey stay-at-home orders, physical distancing, and travel restrictions.¹⁸ Major environment projects, from monitoring climate change¹⁹ to ensuring wildlife recovery following the January 2020 Australian wildfires, are on hold.²⁰ Even in Antarctica, the only continent untouched by COVID-19 at the time of writing, research seasons are being canceled.²¹ In addition, graduate students and early-career scientists are facing uncertainty about fellowships and scholarships and unclear milestones for academic progress²² because closures and travel restrictions may preclude completion of scientific projects. The domino effect of missed critical work and gaps in scientific data sets of unknown length will be far-reaching, particularly for ecology, conservation, exploration, environmental health, and earth systems monitoring. The scarcity of broad support programs and organizations for environmental scientists is a gap in the field and an opportunity for philanthropic support. Philanthropic actions could support individuals that advance environmental science by

- supporting broad access to online platforms and tools to continue environmental science work remotely where possible, particularly for data sharing and collaboration;
- providing flexibility in existing science grants so that projects can be restructured appropriately to meet COVID-19-related health and safety precautions and travel restrictions;
- providing financial assistance to support the livelihoods of graduate students and early-career scientists who have lost grant support, fellowships, or employment due to COVID-19 and do not qualify for government unemployment assistance; and
- developing fellowships and training programs that will attract new trainees to the field and provide those already in the field with development tools to bolster skills and/or learn new ones.

Foster Youth Leadership



A cause for optimism is that youth leaders were building momentum pre-COVID-19 for environmental action and climate advocacy programs. During COVID-19, many grassroots and volunteer youth efforts slowed down or could not attain the same reach. The urgency of environmental issues remains high for future generations and will be closely tied to decisions about global recovery measures. Philanthropists can support youth climate and environmental justice leaders by

- directly supporting youth-led initiatives;
- leveraging philanthropic networks and connecting youth leaders with appropriate civil society and government leaders and other stakeholders to advocate for sustainable outcomes; and
- providing rapid-response grant support for advocacy efforts that are virtual or physically distanced in 2020 and 2021.

SPOTLIGHT

Zero Hour

The mission of [Zero Hour](#) is to center the voices of diverse youth in the conversation on climate and environmental justice. Zero Hour is a youth-led movement creating entry points, training, and resources for new young activists and organizers (and adults who support the vision) who want to take concrete action around climate change. This group focuses on protecting rights and access to natural resources and a clean, safe, and healthy environment that will ensure a livable future where we not just survive but flourish.

Address Concurrent Environmental Disasters



For the first time, a serious pandemic is overlapping with environmental disasters and extreme weather events such as hurricanes, wildfires, floods, droughts, and heatwaves with potentially devastating consequences to people, livelihoods, and the economy. Although many factors contribute to when and how environmental disasters manifest themselves, the COVID-19 pandemic is creating an urgent need to prepare immediately for the new complexities of environmental disaster response at a time when government and community resources are more strained than usual. The magnitude of global environmental disasters is not trivial—in 2019, weather-related hazards and disasters collectively displaced an estimated 24 million people across 140 countries and territories.²³ Experts were already predicting that hazardous weather-related events will increase in frequency, duration, and intensity because of factors such as climate change,²⁴ suggesting that 2020 and 2021 will be similar if not worse in terms of disasters requiring evacuations.

In addition, these adverse events disproportionately affect the health and well-being of marginalized and vulnerable communities already being hit hard by COVID-19. This disparity underscores an urgent need for philanthropy as evidence mounts that the global community is not adequately prepared to respond. Community-driven responses will be critical to tackling environmental disasters that occur during the pandemic, and philanthropy can play a significant role. With so much uncertainty about the availability of government resources (e.g., funding, human talent, and supplies), domestic and international travel restrictions, and the ever-changing strategies around the world to manage this ongoing public health crisis, a one-size-fits-all approach to respond to environmental disasters during COVID-19 is not possible. An effective response must be driven by individual communities in the context of how they are managing the COVID-19 outbreak. Unfortunately, similar to federal and state governments, community resources are also scarce. This is another area where philanthropy can help to fill critical gaps.

Every environmental disaster presents unique complexities to consider, and they are even more complex in the context of a pandemic. In some areas, regularly prescribed forest burns to remove built-up fuel and prevent wildfires are on hold because the particulate matter in smoke increases the risk of COVID-19 complications. A typical response to planning for a dangerous heatwave is to designate public “cooling centers” in buildings such as libraries and schools with air conditioning.

But, with many of these buildings closed and social distancing nearly impossible in a closed environment, individuals may be reluctant to go to a center and risk infection. In addition, disaster response often relies on professional expertise and volunteers from both inside and outside of the region, but maintaining a pipeline of support is difficult during COVID-19. Professional and volunteer responders from outside the disaster area may be reluctant or unable to travel because of restrictions, and the affected communities may not welcome outside responders into their community because of the increased risk of exposure. Further, disaster managers must quickly find and deliver additional protective equipment, evacuate at-risk populations, keep evacuees physically distanced, and keep first responders and emergency workers safe. Philanthropy can support community-driven efforts that enhance services to prepare for, respond to, and assist with environmental disasters by

- supporting scientific research to better understand the ways that environmental pressures such as climate change, rising sea levels, pollution, and biodiversity and habitat loss influence environmental disasters and public health to improve prediction and response.
- working in concert with local NGOs and government leaders to increase public awareness about the double-punch of environmental disasters during COVID. Campaigns can take the form of public service announcements, trainings, and public outreach. Information should be based on the best available science and include practices for how individuals should plan and respond, particularly those from vulnerable populations and in areas with few or no resources.
- providing financial support and technical assistance to disaster and non-disaster NGOs to develop a comprehensive understanding of the intersection of environmental disasters, pandemics, and their work. Where possible, philanthropy could provide resources and platforms to build community networks of stakeholders, NGOs, and government agencies so that concerns can be raised and responses coordinated.
- providing financial support to enhance the immediate services of frontline health workers, emergency responders, government, and volunteers through nontraditional support such as subsidized daycare, travel, mental health and well-being services, and socially distanced housing.

SPOTLIGHT

World Central Kitchen (WCK)

Founded in 2010 by Chef José Andrés, [WCK](#) uses the power of food to heal and strengthen communities through times of crisis and beyond. WCK has transformed the field of disaster response to help devastated communities recover and establish resilient food systems. Since its founding, WCK has served more than 25 million meals to those impacted by natural disasters and other crises around the world in countries including Albania, The Bahamas, Colombia, Guatemala, Haiti, Mexico, Mozambique, Spain, Venezuela, and the United States.

- providing medium- to long-term assistance during the recovery phase following the disaster. Philanthropists can take the lead in developing a deeper understanding of the landscape and needs in the community beyond the immediate response and strategize on long-term assistance to help communities rebuild.
- assisting communities to build resilience against future environmental disasters. Donors can provide avenues for stakeholders to convene, set goals, and work together to understand their community- and population-specific needs, paying particular attention to human capacity, technology, communication, public health, and health-care infrastructure.

Ensure COVID-19 Recovery Measures Are Environmentally Sound



The economic toll of COVID-19 is forecasted to be in the trillions of dollars over the next decade,²⁵ which has governments around the world considering measures to bolster jobs and economies. Many of these measures will touch all aspects of society and include short-term stimulus and long-term investments in businesses, job creation, and infrastructure development. Although it is critical to evaluate immediate economic needs, it is equally vital to understand the long-term environmental consequences of programs and initiatives that are developed now. Consequently, many experts are calling for a Green Recovery—a recovery that deprioritizes business-as-usual approaches and instead meets the dual objectives of short-term economic recovery and long-term environmental benefits.²⁶ The European Union has included several green measures in its recovery plan, including the announcement of a \$1.25 billion fund for technology advancement for low carbon technologies such as renewable energy and carbon capture, use, and storage.²⁷ With attention focused on recovery measures, a unique opportunity exists for philanthropists to unlock scalable solutions for our environment at the governmental level with cascading effects on other sectors. Some key philanthropic opportunities include

- advocating for environmentally sound recovery measures to policymakers, the private sector, and other stakeholders. Where possible, support bottom-up local and state recovery measures, and help to promote the connection among environmental health, jobs, and the economy.

SPOTLIGHT

The Freshwater Trust

Founded in 1983, [The Freshwater Trust](#) accelerates the pace and scale of freshwater restoration in the Pacific Northwest through the use of science, technology, and incentive-based solutions to restore rivers on a timeline that matters. In 2013, the trust received the US Water Prize for its innovative solutions to restore rivers and streams in the Pacific Northwest.

- providing a platform that can help communities and NGOs ideate, propose, submit, and advocate for shovel-ready projects for government economic recovery programs. One barrier to environmental protection, compared to other sectors, is a lack of a slate of immediately fundable and scalable projects.
- supporting job creation by developing short- and long-term fellowship programs, environmental workforce training, and supporting formal and informal staff positions at governments and NGOs.
- advancing equitable transition from fossil fuels to renewable energy sources (e.g., solar, wind) through government initiatives, investments, and infrastructure financing, and ensuring that the fossil fuel workforce can acquire jobs in renewable energy and other related sectors.
- raising awareness about the often-overlooked ocean and coastal recovery measures such as offshore renewable energy, coastal restoration, blue carbon initiatives, energy-efficient maritime transportation, sustainable fishing and aquaculture, and climate resiliency.

Maintain Momentum on Climate Change Solutions



Climate impacts are arriving faster than experts had predicted. For example, the Arctic reached the highest recorded temperatures in summer 2020, with cascading implications for sea-level rise, wildfires, and permafrost melt.²⁸ Australia's Great Barrier Reef suffered another severe coral bleaching event in early 2020—the third in just five years, following the warmest ocean temperatures ever recorded.²⁹ Experts suggest we have approximately one decade to make the necessary changes to avoid the worst impacts of climate change.³⁰ COVID-19 is projected to reduce annual greenhouse emissions, perhaps by 8 percent,³¹ but with emissions still increasing exponentially, climate action remains justified.

The unfortunate reality is that as the world responds to the COVID crisis and navigates recovery, we do not have the luxury of ignoring climate change; we must find ways to solve for both.

Meaningful climate progress is a complex global problem that must be addressed through policies, innovation, and behavior change at all levels of society. The good news is that clear solutions exist to reduce the amount of greenhouse gases that humans produce (e.g., shift from fossil fuels, improve energy use efficiency, improve food systems, and increase plant-rich diets) and remove greenhouse gases (e.g., restore ecosystems such as forests, shift agriculture practices, and deploy technologies to remove and store carbon). The even better news is that, in some cases, climate action and COVID-19 action can be synergistic. Poor air quality has been shown to increase susceptibility to COVID-19. Decreasing contaminants from burning fossil fuels in favor of renewables will improve air quality and decrease the rate of additional respiratory complications related to COVID-19.

GLOSSARY

Carbon Sources and Sinks

In Earth's carbon cycle, carbon is exchanged across Earth's atmosphere, oceans, organisms and ecosystems, and rocks. Processes that predominately increase the amount of carbon in the atmosphere are commonly referred to as "sources" (e.g., burning of fossil fuels, forest fires, and respiration). Processes that predominately decrease the amount of carbon in the atmosphere are commonly referred to as "sinks" (e.g., photosynthesis leading to plant growth, absorption of carbon by the ocean, and storage of carbon in soil).

Nature-Based Solutions to Climate Change

These solutions bolster the natural carbon cycle of the planet to become a net sink for carbon. These solutions include natural carbon storage mechanisms such as protecting and restoring ecosystems, including forests, grasslands, peatlands, and wetlands, and advancing sustainable agriculture methods that ensure soil health.

Blue Carbon

Blue carbon refers to carbon that is stored in coastal and marine ecosystems such as mangroves, salt marshes, and seagrass beds. These ecosystems, when healthy, can store more carbon per unit area than terrestrial forests³² and provide co-benefits such as storm protection, food security, recreation, and increased biodiversity.

Green jobs that support climate adaptation and mitigation can be included in COVID-19 economic recovery measures to bring well-paying jobs to families. Addressing drivers of climate change, such as deforestation, will subsequently reduce the risk for future zoonotic diseases.

Focusing on Immediate Action among Stakeholders

Realizing that climate change is a threat multiplier to any philanthropic portfolio, climate and non-climate funders alike should come together and align on goals and strategies. Given that most climate interventions require substantial government and private-sector buy-in and cooperation, philanthropists' role will be to leverage their resources and accelerate solutions. The faster society reduces reliance on carbon, the fewer climate impacts there will be. In the short term, philanthropists can build momentum around nature-based solutions to climate change that provide net carbon storage (i.e., solutions that are carbon sinks instead of carbon sources). This effort will require building stronger linkages between climate change and biodiversity conservation fields. These fields are more siloed than our planet can afford, and divisions between them have led to inefficiencies in collaboration, funding, investments, and capacity building.

Philanthropy can also use all the levers at its disposal to ensure that climate-appropriate policy agendas remain front and center and that governments and industry are not only accountable but also willing to be part of the solution.

Philanthropy should focus on

- providing financial support and technical assistance to NGOs, private sector, and local communities for nature-based solutions to climate change. Examples include funding research to understand the distinct ways that ocean and coastal systems can serve as carbon sinks (i.e., blue carbon) and funding efforts to identify and explore pathways to protect, conserve, and restore ecosystems such as tropical forests, peatlands, and grasslands. Philanthropy can also build a more comprehensive approach to regenerative agriculture and healthy soils.
- advocating for policy solutions and commitments by governments and industry to address climate change by prompting collaborations, supporting research and initiatives that can inform policy decisions, using litigation when necessary, building political buy-in, and shifting capital to green investments.

SPOTLIGHT

Project Drawdown

Founded in 2014, [Project Drawdown](#) is a nonprofit organization that seeks to help the world reach “Drawdown”—the future point in time when levels of greenhouse gases in the atmosphere stop climbing and start declining steadily. Teams of researchers and experts conduct reviews to provide evidence-based recommendations and strategies for the steps needed to address climate change.

Building Bridges for Unconventional Conversations on Climate

Philanthropy can help to bring seemingly controversial topics about climate change to the forefront of conversations to enable thoughtful and inclusive dialogue. First, it is vital to address social justice, equity, and inclusion and the role that systemic failures such as racism have played in climate change to date and will play in the future. Second, the fact that the wealthiest 10 percent of the global population produces half of the world’s greenhouse gas emissions must be addressed,³³ yet the most vulnerable populations disproportionately feel the impacts of climate change. Third, much attention is necessarily focused on eliminating fossil fuel use, but it is unreasonable to assume a complete transition in the next decade. To what extent should we rely on more efficient fossil fuel uses and less popular alternatives such as nuclear power? Finally, the most appropriate way to discuss global population growth in the context of climate change must be determined.

Some philanthropic opportunities to facilitate these discussions include

- convening experts and community leaders to identify the difficult or controversial questions that society should ask itself about climate change, and developing thoughtful approaches to addressing them; and
- working with other philanthropists, civil society leaders, and environmental justice organizations to bring these unconventional conversations into the open appropriately and productively and to develop meaningful calls to action, concrete next steps, and achievable milestones.

Prevent Future Pandemics Caused by Zoonotic Diseases



There is a simple but critical linkage between pandemics, such as COVID-19, and the environment. Unfortunately, it has taken an event of this scale to shock the world into paying attention to the dangers and implications of zoonotic diseases. On the one hand, healthy and biodiverse ecosystems act like buffers and reduce the vulnerability of human populations to zoonotic diseases and pandemics. On the other hand, the litany of environmental challenges facing humanity today increases the risk that another similar pandemic with devastating consequences will occur. On a global scale, unprecedented biodiversity and habitat loss, wildlife consumption and trade, and intensive land development and farming techniques have reduced the natural buffer and put human populations closer to wild and domestic animals, providing new opportunities for disease spillover to occur.

GLOSSARY

Zoonotic Disease

Diseases originating from animals and transmitted to humans, caused by animal pathogens (e.g., bacteria, viruses, fungi, or animal parasites). Zoonotic diseases cause the majority of emerging diseases in humans, approximately 60-70 percent over the past several decades.³⁴ In recent years, several diseases have transferred from animals to humans, including Ebola, avian influenza (bird flu), and severe acute respiratory syndrome (SARS), with COVID-19 tentatively linked to a disease prevalent in bats.³⁵ All new zoonotic diseases initially carry the threat of becoming a pandemic.

Spillover

Transmission of zoonotic diseases from animals to humans. Spillover can occur directly through animal contact or indirectly through insect vectors and the food system.³⁶

Advancing Multidisciplinary Approaches

About 60 percent of human infections have an animal origin,³⁷ but we still lack a complete scientific understanding of how to predict and detect zoonotic diseases and ultimately prevent future pandemics.

Substantial progress will require a renewed effort by the environment and public health communities to develop a more complete understanding of the drivers of zoonotic disease and their relation to environmental issues such as climate change, land development, food systems, and pollution. Philanthropy can play a unique role in breaking down silos and identifying gaps in the field and in advocating for sound policy decisions from local to international levels based on the best available science. Philanthropic recommendations include

- increasing grant funding and development of initiatives that incorporate environment and health outcomes together, not singly. There is an unprecedented opportunity to accelerate the growth of a robust and multidisciplinary field that incorporates optimal health for people, animals, and the environment, and advocate for its use in policymaking and scientific research. This approach is commonly called “One Health.”³⁸
- supporting research and coordination to increase the ability to predict zoonotic disease hotspots.
- funding infrastructure, technology, capacity building, and staff positions to help detect and respond to disease spillover, particularly in resource-poor communities. Post-COVID philanthropy could provide funding for stakeholder coordination to identify critical gaps, lessons learned, best practices, and future recommendations.

SPOTLIGHT

Ending Pandemics

Founded in 2010 within the Skoll Global Threats Fund, San Francisco-based [Ending Pandemics](#) was spun out as an independent nonprofit organization in 2018. Ending Pandemics provides scientific and technical expertise and catalytic funding to find and contain outbreaks faster. Ending Pandemics partners closely with governments, citizens, frontline workers, academia, and NGOs around the world.

Addressing Wildlife Trade

Because COVID-19 has a wildlife origin, there has been a renewed focus on addressing the points where humans come into direct contact with wild animals. The legal and illegal wildlife trade is a multi-billion-dollar industry that involves the buying and selling of thousands of plants and animals for uses such as clothing and luxury items, consumption for food and treatment of ailments, and keeping live specimens for exotic pets and zoos. The close proximity to humans throughout the distribution process and associated biodiversity loss increases the risk of spillover events. The trade is also closely tied to decreases in biodiversity and habitat loss. Although some international trade is regulated, most trade agreements do not factor in zoonotic disease risk. A comprehensive policy

change that appropriately considers livelihoods of communities that rely on some aspect of the trade is needed. New frameworks should incorporate curtailing illegal trade, identifying high-risk species where zoonotic diseases are more prevalent, and enforcing safety and hygiene standards for the legal trade. A further complication during COVID is that experts are predicting that the longer the crisis lasts, some communities may look to nearby wildlife sources for food or be incentivized to join poaching efforts for income.

Philanthropy is poised to leverage networks and resources to catalyze global action at the private-sector level and to advocate for change at the government level. Some possible philanthropic actions include

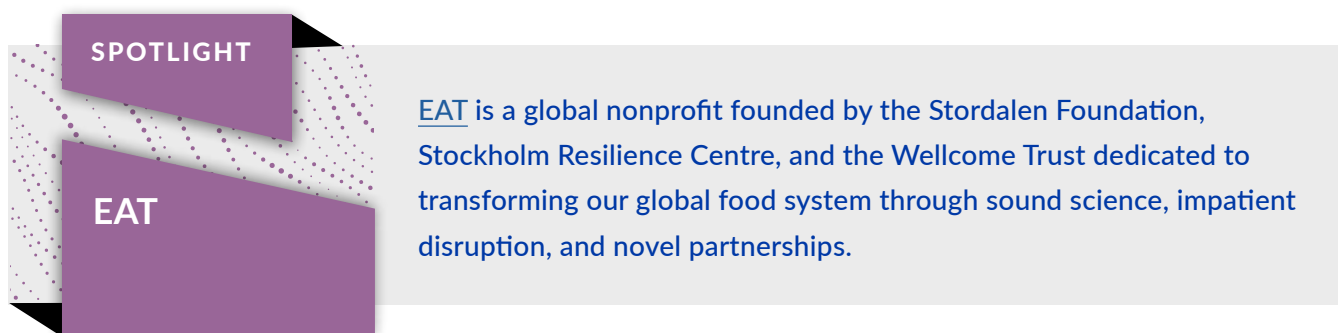
- advocating for policy change at local and international levels to address legal and illegal wildlife trade, particularly for species with high risk for zoonotic diseases. Policy change, regulation, and enforcement are needed to increase hygiene practices in lower-risk and culturally appropriate wildlife products. Appropriate philanthropic levers can be used (e.g., advocacy, litigation) to influence formal government policy and follow-through at national and international levels to halt the sale of illegal and high-risk wildlife and to enforce regulations. As more policies are put in place, there is a risk of black-market trade, so identifying local partners who can monitor illegal activities in communities will be key.
- identifying avenues to strengthen government and civil society efforts to reduce consumer demand for high-risk wildlife products. In particular, donors are needed to support campaigns that strategically change consumer behavior.
- working through local aid organizations to provide low- to no-cost non-wildlife alternative food sources in culturally appropriate ways in areas where individuals are struggling to feed themselves and their families due to food shortages or unemployment.

Fixing Food Systems

The majority of spillover events have occurred through food systems and account for approximately 50 percent of all zoonotic diseases that have emerged in humans.³⁹ Direct interactions with wildlife and livestock are largely to blame. However, the situation has recently become more complicated as agricultural practices and animal protein production have intensified. Increased animal and plant density, reduced genetic diversity, rapid conversion of forests and other wildlands to farms and feedlots, animal waste pollution, and gaps in enforcement of hygiene standards all point to an increased likelihood of human-animal contact. These challenges are only expected to worsen with a growing global population and increased demand for food. Philanthropy can play a critical role in rebuilding food systems to feed future populations in ways that are sustainable and equitable. Advocating for regenerative farming that can meet the needs of a growing population through healthy food production that leans toward plant-rich diets, reduced food waste, healthier soils, and limited expansion of agricultural lands into new habitats can reduce the risk of new zoonotic

diseases, increase biodiversity, and improve human health outcomes. Philanthropy can play a role by

- advocating for COVID-19 recovery measures that include assistance for regenerative farming practices that increase biodiversity and produce healthy food;
- advocating for private-sector investments in food systems that reduce dependency on intense animal factory farming and exploring investment in sustainable farming practices that improve soil health, biodiversity outcomes, and food yield; and
- supporting local and international NGOs that are raising public awareness about the linkages among food systems, health, and the environment.



[EAT](#) is a global nonprofit founded by the Stordalen Foundation, Stockholm Resilience Centre, and the Wellcome Trust dedicated to transforming our global food system through sound science, impatient disruption, and novel partnerships.

Protecting Biodiversity and Ecosystems

Protecting biodiversity and ecosystems is another component of preventing zoonotic diseases in the long term. As of 2018, only 15 percent of Earth's land surface and inland waters and approximately 7 percent of the global ocean was under some sort of protection or management.⁴⁰ Destruction of intact ecosystems for human needs such as road access, farming, housing, logging, and other infrastructure has led to fragmented habitats and humans being closer than ever to wildlife.

Experts are also concerned that drastic reductions in biodiversity will be a key factor for increased risk of zoonotic diseases.

Avoiding biodiversity loss also has the immediate added benefits of preserving ecosystem services critical for human survival. Unfortunately, many species populations are currently on the decline,⁴¹ with approximately 31,000 species assessed to be threatened or endangered globally,⁴² and those are the ones we have adequate information on. Many drivers have been causing the decline; among them are drastic changes in land and sea use, overexploitation of organisms and resources, climate change, pollution, and invasive species.

Ironically, the diversity of species, their characteristics, habitat ranges, and lifestyles make them difficult to protect. Each species requires specific interventions. In addition, species do not follow borders laid out on maps—governments, municipalities, and other stakeholders must coordinate and

collaborate. With so many entry points, philanthropists must identify particular regions or species of interest that will guide their strategy. Aligning goals with coalitions of funders may be particularly helpful in addressing the biodiversity crisis. Philanthropy can improve biodiversity and habitat protections by

- providing financial support for scientific research into the linkages between zoonotic disease and biodiversity among different plant and animal groups to improve disease prediction, detection, and response and to inform policy decisions. Convening experts to understand the critical gaps in the field could be a useful first step—and philanthropy is excellent at this.
- creating and advocating for clear, evidence-based, publicly supported goals and pathways for biodiversity and habitat protection at local, national, and international levels. Donors can provide resources, capacity building, and ways to incentivize those goals. Coalitions among government, civil society, and the private sector will ensure that partners can address the complex challenges together.
- supporting the often-underfunded organizations that are researching, discovering, monitoring, cataloging, assessing the current state of species and ecosystems, and advancing management options. During and after COVID-19, donors can provide support to organizations for continued operations.
- identifying strategies for the private sector to ensure that businesses incorporate risk management of biodiversity and habitat loss and operate in ways that limit the impact. In particular, philanthropists can advance the field of ESG (Environment, Social, and Governance), investing in the financial sector to include biodiversity and ecosystem outcomes in addition to climate outcomes.

SPOTLIGHT

International Union for Conservation of Nature Red List

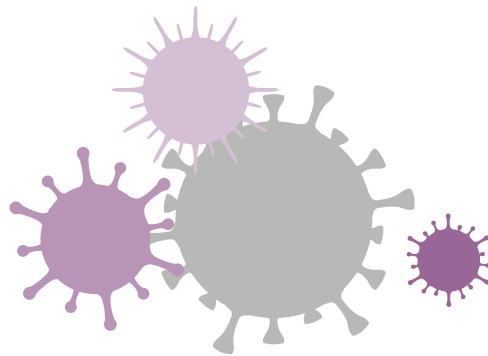
Established in 1964, the [International Union for Conservation of Nature's Red List of Threatened Species](#) is the most evidence-based and comprehensive information source on the global extinction risk status of animal, fungus, and plant species. Information from the organization is used to inform policy decisions, provide benchmarks for biodiversity progress, and inform conservation management plans.

Overall, philanthropists should ensure that current philanthropic giving during COVID-19 is flexible enough to maintain adequate protections and progress for species and habitats. Post-COVID-19, philanthropists can leverage resources to catalyze government action to accelerate species and habitat protection and reduce the factors that drive species and ecosystem loss (e.g., changes in land and sea use, exploitation of organisms, climate change, pollution, and invasive species).

SPOTLIGHT

Global Wildlife Conservation

[Global Wildlife Conservation](#) is an environmental NGO that saves the diversity of life on Earth by protecting and recovering endangered wildlife and habitats through science-based field action. The organization focuses on wildlife, wildlands, and empowering local champions through exploration, research, and conservation projects.



WHERE TO BEGIN IN ENVIRONMENTAL PHILANTHROPY?

It is becoming more and more apparent that with environmental issues, we need to address everything—and we need to do it now. Nevertheless, as with any complex systems-level problem, it can be difficult to know where to start or what actions will have the greatest impact. The Milken Institute Center for Strategic Philanthropy has identified some important considerations for philanthropists who are early in their giving journey that will help you strategically narrow your scope and put you on a path to success. It is important to ask yourself several personal questions about what issue you want to tackle and how.

- Are there any geographies you would like to focus on? The scale and approach of what you are trying to accomplish will change depending on local, regional, national, and international perspectives. Location is an important consideration because there are processes for how monies can be distributed at home and abroad.
- Are there topic areas or issues of personal interest? Identifying passion areas or topics most relevant to you is an excellent entry point to addressing environmental issues. Because most issues are interconnected, it will be easy to expand into other subjects and portfolios as you move along your journey.
- How much capital do you want to deploy? Realistic discussions about the amount of available philanthropic capital are important and may influence the scale and scope of what you can address. Philanthropists have other resources that add value, for example, well-connected personal networks and assets from personal businesses.
- Are you looking for partners? Most environmental challenges require a host of stakeholders to solve. Still, philanthropists are in a unique position in that they can develop strategies individually or work toward goals with other philanthropists or partners in other sectors. Joining a funder collaborative or network early on may provide learning opportunities.

Just like any seemingly impossible task, the important thing is just to get started. As your philanthropic journey progresses and you learn more about the topic and the intricacies of the challenge, you can reassess the questions in this list and expand strategically.

CONCLUSION

It is clear that our “normal” pre-COVID lifestyles were broken, for people and the planet. The good news, however, is that we are on the cusp of a great global reset that environmental philanthropists are poised to lead. For high-impact social investors, philanthropic capital and convening capability can be the catalyst that helps not only to mitigate the environmental damage caused by the virus but also to change the course of the future.

Environmental challenges are systemic by definition. They are complex with multiple root causes and direct and indirect linkages to other facets of human society. In many cases, solutions and approaches already exist, and the faster solutions can be activated, the more likely Earth’s systems can be preserved and humans will avoid the worst impacts. Philanthropists are uniquely situated to move the needle on many of the systemic environmental challenges.

The environmental community needs philanthropy to continue funding directed at environmental issues, release more capital to support boots-on-the-ground efforts, be flexible with the needs of current and new grantees who are currently under enormous constraints and pressure, and finally, collaborate with others to ensure outsized impact. As Greta Thunberg noted, “Our house is still on fire.”⁴³ So even as COVID-19 continues to command our attention, philanthropists must stay the course on prior commitments and help rebuild momentum in combating environmental crises.

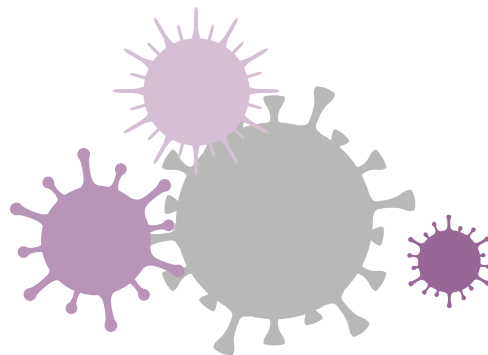
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