The 2024 Resilience Hub

Six Major Climate Challenges that Resilience Can Help Solve

Overview
The Resilience Hub is now in its fourth year, building on three successful Hubs since launching at COP26 in Glasgow. This marks a great moment to reflect on three years of knowledge gained and re-orient the Resilience Hub's programme to one that seeks to tackle or 'solve' key challenges or barriers that still exist to achieving the mission of the Resilience Hub: to increase levels of awareness, investment and action on climate resilience.

What will we do differently this year?
In 2024, the Resilience Hub will be replacing themes with challenges: at COP29, we will have six challenges across six days, focusing on one challenge each day (aligning with COP29 Presidency theme days where possible) instead of having individual thematic sessions spread across the COP.

With each challenge, we are aiming to compile a series of key messages, proposed solutions and recommendations that can be turned into a 'call to action on resilience and adaptation'. The call to action should be presented to the UNFCCC and the incoming COP Presidency (COP30) to directly influence their plans for the next twelve months, ahead of the crucial COP30 in Brazil (10 years since the Paris Agreement, halfway point in the crucial climate decade).

The Six Challenges

Using a resilience lens, how can we better:

1. Anticipate and manage **economic disruption** and close **finance** gaps?
2. Address and overcome **food and water insecurity**?
3. Promote **nature-positive action** to recover from and prevent further biodiversity loss and environmental degradation?
4. Build stronger, safer and healthier **urban communities** where everyone can thrive?
5. Prepare for **extreme weather events** and improve **disaster recovery efforts**?
6. Ensure the incorporation of **culture and Indigenous and local knowledge** at every level of decision making?

Each challenge must address these cross-cutting themes: (1) Finance: fostering access to financing for local actors and reducing the financing gap between adaptation and mitigation; (2) Innovation; (3) Radical Collaboration: uplifting frontline voices and democratizing decision-making spaces; (4) Gender and Equity

The Challenges in more detail

1. Anticipating and managing **economic disruption** and closing [adaptation] **finance** gaps

The underfinancing of climate adaptation poses systemic risks to global economic stability, especially for climate-vulnerable nations. With only six years left until 2030, we are struggling to effectively invest in adaptation and failing to strengthen economies for a resilient future. Without strategic and collective action, we risk the collapse of economies, massive displacement of individuals, and significant biodiversity loss. COP29, as the Finance COP, offers the ideal platform to elevate the conversation on financing adaptation and resilience, highlighting the high cost of inaction. Of the USD 63 billion in adaptation finance tracked from 2021-2022, only 2% came from the private sector, revealing untapped potential for transformative change toward climate-resilient communities, businesses, and ecosystems. Despite these challenges, financing adaptation and resilience could boost the global economy by up to USD 7 trillion by 2030. However, gaps in collaboration, the absence of enabling policies, and the lack of standardized metrics for private finance persist. The gap between needed investment and actual funding for climate resilience continues to grow, with adaptation costs for developing countries projected to reach USD 215-387 billion annually this decade. While innovative finance approaches are emerging, scaling them requires reforms in the broader climate finance architecture.

The Sharm Adaptation Agenda Task Force on Finance is spearheading the Call for Collaboration on Adaptation Private Finance and fostering government and Non-State Actors, including RtR partners, to agree on collaborations that accelerate finance flows and accessibility. Results from this challenge can inform the opportunities advanced by this Call for Collaboration.

Questions to Address:

a. What role is the private finance sector currently playing, and what does it need to achieve better adaptation and resilience solutions?
b. What financing gaps are governments facing in preparing their communities? What reforms are needed to address these gaps?
c. What kind of financial support, capacity building, and technical assistance do governments in the Global South need to be creditworthy?
d. How can we transform economies to support adaptation actions and reduce the cost of inaction?
e. Funding for loss and damage is recognized but not being mobilized: what considerations are required to ensure effective access?
f. A New Collective Quantified Goal on Climate Finance is being negotiated: how can we ensure finance that is usable goes to climate resilience?

g. Currently, only 10% of climate finance reaches local stakeholders. What mechanisms can ensure resources flow quickly and effectively to local stakeholders? How can funding be unlocked to reach communities and support Locally Led Adaptation?

2. Addressing and overcoming **food and water insecurity**

Water change is climate change. Climate impacts manifest through water-related disasters that disrupt lives and livelihoods. Climate change is intensifying extreme floods, storms, and droughts, altering rainfall patterns, river flows, and melting glaciers. Over the last decade, 9 out of 10 natural disasters were water-related, disrupting vital river systems that provide drinking water to over 2 billion people and support one-third of global food production.

Meanwhile, agriculture consumes 80-90% of freshwater withdrawals and contributes 11% of global greenhouse gas emissions. Although global per-capita food availability has increased despite a doubling population, this progress has come with significant ecological, social, and economic costs.

Enhancing the resilience of food and water systems requires an integrated approach. Food and water systems are interconnected social-ecological systems, and resilience cannot be achieved by addressing only individual components. Building resilience means addressing not just agricultural practices but also consumption patterns, food-related health, and access. Resilient food systems depend on resilient water systems; food production relies on water availability, and sustainable food production landscapes, focused on regenerative practices, are crucial for maintaining water resources. Global food trade and value chains also affect water use and ecosystem degradation, underscoring the intrinsic link between food and water resilience.

The SAA and RtR have incorporated nature at the heart of their agendas in regards to food and agriculture and water and nature systems. Results from this challenge can be incorporated under SAA solutions stories and call to action and RtR evidence of people increasing resilience.

Questions to Address:

a. How can innovative finance transform agriculture to ensure that water, land, and other resources remain within safe and just planetary boundaries?
b. How do we build the "unholy alliances" or "radical collaborations" necessary for climate-resilient food systems across markets, policy, and communities?
c. How do we ensure that farmers, pastoralists, fisher communities, and Indigenous peoples are at the center of food systems? What are the lived experiences of locally-led adaptation within these communities?

d. How can we move beyond a focus on efficiency to emphasize the diversity and redundancy needed for water-resilient food systems?
e. How can Indigenous knowledge, feminist practices, and local experiences be centered in agroecological transformations?

3. Promote **nature-positive action** to help recover from and prevent further **biodiversity loss and environmental degradation**

The IPCC-IPBES joint report highlights the alarming extent of human impact on the planet, with 77% of land and 87% of the ocean directly modified by human activities. The Living Planet Report further reveals an average decline of 69% in species populations since 1970, with freshwater systems suffering the most, experiencing an average decline of 83% in the same period. This biodiversity loss is not just an environmental issue but also a critical challenge for climate stability and human well-being.

Healthy ecosystems are essential for climate regulation, acting as carbon sinks, regulating water cycles, and supporting diverse life forms. However, as ecosystems degrade, their ability to perform these functions diminishes, exacerbating climate change and increasing vulnerability to its impacts. Indigenous and local communities, who are deeply dependent on nature and biodiversity for their livelihoods, are also the most effective stewards of these ecosystems. Despite their vital role in conservation, these communities face disproportionate impacts from climate change, making the preservation of biodiversity and healthy ecosystems not only an environmental imperative but also a matter of social justice. This challenge will explore how to increase financial flows and innovative solutions responding to the debt, nature, ecosystem degradation and climate crisis.

Both SAA and RtR are supporting a strong narrative and elevation of the role of nature for adaptation and the opportunities for disaster risk reduction. Results from this challenge will aim to articulate with the narrative and evidence on nature for adaptation and contribute to the Nature Positive Call to Action supported by SAA and RtR.

Questions to Address:

a. What transformations are required in business, economies, and societies to achieve this resilience?
b. How can nature be prioritized in Nationally Determined Contributions (NDCs), the Global Goal on Adaptation, and the Global Goal for climate finance?
c. Can natural climate solutions also support biodiversity goals? What are the limitations of nature-based solutions for biodiversity conservation, and how can we ensure that these goals are met?

d. What are the implications of the Kunming 30x30 target on locally-led adaptation efforts? How can we ensure that Indigenous communities are central to both biodiversity and climate adaptation goals?
e. How can we ensure that finance shifts towards supporting biodiversity without sacrificing the needs of people or the planet?
f. What kinds of radical collaborations are necessary among governments, businesses, cities, and communities to effectively address both climate and biodiversity challenges?

4. Building stronger, safer and healthier **urban communities** where everyone can thrive

Urbanization is transforming the global landscape, with nearly 70% of the population expected to live in cities by 2050, predominantly in low- and middle-income countries. This rapid urban growth presents both opportunities and challenges for building resilient communities where everyone can thrive. Investing in climate-resilient infrastructure is essential to protect urban populations from increasingly frequent climate-related events. This includes integrating nature-based solutions like urban green spaces to mitigate floods and heat, retrofitting infrastructure to endure extreme weather, and adopting inclusive zoning policies that promote safe, affordable housing in less vulnerable areas.

To support these efforts, systems such as early warning mechanisms, resilience metrics, and public communication campaigns are critical. Early warning systems can provide timely alerts about natural hazards, while resilience metrics help track progress in enhancing urban resilience.

Urban informality, which often includes insecure land tenure and inadequate access to basic services, poses a significant challenge to resilience. However, informal settlements are also vibrant economic hubs. Regularizing these settlements and securing land rights for urban migrants can enhance stability and encourage investment. Finally, climate-resilient housing and access to basic services like health, education, and water are crucial. Affordable, safe housing using resilient materials, coupled with strong health and education infrastructure, can reduce vulnerability and ensure continuous service provision during crises. Building resilient urban communities requires a holistic approach, integrating infrastructure, policy, and community engagement to create environments where all residents are protected and can thrive.

The SAA Task Force on Human Settlements is advancing adaptation solutions, governance setups, policy and finance opportunities to address urban system challenges, including informality. Results from this challenge can be incorporated into SAA outcome report, signals

of change and Call to Action and inform evidence of the RtR people increasing resilience in urban systems.

Questions to Address:

a. How can we invest in building resilient urban communities through improved urban planning and infrastructure development?
b. What systems should we finance or invest in to create resilient urban communities—early warning systems, resilience metrics, communication campaigns, or capacity building initiatives?
c. Urban informality presents challenges like insecure land tenure, lack of housing, and limited access to basic services, yet these communities contribute significantly to the local economy and need systemic support to build resilience.
d. Climate-resilient housing and access to essential services such as health, education, water, and sanitation are crucial for reducing vulnerability to climate change impacts and addressing broader development challenges.
e. How can we better prepare for extreme weather events and enhance disaster recovery efforts?
f. How can we ensure that culture, Indigenous knowledge, and local expertise are integrated into every level of decision-making?

5. Preparing for **extreme weather events** and improving **disaster recovery efforts**

As global discussions on Loss and Damage continue, communities and governments are grappling with the harsh realities of increasingly severe and frequent climate disasters. Floods, cyclones, extreme heat, droughts, and wildfires are becoming more common, bringing a range of economic, health, and social challenges. These disasters are placing enormous pressure on already overburdened social safety nets and disaster recovery systems. Record-breaking heat waves, like those in Delhi with temperatures soaring around 50°C, serve as stark reminders of the escalating crisis. The full impacts of these hazards, including long-term effects such as learning loss and chronic illness, may not be fully understood or accounted for until years later.

The burden of these climate hazards is also disproportionately borne by the world's poorest communities. Data shows that 70% of all deaths from climate-related hazards occur in the 46 poorest countries, highlighting the deep inequalities in vulnerability and impact. Despite this, the evidence is clear that early investments in resilience and adaptation can yield significant benefits. However, the challenges are as complex and multifaceted as the global crisis itself, requiring a comprehensive approach to mitigate the impacts and prepare for future events.

Preparing for extreme weather events and improving disaster recovery efforts is essential to building a more resilient future.

The SAA and RtR are tracking non-state actors' leadership to address loss and damage and can include the results of this challenge with evidence and narrative under SAA and RtR reports and Call to Action.

Questions to address:

a. What is the current status of international data collection and modeling on climate hazards? What are the major gaps, and how can governments, civil society, and the private sector best use existing data while addressing its uncertainties?
b. As disaster risk reduction efforts, such as Early Warnings for All, push for better and more timely warnings for communities, what opportunities might be overlooked, including unconventional, innovative, or grassroots collaborations?
c. With the increasing urbanization and focus on climate hazards affecting city dwellers, how can we ensure that rural populations, often older and linked to high-risk occupations like agriculture, are also considered?
d. What are the key lessons from the past two decades of disaster risk reduction, recovery initiatives, climate mitigation efforts, and recent locally led adaptation projects?
e. Where have gender-sensitive approaches been successfully applied, and what lessons can be learned for effective gender integration across the field?

6. Ensuring the incorporation of **culture and Indigenous and local knowledge** at every level of decision making

Indigenous peoples represent about 5% of the global population but protect 80% of the world's biodiversity. Their traditional lands are often rich in biodiversity, serving as vital carbon sinks and ecosystems essential for climate regulation.

Incorporating culture and Indigenous and local knowledge in decision-making is essential for building climate resilience. These communities have deep-rooted connections to their environments and possess centuries of knowledge about local ecosystems, weather patterns, and sustainable practices. This wisdom, often passed down through generations, offers unique insights that are vital for adapting to the changing climate. Ensuring their participation at every level of decision-making not only honors their cultural heritage but also enriches the overall strategies for resilience.

Inclusion of Indigenous and local knowledge fosters more holistic approaches to climate adaptation, recognizing the interdependence of natural and human systems. It helps to tailor

solutions that are context-specific and more likely to be sustainable in the long term. Moreover, this approach empowers communities, ensuring their voices are heard and respected in shaping policies that directly impact their lives. By integrating this knowledge with scientific data, decision-makers can craft more effective, inclusive, and culturally relevant strategies to combat climate change, ultimately leading to stronger and more resilient communities.

The SAA and RtR support locally-led adaptation principles and equitable, just and inclusive approach of climate action. Results from this challenge can help inform evidence of inclusive action into the reports and call to action.

Questions to address:

a. Addressing power imbalances, ensuring community empowerment, and respecting local knowledge are critical challenges. How can we shift mental models and working methods to intentionally embed equitable approaches in programs?
b. Can art, games, and heritage help bridge capacity gaps by addressing power dynamics, conflict, and fostering locally-led adaptation solutions?
c. How can we leverage cultural norms and indigenous solutions to enhance the effectiveness of adaptation measures?
d. What strategies can be employed to ensure that marginalized and vulnerable groups are actively involved in climate adaptation planning and decision-making?
e. How can we improve the integration of traditional ecological knowledge with scientific data to create more robust and contextually appropriate climate resilience strategies?