Submission by the Stockholm Environment Institute on behalf of the Adaptation Without Borders global partnership, on the 3rd workshop under the Glasgow–Sharm el-Sheikh work programme on the global goal on adaptation

5 September 2022

The Stockholm Environment Institute commends the chairs of the UNFCCC subsidiary bodies and the UNFCCC Secretariat for the start of the Glasgow–Sharm el-Sheikh work programme on the global goal on adaptation. The first two workshops were inspiring and well organised, and have provided a good basis for further discussion during the workshops to come. We are grateful for the opportunity to submit our views on the third workshop, the topic of which will be "methodologies, indicators, data and metrics, monitoring and evaluation".

Two dimensions of measuring adaptation progress: what and how

Over the past decade, a variety of actors around the world have put effort into developing and testing indicators to demonstrate adaptation success—an effort made particularly relevant by the global goal on adaptation and the global stocktake. Most existing indicators are meant to track, in one way or another, progress made towards enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change. Less attention has been given to assessing *how* such progress might have been achieved.

Recent studies have shown that adaptation can result in winners and losers. Seminal research by Atteridge and Remling (2017) argued that adaptation action can lead to the redistribution rather than reduction of vulnerability to climate change. This unintended outcome of adaptation would often affect people and places with the lowest levels of wealth and resilience, and little capacity to cope with the additional burden of redistributed vulnerability. Ensuring that adaptation is just and equitable requires recognising the global interconnectedness of our economic, social and biophysical systems, and the pathways along which vulnerability and risk travel.

Just resilience

Aware of the risk that adaptation could have unequal outcomes, last year's EU Adaptation Strategy introduced the term 'just resilience' as a guiding vision of how adaptation to climate change should take place in Europe. It indicates that we should not just protect ourselves against the impact of heat waves, windstorms, floods or droughts, but that we should do so *justly*. To support the vision of just resilience, the European Environment Agency then published the report *'Leaving No One Behind' in Climate Resilience Policy and Practice in Europe—Overview of Knowledge and Practice for Just Resilience* (Breil et al., 2021).

The aspiration for just resilience extends beyond Europe. This is because—as the EU Adaptation Strategy itself notes—the EU and the rest of the world are inescapably intertwined. The Adaptation Without Borders global partnership prepared the attached policy brief that addresses just resilience

from a transboundary climate risk perspective (Lager et al., 2021). It proposes a framework for a just transition for climate change adaptation, using two dimensions: justice—procedural and distributional—and connectedness. Achieving globally just resilience requires addressing both dimensions together, but neither is all-or-nothing: incremental steps can make adaptation more globally just over time. Ongoing work by both the European Environment Agency and Adaptation Without Borders focuses on developing indicators to measure just resilience.

Ways forward

The Stockholm Environment Institute, on behalf of the Adaptation Without Borders global partnership, encourages the chairs of the subsidiary bodies of the UNFCCC to explicitly consider not only the 'what' in measuring adaptation progress, but also the 'how'. We propose that the third workshop under the Glasgow–Sharm el-Sheikh work programme on the global goal on adaptation include at least one session on just resilience. Ms Frida Lager, who leads the ongoing work by the European Environment Agency and Adaptation Without Borders, would be an excellent speaker at the workshop.

Beyond the workshop, we remain available to engage in consultations with the chairs of the subsidiary bodies, the Adaptation Committee, the UNFCCC Secretariat and others on the implementation of the work programme. For more information on Adaptation Without Borders, please refer to https://adaptationwithoutborders.org.

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Adaptation Without Borders

A Just Transition for Climate Change Adaptation: Towards Just Resilience and Security in a Globalising World

KEY MESSAGES

- In a globalising world, the impacts of both climate change and adaptation measures are increasingly likely to be felt well beyond the places where they occur – even thousands of kilometres away.
- Ensuring that adaptation is truly just and equitable requires recognising transboundary climate risk and building resilience on a global scale. This involves avoiding actions that simply shift risks to other actors or reinforce existing vulnerabilities.
- We propose a framework for a just transition for climate change adaptation, focused on two dimensions: justice – procedural and distributional – and connectedness. Achieving globally just resilience requires addressing both dimensions together, but neither is all-or-nothing: incremental steps can make adaptation more globally just over time.
- A just transition for adaptation is crucial to ensuring both human well-being and countries' security, as resource scarcity and other stresses caused by climate change or by maladaptation can exacerbate conflict and even indirectly fuel violence.
- Going forward, we recommend that policymakers strengthen multilateral cooperation for globally just resilience; develop agreed principles to move from ambition to action; craft incentives to invest in just transitions for adaptation; and advance research to support decision-making.

Justice has long been a central element of the international community's approach to climate change, including with regard to financial support for adaptation in developing countries. Yet, even as it has become increasingly clear that climate risks – and adaptation measures – often extend across national borders, a new challenge has emerged: how to ensure globally just resilience.

In a globalising world, countries' economies and the resources they depend on are closely connected through trade, financial flows, the movement of people, and shared biophysical systems such as river basins. That means that shocks or stresses in one country can be felt, and sometimes made worse, in other countries thousands of kilometres away. For example, during the global food price crisis of 2007–2008, multiple factors, including oil prices, extreme weather, changes in food demand, trade policies and government responses to the unfolding crisis, all interacted to generate a surge in global food prices, creating food insecurity for vulnerable communities worldwide.[1]

Situations like this, which climate change is exacerbating, directly affect human security and can fuel latent conflicts. When people are hungry and desperate, especially in the absence of good governance and safety-net programmes, tensions may escalate, and affected communities may also become very vulnerable to exploitation by criminal networks or armed groups.

To be both effective and just, adaptation measures in a globalising world thus need to start by recognising systemic and cascading cross-border effects. Otherwise, actions designed to reduce climate risk and vulnerability can instead reinforce or redistribute them across countries, deepening existing inequality and threatening human security.[2]

This policy brief aims to expand our collective view of justice in adaptation by considering the globally interconnected nature of our economy and society. Building

on the literature on just transitions for climate change mitigation, it presents a novel framework for a just transition for adaptation, with the objective of achieving globally just resilience. It then presents two case studies to demonstrate the utility of the framework for analysing and advancing globally just resilience.

Just transitions and adaptation in a globally connected world

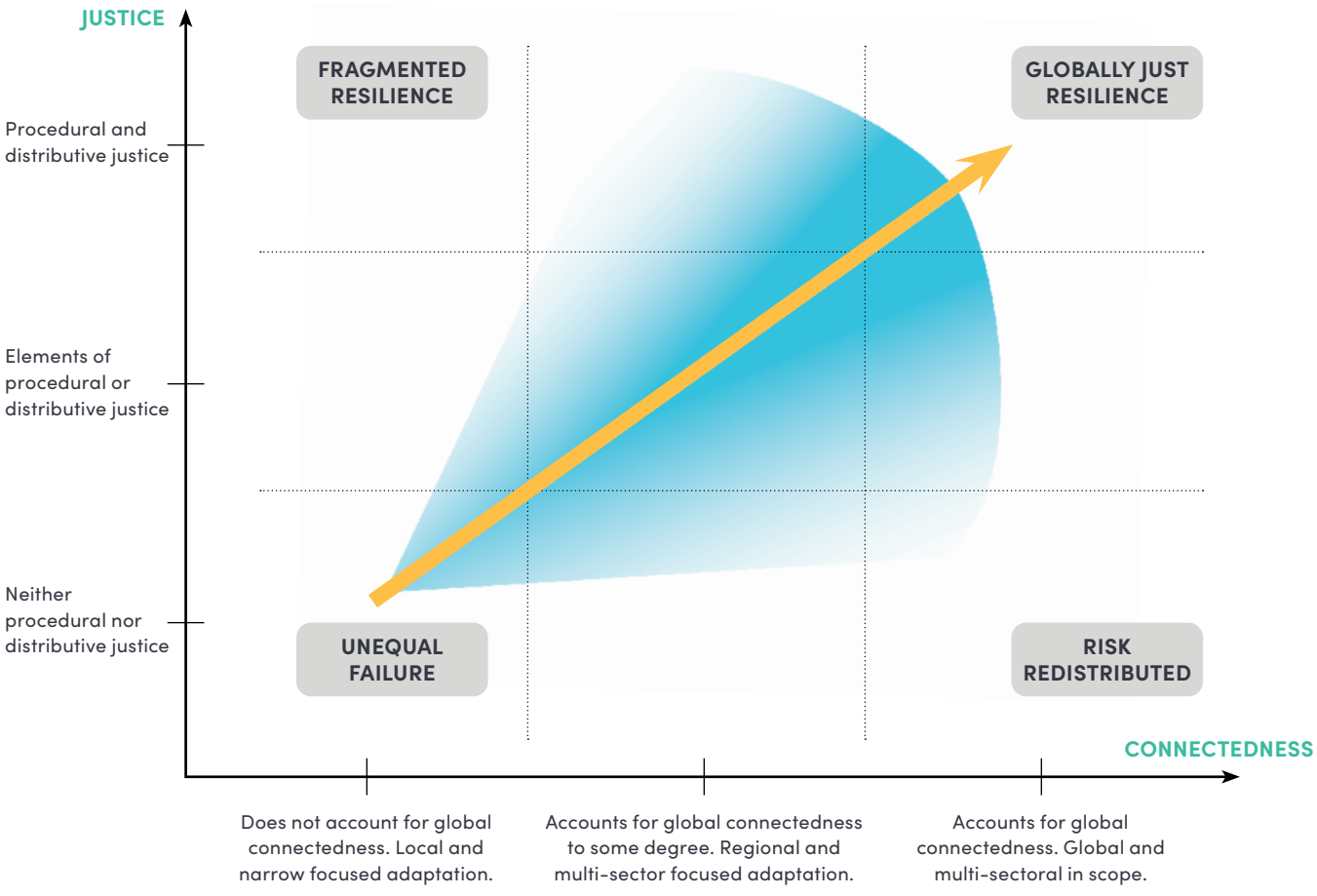
The term "just transition" has its roots in the workers' rights movement in the United States during the 1970s and 1980s. The movement responded to increased regulation on polluting industries that caused job losses and precipitated demands from labour unions to invest in worker retraining and community support. It also pushed for an industry transition towards more environmentally friendly design, in view of harmful toxic waste sites and occupational health problems faced predominantly by immigrant women workers in the semi-conductor industry.[3] Since then, there have been three critical additions to the workers' rights elements of a just transition: climate justice (e.g. sharing burdens and benefits across scales and generations), energy justice (e.g. energy access and poverty alleviation in a post-carbon world) and environmental justice (e.g. involving citizens in development, implementation and enforcement).[4]

As with mitigation, adaptation can lead to unequal and unjust outcomes. Some actors may take advantage of the urgency of adaptation to elicit power or economic gains at others' expense,[5] but often negative consequences are unintended. The term "maladaptation" captures this possibility, referring to adaptation that shifts vulnerability to other sectors, locations or communities.[6] Avoiding maladaptation is crucial, but we would argue that it is not enough; we need to actively pursue a just approach to adaptation.

What does it mean for adaptation to be just? In their seminal 2006 article "Fair Adaptation to Climate Change", Paavola and Adger focus on social vulnerability, equal participation in and distribution of adaptation planning and assistance, responsibility for climate change impacts, and the international dimensions of justice.[7] Other contributions have underscored the importance of community capabilities, focused on maintaining the provision of basic needs and freedom of choice for constituents.[8] There have also been calls for a more transformational approach to adaptation that addresses the drivers and underlying values of the systems that cause vulnerability, instead of treating adaptation as solely a technical problem.[9]

Figure 1. Framework for globally just resilience defined by justice and connectedness

The yellow arrow shows the movement of just transition for adaptation in a globally connected world within the framework



What is missing from this body of work is a way to deal with the interconnected nature of people and places in the modern, globalised world. These approaches focus primarily on justice *within* an individual community or country. Now we need to consider how justice might be achieved *between* communities or countries, especially when there are differences in vulnerability, capability and power.

A novel framework for globally just resilience

A new analytical framework is required to better account for the transboundary effects of climate change and conceptualise a just transition for adaptation in this context. Our proposed framework, illustrated in **Figure 1**, includes two core dimensions:

1. **justice**, broadly conceptualised;
2. **connectedness**, referring to the scope and connectivity of a system being adapted.

Each exists across a spectrum, and each can advance without the other. Only by addressing both together, however, can we achieve globally just resilience.

Whichever elements one prioritises in the pursuit of **justice** in adaptation, two key components are needed to achieve those priorities: *procedural justice* and *distributive justice*.

Procedural justice refers to the degree to which those affected by climate risk and adaptation are recognised and able to fully participate in decision-making processes. This includes having the ability to shape the outcomes of adaptation processes and ensuring that governance structures are in place to influence local, national and international transitions.

Distributive justice refers to how the benefits and harms of adaptation outcomes are allocated. It engages with questions such as "who benefits, and how?" and "who gets left behind?" A just distribution of adaptation outcomes would need to account for the uneven distribution of climate risk and adaptive capacity, historical contributions to causing climate change, and structural and systemic inequality, as these may also be exacerbated by the effects of climate change.

Both aspects of justice are important, and the presence of one does not guarantee the other. An inclusive process can still result in inequitable outcomes, and a process that ensures well-distributed outcomes can still fail to give voice and decision-making power to those affected. Achieving a just transition for adaptation requires engaging with both elements, moving away from the most-unjust forms of adaptation, to the most-just.

On the other axis, **connectedness** captures the degree to which adaptation actions account for the broader systems

"A new analytical framework is required to better account for the transboundary effects of climate change and conceptualise a just transition for adaptation in this context."

and structures beyond the place or sector in which they occur. Because climate risk varies significantly across locations, there has long been a mantra that "all adaptation is local" – and that remains largely true. But in an increasingly interconnected world, the local context in which adaptation occurs is affected by the actions of others and can also affect others.

David Attenborough captured those interconnections well in recent remarks on the COVID-19 pandemic: "Perhaps the most significant lesson brought by these last twelve months has been that we are no longer separate nations, each best served by looking after its own needs and security. We are a single, truly global species, whose greatest threats are shared and whose security must ultimately come from acting together, in the interests of us all".[10]

Truly understanding the effects of an adaptation action thus requires considering how it may affect people in other places – be it via ecosystems, value chains, human migration or financial flows. As with justice, connectedness can be addressed at different levels: from accounting for local context but failing to recognise systemic and structural factors, to making some connections across regions or sectors, to fully recognising global and multi-sectoral causes and effects.

Demonstrating the potential for a just transition for adaptation

Considering transboundary climate risk necessarily complicates our understanding of just resilience. In a world where multilateral cooperation is under threat from nationalism and populism, how can countries join forces to identify and manage shared climate risks, rather than exacerbate existing tensions? As inequality widens and people all over the world feel increasingly left behind, how can we reduce climate risk and vulnerability for all, instead of redistributing it from one country to another?

Moving from the conceptual to the practical, the case studies in this section demonstrate how a just transition for adaptation can be approached on the ground. They show the potential for resilience-building that is inclusive and just, and that benefits from coordinated international action.

Case study 1

Agricultural trade and just transitions in the Brazilian coffee supply chain

Coffee is one of the most traded commodities in the world, with 72% of total production worldwide – over 7.8 million tonnes – exported and exchanged on international markets in 2019.[11] Grown predominantly in the "coffee belt" in the tropics, coffee is typically sold as raw beans by smallholder farmers to local cooperatives, which then engage with large commodity traders that supply the beans to roasters abroad.

Coffee is highly vulnerable to climate change, which threatens to reduce the global area suitable for its cultivation by up to 50%.[12] The 60 million people who are directly employed in the international coffee supply chain may experience declining yields in a warming world or even lose their livelihoods.[13] The 80% of coffee farmers who are smallholders – cultivating areas smaller than 5 hectares – are particularly vulnerable, as they often lack the financial resources to absorb shocks or purchase additional agricultural inputs and depend heavily on rain-fed agriculture.[14]

Brazil is the largest and most important coffee producer in the world, representing nearly 30% of total exports alone.[15] Climate change impacts on Brazilian coffee growers are therefore likely to be felt across the global coffee supply chain: from roasters and retailers in the United

States and Europe, to coffee traders, to producers in other countries.

What would constitute a just adaptation to this risk? Coffee traders, roasters and retailers can reasonably be expected to assess and manage risks within their own supply chains, and adapt accordingly. The choices they make, however, could deepen Brazilian farmers' vulnerability. They might cancel their contracts in Brazil, for instance, or sell assets in an effort to reduce exposure. Farmers who were already vulnerable to climate change could then lose their livelihoods based on that preemptive choice. This is an example of adaptation that addresses connectedness but neglects justice. Or actors across the supply chain could work together to address the climate risks, paying attention to both procedural and distributive justice to ensure that all are meaningfully engaged and that the outcomes – risks and opportunities – are fairly shared.

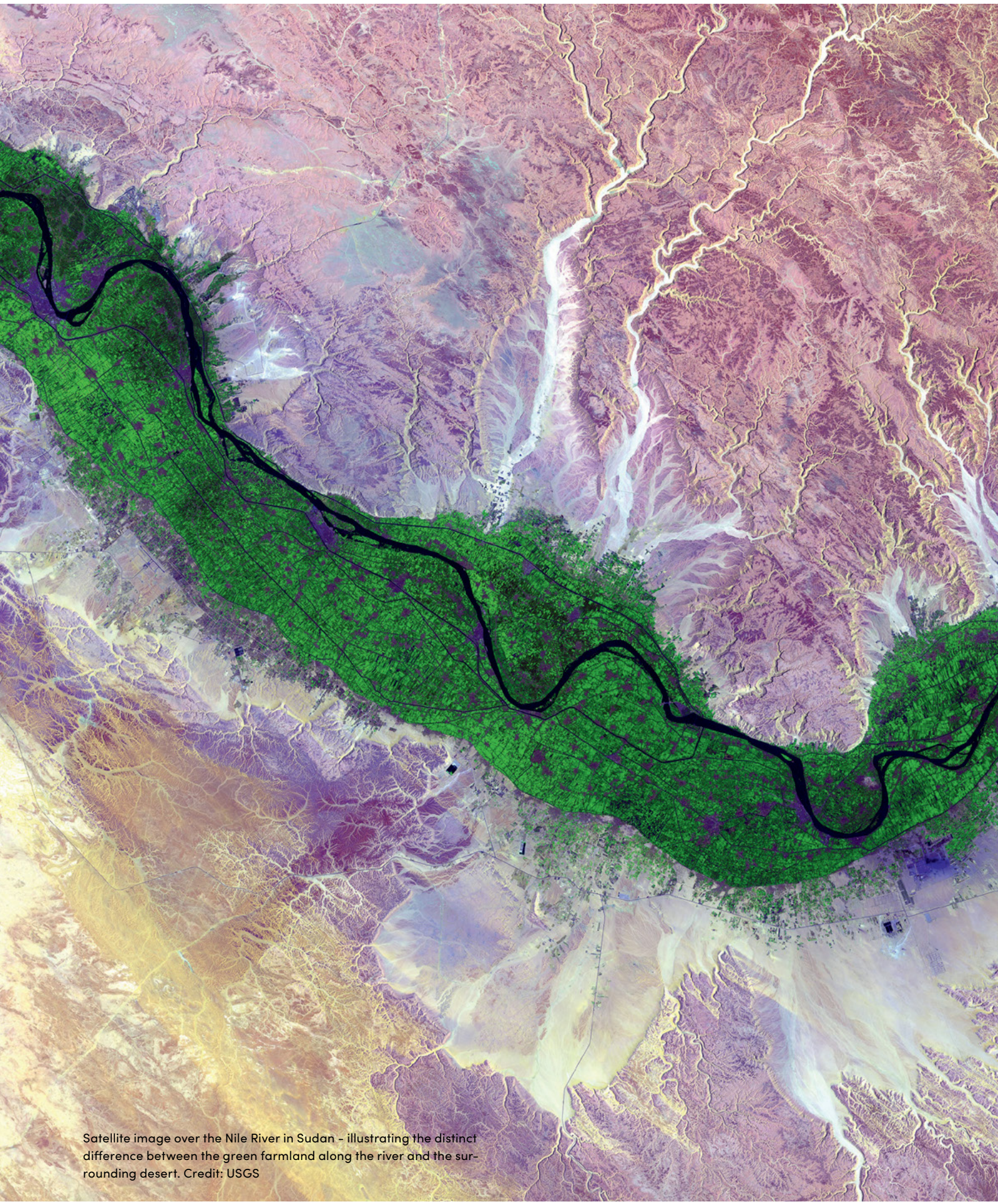
Farmer showing coffee harvest in Minas Gerais, Brazil. Credit: Vandelino Dias Junior

A number of steps may be taken directly by national governments. In Brazil, efforts could be taken to robustly integrate climate change adaptation in the Low-Carbon Agriculture (ABC) Plans already being developed throughout the country in consultation with local communities. Moreover, resources from the national coffee fund Funcafé could be made available to producers to improve their climate resilience.

The private sector also has an opportunity to get more engaged. Sustainability certification schemes such as Fair Trade, Rainforest Alliance and UTZ are already common throughout the Brazilian coffee sector, and certification standards could be adjusted to increase resilience, in addition to providing technical and financial support to producers who hope to become certified. Traders and roasters, who are the largest actors throughout the supply chain, with several accounting for substantial shares of their respective markets, could also improve their sustainability standards to include climate risk assessments and promote adaptation action, which would have widespread effects across the sector.

Finally, managing transboundary climate risks in the coffee sector may also afford opportunities to increase multilateral cooperation around adaptation. Germany, for example, could repeal its coffee tax for certified coffees, increasing demand for sustainably produced coffee. Brazil or any of its trading partners could provide tax incentives to private companies who invest in the resilience of their partners abroad, encouraging foreign direct investments in sustainability rather than risk offloading behaviour. Or free trade agreements (such as the EU–Mercosur Free Trade Agreement) could consider incorporating climate risk assessments in their sustainability chapters and mechanisms for climate action support in accompanying investment agreements. In each case, engaging producers in the decision-making process will be essential to accurately target their needs and to structure incentives that distribute risk equitably between smallholders and large companies.

In sum, the Brazilian coffee sector – and agricultural commodity trade more broadly – provides an important opportunity to facilitate a just transition for adaptation. Without deliberate attention to justice, a more connected approach to adaptation risks leaving vulnerable actors behind and increasing risks to human security as livelihoods are harmed or lost. By explicitly considering procedural and distributive justice as we pursue adaptation action, it is possible not only to support vulnerable producers and communities as we manage transboundary climate risk, but also to further engage the private sector in climate risk management and improve multilateral cooperation.



Satellite image over the Nile River in Sudan - illustrating the distinct difference between the green farmland along the river and the surrounding desert. Credit: USGS

"... before any additional water is diverted from the Nile River, an effort to improve water use efficiency in agriculture would be required to defuse any emerging tension between the countries related to water use for agriculture, thereby accounting for both justice and connectedness ..."

Case study 2

Just transition for adaptation in the Blue Nile Basin

In the Blue Nile, Ethiopia is constructing the Grand Ethiopian Renaissance Dam (GERD), which will become the largest hydropower scheme in Africa and the fifth largest in the world. It is expected to produce about 16 terawatt-hours (TWh) of electricity per year, serving nearly half the Ethiopian population and also exporting power to neighbouring countries.[16] By regulating the river's flow, reducing peaks, bridging low flow periods and reducing the transport of sediment, the dam is also expected to reduce flood and drought risks. Once the project is operational, these benefits are expected to be realised without taking water out of the river system.

For Sudan, one of the most climate-vulnerable countries in the world, a more even flow downstream could enable the further development of irrigated agriculture – a key adaptation measure as the country faces both severe and frequent flood events, and intense and prolonged droughts.[17] Increasing temperature and declining rainfall also have negative impacts on rainfed agriculture.[18]

Sudan has a total area of about 1.8 million hectares equipped for irrigation, of which about half is actually being irrigated, using nearly 26 billion cubic metres (BCM) of water per year.[19] If the GERD increased water availability for Sudan, and all land equipped for irrigation were irrigated, water use could rise by 86%, to about 48 BCM per year. This would far surpass Sudan's estimated total water availability, 30–35 BCM, which also includes other sources than the Nile such as groundwater.[20] It would also strain the water share for Sudan of 18.5 BCM stipulated in the 1959 Nile Waters Agreement between Egypt and Sudan.

Water withdrawals of this magnitude would have a substantial impact on downstream water flows, at the expense of Egypt, which would certainly voice concerns. Agriculture is also an important sector for Egypt, though not quite as much as for Sudan. In Sudan, agriculture employs 60–80% of the population, uses 96% of the country's total water consumption, and generates about 28% of GDP. It is the backbone of Sudan's economy. In Egypt, agriculture employs about 23% of the population, accounts for about 86% of total water use, and contributes to 11% of the GDP.

How might just adaptation be achieved in this context? One entry point is to improve irrigation efficiency. In fact, before any additional water is diverted from the Nile River, an effort to improve water use efficiency in agriculture would be required to defuse any emerging tension between the countries related to water use for agriculture, thereby accounting for both justice and connectedness. Investments in the agriculture sector should ideally focus on water efficiency, which would increase sustainability of the sector in the basin.

There are a wide range of potential socio-economic development pathways regarding water use in the Nile River Basin. However, to understand the options for water use in the Nile River Basin in the future, as well as their implications for justice, we can look at two simplified scenarios.

In the first case, let's assume that Sudan secures the investments needed to expand irrigated agriculture, and moves forward on its own. As noted, this would inevitably increase Sudan's water use and reduce downstream flows. Water shortages downstream could lead to hard-to-manage negative responses. Acute water shortage could lead to a "water panic" among irrigators and civil

society, similar to "financial panic" experienced in the world of finance during crisis.[21] Perceived or actual limitations to access to water, can spread rapidly, exacerbated by the use of social media. Such a development would increase pressure on the Egypt government. This, in turn, would escalate tensions among riparian countries in the Blue Nile basin (Egypt, Sudan and Ethiopia), with impacts on both human and national security.

In the second scenario, the three countries would work together to improve irrigation efficiency and make the most productive possible use of their shared water resources. By collaborating, they could ensure both procedural and distributional justice. It is important to note that external actors, both donors and investors, have a responsibility to assess how their investments affect the regional water situation and human security in the basin at large. By promoting just resilience, they can help ensure more effective adaptation and reduce the risk of regional conflict.

The case suggests that support to effective climate adaptation in one riparian country could mean negative, even devastating, impacts in a neighbouring country. Hence, just adaptation to climate change, and just transition to a more sustainable use of water for agriculture in a shared river basin would need to take a basin-wide approach when planning for interventions.

Man in a boat on the Nile River, Egypt.
Credit: Squirrel_photos from Pixabay

Implications for human security

In practice, realising a just transition for adaptation requires specific attention to vulnerable groups and communities and to the effects of adaptation measures beyond the place or focus of implementation. By default, the impacts of climate change will be unjust, as countries and communities that have done little to cause climate change may face some of the worst effects and have the least capacity to adapt. Transboundary climate risk could result in another level of injustice, as poorer and more vulnerable countries are harmed by the adaptation choices of wealthier and less exposed countries and global actors. For a just transition in a globally connected world, adaptation needs to consider negative spillover effects and avoid maladaptive measures, such as abandoning or exploiting vulnerable regions and redistributing vulnerability.

Failing to sufficiently account for justice in adaptation may appear to be in wealthier nations and communities' self-interest, but it can create significant human security risks. The adverse effects of climate change can exacerbate the grievances of already vulnerable communities and open the door to more significant security challenges. Adopting a just approach to adaptation is necessary to both safeguard human security and limit the subsequent negative effects on traditional national security and geopolitics.

Climate-related hazards can indirectly fuel both greed and grievance-based conflicts at the community, national and regional levels.[22] Reduced water availability, food scarcity and land degradation due to climate change may lead to increased poverty and hunger, especially in agricultural communities in developing countries. That, in turn, can escalate tensions, particularly in the absence of good governance. Terror and organised crime groups with regional and even global reach can benefit from increased human insecurity. For example, droughts in Mali (2009) and Iraq (2008) helped Al-Qaeda and the Islamic State of Iraq and Syria (ISIS), respectively, to recruit new members.[23] Similarly, affected communities in the Horn of Africa have been targeted by the Al Shabab group, and Boko Haram exploited the vulnerabilities of communities triggered by water and food shortages in the Lake Chad region.[24]

As illustrated by the Nile basin example, shortages (perceived or real) in one country may lead to tensions with neighbouring countries. Moreover, water and food insecurity, in combination with other push and pull factors, may trigger forced migration within or between countries. When a larger population migrates from one area to another, nationally or regionally, it can initially increase tension in the receiving area, as competition for natural and other resources increases. In this way, local climate-driven water stress may lead to regional tension and possible escalation of armed violence.

Moreover, the cascading effects of climate risk, such as the example of climate-driven water stress or food shortages (including those induced by food-price rises), can transfer beyond the regional scale. Due to trade and market effects, migration trends, financial flows and shared ecosystems, climate-related risks can have impacts across continents. In fact, climate-driven stress, as exemplified above, seldom happens in isolation, but in most cases enhances existing political and socio-economic tensions. In this way, a just transition for adaptation may be interpreted as an intention to ensure justice for all communities dependent on the supply chain of a certain commodity (such as coffee), or all communities dependent on the same transboundary resource base, such as a shared river (as demonstrated in the Nile basin). This is an important consideration when designing and allocating external funding for adaptation programmes.

Achieving globally just resilience: The road ahead

Climate change is already affecting vulnerable communities everywhere. In a globalising world, it is essential to consider how the interconnections between our societies can both transmit climate risk, and act as the bedrock for our ability to take action. Achieving globally just resilience is imperative in order to assure that climate risks are not only addressed, but managed with justice at the forefront, supporting vulnerable communities and improving human security rather than redistributing the burden of risk to those with the lowest capacity to respond.

The aim of this brief has been to make the case for a just transition for adaptation. In order to take this work forward, it is necessary to move from awareness to action. Specifically, we recommend:

Strengthen multilateral cooperation for globally just resilience

The success of national adaptation in one country is contingent on risk exposure abroad. Climate action in one place should not come at the expense of vulnerable communities elsewhere. Multilateral cooperation will be essential to identify shared risks and manage them jointly. Climate diplomacy for adaptation should be substantially strengthened, moving beyond discussions of finance provision to meaningfully incorporate equity and human security, and to include actors across sectors and scales which have not traditionally been involved in adaptation, but are central to international cooperation. This includes, but is not limited to, the Global Goal on Adaptation under the Paris Agreement.

Develop agreed principles to move from ambition to action

Recognising the imperative of globally just resilience is only the first step. One helpful way to move from ambition

to action is to develop shared principles, so actors have a common understanding of how this issue should be addressed, to facilitate policy-making. Principles of this sort are inherently normative and may differ across contexts. As such, they will require public, inclusive deliberation, both to capture all relevant perspectives and to build popular support. The "seven principles for a just transition [for mitigation]" developed by Atteridge and Strambo in 2020[25] may serve as a useful starting point, here adjusted for use in the context of just adaptation:

1. Actively encourage adaptation;
2. Avoid the creation of adaptation "losers" or redistributing climate risk;
3. Provide international support for vulnerable regions and communities;
4. Support people and communities who are negatively affected by adaptation measures;
5. Reduce climate risk and distribute the burdens of adaptation fairly, ensuring that risk is not transferred from the private to the public sector;
6. Address existing global inequalities, including the distribution of climate risk;
7. Ensure that a planning process is both inclusive and transparent.

Craft incentives to invest in just transitions for adaptation

Another key task for policy will be to carefully craft incentives to invest in just transitions for adaptation. As actors – including those in the private sector, those who are not traditionally engaged in adaptation, and those based outside a policy-maker's direct jurisdiction – become more aware of their exposure to climate risks, they are likely to try to reduce those risks. Policy should support actors in that process, but in a way that encourages investment in risk reduction, not "risk-dumping" that harms communities that are already vulnerable to climate risk. Options for this may range from direct regulation and new multilateral agreements, to providing tax incentives or developing mutually beneficial investment frameworks with international partners. Optimal policies are likely to differ substantially across contexts.

Advance research to support decision-making

In order to craft and implement effective policies to facilitate a just transition for adaptation, more research is required to support decision-making. This includes, but is not limited to, work that accurately describes current exposure to and transmission of transboundary climate risk, identifies concrete policy options to manage such risk, and assesses the trade-offs associated with different policy options for different communities and actors with justice in mind.

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Adaptation Without Borders is a global partnership working to strengthen systemic resilience to the cross-border impacts of climate change. We identify and assess transboundary climate risks, appraise the options to better manage those risks and support policymakers, planners and the private sector to develop climate-resilient and inclusive solutions. We catalyse new alliances and forms of cooperation on adaptation that pave the way towards a more sustainable and resilient world.

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Stockholm Climate Security Hub

SEI Stockholm Environment Institute

SIWI

UNESCO United Nations Educational, Scientific and Cultural Organization

International Centre for Water Cooperation

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