"Mainstreaming" is a term of art for those working in the field of climate change adaptation. While the adaptation literature reflects multiple uses and framings of the concept (e.g. Persson and Klein, 2009; Oates et al., 2011), it has come to describe the imperative to integrate adaptation into development policy and, more recently, into other relevant policy areas.

Mainstreaming is widely seen as an effective and pragmatic approach to achieve adaptation goals, given competing demands on a finite set of financial, human and institutional resources and capacities. This advisory brief uses the Adaptation Futures 2016: Practices and Solutions conference outcomes to show how adaptation practice is expanding the use of mainstreaming even further.

Discussions of mainstreaming are closely linked to debates about how best to pursue adaptation in research, policy and practice. Presentations at Adaptation Futures 2016 suggested that on the one hand, adaptation is a distinct challenge that requires specialised knowledge and skills. This approach of studying, planning and pursuing adaptation exclusively through an adaptation lens is sometimes called the "adaptation silo". On the other hand, adaptation occurs within existing fields and activities: infrastructure, agriculture, water resources management, etc. This approach is aligned with "mainstreaming" adaptation into other areas of policy and practice.

Implicit in mainstreaming is that effective adaptation requires interdisciplinary collaboration, knowledge co-production, and interaction among policy-makers, practitioners and scholars. There is significant knowledge about adaptation that is generated outside the fields where adaptation occurs – from future climate projections, to understanding social vulnerability, to insights about learning and decision-making. At the same time, adaptation experts play a key role in synthesising and transferring lessons across sectors and locations, greatly expanding adaptation knowledge overall.

In sum, when thinking about adaptation in a "silo", or adaptation “mainstreamed”, the question is not a matter of “either/or” but of "when?" and "for what purpose?" Each of these approaches may be useful to different actors, in different contexts, for different reasons.

Adaptation Futures 2016 was the largest-ever gathering of adaptation experts. The conference outcomes (De Pater and van Steenis, 2016) present an opportunity to take stock of how adaptation mainstreaming is currently addressed or implied within the global adaptation community, and to derive implications for policy and outstanding questions for research. In particular, we draw on the conference outcomes to:

- Map the state of the adaptation mainstreaming and "silo" discourse;
- Select illustrative examples that inform the opportunities, challenges and future questions for balancing the pursuit of a distinct adaptation science and practice, while mainstreaming adaptation objectives and implementation into other areas of policy;
- Distil lessons from experience with mainstreaming shared at the conference;
- Recommend actions to better address the challenges and opportunities posed by expanding the definition of adaptation mainstreaming to inform and challenge the future of adaptation research, policy and implementation.

Key messages

- "Mainstreaming" adaptation is a living term that is broadening in its application. First used to describe the integration of adaptation objectives into development policy and practice, it has now expanded into many other areas – most recently, into business.
- Mainstreaming adaptation into other areas of policy is, objectively, not a “good” or “bad” strategy, but rather depends on the questions “when?” and “for what purpose?”
- Understanding the challenges and solutions particular to adaptation is necessary but insufficient to adequately plan for and implement adaptation. There is a role for stand-alone adaptation research to develop this understanding, and a role for interdisciplinary approaches to plan for and implement adaptation in a resource-efficient manner.

Broader, ubiquitous, ambiguous: What does mainstreaming adaptation mean, and when is it appropriate?

1 With 1700+ experts presenting in 150+ conference sessions, the Adaptation Futures 2016 outcomes mapped here arguably comprise a representative subset of the global adaptation discourse.

2 Early adaptation literature already asked similar questions about adaptation: to what and by whom? See, e.g., Smit et al. (2000).

A ‘community champion’ explains weeding and mulching techniques to women in a watermelon plot in Alea, Solomon Islands.
Mapping the mainstreaming vs. distinct discipline discourse

At its most introspective, adaptation science has asked whether adaptation should even be considered a distinct discipline (see, e.g., Patt, 2013). The issue is not whether adaptation is valuable or necessary, but rather whether it is better achieved by sectoral experts addressing adaptation challenges – perhaps through activities that are not even called “adaptation”.

The ultimate goal of adaptation is to decrease vulnerability to climate change impacts. If a farmer’s crop is vulnerable to drought, one possible adaptation measure is to plant more drought-resistant crop varieties. Or the same farmer could diversify her livelihood by learning how to fish; even a community organisation with no adaptation expertise could easily promote that strategy and provide support for it. Yet someone with expertise in adaptation might note that the best approach is to pursue both crop diversification and livelihood diversification. Or, looking more broadly at future climate projections, the expert might note that fishing is not a long-term viable livelihood option, as the river is likely to dry out soon.

The value of studying adaptation as a stand-alone field, and the purpose and place of disciplinary silos more broadly, ran throughout the Adaptation Futures 2016 sessions. A clear message was that disciplinary and policy silos are sites for expertise and for developing the in-depth knowledge and solutions needed to address complex problems such as climate change. While complex problems are usually best addressed by combining expertise from different disciplines and a wide net of stakeholders, the value of broad and interdisciplinary collaboration is precisely the combining of various expertise and agendas.

The conference report quotes Elizabeth Atkinson, of the University of Waterloo, who spoke at a session on the emerging role of accountants in enabling organisational adaptation and resilience to climate change:

Co-invention and innovation, co-design, co-production and co-delivery is the way forward. Are there limits to this ‘co-ness’? Certainly, and each system will indicate where these are.

Effective adaptation also requires breaking out of the silo, to reap the benefit of expertise in other disciplines. Policy-makers, practitioners and scholars must connect and, together, make the most of the full spectrum of the tools, perspectives and methodologies they bring to the table. One example cited at Adaptation Futures 2016 was the Bosai framework, a Japanese initiative to promote infrastructure and technology export by encouraging industry, research and government experts in disaster prevention to exchange information.

Silos also challenge the pursuit of viable monitoring and evaluation. Evaluating only the aims and achievements of adaptation fails to consider the effects – positive and negative – that adaptation activities have in other areas. Take, for instance, the adaptation measure of building a dam to address water scarcity, only to harm ecosystems downstream. Indeed, adaptation practice and policy must understand connections and overlap between adaptation and other agendas, such as poverty reduction, disaster risk reduction, biodiversity loss, and mitigation.

A linkage of particular concern to developing countries is between adaptation and poverty alleviation. Poverty is a key driver of social vulnerability, and to the extent that it threatens livelihoods and/or worsens disasters, climate change can exacerbate poverty. Many measures can advance both adaptation and poverty reduction goals. However, unwise adaptation activities or investments can aggravate poverty and inequality, and failing to address underlying poverty erodes adaptive capacity.

Recognising this type of dynamic requires in-depth understanding of both adaptation and poverty, to pursue synergies and avoid working at cross-purposes. This means that in most contexts, it makes sense to “mainstream” – i.e., to address adaptation and poverty alleviation together. In practice, however, since there is a strong equity case to keep development and adaptation finance separate, it is a challenge to mainstream poverty reduction and adaptation in practice while keeping a clear distinction in their respective budget lines and discourse.

Adaptation mainstreaming: Lessons from Adaptation Futures 2016

Early uses of adaptation mainstreaming emphasised the integration of adaptation planning and activities through development cooperation – sometimes referred to as the “development first” framing (Oates et al., 2011). Discussions at Adaptation Futures 2016 suggest that the concept of mainstreaming has expanded beyond incorporating adaptation objectives into development policy. Insights from the conference include:

Synergies between poverty reduction and adaptation should be exploited. This may be a hackneyed refrain, but the need to mainstream climate change adaptation and poverty reduction was mentioned frequently at Adaptation Futures. It can be deduced that the synergies at this intersection have not been fully realised. By way of example, the National Adaptation Plan (NAP) process has as a main objective – and challenge – to mainstream adaptation into development and to reduce vulnerability. To do this, it is critical to find the suitable institutional structure to support mainstreaming efforts, to ensure that policies are coherent and not counterproductive, and that resources are used efficiently.

From left, Debra Roberts, of eThekwini Municipality, Durban, South Africa; Mark Watts, of C40 Cities Climate Leadership Group; John Firth, of Acclimatise; and Christiana Figueres, then executive secretary of the UNFCCC.
Mainstreaming happens when incremental change turns into systemic practice. Adaptation Futures 2016 also highlighted that there is still a long way to go before the adaptation community can claim to have successfully integrated and mainstreamed adaptation into decision-making. Structural change is slow, and institutions are sticky, but the effects of small steps, a project-by-project and long-term approach should not be underestimated.

Mainstreaming is extending beyond national development policies, into other realms. One example discussed is bringing adaptation meaningfully into school curricula – which already cover climate mitigation science well in many parts of the world. Another example is the integration of adaptation into entire suites of project portfolios and organisational operations. For instance, the World Bank’s International Development Association addresses climate resilience in strategic documents and screens each project for potential climate risk. City planning is another area where mainstreaming adaptation is being emphasised. Amsterdam and Rotterdam, for example, are collaborating to mainstream a “rainproof” concept for flood management in their city planning. In plenary at Adaptation Futures 2016, John Firth, of Acclimatise, argued for integrating adaptation implementation into powerful ministries at the national level: “Unless you have ministries of finance owning climate change [adaptation], you are not going to get implementation of action.”

A business case for mainstreaming adaptation is essential – but often elusive. Business is increasingly interested in the concept of mainstreaming. In discussing bankable investments, private sector actors use the term to describe bringing the concept of adaptation into business thinking and operations broadly – for everything from adapting business models, to motivating investments that have adaptation or financial benefits, to turning climate adaptation into a business opportunity. This broad approach to “mainstreaming” can be confusing: Mainstreaming adaptation can be viewed as an extra “layer” of challenge when making a business case – e.g. the expense of “climate proofing” an investment (a cost). Other times, it can be framed as anticipating future climate impacts and then making long-term investments that avoid future damage (an avoided cost).

Mainstreaming “failures” demonstrate the importance of institutional coherence and coordination among financiers. Several participants in the Pilot Program for Climate Resilience (PPCR) reported lessons from mainstreaming adaptation into development planning and investment. For Samoa, the failure to mainstream early on resulted in many parallel, uncoordinated climate (adaptation and mitigation) projects. As a result, institutional coherence is now targeted by the PPCR through a Climate Resilience Investment Coordination Unit.

Mainstreaming presents challenges, too. Mainstreaming adaptation can make adaptation efforts and progress invisible. The Paris Agreement challenges the Adaptation Committee under the United Nations Framework Convention on Climate Change (UNFCCC) to elaborate ways to recognise adaptation efforts that are undertaken, particularly in developing countries. Progress on adaptation needs to be visible for many reasons, not least of all to demonstrate accountability in financing – i.e. that adaptation funds are being used for adaptation activities, and to achieve adaptation results. Challenges in urban adaptation were also discussed. In Ho Chi Minh City, for example, the modification of levees, drainage and retention areas was pursued to address flooding. A mainstreaming challenge was identified in navigating the competition between economic interests and adaptation measures.

Asking the right questions

This advisory brief has surveyed the uses of and lessons learned from adaptation mainstreaming as presented at the Adaptation Futures 2016 conference. A key take-away is that “to mainstream or not to mainstream?” is not the question. Instead, it is important to understand when and how it makes sense to mainstream adaptation.

Mainstreaming in its conventional sense (integrating adaptation into development policy) and in its expanded sense (adaptation integration into broader areas of policy and business) is particularly important for policy coherence when planning for adaptation and synergetic policies, such as adaptation and poverty eradication. Mainstreaming can also be important to ensure coordination among finance streams – though this works better in theory than in practice due to equity arguments for keeping adaptation finance streams visible.

Adaptation scholars, policy-makers, and practitioners who consider themselves “doers” of mainstreaming might take a step back to ask what exactly they are committing to. This survey of climate adaptation mainstreaming suggests that mainstreaming as a term has broadened and is thus diffuse. In a policy context, it is used not to refer specifically to adaptation vis-à-vis development policy, but also to many other policy spheres – e.g. disaster risk reduction, biodiversity loss, health. It is also applied to bringing climate adaptation considerations into the “blood” of an organisation, including its project portfolios, institutional policies, and the physical work environment of those who work there.

Finally, as relative newcomers in the adaptation community, business appears to have its own understanding of “mainstreaming”. It involves bringing adaptation into business thinking and operations in a broad sense: climate-proofing business models through addressing vulnerabilities, including in supply chains; identifying and motivating investments that have adaptation benefits and returns (“a business case”); and facilitating adaptation in the communities in which they operate.
Recommendations

- **Pursue pragmatic adaptation mainstreaming.** Achieving adaptation goals through related areas of policy and practice is often pragmatic, effective, and desirable – and indeed necessary to avoid wasting resources or working at cross-purposes. However, there are also viable reasons to study, make policy for, or implement adaptation as a stand-alone activity.
- **Understand what’s in a name.** As mainstreaming expands into a broader range of fields, it is important to know what the concept means to different people. A systematic exercise, involving a literature review and scanning of adaptation project portfolios, would be useful to scope the full range of adaptation mainstreaming in theory, in policy and in practice. That would be a practical contribution to understanding the role of adaptation on its own, how and why it is integrated with other policy areas, and the risks and potential of pursuing more of it in the future.

**References**


