

**Thirteenth meeting of the Adaptation Committee
Bonn, Germany, 27 February to 2 March 2018**

Draft report on various approaches to adaptation, such as community-based adaptation and ecosystem-based adaptation, taking into account livelihoods and economic diversification

Recommended action by the Adaptation Committee

The Adaptation Committee (AC), at its 13th meeting, will be invited to consider this draft report and provide further guidance to the secretariat on its finalization as needed.

TABLE OF CONTENTS

1.	Introduction and background	2
2.	Overview of the different approaches to adaptation	3
3.	Common challenges of different approaches	11
4.	Conclusions	13

1. Introduction and background

1. The Adaptation Committee, as part of its 2016–2018 workplan and as part of its workstream A (Technical support and guidance to the Parties on adaptation action), agreed to prepare a report on various approaches to adaptation, such as community-based adaptation (CBA) and ecosystem-based adaptation (EbA), taking into account livelihoods and economic diversification (LED).
2. At its 11th meeting, the AC considered a draft outline of the report (contained in document AC/2017/6) and provided further guidance to the secretariat for its preparation. Following a discussion of the draft report and the provision of further guidance at AC 13, the AC may wish to request the secretariat to finalize the report.

1.1. Relevant work under the Convention

3. Under the Convention, Parties have been accumulating experiences, knowledge, lessons learned and best practices relating to various adaptation approaches, including CBA, EBA, the risk-based approach and LED. Institutions inside and outside of the Convention are contributing greatly to enrich the pool of information. Through submissions, technical papers and workshops, the Nairobi work programme, its partner organizations and the AC, in particular, have contributed to this growing body of knowledge (see box 1).

Box 1. Relevant work under the Convention

CBA and EBA

- “Good practices and lessons learned in adaptation planning processes addressing ecosystems, human settlements, water resources and health, and in processes and structures for linking national and local adaptation planning: a synthesis of case studies”, FCCC/SBSTA/2015/4, http://unfccc.int/documentation/documents/advanced_search/items/6911.php?preref=600008772
- “Synthesis report on methods and tools for, and good practices and lessons learned relating to, adaptation planning processes addressing ecosystems, human settlements, water resources and health, and good practices and lessons learned related to processes and structures for linking national and local adaptation planning”, FCCC/SBSTA/2014/4, http://unfccc.int/documentation/documents/advanced_search/items/6911.php?preref=600008090

EBA

- “Adaptation planning, implementation and evaluation addressing ecosystems and areas such as water resources”, FCCC/SBSTA/2017/3, <http://unfccc.int/resource/docs/2017/sbsta/eng/03.pdf>
- “Ecosystem-based adaptation and adaptation planning processes addressing ecosystems: overview, good practices and lessons learned”, 2016 https://unfccc.int/files/adaptation/application/pdf/2_synopsis_ecosystem.pdf
- ‘Report on the technical workshop on ecosystem-based approaches for adaptation to climate change’, FCCC/SBSTA/2013/2, <http://unfccc.int/resource/docs/2013/sbsta/eng/02.pdf>
- “Ecosystem-based approaches to adaptation: compilation of information”, 16 November 2011, FCCC/SBSTA/2011/INF.8, http://unfccc.int/documentation/documents/advanced_search/items/6911.php?preref=600006572

LED

- “Fact sheet on livelihood and economic diversification: complementary tools for adaptation”, https://unfccc.int/files/adaptation/groups_committees/adaptation_committee/application/pdf/ledinfo_factsheet_2016.pdf
- “Report on the expert meeting on promoting livelihoods and economic diversification to build resilience in the context of planning, prioritizing and implementing adaptation”, 9 September 2016, AC/2016/17, http://unfccc.int/files/adaptation/groups_committees/adaptation_committee/application/pdf/ac10_5c_report_led.pdf
- “Report on the technical workshop on increasing economic resilience to climate change and reducing reliance on vulnerable economic sectors, including through economic diversification”,

FCCC/SBSTA/2009/7,

http://unfccc.int/documentation/documents/advanced_search/items/6911.php?preref=600005427#beg details of the meeting are available at <http://unfccc.int/4781>

- “Synthesis of information on economic diversification submitted by parties and relevant organizations”, FCCC/SBSTA/2007/14,

http://unfccc.int/documentation/documents/advanced_search/items/6911.php?preref=600004420

Momentum for Change initiative led by the UNFCCC incorporates the perspectives of different approaches through innovative and transformative solutions. Case studies and lessons learned are available at unfccc.int/6214

1.2. Purpose and scope of the report

4. This report provides concise information about features of CBA, EbA, LED and risk-based adaptation approaches to assist Parties in exploring and identifying appropriate approaches for their specific national contexts. There is no universal, one-size-fits-all solution to adapt to the adverse impacts of climate change and build resilient societies. Countries need to identify the optimal combination of approaches and methods. The discussed approaches are not mutually exclusive, but rather complementary allowing for synergy in enhancing resilience.

5. Following the outline and guidance provided at AC11, this report first provides an overview of different approaches to adaptation, highlighting their strengths and differences. Second, the paper describes common challenges of the different approaches. Case studies are used to highlight practical experience with the different approaches.

2. Overview of the different approaches to adaptation

6. This section highlights the features of CBA, EbA, LED and the risk-based approach and compares the strengths of each approach in relation to different timescales and operating levels.

2.1. Community-based adaptation

7. Community-based adaptation is a bottom-up planning approach. It is a community-led process, based on communities' priorities, needs, knowledge, and capacities, to empower people to plan for and cope with the impacts of climate change.¹ CBA emphasizes the importance of engaging local communities, especially vulnerable groups and people, in the adaptation process. CBA is in part a response to criticisms that previous adaptation policies were carried out in a top-down manner, without hearing priorities, needs, existing knowledge and capacity of people who are in the community and recipient of the benefits of adaptation action. CBA responds to the needs of vulnerable people through a decentralized, inclusive, participatory approach that enables integration of local and community perspectives into adaptation planning.

8. Climate change severely affects the living conditions of poor people who do not have the option of moving from geographically vulnerable areas. Moreover, the livelihoods of many poor people heavily depend on natural resources, such that climate impacts on ecosystems, including loss of biodiversity, also deteriorate their income resources. The uncertainty associated with climate change creates additional complexities for vulnerable people already facing significant social and economic challenges, and who often have little influence on political decision-making. By taking an integrated approach to the needs of local community, and especially of vulnerable people, CBA strives to deliver benefits directly to people who otherwise may be left out of adaptation decision-making processes.

¹ Reid H, Alam M, Berger R, Cannon T, Huq S and Milligan A. 2009. Community-based adaptation to climate change: an overview. *PLA 60: Community-based adaptation to climate change*: p13. Available at <http://pubs.iied.org/pdfs/14573IIED.pdf>

Box 2. Case study on community-based approach in the Arctic

Although reindeer husbandry is one of the traditional income resources and livelihood for indigenous people in the Barents area of the Arctic, it is susceptible to warming winter conditions that limit access to food. Reindeer herders have actively and flexibly responded to changing climate conditions to strengthen their coping capacity. Participatory planning processes along with advanced technology has substantially strengthened the resilience of herding livelihoods. For example, development of Sweden's reindeer husbandry involved GPS tracking data of reindeer whereby a comprehensive GIS database integrates the knowledge of herders and regional authorities, linking reindeer herding and land use with pasture resource data.

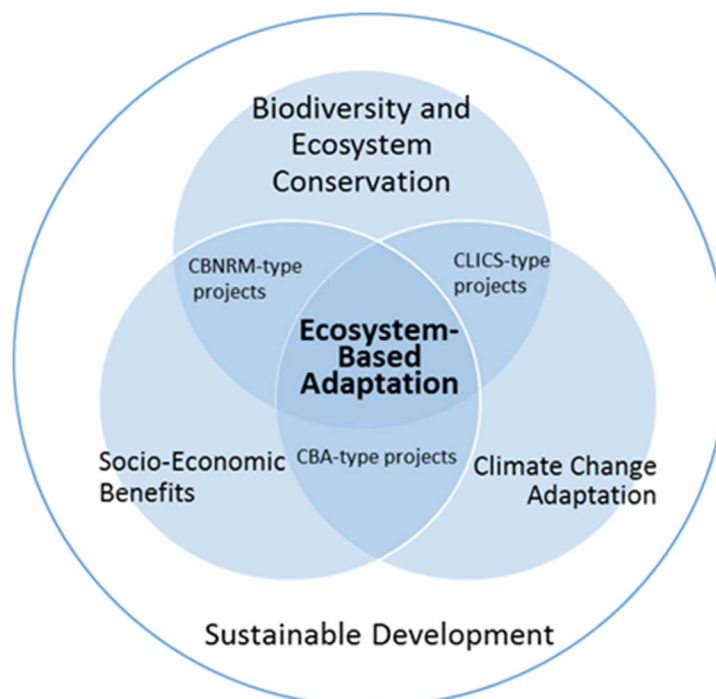
Sources: AMAP, 2017. Adaptation Actions for a Changing Arctic: Perspectives from the Barents Area. Arctic Monitoring and Assessment Programme (AMAP), available at www.amap.no/documents/doc/Adaptation-Actions-for-a-Changing-Arctic-Perspectives-from-the-Barents-Area/1604

2.2. Ecosystem-based adaptation

9. EbA is defined as “the use of biodiversity and ecosystem services as a part of an overall adaptation strategy to help people to adapt to the adverse effects of climate change”.² Besides enhancing adaptive capacity and resilience, EbA provides multiple benefits for natural resource conservation and management. Sustainable agriculture, water and forest resource management are standard EbA measures.

EbA not only contributes to the restoration of ecosystems and biodiversity, it also delivers socio-economic benefits. EbA tends to be cost effective because it utilizes the existing services of biodiversity and ecosystem as much as possible, and is generally less costly than built infrastructure. Successful EbA requires the engagement of local people who rely on ecosystems for their livelihood, and focusses on maintaining and enhancing these ecosystem services. EbA approaches link biodiversity, ecosystem conservation, socio-economic development and climate change adaptation in order to enhance sustainable development (see figure 1). Inclusion of the local community is critical in both EbA and CBA, and participatory approaches are a common element of both methods.

² Lo V. 2016. *Synthesis report on experiences with ecosystem-based approaches to climate change adaptation and disaster risk reduction*. Technical Series No.85. Secretariat of the Convention on Biological Diversity: p16. Available at www.cbd.int/doc/publications/cbd-ts-85-en.pdf

Figure 1. Linkage between EbA and related fields

Source: Figure adapted from Midgley et al. 2012.³ CBNRM refers to community based natural resource management⁴, while CLICS refers to climate change-integrated conservation strategies⁵

Box 3. EbA approaches in the adaptation strategy for the Danube region

Central and Eastern European countries within the Danube River basin cooperate under the International Commission for the Protection of the Danube River (ICPDR). In 2012 they adopted a climate change strategy the stresses cross-cutting measures for water management, including a monitoring and forecasting system, knowledge and capacity building, infrastructure reforms, and policy and institutional arrangements. Ecosystem-based measures are a key pillar of the policy and promote the use of healthy ecosystems as green infrastructure and water-retention services in a variety of bio-geography and habitats. The Danube delta includes parts of Romania, Ukraine, and Moldova, and the three countries collaborated to develop a strategy targeting a unique ecosystem as the second largest wetland in Europe. The strategy includes risk evaluation of climate change impacts on socio-economic sectors, such as agriculture, fisheries, forestry, energy, tourism and public health, and identifies possible interventions for each sector using an ecosystem-based approach. For example, with respect to agriculture, fisheries and forestry, the strategy suggests introducing native species to improve water quality.

³ Midgley G, Marais S, Barnett M, Wågsæther K. 2012. *Biodiversity, climate change and sustainable development – harnessing synergies and celebrating successes Final Technical Report*: p5. Available at unfccc.int/files/secretariat/momentum_for_change/application/pdf/biodiversity_climate_change_sustainable_development_technical_report.pdf

⁴ CBNRM is the management of natural resources by all concerned stakeholders. Communities managing the resources have the legal rights, the local institutions, and the economic incentives to take substantial responsibility for sustained use of these resources (CBNRM Net 2001).

⁵ CLICS are climate-resilient conservation plans that often result in spatial and related types of planning products. These guide planning for ecosystem service corridors and protected areas that are resilient to climate change (Hannah et al. 2002a, Hannah et al. 2002b).

Sources: ICPDR Strategy on Adaptation to Climate Change, available at <http://www.icpdr.org/main/climate-adaptation-strategy-adopted>.

Adapting to change: Climate Change Adaptation Strategy and Action Plan for Danube Delta Region Romania-Ukraine-Moldova, available at http://d2ouvy59p0dg6k.cloudfront.net/downloads/2_danube_delta_adaptation_strategy.pdf

2.3. Livelihood diversification

10. The diversification of livelihoods is one means of strengthening adaptive capacity of marginalized groups and people. Livelihood refers to the resources used and the activities undertaken in order to live. Livelihoods are usually determined by the entitlements and the human, social, natural, physical, or financial assets to which people have access.⁶ In the context of adaptation planning and implementation at household and community level, diverse sources of income is a mechanism to disperse risks. Ideally, some of them are less vulnerable to the impacts of climate change.

11. The sustainable livelihoods approach (SLA), developed with the goal of poverty eradication at the household level, analyses the “main factors that affect poor people's livelihoods and the typical relationships between these factors”.⁷ Climate change could be one risk factor included in an SLA assessment framework. The International Fund for Agricultural Development (IFAD) highlights seven guiding principles for SLA, including a people-centred approach for active participation, holistic perspective beyond sectors and actors, and encouraging broad partnership between the public and private sectors. Those principles provide informative and useful lessons for climate change adaptation.

Box 4. Livelihood diversification programme for small-scale farmers

IFAD facilitates access of farmers to climate change-related information, tools and technology through the Adaptation for Smallholder Agriculture Programme (ASAP). Established in 2012, ASAP initiated projects in 41 countries and has reached at least 8 million small-scale farmers. Information strives to reduce climate vulnerability by promoting production of different crops and livestock through measures such as diversifying household food production, enhancing agricultural extension services, promoting greater crop diversity and biodiversity, integrating farming and agroforestry systems, and improving post-harvest management through climate-smart agriculture (CSA).

One project, implemented in Nicaragua, is promoting cacao production to transform agriculture systems currently dependent on coffee production. IFAD introduced shade-grown coffee and cacao cultivation to farmers to help offset losses related to climate change. In Rwanda, a solar energy project created new income for smallholder farmers selling excess electricity to charge neighbours' mobile phones. The next step for ASAP is to integrate economic diversification and mitigation co-benefits, and to monitor that progress. More detail about the programme is available at www.ifad.org/web/guest/asap#.

Source: Submission from IFAD on adaptation actions and plans that could enhance economic diversification and have mitigation co-benefits.

12. Another critical aspect is the resilience of livelihoods themselves. Livelihood resilience has been defined as “the capacity of all people across generations to sustain and improve their livelihood opportunities and well-being despite environmental, economic, social and political disturbances”.⁸ Research emphasizes the importance of giving attention to negative socioeconomic impacts of climate change, including impacts on social inequality,

⁶ IPCC. 2014. *Climate Change 2013: Impacts, Adaptation and Vulnerability*. Annex II, p.1769, available at www.ipcc.ch/pdf/assessment-report/ar5/wg2/WGIIAR5-AnnexII_FINAL.pdf

⁷ IFAD. *The Sustainable Livelihoods Approach*. Available at www.ifad.org/topic/resource/tags/sla/2179541

⁸ Tanner T, Lewis D, Wrathall D, Bronen R, Cradock-Henry N, Huq S, Lawless C, Nawrotzki R, Prasad V, Rahman Md, Alaniz R, King K, McNamara K, Nadiruzzaman Md, Henly-Shepard S and Thomalla F. Livelihood resilience in the face of climate change. *Nature climate change* 1: p.23, available at www.nature.com/articles/nclimate2431

rights and poverty and on different types and degrees of vulnerability. Diversifying livelihoods contributes not only to strengthening adaptive capacity, but also to improving people's well-being and empowerment through active participation in decision-making processes.

2.4. Economic diversification

13. Reducing the economic risks of climate change by ensuring different income sources is a critical element of national adaptation strategies, as well as at the level of livelihoods. Economic diversification describes the process in which a growing range of economic outputs is produced. It can also refer to the diversification of markets for exports or the diversification of income sources away from domestic economic activities (i.e. income from overseas investment). Economic diversification in its standard usage, either regarding the diversity of economic activities or markets, is a significant issue for many developing countries, particularly those that have traditionally relied on the production of commodities that are vulnerable to climate variability and change.⁹ Therefore, countries may consider using macroeconomic policies to promote a greater balance between domestic industries that are vulnerable to climate change, and those that are more climate secure.

Box 5. Case studies of livelihood and economic diversification

Climate-proofing natural resource-based rural enterprises through value chain analysis

The Caribbean Natural Resources Institute (CANARI) project *Building climate-resilient rural enterprises in Trinidad and Tobago* is undertaking value chain analysis to identify vulnerabilities. The project, which is funded by the GEF small grants programme, involves collaboration with local tourism committees and farmers' associations. It focuses on two communities with small-scale business that rely on cocoa and honey production. It has identified potential adaptation measures to enhance climate resilience, including planting of climate resilient native plants and the installation of rainwater harvesting and solar power systems to increase production. At least 20 community members acquired awareness and understanding of climate risks through the participatory process applied in this project, and identified tailor-made solutions based on local knowledge.

Source: Submission from CANARI on adaptation actions and plans that could enhance economic diversification and have mitigation co-benefits.

Multi-beneficial livelihood installation at a small fisher village

MANTA Sail Training Centre is a sailing and water sports centre in Vietnam with the goals of conserving marine biodiversity from overfishing and damage caused by motor boats and fossil fuels, and creating new opportunities for the tourism and water-sports markets. They introduced sailing and water sports techniques that meet safety standards to local fishers, and created new livelihoods in the local tourism industry. The training also raised awareness about climate change impacts and the protection of marine ecosystems, and will generate mitigation co-benefits by encouraging the use of wind rather than fossil fuel power. Beyond enhancing the capacity to cope with climate changes, the centre also provides educational opportunities and motivation for local youth.

Source: Submission from MANTA Sail Training Centre on adaptation actions and plans that could enhance economic diversification and have mitigation co-benefits.

2.5. Risk-based approach

14. Assessing risk is a starting point for all approaches to adaptation planning and implementation. The Intergovernmental Panel on Climate Change (IPCC) defines the risks of climate change impacts as the "potential for consequences where something of value is at stake and where the outcome is uncertain".¹⁰ Risk will change dramatically in the context of who, to whom, when and where. The risk-based approach provides a framework to

⁹ unfccc.int/3994

¹⁰ IPCC. 2014. *Climate Change 2013: Impacts, Adaptation and Vulnerability*. Annex II: p1772. Available at http://www.ipcc.ch/pdf/assessment-report/ar5/wg2/WGIIAR5-AnnexII_FINAL.pdf

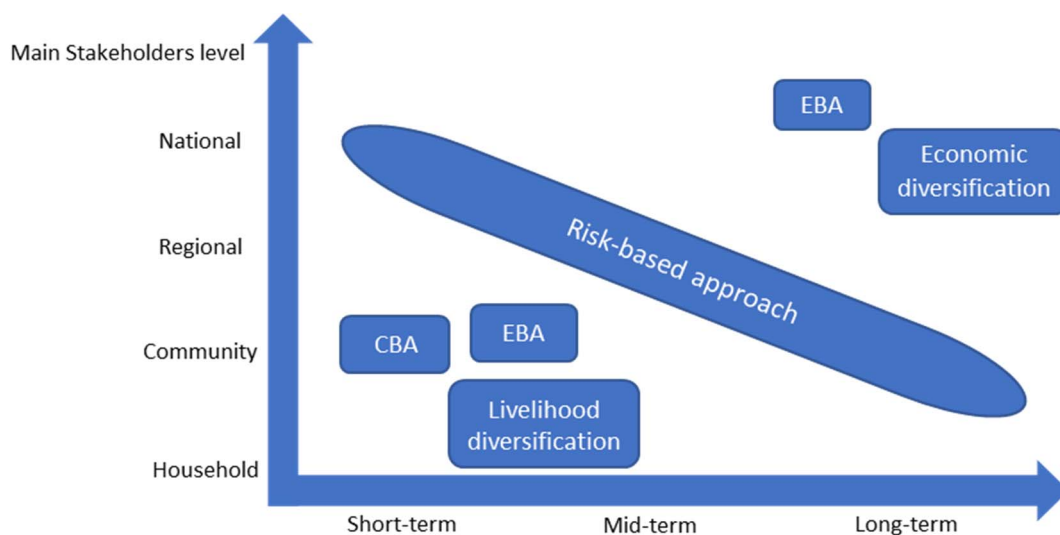
manage multi-dimensional risks and their consequences, taking both climate and non-climate risks into consideration in the larger socio-economic, political and cultural context.¹¹ A risk-based approach includes four steps: 1 - identification of relevant risks; 2 - characterization of those risks; 3 - selection of policy options to address the risks; and 4 - feedback to respond to developing risks.¹²

15. The first step commonly involves both top-down and bottom-up approaches. Top-down approaches start with analysis of climate change projections, while bottom-up approaches start with analyses of the human systems and ecosystems affected by climate change. Stakeholder engagement is critical for the bottom-up approach. Both approaches examine vulnerability, exposure, and hazard, as determinants of risk.¹³ The second step involves the characterization of risks to determine appropriate responses in terms of risk reduction, risk transfer and risk monitoring. Estimation of the frequency of events, the severity of consequences, and the costs and benefits of intervention are elements that must be considered. The next step involves choosing policy options that fit a wide range of actors. Adaptation measures can be considered to fit into two broad categories: soft approaches, which include capacity-building, institutional arrangements, and policy planning; and hard approaches, which involves technology and action, including grey and green measures. In practical application, options and measures generally include both categories. Once implementation starts, the process needs to include regular monitoring and evaluation. The results of the feedback process should be used to adjust adaptation planning and implementation process continuously

2.6. Different approaches at different scales

16. Considering the core concepts, methods for planning and implementation of each approach described above, it is worth examining the timescale and engagement levels of adaptation interventions that can maximize the advantages, or decrease the weaknesses, of these approaches. Figure 2 maps the approaches in time scale (short, mid and long-term) with respect to how long it will take to implement a plan and achieve its objectives. This time scale is plotted against the level (national, regional, community and household) of the main actors and stakeholders' in the intervention.

Figure 2. Mapping different approaches



17. The risk-based approach provides a common framework to analyze climate change risk and vulnerability, with the scope of the approach dependent on the focus of the intervention. CBA is a people-centred approach

¹¹ OECD. 2015. *Climate Change Risks and Adaptation: Linking Policy and Economic*: p78. Available at <http://dx.doi.org/10.1787/9789264234611-en>

¹² OECD. 2015. *Climate Change Risks and Adaptation: Linking Policy and Economic*: p79. Available at <http://dx.doi.org/10.1787/9789264234611-en>

¹³ IPCC. 2014. *Climate Change 2013: Impacts, Adaptation and Vulnerability*. Annex II: p1772. Available at http://www.ipcc.ch/pdf/assessment-report/ar5/wg2/WGIIAR5-AnnexII_FINAL.pdf

designed to involve vulnerable people in the decision-making process. It has been promoted for more than two decades by the international NGOs and intergovernmental organizations.¹⁴ For this analysis, CBA is considered to operate optimally at the community/household scale.

18. Participatory approaches are fundamental to CBA for the identification of needs and gaps of the targeted community or people based on local experience with climate risk.¹⁶ With respect to the use of future climate projections, combining local lessons with regional or global projections and available scientific data can strengthen the intervention-specific context, respecting community needs. The process of identifying and prioritizing risks and vulnerabilities, and discussion of future climate projections in participation with the local community helps to build the linkage between people's daily life and the risks of climate change, generating local ownership.

19. Livelihood diversification also has a primary focus on the community and household level. In responding to ongoing climate changes and the uncertainty of climate risks, households may seek out secondary and tertiary livelihood options as well as taking measures to make existing primary income sources climate resilient. Communities need to take leadership in identifying needs and gaps, and a range of adaptation options. CARE developed a toolkit for climate-resilient livelihood consisting of critical questions.¹⁷ The toolkit highlights essential perspectives for livelihoods security, including diversification from agricultural to non-agricultural or more climate-proof activities, an appropriate range of targeted people, enhanced accessibility to climate information, efficient delivery of available resources and the ability to influence local policy. The goal of livelihood diversification is to create an environment that enables people to choose their income sources while maintaining a certain level of living quality. Providing a set of options is vital given the bottom-up nature of the approach.

20. While livelihood diversification is most relevant at the household level, economic diversification aligns best with regional and national policy-making processes. Strong ownership of planning and strategy, application of a gender sensitivity approach, and inclusiveness of national adaptation plans (NAPs) can assist economic growth and increase the income of vulnerable people. The private sector also plays a critical role in economic diversification in terms of leveraging and stimulating private investment for financial and economic reforms.

21. EBA can be applied to a broad range of interventions from the community to national scale. Like CBA and livelihoods diversification, EBA responds to the needs of the people primarily dependent on natural resources and therefore directly affected by climate change impacts.¹⁸ The approach involves a range of stakeholders, aligning their needs to planning outcomes and forging partnerships for implementation, especially for carrying out field projects. Stakeholder involvement was key in ensuring success in different community-focused projects

¹⁴ IIED provides extensive resources about CBA and convenes the international conference for CBA every year.

<https://www.iied.org/community-based-adaptation>

¹⁵ Further information on CBA field projects can be found in;

The GEF-SGP (GEF-Small Grants Programme). Community Based Adaptation.

https://sgp.undp.org/index.php?option=com_areaofwork&view=summary&Itemid=244

UNDP (United Nations Development Programme). Community-Based Adaptation

<http://www.adaptation-undp.org/community-based-adaptation>

¹⁶ Forsyth T. 2017. *Community-Based Adaptation to Climate Change*: p7. Available at

<http://climatescience.oxfordre.com/view/10.1093/acrefore/9780190228620.001.0001/acrefore-9780190228620-e-602>

¹⁷ CARE. *Toolkit for Integrating Climate Change Adaptation into Development Projects*. Available at

http://www.careclimatechange.org/tk/integration/en/step_by_step_guidance/design/climate-resilient_livelihoods.html

¹⁸ Bertram M, Barrow E, Blackwood K, Rizvi A.R, Reid H and von Scheliha-Dawid S. 2017. *Making Ecosystem-based Adaptation Effective: A Framework for Defining Qualification Criteria and Quality Standards*: p5. Available at

<http://pubs.iied.org/G04167/>

for coastal ecosystem-based adaptation,¹⁹ for example, community leadership to build the supportive foundation for capacity building through training and education contributes to the seamless implementation.²⁰²¹

22. Some countries have introduced EBA into national planning. For example, Brazil included an ecosystem approach in its NAP, noting that there are still gaps to be addressed to incorporate EBA into public policies. The NAP states six possible steps to foster further development of the EBA methodology, including enhancement of the understanding for policymakers, awareness raising among sectors and actors, development of evaluation system and financial incentives.²² Some countries mention EBA or ecosystem approaches for adaptation as a tool for implementing their national adaptation programme.²³

23. Challenges to obtaining wider acceptance of EBA at a national scale is the lack of an outcome-based evaluation methodology. Data collection is the primary step for monitoring an intervention, however the complexity of issues, including those related to data collection and coordination between local institutions, make EbA monitoring and evaluation challenging to address, especially for developing countries with limited capacities and facilities.

24. The lack of standardized tools and guidelines for tracking progress and assessing the outcome of a project have also hindered EbA from turning into an evidence-based approach. In some cases, outcomes may not be evident for a decade after the completion of the intervention.²⁴ Thus, EBA approaches should consider a long-time scale to evaluate the results of the intervention, and the need to maintain communication and contact with stakeholders to track the impact beyond the project management cycle.

25. Economic diversification similarly can require a long time for the transition to a greater range of economic outputs across industries. Transforming a national economy from being dependent on a single or limited sectors to a resilient combination of income sources from multiple sectors requires engagement at the highest political level, a long-term mandate, inclusion of all stakeholders, endorsement from finance and planning ministries, and coordination between regional and national governments.

26. The advantage of economic diversification within national level planning is its top-down and cross-sectoral approach, with a view to pursuing mid- to long-term sustainable economic growth that generates employment and increases the income of vulnerable people. Although the private sector also plays a critical role in the diversification approach, governments generally need to lead and communicate a message of assurance to the private sector to leverage and stimulate private investment for financial and economic reforms.

27. Governments have a responsibility to recognize potential conflicts over existing resources associated with economic transformation, and take steps to avoid harmful and negative impacts during the transition.²⁵ Therefore, it is critical to conduct economic diversification under good environmental governance and coherent institutional arrangements, in particular in the areas of education, youth, employment, social protection and poverty reduction, and to develop an understanding of the co-benefits of resilience, economic growth and

¹⁹ UN Environment. *Coastal Ecosystem-Based Adaptation: Case Studies*. Available at <http://web.unep.org/coastal-eba/case-studies>

²⁰ UN Environment. *Coastal Ecosystem-Based Adaptation: Lauru Ridges to Reef Protected Area Network (Lauru PAN)*. Available at <http://web.unep.org/coastal-eba/lauru-ridges-to-reef>

²¹ UN Environment. *Coastal Ecosystem-Based Adaptation: Community-based coral aquaculture and reef restoration programme, Puerto Rico*. Available at <http://web.unep.org/coastal-eba/content/community-based-coral-aquaculture-and-reef-restoration-programme-puerto-rico>

²² Brazil. *National Adaptation Plan to Climate Change: Sectoral and Thematic Strategies*. Volume 2: pp42-46. Available at http://www4.unfccc.int/nap/Documents%20NAP/English_PNA_Part2%20v4.pdf

²³ Costa Rica, Madagascar, Mexico and Morocco mentioned EbA as one of the tools for adaptation in their Nationally determined contributions (NDCs). Their NDCs can be found out at <http://www4.unfccc.int/ndcregistry/Pages/Home.aspx>

²⁴ Lo V. 2016. *Synthesis report on experiences with ecosystem-based approaches to climate change adaptation and disaster risk reduction*. Technical Series No.85. Secretariat of the Convention on Biological Diversity: p80. Available at <https://www.cbd.int/doc/publications/cbd-ts-85-en.pdf>

²⁵ CARE. 2011. *POLICY BRIEF: Climate Change Why community based adaptation makes economy sense*. Available at http://www.care.dk/wp-content/uploads/2013/02/PolicyBrief_ClimateChange_final_web.pdf

diversification in a country-specific context.²⁶ Good governance and regulatory measures also facilitate economic diversification with both innovation and application of traditional practices.

28. In decision-making about economic diversification, particular attention should be paid to the poorest and most vulnerable, since they have the least capacity to manage risks and are often the most impacted by climate change. Adopting a dual approach of macro and microeconomic policies for the creation of employment, involving both livelihood and economic diversification, could act in a complementary manner and provide a valuable tool for socio-economic resilience.

3. Common challenges of different approaches

29. The previous sections assessed the features of different approaches to adaptation in terms of target level and time span. While each approach has distinct advantages and conditions where it can maximize its strengths, there are some common issues and gaps that need to be recognized and addressed.

3.1. Stakeholder engagement and beneficiaries

30. The lessons learned as communicated by Parties highlight that stakeholder engagement is a fundamental and indispensable factor for successful adaptation projects regardless of the approach taken. Depending on the context of an intervention, the approaches taken to stakeholder engagement will be different. It is important to obtain a wide range of involvement from local to high-level decision-makers, without excluding or limiting the participation of a particular group of people. This builds trust and ownership of the project. This ownership can provide a basis for continuity of projects to achieve a positive outcome, particularly when projects require a long time to complete. The level of commitment by stakeholders could also be different at each stage of the intervention.

31. Engagement that includes socially vulnerable groups creates a vital opportunity to raise awareness. Projects using CBA, EBA, and livelihood diversification approaches need to incorporate traditional and empirical knowledge to tailor the different interventions. The awareness of climate change impacts, and the ability to examine the coping capacity developed over many years, can help identify an optimal mix of traditional knowledge and scientific data analysis, and strengthen stakeholder commitment to the intervention.

32. However, in all approaches there is a concern that those stakeholders engaged in the project may not represent appropriately the people who will be affected by an adaptation intervention. "Community" is a simple and broadly accepted notion referring to a group of people who live a similar lifestyle and share a social and cultural background. In fact, it is likely that a group of people that looks like a "community" actually consists of several smaller interest groups. It is possible that taking a community-centred approach ignorantly can reinforce exploitation and suppression inside a "community".

33. It is also possible that the integration of traditional and customary practice into adaptation intervention could also impose an intolerable burden on the most vulnerable people. There is also concern that projects developed with a tight focus on specific stakeholders could end up being maladaptive by simply transferring climate change risk to other groups. Therefore, it is important to encourage participation across sectors and different social groups and to pay particular attention to the poor and vulnerable using a gender-equal approach in planning and implementing an adaptation intervention. Using gender sensitivity and culturally appropriate tools and strategies for engaging women and vulnerable groups enables them to reflect their concerns in a given intervention.

3.2. Upscaling bottom-up approaches

34. The strength of CBA, EbA and livelihood diversification lies in their bottom-up, decentralized methods that place a high priority on people and community in a specified context. Bottom-up approaches can also inform participatory and deliberative methods at national level adaptation planning process. However, to expand to the national level it is necessary to integrate those activities into institutional and policy frameworks that will mainstream adaptation into national-level planning. It is important to build-up an interactive relationship that

²⁶ AC/2016/17.

maximizes the benefits of both top-down and bottom-up methods between the local and national levels. National level upscaling can assist the mobilization of finance for CBA, EBA and livelihood field projects.

3.3. Assessing effectiveness of an intervention

35. Assessment tools are used to collect vital information affecting decision-making and to adjust adaptation interventions. Ex-ante evaluation of positive and negative impacts of adaptation interventions should be carried out in a deliberative manner to avoid maladaptation, and regular monitoring and reviews can ensure the improvement of projects over time.

36. However, a common challenge to the application of assessment tools is the lack of climate and socio-economic data, particularly in developing countries, at the spatial and temporal scales needed to set a baseline for tracking progress and predict the outcomes of the intervention. Basic climate, social and economic datasets for adaptation are the foundation for quantitative assessment and indicators for measuring benefits by intervention. M&E is often time-consuming and costly. Interactive coordination could reduce burdens for M&E, facilitate synergies between institutions and enhance overall implementation.

37. Furthermore, the lack of data collection hinders the development of quantitative assessment methods. It should be recognized that a fixed standard set of indicators cannot capture precisely the outcomes of different adaptation approaches, considering a context-specified nature of adaptation approaches. A combination of quantified and qualified evaluation metrics could complement one another and enhance the accuracy of the assessment framework.

38. The complexity of assessment frameworks affects usability. Many case studies express the need for further reviewing existing guidelines, and encourage the development of more user-friendly and smart indicators and guidelines. For approaches adopting participatory processes, the assessment tools need to take into account the perspective of users as a core value of the approach.

Box 6. Assessment tools for economic diversification from submissions

HELVETAS Guideline - Assessing Climate Risks in Market Systems

This guideline is designed to support the private sector in understanding climate change risks and to identify climate resilient markets. It is an eight-step assessment consisting of two modules; risk and vulnerability assessment and planning in subsectors and selected market system; and identification and implementation of measures dealing with determined risks. By applying the guideline, the subsector could prepare for potential hazards in production and specific value chains, and identify proactive adaptation measures. Available at https://assets.helvetas.org/downloads/guideline_climate_21july_2017_final.pdf

GIZ - The Climate Expert Approach to support SMEs

GIZ has developed several analysis tools and capacity-building packages to improve the climate resilience of the small- and medium-sized enterprises (SMEs), and to assist risk management of industrial zones through regional and inclusive approaches. The tools help to identify climate risk and highlight possible interventions. Case studies from different parts of world and assessment tools available at <http://www.climate-expert.org/en/home/>

Source: Submission from IFAD and GIZ on adaptation actions and plans that could enhance economic diversification and have mitigation co-benefits.

3.4. Lack of resources

39. Financial support from public and private sectors, as well as capacity building are needed to better apply the various approaches described in this report. Institutional capacity to build policy frameworks, the human capacity to understand scientific knowledge, and technology for planning and implementation of adaptation measures are critical for all approaches.

4. Conclusions

40. 41. Each of the approaches discussed in this report have been developed to overcome drawbacks identified in previous approaches to adaptation. Comparative studies of different approaches could further inform adaptation planning and policy development, and could provide valuable insights on how to best use practical implementation tools within limited budgets, resources and capacity constraints.

41. Each of the approaches discussed in this paper bring unique advantages. All have the potential to help address broader social and economic challenges through the inclusion of stakeholders. There are also shared obstacles. For example, CBA, EbA and LED, which are rooted in the core concept of the bottom-up approaches, face challenges regarding stakeholders and scaling-up of projects. All approaches share obstacles related to monitoring and evaluation and demonstrating the effectiveness of measures. Accumulating lessons learned and good practices is important to allow practitioners to select approaches that best fit their practical context and also informs the further refinement and development of the approaches.
