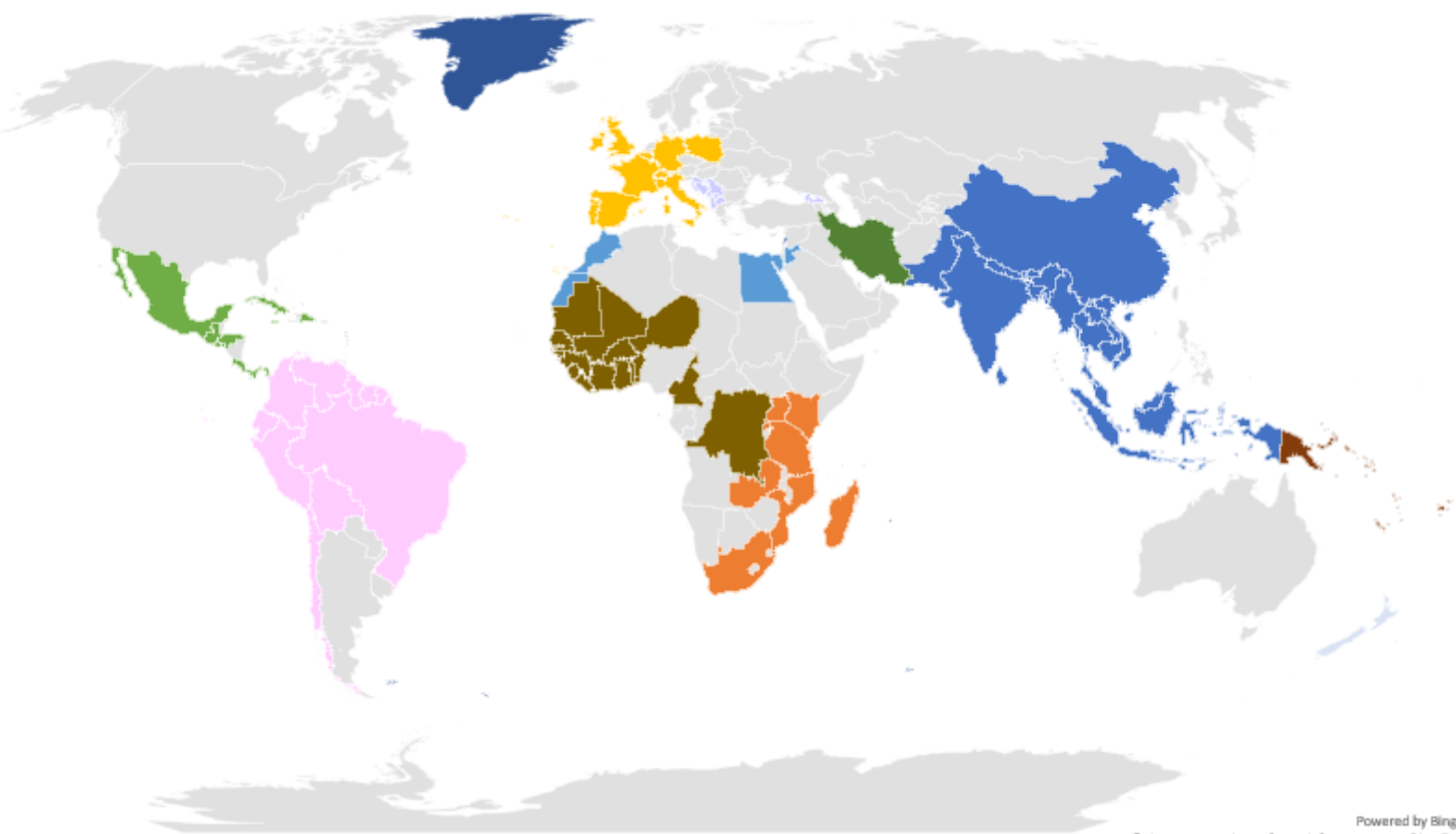




Nature-based Solutions for Climate Resilience

Mapping Analysis of IUCN's Nature-based Solutions for Climate Resilience Projects

August 2021



Powered by Bing
© GeoNames, Microsoft, NavInfo, TomTom, Wikipedia

About IUCN

IUCN is a membership Union uniquely composed of both government and civil society organisations. It provides public, private and non-governmental organisations with the knowledge and tools that enable human progress, economic development and nature conservation to take place together.

Created in 1948, IUCN is now the world's largest and most diverse environmental network, harnessing the knowledge, resources and reach of more than 1,400 Member organisations and some 18,000 experts. It is a leading provider of conservation data, assessments and analysis. Its broad membership enables IUCN to fill the role of incubator and trusted repository of best practices, tools and international standards.

IUCN provides a neutral space in which diverse stakeholders including governments, NGOs, scientists, businesses, local communities, indigenous peoples organisations and others can work together to forge and implement solutions to environmental challenges and achieve sustainable development.

Working with many partners and supporters, IUCN implements a large and diverse portfolio of conservation projects worldwide. Combining the latest science with the traditional knowledge of local communities, these projects work to reverse habitat loss, restore ecosystems and improve people's well-being.

www.iucn.org

<https://twitter.com/IUCN/>

Nature-based Solutions for Climate Resilience

Mapping Analysis of IUCN's Nature-based Solutions for Climate Resilience Projects

Amber R. Bjerre, Wendy C. Atieno and Ali Raza Rizvi

August 2021

The designation of geographical entities in this book, and the presentation of the material, do not imply the expression of any opinion whatsoever on the part of IUCN concerning the legal status of any country, territory, or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The views expressed in this publication do not necessarily reflect those of IUCN.

IUCN is pleased to acknowledge the support of its Framework Partners who provide core funding: Ministry of Foreign Affairs of Denmark; Ministry for Foreign Affairs of Finland; Government of France and the French Development Agency (AFD); the Ministry of Environment, Republic of Korea; the Norwegian Agency for Development Cooperation (Norad); the Swedish International Development Cooperation Agency (Sida); the Swiss Agency for Development and Cooperation (SDC) and the United States Department of State.

Published by: IUCN, Gland, Switzerland

Produced by: IUCN Global Ecosystem Management Programme

Copyright: © 2021 IUCN, International Union for Conservation of Nature and Natural Resources

Reproduction of this publication for educational or other non-commercial purposes is authorised without prior written permission from the copyright holder provided the source is fully acknowledged.

Reproduction of this publication for resale or other commercial purposes is prohibited without prior written permission of the copyright holder.

Recommended citation:

Bjerre, A. R., Atieno, W. C., & Rizvi, A. R. (2021). *Nature-based Solutions for Climate Resilience: Mapping Analysis of IUCN's Nature-based Solutions for Climate Resilience Projects*. Gland, Switzerland: IUCN.

Cover photo: Global distribution of IUCN's Nature-based Solutions for Climate Resilience projects.

Layout by: Amber R. Bjerre

Table of Contents

List of figures	v
List of tables.....	v
Executive Summary	vi
Acknowledgements.....	vii
<i>Contributors</i>	vii
Glossary of abbreviations	viii
1. Introduction	1
2. Methodology	4
3. Results and analysis	6
3.1. <i>Geographical regions and ecosystems</i>	6
3.2. <i>Projects by geographical region and current status</i>	10
3.3. <i>Project activities</i>	12
3.4. <i>Tools and methodologies employed by projects</i>	13
3.5. <i>Knowledge products</i>	16
4. IUCN’s donors’ contributions’	17
5. Recommendations	20
5.1. <i>Progress on 2014 Recommendations²</i>	20
5.2. <i>Recommendations for 2021-2024</i>	26
6. Conclusion and next steps	30
Annex: Compendium of knowledge products	31

List of figures

Figure 1. Nature-based Solutions framework and concept ⁴	2
Figure 2. Three elements and five criteria help answer the question “Is this approach EbA or not?”, based on the technical paper, Making Ecosystem-based Adaptation Effective – A Framework for Defining Qualification Criteria and Quality Standards ¹³	4
Figure 3. Geographical regions broken down by country.	7
Figure 4. World map of where IUCN Nature-based Solutions for Climate Resilience projects were / are being implemented.....	8
Figure 5. Ecosystems of implementation.....	9
Figure 6. Projects, ecosystems and regions.....	10
Figure 7. Current project status.	11
Figure 10. Distribution of projects implemented per Region [Total number of projects (n) is 100].....	11
Figure 8. Project status by geographical region [Total number of projects (n) is 100].....	11
Figure 9. Project start and end years [Total number of projects (n) is 100].	11
Figure 11. Frequency of the projects' focus points for EbA-activities within a specific ecosystem [Total number of projects (n) is 100].....	12
Figure 12. Division of major donors that provided financial support EbA related projects [Total number (n) of donors is 59. Category “Others” includes Donor organisations with a percentage value less than 3%].	18
Figure 13. Number of donors by geographical region, based on location of the donors' headquarters or main office (not necessarily where the supported projects are implemented) [Total number (n) of donors is 59] ¹⁷	18

List of tables

Table 1. Overview of a few of the employed tools and methodologies.....	13
Table 2. Overview of a few of the tools and methodologies developed by included projects.....	14
Table 3. An overview of all donors by geographical region, based on location of the donors' headquarters or main office (not necessarily where the supported projects are implemented).	19
Table 4. Progress made on 2014 Recommendations ² , where the right column details a few of the many examples of progress and provides further suggestions.	20

Executive Summary

The term Nature-based Solutions (NbS) has become widely used in a number of policy and conservation processes in recent years, in line with the growing recognition that the well-being of human communities and natural systems are interconnected, and that ecosystem services play a key role in addressing global challenges – when ecosystems are sustainably managed and effectively conserved.

Since 1948, the International Union for Conservation of Nature (IUCN) has been a global leader in steering the future of conservation. For over a decade, IUCN has furthermore carried the mandate of working with nature as a cornerstone of adaptation strategies to simultaneously address climate risks, the biodiversity crisis, and human wellbeing¹ as a Nature-based Solution. As an umbrella term, NbS encompasses approaches of working with nature for societal benefit, including, but not limited to, Ecosystem-based Adaptation (EbA; also known as Nature-based Solutions for Adaptation), ecosystem-based disaster risk reduction (Eco-DRR), and ecosystem-based mitigation (EbM). IUCN has been developing and implementing portfolios in these areas since before these various terms were officially coined, across offices and programmatic units.

This global assessment of IUCN's project portfolio from 2015 to 2020 indicates that IUCN has been involved in 100 projects that directly and/or indirectly contribute towards climate change adaptation and resilience. The analysis captures all work and/or knowledge on human climate resilience across IUCN's programmes and offices and is *not* limited to the Global Ecosystem Management Programme. This effort has been undertaken to map the projects to learn from the various initiatives being implemented or completed by 2020, with the aim to contribute to future learning and experience, thus providing guidance to grow IUCN's programmatic interventions. Moreover, this analysis contributes toward an overarching institutional goal of promoting climate-sensitive and climate-reactive planning for the conservation of biodiversity and sustainability of ecosystem services for human wellbeing.

The designation of geographical entities in this analysis, and the presentation of the material, do not imply the expression of any opinion whatsoever on the part of any participating organisations concerning the legal status of any country, territory, or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries. Further, all geographical entities included in this analysis may or may not be related to project implementation, as the information for this analysis was obtained from the IUCN Project Portal and not always confirmed by Regional Coordinators or Project Managers.

¹ WCC-2012-Res-084-EN: Promoting ecosystem-based adaptation.
https://portals.iucn.org/library/sites/library/files/resrecfiles/WCC_2012_RES_84_EN.pdf

Acknowledgements

This analysis is an update of the 2014 *Nature Based Solutions for Human Resilience: A Mapping Analysis of IUCN's Ecosystem Based Adaptation Projects*², which was a valuable learning experience to showcase Nature-based Solutions (NbS) for adaptation and resilience projects. This update was made possible by the contributions of IUCN staff around the world. Preliminary data was obtained from the IUCN Project Portal. This is a living document and will be actively updated. Amber R. Bjerre offered much needed help in compiling and analysing data and compiling this report.

Ali Raza Rizvi
August 2021

Contributors

This analysis is a collaboration of the regional coordinators, thematic heads and project managers, who provided invaluable information for analysis. We gratefully acknowledge our IUCN colleagues from around the world who contributed time and effort to compile, draft and refine this document, including but not limited to:

Adolfo Ottoniel	El Hadji Balle Seye	Moses Egaru
Monterroso Rivas	Emily Goodwin	Naalin Perera
Alain Ndoli	Francis Musau	Nalin Indika Munasinghe
Ali Hayajneh	George Akwah Neba	Natalia Boulad
Ananda Mallawatantri	Hany El Shaer	Padmi Meegoda
Andrew Foran	Jacques Somda	Radhika Murti
Annika K. Min	James Dalton	Rebecca Welling
Arsene Alain Sanon	James Oliver	Remi Jiagho
Bara Top	Kaori Yasuda	Renaud Bailleux
Bechir N'diath	Karen Podvin	Safietou Sall Ba
Belén Valenzuela	Kathryn Bimson	Sampath Goonatilake
Carole Martinez	Kelli M. Palaka	Sophie Kutegeka
Chantal van Ham	Kristin Meyer	Tania Ammour
Charles Karangwa	Laila Annouri	Thomas Louis Price
Charles Oluchina	Lourdes Lázaro Marín	Thomas Sberna
Cheng Zhang	Manuel Menomussanga	Tony Nello
Chetan Kumar	Marcos Valderrábano	Verónica Ruiz García
Dafne Edith Domínguez	María Del Mar Otero	Vesna Bjedov
Dinithi Samarathunga	María Moreno de los Ríos	Wenjia Jin
Dorothee Herr	Almandoz	Yan Zhang
Doyi Mazenzele	Mauricio Xerinda	Ziad Samaha

² Rizvi, A. R. (2014). *Nature Based Solutions for Human Resilience: A Mapping Analysis of IUCN's Ecosystem Based Adaptation Projects*. IUCN. https://www.iucn.org/downloads/eba_in_iucn_mapping_analysis.pdf

Glossary of abbreviations

BEST	Promoting the conservation and sustainable use of Biodiversity and Ecosystem Services in Overseas Countries and Territories
BMU-IKI	Federal Ministry for the Environment, Nature Conservation and Nuclear Safety's International Climate Initiative, Germany
CBD	Convention on Biological Diversity
CC	Climate change
CER	Coastal Ecosystem Resilience: Enhancing socio-ecological climate change resilience of marine and coastal systems in Lebanon
CLEARING House	Collaborative Learning in Research, Information-sharing and Governance on How Urban forest-based solutions
CREATE	Climate Resilience Evaluation for Adaptation Through Empowerment
CRiSTAL	Community-based Risk Screening Tool – Adaptation & Livelihoods
CVCA	Climate Vulnerability and Capacity Analyses
EbA	Ecosystem-based Adaptation (also known as Nature-based Solutions for Climate Change Adaptation)
EC	European Commission
ECARO	Eastern Europe and Central Asia (Region)
Eco-DRR	Ecosystem-based Disaster Risk Reduction
EMP	Ecosystem Management Programme (IUCN)
EPIC	Ecosystem protecting Infrastructure and Communities
ESARO	Eastern and Southern Africa (Region)
EUR or €	Euro
FAO	Food and Agriculture Organization of the UN
FEBA	Friends of Ecosystem-based Adaptation
FLR	Forest Landscape Restoration
DRR	Disaster Risk Reduction
GCF	Green Climate Fund
GEF	Global Environment Facility
IISD	International Institute for Sustainable Development
IUCN	International Union for Conservation of Nature
IWRM	Integrated water resource management
Lao PDR	Lao People's Democratic Republic
M&E	Monitoring and Evaluation
NbS	Nature-based Solutions
ORMACC	Mexico, Central America and the Caribbean (Region)
PA	Protected areas
PACO	West and Central Africa (Region)
RELIEF Kit	Resilience through Investing in Ecosystems – knowledge, innovation and transformation of risk management
ROWA	West Asia (Region)
SEARCH	Social, Ecological and Agricultural Resilience in the face of Climate Change
SIDA	Swiss International Development Cooperation Agency
SUR	South America (Region)
SWOT Analysis	Strengths, Weaknesses, Opportunities and Threats Analysis
UN	United Nations
UpBASIC	Upscaling Nature-based Solutions for Climate Change Adaptation in the Volta Basin Region
WISE UP to Climate	Water Infrastructure Solutions from Ecosystem Services Underpinning Climate Resilient Policies and Programmes

1. Introduction

Since 1948, the International Union for Conservation of Nature (IUCN) has been a global leader in steering the concept of Ecosystem-based Adaptation, paving the way for the wide uptake of working with nature as a cornerstone of adaptation strategies to simultaneously address climate risks, the biodiversity crisis, and human wellbeing. There is increasing global recognition and evidence that healthy resilient ecosystems lay the foundation for sustainable economic development, food and water security, disaster risk reduction and climate action. Owing to IUCN’s neutral, science-based reputation, outreach and convening power spread over its membership and partners – including states, non-governmental organisations, academia, private sector, and media – IUCN is ideally placed to bring together stakeholders on working with nature for climate adaptation and to serve as an example of how to best implement these NbS practices and approaches globally.

2020 was originally planned to be the “Super Year for Biodiversity”, but instead brought new global attention to the role biodiversity plays in securing human health, well-being and resilience – including how climate change, habitat degradation and land use changes both contribute to disease outbreaks and undermine our ability to respond and recover. Climate change adds layers of complexity and uncertainty to these compounding threats. Ultimately, both climate resilience and public health depend on strengthening the social and ecological resilience of communities. With the planning of response and recovery initiatives around the world, working with nature offers a key mechanism for green recovery by addressing underlying environmental and climatic drivers to support human health and livelihoods and build holistic resilience.

IUCN is extensively involved in supporting and implementing such **climate change adaptation and resilience projects** around the globe, with a special focus on **Nature-based Solutions** (NbS), including approaches such as Ecosystem-based Adaptation^{3,4} (EbA; also known as Nature-based Solutions for Adaptation), ecosystem-based disaster-risk reduction⁵ (Eco-DRR), and ecosystem-based mitigation (EbM). This focus is purposefully aligned with IUCN’s conceptual framework of NbS⁶ as a part of its overall vision, mission and commitments. IUCN defines NbS as “actions to protect, sustainably manage and restore natural or modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits.”⁷

As an umbrella term, NbS encompasses approaches of working with nature to address societal challenges, including, but not limited to, approaches to address climate change – EbA, Eco-DRR, and EbM⁸.

³ CBD (2009). Connecting Biodiversity and Climate Change Mitigation and Adaptation: Report of the Second Ad Hoc Technical Expert Group on Biodiversity and Climate Change. Technical Series No. 41. Secretariat of the Convention of Biological Diversity: Montreal. <https://www.cbd.int/doc/publications/cbd-ts-41-en.pdf>

⁴ CBD (2010). Decision X/33. Biodiversity and climate change. <https://www.cbd.int/decision/cop/?id=12299>

⁵ Estrella, M. and Saalimaa, N. (2013). Ecosystem-based Disaster Risk Reduction (Eco-DRR): An overview. In Renaud, FG., Sudmeier-Rieux, K. and Estrella, M. (2013). The role of ecosystems in disaster risk reduction, United Nations University Press, Tokyo: Japan. <http://collections.unu.edu/view/UNU:1995>

⁶ IUCN (2020). IUCN Global Standard for Nature-based Solutions. <https://doi.org/10.2305/IUCN.CH.2020.08.en>

⁷ IUCN (2016). Nature-based Solutions to address global societal challenges. <http://dx.doi.org/10.2305/IUCN.CH.2016.13.en>

⁸ Seddon, N., Smith, A., Smith, P., Key, I., Chausson, A., Girardin, C., House, J., Srivastava, S. and Turner, B. (2021), Getting the message right on nature-based solutions to climate change. Glob Change Biol. <https://doi.org/10.1111/gcb.15513>

NbS have become a uniting force for the common objectives among the United Nations Framework Convention on Climate Change (UNFCCC), the Convention on Biological Diversity (CBD), the Sendai Framework for Disaster Risk Reduction and the Sustainable Development Goals (SDGs)⁹. Approaches such as EbA, Eco-DRR and EbM demonstrate the application of NbS to address a particular societal challenge – in this case, climate adaptation, disaster risk reduction, and climate mitigation, respectively. **NbS as an overarching concept can be used to support communication and mainstreaming of EbA, eco-DRR and EbM across international multilateral agreements/global frameworks and their audiences**, including building synergies and bridging the gap between traditional ‘grey’ interventions and nature-based interventions¹⁰ (Figure 1). IUCN has committed to integrating NbS within its programme areas and objectives in its 2021-2024 programme¹¹. As climate change is a cross-cutting issue which affects and will continue to affect all sectors, this analysis seeks to capture all relevant initiatives which use ecosystems and ecosystem-services to increase the resilience of and reduce the climate risk and vulnerability of communities and ecosystems, in spite of varying terminology used across IUCN in service of this goal.



Figure 1. Nature-based Solutions framework and concept⁴.

This assessment was conducted in alignment with the preceding 2014 Analysis², which gave forward-looking direction for Eco-DRR, EbA and climate change adaptation as a whole. As such, this document builds upon the 2014 Analysis² and thus serves as a Volume II to the growing portfolio of IUCN’s climate change adaptation and resilience projects. The goal of this analysis, through tracking the work IUCN is doing in this regard, is to continue the process of providing evidence-based knowledge on NbS for climate change adaptation and disaster risk reduction and the effectiveness of these approaches.

This assessment of IUCN’s portfolio of projects being implemented or completed by 2020 indicates that IUCN has 100 projects that directly and/or indirectly contribute towards climate change adaptation, resilience, and disaster-risk reduction. This effort has been undertaken to map the projects to learn from the various climate change adaptation and resilience related initiatives being implemented or completed by 2020. This document contains an analysis of the mapping

⁹ Donatti C.I., Dunlop M., Harvey C.A., Hole D., Lavorel S., Locatelli B., Mumba, M., Vignola R., Watson J., Wise R. Ecosystem-based Adaptation: Essential for Achieving the Sustainable Development Goals. https://www.conservation.org/docs/default-source/publication-pdfs/ci_eba_essential-for-achieving-the-sustainable-development-goals.pdf?Status=Master&sfvrsn=14ce6248_3

¹⁰ Chausson, A, Turner, B, Seddon, D, et al. Mapping the effectiveness of Nature-based Solutions for climate change adaptation. *Glob Change Biol.* 2020; 26: 6134– 6155. <https://doi.org/10.1111/gcb.15310>

¹¹ IUCN (2021). Nature 2030: one nature, one future: a programme for the Union 2021-2024. <https://portals.iucn.org/library/node/49292>

exercise with the aim that it will contribute to future learning and experience, thus providing guidance to IUCN's climate change adaptation and resilience projects around the globe. Moreover, this analysis contributes toward an overarching goal of promoting climate-sensitive and -reactive planning for the conservation of biodiversity and sustainability of ecosystem services for human wellbeing.

The initial information for this analysis was gathered from the [IUCN Project Portal](#)¹² and otherwise available information from the [IUCN website](#). Selected projects included objectives which directly contribute to EbA and/or Eco-DRR or which conserve, restore or sustainably manage ecosystems with the goal of climate change adaptation or disaster-risk reduction. The analysis includes identified NbS projects, which have climate change adaptation and/or disaster-risk reduction co-benefits. In this way, the analysis captures all work and/or knowledge on **human climate resilience** across IUCN's programmes and is *not* limited to the Global Ecosystem Management Programme. Information was sent to IUCN Regional Offices, EbA focal points and project managers to respond by providing details on the region, themes, ecosystems, objectives and interventions they are working on, as related to climate change adaptation, and resilience. Project managers and focal points were asked to share information on projects and programmes, even if they were not specifically EbA or Eco-DRR projects, but had at a minimum results areas or co-benefits related to these approaches and/or climate change adaptation as a whole.

¹² In early 2021, the [IUCN Open Project Portal](#) was launched, which contains detailed information on IUCN's projects in over 150 countries worldwide. It comprises data and information for active projects in 2021 and after, making it the central point of access to detailed information about IUCN projects.

2. Methodology

As a rapid desk assessment, this analysis includes selected projects with objectives which directly contribute to climate change adaptation and resilience or which conserve, restore or sustainably manage ecosystems with the goal of climate change adaptation or disaster-risk reduction. The analysis includes identified NbS projects, which have climate change adaptation and/or disaster-risk reduction co-benefits. In this way, the analysis captures all work and/or knowledge on **human climate resilience** across IUCN's programmes.

This analysis evaluated projects with respect to the elements according to the technical paper *Making Ecosystem-based Adaptation Effective – A Framework for Defining Qualification Criteria and Quality Standards* ([EN](#) | [ES](#) | [FR](#))¹³, which were developed following the recommendation of the 2014 Analysis². These criteria provide 3 elements and 5 qualification criteria and 20 quality standards of EbA (Figure 2). This analysis includes projects which:

- A) help people adapt to climate change (Element A),
- B) use ecosystem services and address biodiversity gains (Element B) and
- C) projects that integrated adaptation into policies, enhanced capacities or overall part of an overall adaptation strategies (Element C)¹³.

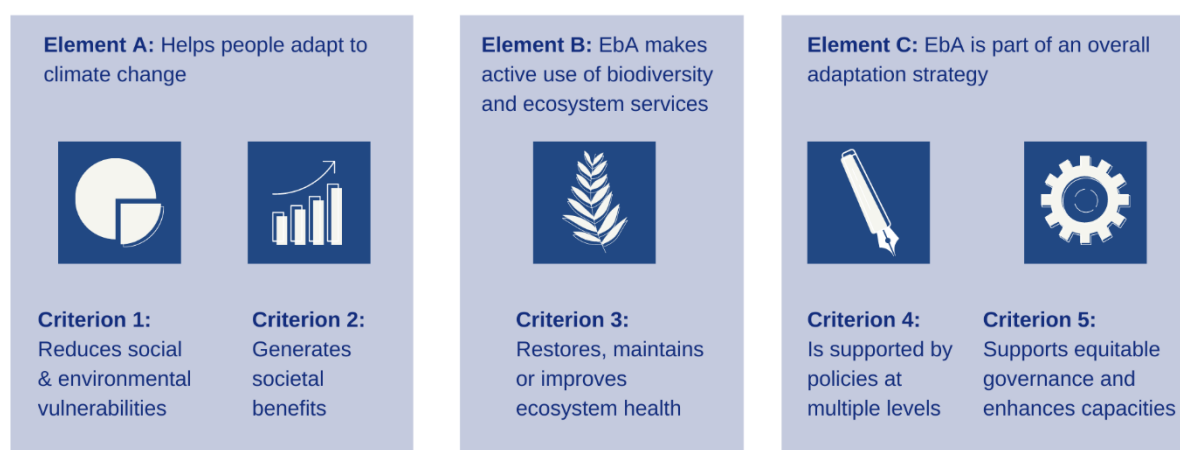


Figure 2. Three elements and five criteria help answer the question “Is this approach EbA or not?”, based on the technical paper, *Making Ecosystem-based Adaptation Effective – A Framework for Defining Qualification Criteria and Quality Standards*¹³.

¹³ FEBA (Friends of Ecosystem-based Adaptation). (2017). *Making Ecosystem-based Adaptation Effective: A Framework for Defining Qualification Criteria and Quality Standards* (FEBA technical paper developed for UNFCCC-SBSTA 46). Bertram, M., 1 Barrow, E., 2 Blackwood, K., 3 Rizvi, A.R., 3 Reid, H., 4 and von Scheliha-Dawid, S.5 (authors). GIZ, Bonn, Germany, IIED, London, UK, and IUCN, Gland, Switzerland. 14 pp. [EN](#) | [ES](#) | [FR](#)

This analysis was conducted as a rapid desk assessment, which includes projects that address climate change adaptation and resilience or which conserve, restore or sustainably manage ecosystems with the goal of climate change adaptation or disaster-risk reduction. This included an iterative process to search for and analyse projects: level one of projects were those that explicitly include EbA or Eco-DRR as project goals. Level two were NbS projects, which included climate adaptation and disaster reduction as intended goals without directly referring to EbA or Eco-DRR. This second level of analysis captures projects across IUCN's project portfolio which are not labelled as EbA or Eco-DRR and which address the question of differing definitions. This includes FLR, NbS in the water sector and several adaptive management projects, such as *Protection of key ecosystem services by adaptive management of Climate Change endangered Mediterranean socioecosystems* (AdaptaMED); *GronGreen*, which aims to create climate and water resilient, healthy and liveable cities by investing in NbS; *SINCERE- Innovating for Forest Ecosystem Services*; *Stabilising Land Use: Protected Areas (PA) Categories V and VI as Landscape Mechanisms for Enhancing Biodiversity in Agricultural Land, Ecological Connectivity and REDD+ Implementation*; and *Water Infrastructure Solutions from Ecosystem Services Underpinning Climate Resilient Policies and Programmes* (WISE UP to Climate).

Additionally, projects that lacked a field component but whose results or lessons contributed to generating knowledge on NbS for adaptation and resilience, such as *Supporting ECOWAS Students' CITES research: West Africa Biodiversity Climate Change* (WABiCC), *NetworkNature Horizon 2020* project, and *Sweden Ministry of the Environment and Energy (MEES) Oceans & Climate change* projects, were also included in the analysis.

It is important to note that projects which sought to address biodiversity loss along with intended gains for climate change but which did not address or include people such as *Tigers in Nepal: Preparing for the Impacts of Climate Change* (which is implemented in protected areas throughout Nepal) were not included.

3. Results and analysis

The following results and analysis are based on the information gathered from the IUCN Project Portal and confirmed by IUCN Project Managers and relevant regional focal points.

3.1. Geographical regions and ecosystems

The projects cover diverse regions^{14,15} spanning a total of 109 countries (Figure 3 and Figure 4), including:

- **Asia:** Bangladesh, Bhutan, British Indian Ocean Territory,* Cambodia, China, India, Indonesia, Lao People's Democratic Republic (Lao PDR), Malaysia, Maldives, Myanmar, Nepal, Pakistan, Sri Lanka, Thailand,† Viet Nam
- **Eastern and Southern Africa (ESARO):** French Southern Territories,* Kenya, Madagascar, Mauritius, Mozambique, Rwanda, Seychelles, South Africa,† Tanzania, Uganda, Zambia
- **Eastern Europe and Central Asia (ECARO):** Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, Serbia†
- **Europe:** Belgium, Croatia, France, Germany, Ireland, Italy, Poland, Portugal, Spain, Switzerland,† United Kingdom of Great Britain and Northern Ireland
- **Global**¹⁶
- **Mediterranean**¹⁷: Albania,‡ Croatia,‡ Egypt, France,‡ Italy,‡ Jordan,‡ Lebanon,‡ Montenegro,‡ Morocco, Palestine,‡ Portugal,‡ Serbia,†,‡ Spain ‡
- **Mexico, Central America and the Caribbean (ORMACC):** Anguilla,* Aruba,* Bermuda,* British Virgin Islands (BVI),* Cayman Islands,* Costa Rica,† Cuba, Curaçao,* Dominica, Dominican Republic, Dutch Caribbean,* El Salvador, French Guiana,* Grenada, Guadeloupe,* Guatemala,† Honduras,† Jamaica, Martinique,* Mexico, Montserrat,* Panama, Saint Barthélemy,* Saint Lucia, Saint Martin,* Saint Vincent and the Grenadines, Sint Maarten,* Turks and Caicos*
- **North America:** Greenland,* Saint Pierre and Miquelon*
- **Oceania:** Fiji,† French Polynesia,* Kiribati, Marshall Islands, Micronesia (Federated States of), New Caledonia,* Palau, Papua New Guinea, Solomon Islands, Tonga, Vanuatu, Wallis and Futuna*
- **South America (SUR):** Bolivia, Brazil,† Chile, Colombia, Ecuador,† Falkland Islands (Malvinas),* Guyana, Peru, Pitcairn,* South Georgia and the South Sandwich Islands,* Suriname, Venezuela
- **West and Central Africa (PACO):** Benin, Burkina Faso,† Cameroon,† Congo, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali Mauritania, Niger, Saint Helena (Ascension and Tristan de Cunha),* Sao Tome and Principe, Senegal, Sierra Leone, Togo
- **West Asia (ROWA):** Iran (Islamic Republic of), Jordan,†‡ Lebanon, Palestine

¹⁴ The regional designation herein is based first on IUCN operational regions, as seen on the [IUCN Regions webpage](#) (States are indicated according to Article 5(a) and Regulation 36 of [IUCN Statutes](#)). Any remaining geographical entities are then designated to the regions listed here based on geography, as marked with an asterisk (*).

¹⁵ IUCN offices span the globe, including headquarters in Switzerland and the United States of America, and regional offices in Burkina Faso, Cameroon, Costa Rica, Ecuador, Fiji, Jordan, Kenya, Serbia, South Africa, Thailand – to name a few. As such, there may be projects that are indeed implemented in these countries but the numbers may be skewed slightly high. All countries with an IUCN office are indicated with a dagger (†).

¹⁶ Some projects span a “global” array of geographical entities, including, but not limited to, *NetworkNature: Multi-stakeholder platform for NbS*, *RELIEF Kit*, *GEF Blue Forests*, *COP26 Climate Action Team*, *Luxembourg Blue Natural Capital Financing Facility (Lux BNCF)*, *Promoting Ecosystem based Adaptation through Friends of EbA (FEB-A)*, and *Global EbA Fund - Support for the Implementation and Upscaling of Ecosystem-based Adaptation*.

¹⁷ According to [IUCN Statutes](#), the list of States displayed under the Mediterranean region fall in one of these four statutory regions: West Asia, West Europe, Eastern Europe, North and Central Asia or Africa. All countries that are included in another region are marked with a double-dagger (§).

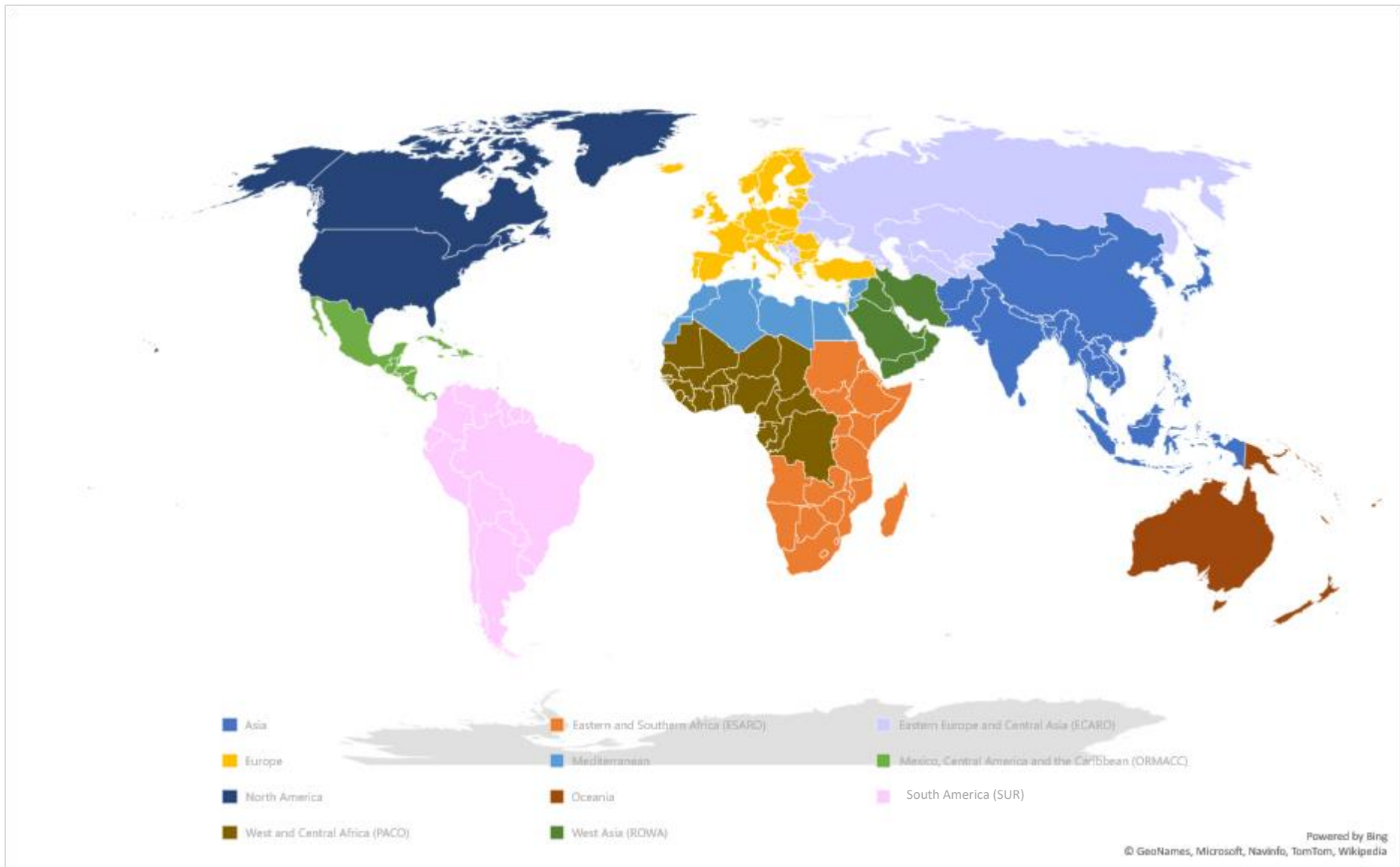


Figure 3. Geographical regions broken down by country.

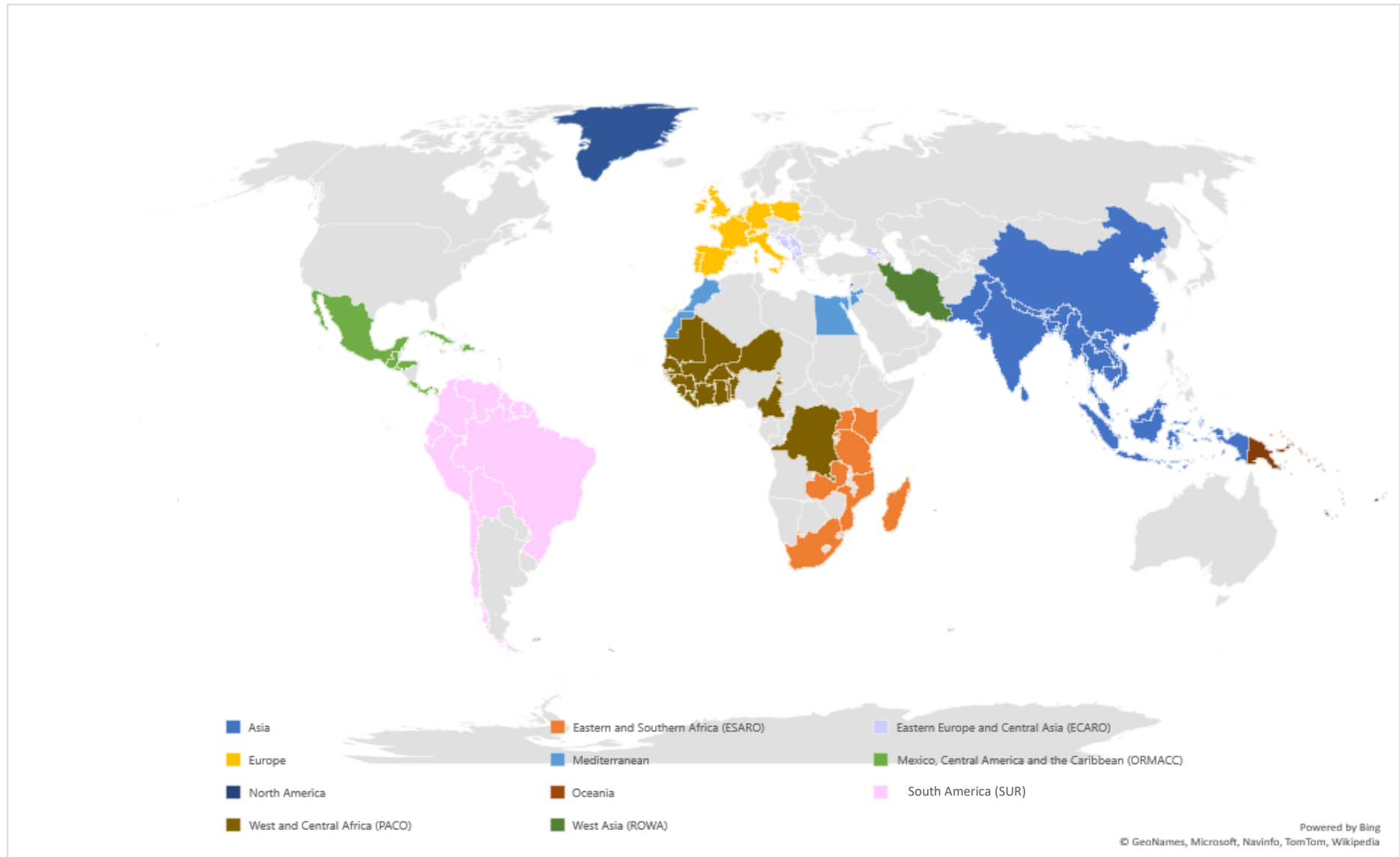


Figure 4. World map of where IUCN Nature-based Solutions for Climate Resilience projects were / are being implemented.

Many of these projects are implemented across several ecosystems¹⁸ (Figure 5), which span the whole range of IUCN’s work, including:

- Agricultural Landscapes
- Coastal and Marine Areas
- Drylands
- Forests
- Mountain Regions
- Multiple
- Other
- River Basins
- Urban
- Wetlands

Of the 100 projects analysed, the largest proportion (25%) of EbA related projects are implemented in coastal and marine areas (Figure 5). Closely thereafter, 20% of projects are implemented across multiple ecosystems, followed by 18% in other ecosystems and 8% each across wetlands, drylands and forests.

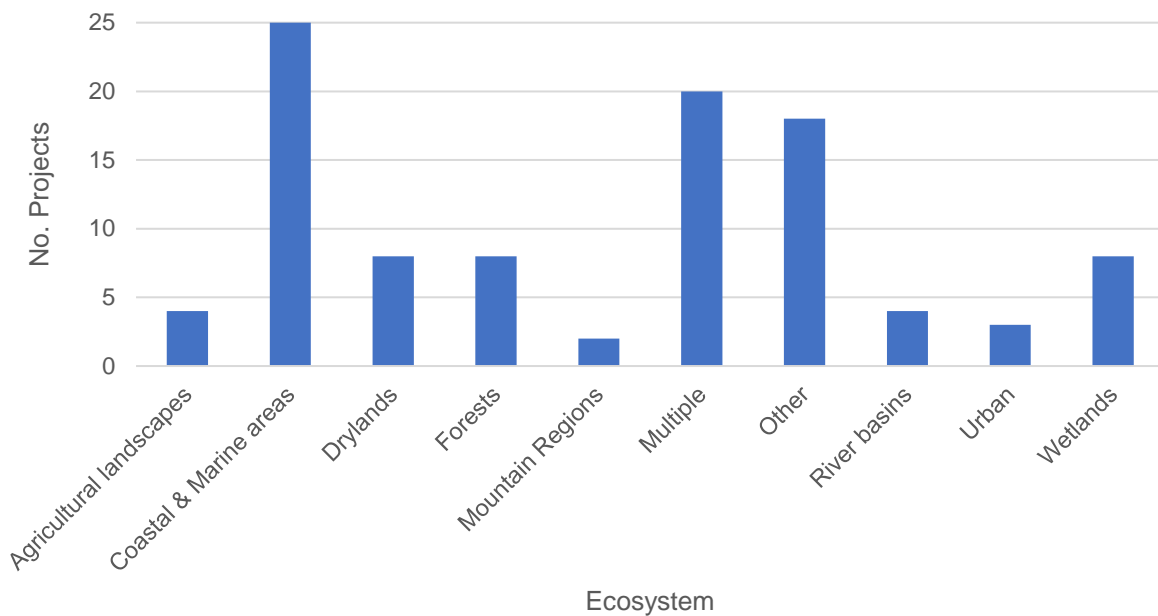


Figure 5. Ecosystems of implementation.

While covering the regions and ecosystems as stated above, the projects address specific areas, including coral reefs, mangrove forests, juniper forests, Andean highlands, Mekong delta, and Amazon river basin. Many projects are trans-boundary and are implemented across different ecosystems; therefore, overlaps between different ecosystems may be present (Figure 6).

¹⁸ While there may be overlap in these ecosystem categories, these categories are distinct for the purposes of this analysis. Any projects that covered multiple ecosystems (according to those listed herein) fall under the category of “multiple”. Any projects that covered a different ecosystem altogether (again, according to those listed herein), fall under the category of “other”.

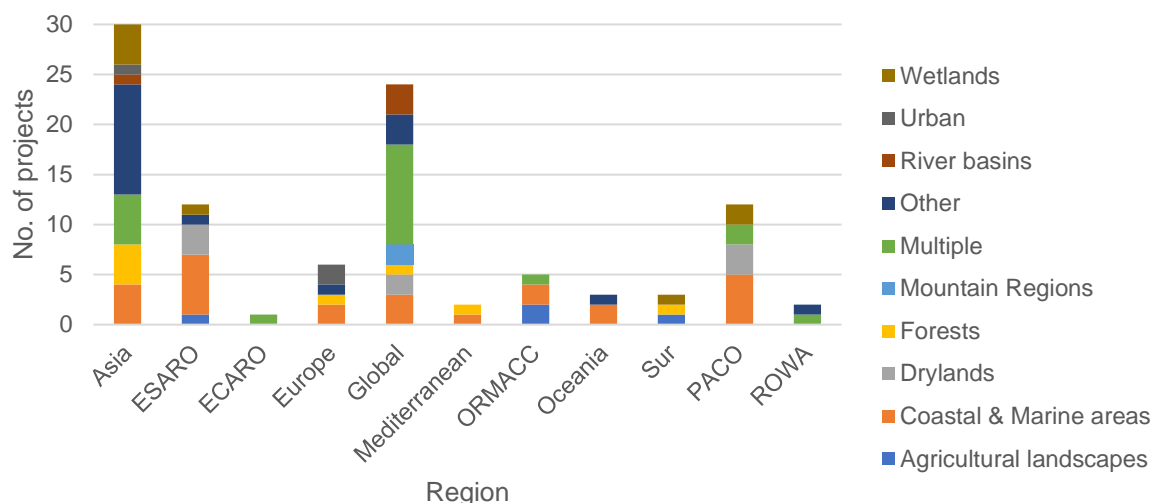


Figure 6. Projects, ecosystems and regions.

3.2. Projects by geographical region and current status

Of the total of 100 projects analysed¹⁹, the region having implemented or implementing the biggest proportion (30%) of EbA related projects is Asia, across 16 countries (Figure 10). Closely thereafter, 24% of projects are implemented across a global setting, followed by 12% across 11 countries in ESARO, 12% across 18 countries in PACO, 6% across 11 countries in Europe, and 7% across both SUR and ORMACC.

While 36% of these projects have been completed to date (Closed (D) in IUCN Portal), 63% remain ongoing (Contract (C) in the IUCN Portal) (Figure 7). The number of projects completed, ongoing or proposed divided up by geographical region shows that, similar to overall project statuses, the majority of projects in most regions are currently ongoing (Figure 8). The largest proportion of projects started in 2016 (20 projects), 2017 (18), and 2019 (18), while the largest proportion of projects plan to be completed in 2021 (11) and 2022 (13) (Figure 9).

¹⁹ A number of the projects mapped are implemented across multiple geographical regions, including, but not limited to, the following projects: *RELIEF Kit* (Asia, Europe, ESARO, Oceania, ORMACC and SUR), *IISD-IUCN EbA Planning Tool* (Asia and North America), *CLEARING HOUSE* (Asia and Europe), *BEST* (Europe, Mediterranean and ORMACC), *EbA Effectiveness* (ESARO, ORMACC and PACO) and *EPIC* (Asia, PACO and SUR), *GronGreen* (Europe and China), *SINCERE* (Europe and South American), *NetworkNature* (Europe). Twelve further projects are implemented across multiple geographical regions, including Asia, ESARO and SUR (*EbA in Mountain Ecosystems*, *Scaling up Mountain Ecosystem-based Adaptation: Building Evidence, Replicating Success, and Informing Policy*, *Protected Area Solutions*, *Integration of Amazon Protected Areas*, and *Integrated Planning*), ESARO and PACO (*Stabilizing Land Use*, *UpBASIC*, *WISE UP to Climate*, and *Enhancing the Value of Ecosystem Services in Pastoral Systems in Kenya and Burkina Faso*), and Mediterranean and ROWA (*SEARCH*, *Participatory Consultation and Drafting of the National Climate Change Adaptation Plan (NAP)*, *Climate Change adaptation through Zarqa River Basin Restoration*, and *CER*). These projects are labeled from here on as operating at a “global” level.

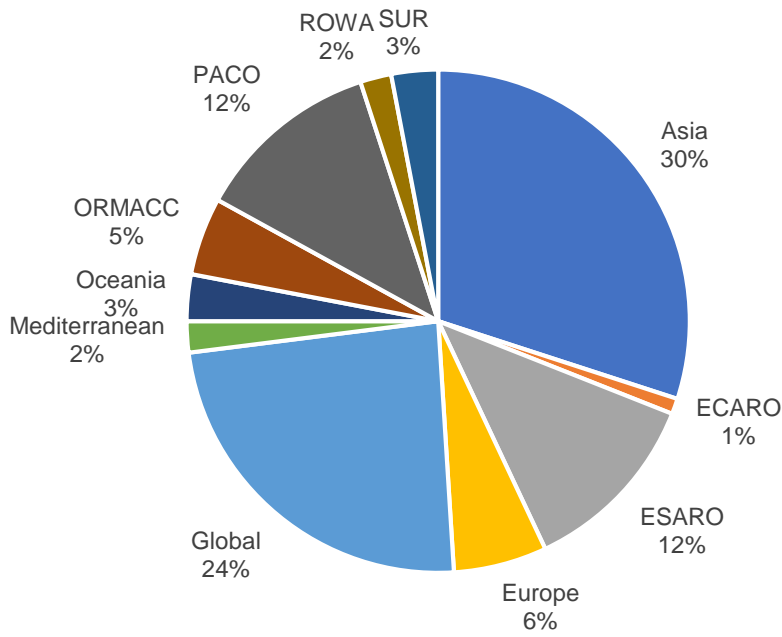


Figure 10. Distribution of projects implemented per Region [Total number of projects (n) is 100].

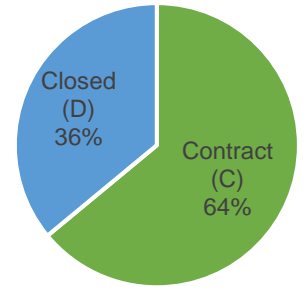


Figure 7. Current project status.

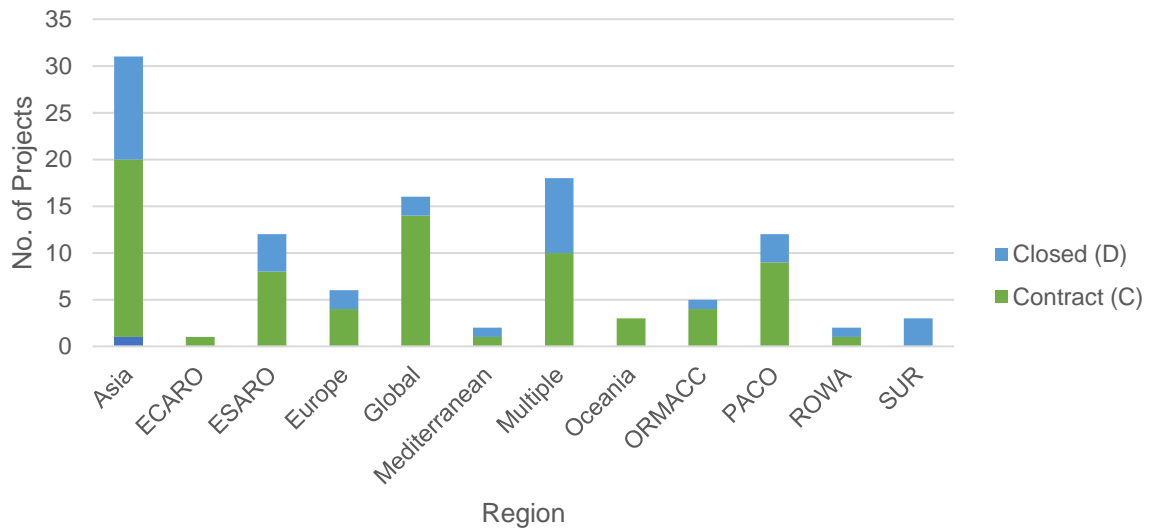


Figure 8. Project status by geographical region [Total number of projects (n) is 100].

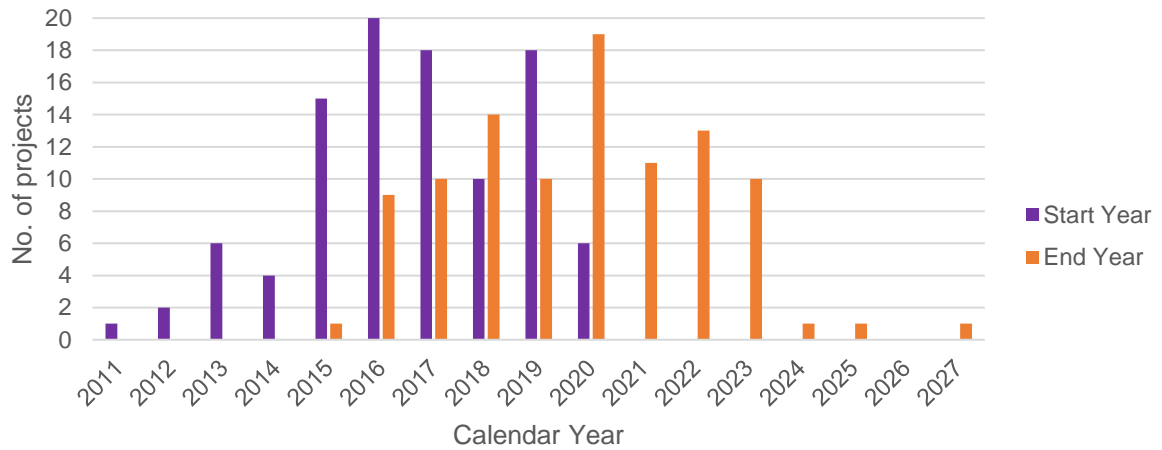


Figure 9. Project start and end years [Total number of projects (n) is 100].

3.3. Project activities

The projects' reported main activities show the breadth of projects/approaches included (Figure 11). While there is considerable overlap as the majority of projects are implemented across levels, diverse ecosystems and eco-regions and integrates environment and development, the predominant focus areas are ecosystem/landscape restoration (i.e., NRM/IWRM interventions) (26 projects) and community adaptive capacity (23).

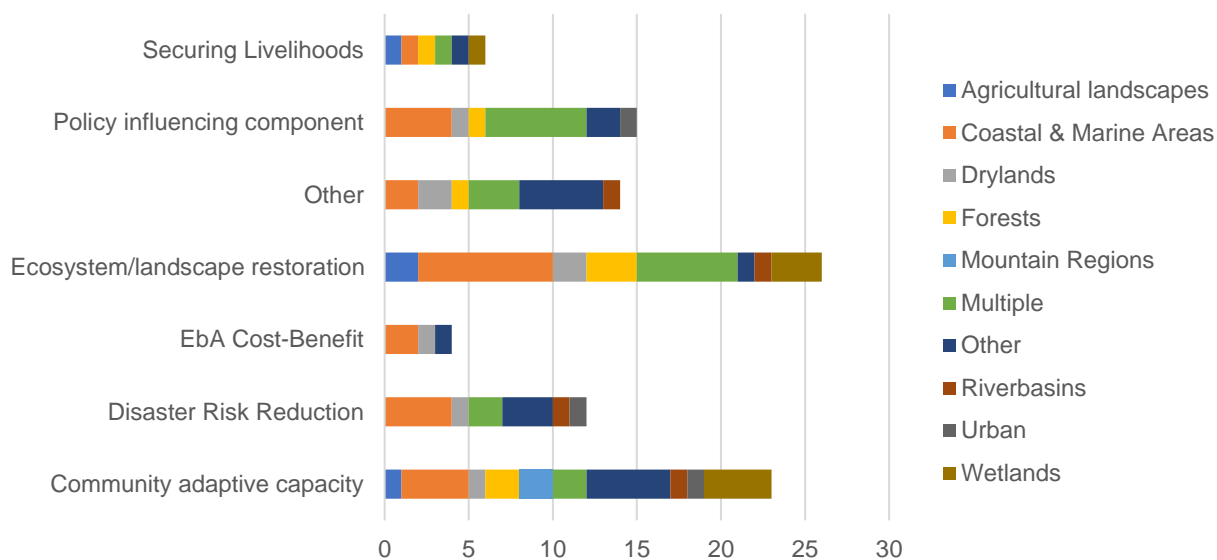


Figure 11. Frequency of the projects' focus points for EbA-activities within a specific ecosystem [Total number of projects (*n*) is 100].

3.4. Tools and methodologies employed by projects

Projects employ various tools and methodologies to evaluate impacts of climate vulnerability and adaptation as well as the specific impacts of project activities. The reported tools and methodologies depend on the project activities and expected outcomes (Table 1).

Table 1. Overview of a few of the employed tools and methodologies.

Tools and Methodologies
Adaptation to Environmental Change: Contribution of a Resilience Framework
Capacity Mapping and Capacity Building Plan
Climate Resilience Evaluation for Adaptation Through Empowerment (CREATE)
Climate Vulnerability and Capacity Analysis (CVCA) and CVCA Handbook
Community Assessment Tools
Community-based Risk Screening Tool – Adaptation and Livelihoods (CRiSTAL)
Disaster-risk Reduction (DRR) and Integrating Environmental Concerns into Disaster Risk Management
Economic Valuation Studies and Cost Benefit Analyses (i.e., Restoration Opportunity Assessment Methodology)
Management Effectiveness Tracking Tool (METT)
Monitoring and Evaluation (M&E) Systems
Multi-objective heuristic search (MOHS) optimisations – for modelling the trade-off analysis
National Assessment Tools
Participatory Assessment of Land Degradation and Sustainable Land management in Grassland and Pastoral Systems (PRAGA)
Participatory Rapid/Rural Appraisals (PRRA, PAR, PRA)
Participatory Rural Appraisal (PRA) and Participatory Planning Cycle Framework
Promoting Local Innovations (PLI) and A Facilitators Guide to PLI
Resilience Analysis Protocols (RAP)
Satellite Imagery
SINCERE Toolkit for Forest Ecosystem Services
Socio-economic Assessment Tools
Species Distribution Modelling (SDM)
SWOT Analysis (strengths, weaknesses, opportunities, and threats)
Toolkit for Planning, Monitoring and Evaluation of the capacity to adapt to climate change (TOP-SECAC) FR EN
Vulnerability Assessment Tools

A number of the projects have developed or intend to develop new methodologies and/or assessment tools (Table 2).

Table 2. Overview of a few of the tools and methodologies developed by included projects.

New tool/methodology	Project information
AbE pattern canvas: a participatory and innovative planning methodology	GO4EbA Projects , Costa Rica, El Salvador, Guatemala, Honduras, Mexico and Panama (<i>Completed 2020</i>)
Adaptation planning, implementation and evaluation addressing ecosystems and areas such as water resources (2017)	Promoting Ecosystem based Adaptation through Friends of EbA (FEBA) , Global (<i>On-going</i>)
Adaptation, Livelihoods and Ecosystems Planning Tool (ALivE)	IISD-IUCN EbA Planning Tool , Nepal and Senegal (<i>Completed 2018</i>)
Approaches to financing nature-based solutions in cities (2019)	Grow Green , Belgium, Croatia, France, Italy, Spain, Poland, United Kingdom of Great Britain and Northern Ireland (<i>On-going</i>)
Booklet for good practices for agrobiodiversity systems with an Ecosystem-based Adaptation (EbA) approach	Ecosystem based Adaptation strategies to climate change in Colombia and Ecuador (EbA Strategies) , Ecuador and Colombia (<i>Completed 2018</i>)
Comprehensive Capacity development program on EbA, focused on three target groups: schoolteachers, community leaders, and representatives from public institutions, NGOs and universities	Ecosystem based Adaptation strategies to climate change in Colombia and Ecuador (EbA Strategies) , Ecuador and Colombia (<i>Completed 2018</i>)
Didactic Units on ecosystem services for primary and secondary school	Protection of key ecosystem services by adaptive management of Climate Change endangered Mediterranean socioecosystems (Life Adapta) , Spain, (<i>On-going</i>)
EbA Tools Navigator	Ecosystem Based Adaptation approaches to adaptation: Strengthening the evidence and informing policy , Burkina Faso, Chile, Costa Rica, El Salvador, Global, Mali, Nepal, Peru, Senegal and Uganda (<i>On-going</i>)
Ecosystem-based Adaptation Monitoring and Evaluation – Indicators	Promoting Ecosystem based Adaptation through Friends of EbA (FEBA) , Global (<i>On-going</i>)
Ecosystem protecting Infrastructure and Communities: Lessons learned and guidelines for implementation (2017)	Ecosystem protecting Infrastructure and Communities (EPIC) , Burkina Faso, Chile, China, Nepal, Senegal and Thailand (<i>Completed 2017</i>)
Global Water Programme Toolkits	WISE UP to climate , Burkina Faso, Ghana and Kenya (<i>Completed 2017</i>)
Guide on good governance for adaptive management (2021)	Protection of key ecosystem services by adaptive management of Climate Change endangered Mediterranean socioecosystems (Life Adapta) , Spain (<i>On-going</i>)
Guidebook for Monitoring and Evaluating Ecosystem-based Adaptation Interventions (2020)	Promoting Ecosystem based Adaptation through Friends of EbA (FEBA) , Global (<i>On-going</i>)
Practical guidelines for establishing a Community Environment Conservation Fund as a tool to catalyse social and ecological resilience (2013)	Building Climate Disaster Resilience Programme for the Restoration of Catchment Ecosystems and Livelihood Improvement – Resilience for People and Landscapes Programme (REPLAP) , Kenya and Uganda (<i>On-going</i>)
Guiding Mediterranean MPAs through the climate change era: Building Resilience and Adaptation	Guiding Mediterranean MPAs through the climate change era: Building resilience and adaptation (MPA-ADAPT) , Croatia, France, Italy and Spain (<i>Completed 2019</i>)
Information System Platform with GIS data with information from regional networks for monitoring global change processes and identification of data sets	Protection of key ecosystem services by adaptive management of Climate Change endangered Mediterranean socio-ecosystems (AdaptaMED) , Spain (<i>On-going</i>)
Learning from Participatory Vulnerability Assessments – key to identifying Ecosystem based Adaptation options (2016)	Promoting Ecosystem based Adaptation through Friends of EbA (FEBA) , Global (<i>On-going</i>)
Making Ecosystem-based Adaptation Effective - A Framework for Defining Qualification Criteria and Quality Standards (2017) EN ES FR	Promoting Ecosystem based Adaptation through Friends of EbA (FEBA) , Global (<i>On-going</i>)

New tool/methodology	Project information
Nature Based Solutions for Climate Change Adaptation – Knowledge Gaps Portal “EbA Solutions” / EbA Toolkit (“Toolkit”)	Promoting Ecosystem based Adaptation through Friends of EbA (FEBA) , Global (<i>On-going</i>) GO4EbA Projects , Costa Rica, El Salvador, Guatemala, Honduras, Mexico and Panama (<i>Completed 2020</i>)
SenseMaker®	Stabilizing Land Use: Protected Areas (PA) Categories V and VI as Landscape Mechanisms for Enhancing Biodiversity in Agricultural Land, Ecological Connectivity and REDD+ Implementation , Congo, Global, Ghana, Tanzania and Uganda (<i>Completed 2020</i>)
Site selection criteria	Enhancing coastal and marine socio-ecological resilience and biodiversity conservation in the Western Indian Ocean - Locally Empowered Area Protection (LEAP) , Kenya, Mozambique, Seychelles and Tanzania (<i>On-going</i>)
Scaling Up Mountain EbA Programme Handbook	Scaling up Mountain Ecosystem-based Adaptation: Building Evidence, Replicating Success, and Informing Policy , Bhutan, Colombia, Kenya, Nepal, Peru and Uganda (<i>On-going</i>)
Using Nature to Reshape Cities and Live with Water: An Overview of the Chinese Sponge City Programme and Its Implementation in Wuhan (2021)	Grow Green , Belgium, Croatia, France, Italy, Spain, Poland, United Kingdom of Great Britain and Northern Ireland (<i>On-going</i>)
VoltAlarm Early Warning System: development of an End-to-End Early Warning System covering the various areas at risk of floods and drought (Further information available here .)	UpBASIC , Benin, Burkina Faso, Côte d'Ivoire, Ghana, Mali and Togo (<i>On-going</i>)
Vulnerability Assessment Tools: Habitat Vulnerability Assessment Tool ; Species Vulnerability Assessment Tool ; Village Vulnerability Assessment Tool ; Vulnerability Assessment and Adaptation Planning Guidance Note (Further Climate Change Vulnerability Assessments are available here .)	Mekong WET: Building Resilience of Wetlands in the Lower Mekong Region through a Ramsar Regional Initiative (MWET) , Cambodia, Lao PDR, Thailand and Viet Nam (<i>On-going</i>)
WEATHER - Guidance for self-assessment of governance for Ecosystem-based Adaptation: for self-assessment, analysis and planning of policy, legal and institutional frameworks related to EbA	GO4EbA Projects , Costa Rica, El Salvador, Guatemala, Honduras, Mexico and Panama (<i>Completed 2020</i>)

3.5. Knowledge products

One of the most important aspects of IUCN-wide projects is the knowledge products produced and developed. The aim is to promote the sustainable development and conservation agenda globally, in the context of several global policy frameworks including, but not limited to, the Sustainable Development Goals (SDGs), UNFCCC, UN Convention on Desertification (UNCCD), CBD and Sendai Framework. A compendium of knowledge products and further information from each project, thus far, has been compiled online (further information available is highlighted in the Annex). These include, but are not limited to, documentaries, websites, documents covering lessons-learnt, publications, case studies, brochures, fact sheets, baseline studies, policy briefs and papers, newsletters, action plans, satellite imagery analyses, environmental action plans, site information and landscape information.

4. IUCN's donors' contributions^{20,21}

In this analysis of IUCN's portfolio of projects being implemented or completed by 2020, a total of 59 donors (co-finance or single) provided financial support, totalling EUR € 230,222,288.18 across all 100 projects included. Donors range from governments, intergovernmental and non-governmental organisations to multilateral agencies and foundations at the international, national, regional and local level (Figure 12, Figure 13 and Table 3).

The **International Climate Initiative (IKI)** of the **Federal Ministry for the Environment, Nature Conservation and Nuclear Safety's, Germany (BMU)** is the largest donor, accounting for 34% of the total financial contributions (EUR € 79,347,035.00) and financing a total of 17 projects across Asia, ESARO, ORMACC, PACO, SUR as well as several global projects.²² The **European Commission** accounted for 14% of the total financial contributions (EUR € 32,630,000.00) and provided funding to 9 projects across Asia, ESARO, Europe, Mediterranean¹⁷, ORMACC, PACO, ROWA and at the global level.²³ Other major donors include:

- the **Green Climate Fund (GCF)**: 9% of total financial contributions (EUR € 21,701,300.00)²⁴;
- the **Global Environment Facility (GEF)**: 7% of total financial contributions (EUR € 15,029,317.00), supporting 4 projects across Asia and PACO (i.e., Cambodia, China, Lao PDR, Mauritania, Myanmar and Thailand);
- the **Swedish International Development Cooperation Agency (SIDA)**: 5% of total financial contributions (EUR € 11,983,599.40), supporting 4 projects across ECARO, ESARO and PACO regions (i.e., Albania, Bosnia and Herzegovina, Kosovo, Burkina Faso, Montenegro, North Macedonia, Mozambique and Serbia);
- **The World Bank**: 4% of total financial contributions (EUR € 8,797,163.60), supporting 4 projects across Asia and PACO regions (i.e., Benin, Burkina Faso, Côte d'Ivoire, Ghana, Mauritania, Sao Tome and Principe, Senegal, Togo and Viet Nam);
- the **Norwegian Agency for International Development (NORAD)**: 3% of total financial contributions (EUR € 8,007,370.00), supporting Mangroves for the Future (MFF) in Asia (i.e., Bangladesh, Cambodia, China, India, Indonesia, Malaysia, Maldives, Myanmar, Pakistan, Seychelles, Sri Lanka, Thailand and Viet Nam); and
- the **United States Agency for International Development (USAID)**: 3% of total financial contributions (EUR € 7,102,049.00), supporting 2 projects in Asia (i.e., Lao PDR and Maldives).

²⁰ All figures are based on the reported amounts in the IUCN Project Portal, and might vary from the exact project funding received from the donor to IUCN and/or the main implementing agency.

²¹ All foreign currencies were converted to EUR using the exchange rate of August to December 2020.

²² This includes projects in Benin, Bhutan, Burkina Faso, Cambodia, Chile, China, Colombia, Congo (the Democratic Republic of the), Costa Rica, Çosta Rica, Ecuador, El Salvador, Ghana, Guatemala, Honduras, Kenya, Lao PDR, Mali, Mexico, Mozambique, Nepal, Panama, Peru, Senegal, Seychelles, Tanzania (United Republic of), Thailand, Togo, Uganda, Viet Nam and Zambia.

²³ This includes projects in Anguilla, Aruba, Belgium, Benin, Bermuda, British Virgin Islands, British Indian Ocean Territory, Cayman Islands, China, Curaçao, Dutch Caribbean, Egypt, Falkland Islands (Malvinas), France, French Guiana, French Polynesia, French Southern Territories, Gambia, Germany, Ghana, Greenland, Guadeloupe, Guinea, Guinea Bissau, Iran (Islamic Republic of), Jordan, Lebanon, Liberia, Martinique, Montserrat, Morocco, New Caledonia, Palestine, Pitcairn, Poland, Portugal, Rwanda, Saint Martin, Saint Barthélemy, Saint Helena (Ascension and Tristan de Cunha), Saint Martin, Saint Pierre and Miquelon, Senegal, Sierra Leone, Sint Maarten, South Georgia and the South Sandwich Islands, Spain, Togo, Turks and Caicos Islands and Wallis and Futuna.

²⁴ This includes *Building livelihood resilience to climate change in the upper basins of Guatemala's highlands* (SUR) and co-supporting *Building Resilient Communities, Wetland Ecosystems and Associated Catchments in Uganda* (ESARO).

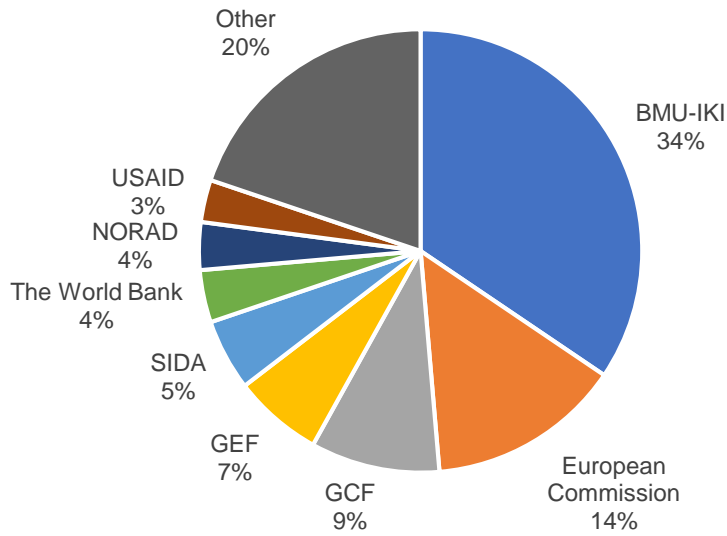


Figure 12. Division of major donors that provided financial support Ebola related projects [Total number (*n*) of donors is 59. Category “Others” includes Donor organisations with a percentage value less than 3%].

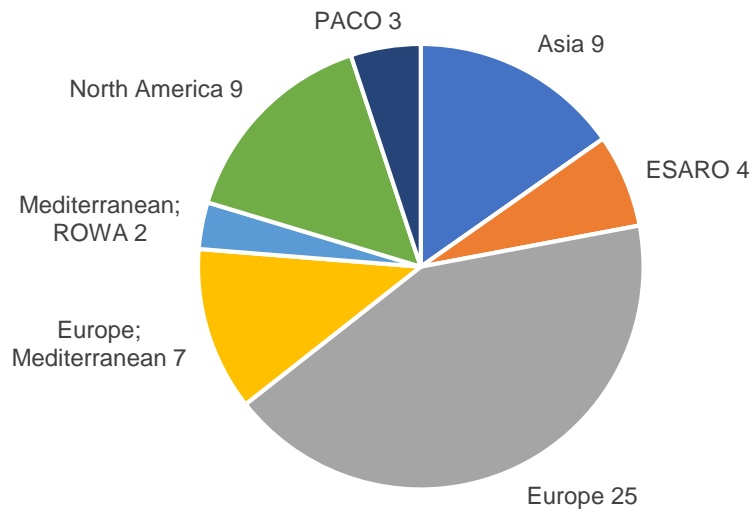


Figure 13. Number of donors by geographical region, based on location of the donors’ headquarters or main office (not necessarily where the supported projects are implemented) [Total number (*n*) of donors is 59]¹⁷.

Table 3. An overview of all donors by geographical region, based on location of the donors' headquarters or main office (not necessarily where the supported projects are implemented).

Region	Donors
Asia	Bangladesh Parjatan Corporation Forest Department - Government of Sindh G.B. Pant Institute of Himalayan Environment and Development, India International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) Keidanren Committee on Nature Conservation, Japan Korea International Cooperation Agency Southasia Institute of Advanced Studies Sri Lanka Business and Biodiversity Platform Thai Union Group PCL
ESARO	Government of Uganda through the Ministry of Water and Environment International Livestock Research Institute The International Center for Research in Agroforestry (ICRAF) UN Women Tanzania
Europe	Austrian Development Agency BMU Danish International Development Agency (DANIDA) Darwin Initiative Deltares Département fédéral de l'économie, de la formation et de la recherche DEFR, Switzerland EU Interreg Programme European Commission GIZ GmbH Global Environment Facility (GEF) Good Energies Foundation Green Climate Fund (GCF) International Labour Organisation Kreditanstalt für Wiederaufbau (KfW), Germany Ministry of Foreign Affairs of Denmark Ministry of the Environment and Energy Sweden Norwegian Agency for International Development Stockholm Resilience Center Swedish International Development Cooperation Agency (SIDA) UN Development Programme (UNDP) UN Environment Programme (UNEP) UNEP/GEF World Meteorological Organization - funded by the Adaptation Fund World Wildlife Fund (WWF) – Deutschland
Europe; Mediterranean ¹⁷	Agencia Española de Cooperación Internacional para el Desarrollo, Ministerio de Asuntos Exteriores y de Cooperación (AECID), Spain EU Life Programme Food and Agriculture Organisation of the UN (FAO) International Office for Water, France Ministère des Outre-Mer, France Ministry of ecological and inclusive transition, France (Ministère de la Transition écologique et solidaire) The Total Foundation; Ministry of Foreign Affairs, Luxembourg
Mediterranean; ROWA ¹⁷	Ministry of Agriculture, Jordan Royal Norwegian Embassy in Lebanon
North America	ChildFund International International Institute for Sustainable Development (IISD) Secretariat of the Convention on Biological Diversity Secretariat of the Convention on Biological Diversity through the Japan Biodiversity Fund The Coca-Cola Foundation The Nature Conservancy (TNC) The World Bank UN International Children's Emergency Fund (UNICEF) United States Agency for International Development (USAID)
PACO	Ecological Monitoring Centre, Senegal Nature and Development Foundation (NDF) Tetra Tech ARD/West Africa Biodiversity & Climate

5. Recommendations

5.1. Progress on 2014 Recommendations²

IUCN works on a broad scope of projects, across geographical regions, thematic areas, and ecosystems, with a range of budgets, partners and other elements – all of which has been highlighted through this analysis. This analysis is a crucial on-going step, building upon the 2014 Analysis², and is a valuable platform to continue to build IUCN’s climate change adaptation and resilience projects related policy and learning frameworks. The following results showcase the growth from 2014 until current, by comparing the recommendations in the 2014 Analysis² and gains already made (Table 4).

Table 4. Progress made on 2014 Recommendations², where the right column details a few of the many examples of progress and provides further suggestions.

2014 Recommendations ²	Progress and further suggestions
<p>1) The major characteristic of EbA approaches, employed by the various IUCN projects, is that they are flexible. This flexibility allows them to undertake no-regret activities effectively for the benefit of the target communities. However, going beyond no-regret options and striving towards sustainable adaptation and resilience enhancement, this flexibility seems to cause problems as it can make it <i>ad hoc</i>, reactionary and donor driven. Therefore, there is a need to define a set of adaptation criteria, under which all objectives of EbA related outcomes, outputs and activities can fall. However being able to implement, early in a project, a set of no-regrets measures is a really important means of building trust.</p>	<p>In 2015, member organisations of the Friends of EbA (FEBA) network, for which IUCN serves as the secretariat, developed key elements, principles, criteria and indicators for defining EbA and for strengthening its integration into policy frameworks and implementation measures at different levels based on a review and analysis of more than 30 publications from FEBA members and other actors. This culminated in the publication Making Ecosystem-based Adaptation Effective - A Framework for Defining Qualification Criteria and Quality Standards. The goal of the publication was two-fold:</p> <ol style="list-style-type: none"> 1. To sharpen understanding among policy makers and practitioners about what qualifies as EbA; 2. To provide guidance on the quality of EbA measures. <p>In addition, in 2020, IUCN launched the Global Standard on Nature-based Solutions, which, building on the work done to develop the <i>Making Ecosystem-based Adaptation Effective – A Framework for Defining Qualification Criteria and Quality Standards</i> (EN ES FR)¹³, together with a wide range of frameworks and methodologies, lays out 28 indicators for Nature-based Solutions across 8 criteria. The Standard provides a robust framework for designing and verifying NbS to concrete solutions-oriented outcomes thus facilitating learning and the strengthening of effectiveness, sustainability and adaptability of NbS.</p>
<p>2) This analysis calls for defining and developing a standard operational framework for EbA. Such a framework should not be a strait jacket but rather a guiding tool so that that each activity planned and undertaken is conducted and managed in the context of a set of defined principals. This framework could be adapted according to local specific conditions to address adaptation deficits and vulnerabilities of communities and ecosystems.</p>	<p>Relevant to the previous point, the developed elements and qualification criteria of EbA serve as a guiding tool. EbA is heavily context-specific and approaches will vary based on climate impacts, ecosystems and socio-political contexts in the target regions as such the principles serve a guide, which can be localised as needed.</p>
<p>3) Along with developing the operational framework, it is crucial to have appropriate tools for implementing the different EbA approaches. It is important</p>	<p>IUCN, together with the International Institute for Environment and Development (IIED), UNEP’s World Conservation Monitoring Centre (WCMC) and GIZ, developed a navigator</p>

2014 Recommendations ²	Progress and further suggestions
<p>to have an integrated tool (or set of tools that contribute to one integrated whole) that addresses not only communities' vulnerabilities but also those faced by local biodiversity and ecosystems. In this way, IUCN's value addition to climate adaptation can be ensured through employing a holistic approach; one addressing all components of overall human wellbeing and sustainable development. In this regard, tools being developed and those used currently should be further examined for their utility and efficiency. Cross-regional linkages will be crucial to effectively build upon existing strengths and consolidate mostly stand-alone good practices into organisational learning. It is clear that there is a vast array of tools being used for various reasons in different projects. IUCN needs to evolve some means to assess the real use and value of these tools and approaches for EbA, with a view to have a more appropriate and strategically (in the context of EbA) defined set of tools and approaches.</p>	<p>of EbA tools to help practitioners and policymakers include EbA into their climate adaptation planning. The EbA Tools Navigator is a searchable database of over 250 tools and methods relevant to EbA, including methodologies and guidance documents from around globe, thus prioritising and showcasing cross-regional similarities and linkages. The tools featured cover the full project cycle from planning and assessment to implementation and valuation to monitoring and mainstreaming. The tools navigator serves to provide practitioners with tools that are relevant at any stage. Users are also able to provide information on additional tools, which may not yet be included. This is a first step toward assessing the real use and value of the tools and approaches applied in EbA.</p>
<p>4) To ensure the integration of biodiversity aspects in the development of a more integrated vulnerability assessment tool and methodology, the active involvement IUCN's Biodiversity Programme will be essential; this could include use of IUCN's knowledge products (especially the risk assessment tools – such as the Red List of Threatened Species and the Red List of Ecosystems).</p>	<p>Originally planned to be the “Super Year for Biodiversity”, 2020 instead brought new global attention to the role biodiversity plays in securing human health, well-being and resilience – including how climate change, habitat degradation and land use changes both contribute to disease outbreaks and undermine our ability to respond and recover. With the planning of response and recovery initiatives around the world, climate change adaptation and resilience approaches, including EbA and Eco-DRR, provide a key mechanism for green recovery by addressing underlying environmental and climactic drivers to support human health and livelihoods and build holistic resilience. In this light, IUCN is developing a number of One Health initiatives including partnering with both the World Health Organization and EcoHealth Alliance, among others, to bring coherence to NbS and One Health as coordinated approaches.</p> <p>Further, the role of healthy and resilient ecosystems in providing benefits to people is recognised not only under the CBD, but in various other major policy frameworks, such as the 2030 Agenda for Sustainable Development, the United Nations Framework Convention on Climate Change (UNFCCC) and its Paris Agreement, the Ramsar Convention on Wetlands, the United Nations Convention to Combat Desertification (UNCCD) and the Sendai Framework for Disaster Risk Reduction. Increased focus on incorporating nature into a range of sectoral and overarching strategies to meet societal challenges is a cornerstone of addressing current global sustainability challenges. As such, the Friends of EbA (FEBA) network and the Partnership for Environment and Disaster Risk Reduction (PEDRR) have published a joint paper to promote Nature-based Solutions in the post-2020 Global Biodiversity Framework, which sets out general principles by which Nature-based Solutions can contribute to addressing biodiversity loss and ensuring people benefit from nature.</p>
<p>5) There is a need to develop indicators that measure effective adaptation. These should be general adaptation indicators as well as those more specific to EbA. At</p>	<p>Effective monitoring and evaluation of EbA outcomes is essential to learn from best practices and reduce uncertainties about effectiveness and long-term impacts. Acknowledging this</p>

2014 Recommendations ²	Progress and further suggestions
<p>the moment these are either missing or too broad, and as such unable to provide hard data regarding EbA effectiveness. This project mapping exercise can provide some valuable learning on the role of appropriate indicators.</p> <p>6) The above mentioned adaptation criteria and indicators should be developed a) based on learning to date from this analysis, and b) with stakeholder participation. Most importantly, these should not only include perceptions regarding EbA effectiveness but provide for hard evidence and cost benefit analyses, that also demonstrate the importance of additionality. The adaptation criteria and indicators should be used to assess and consolidate the knowledge of projects that are not directly related to EbA. This can also feed into the large evidence base.</p>	<p>need, Friends of Ecosystem-based Adaptation (FEBA) partners came together to produce the Guidebook for Monitoring and Evaluating Ecosystem-based Adaptation Interventions. Drawing from FEBA’s wide network of practice-based experience, and the collaboration and expertise of the working group on Monitoring & Evaluation (M&E) of EbA, the Guidebook provides practitioners and planners with a clear process for developing and operationalising effective M&E for EbA. This guidebook explicitly includes a need for stakeholder participation in the entire EbA process.</p> <p>Stakeholder participation is a critical component of climate change adaptation and resilience programmes, such as those described in this analysis. To name a few, stakeholder participation is explicit in guidelines (e.g., Making the Case for Ecosystem-based Adaptation: The Global Mountain EbA Programme in Nepal, Peru and Uganda, Negotiate: Reaching Agreements Over Water), tools (e.g., SenseMaker®), and projects (e.g., NetworkNature: Multi-stakeholder platform for nature-based solutions, Improving the resilience to climate change of the continental wetlands of Mauritania (ARCC / ZH), and Strengthening the communal management of Rangeland around the Oshtorankuh Protected Area to improve the resilience of the community and nature in Iran) described within this analysis.</p> <p>The project <i>Building Climate Disaster Resilience Programme for the Restoration of Catchment Ecosystems and Livelihood Improvement – Resilience for People and Landscapes Programme</i> (REPLAP) undertook baseline assessments that and developed project indicators and an M&E framework to guide project implementation. Additionally, <i>Guiding Mediterranean MPAs through the climate change era: Building resilience and adaptation</i> (MPA-ADAPT) similarly conducted and produced protocols for long-term monitoring. In a similar vein, <i>Nature-based Solutions for Resilient Societies in the Western Balkans</i> (ADAPT) will pilot two NbS interventions in Albania and Serbia, including M&E frameworks and specific indicators. In addition to M&E frameworks specific to the pilot interventions, ADAPT is also developing a broader M&E process to monitor and learn from NbS for CCA and DRR projects implemented by IUCN. All of these projects exemplify the ability to apply and develop context-specific indicators to sustain M&E in the long-term. All of these projects exemplify the ability to apply and develop context-specific indicators to sustain M&E in the long-term.</p>
<p>7) The economic valuation, cost benefit analyses, and assessments of long-term (usually beyond the confines of the project cycle) durability of outcomes need to become an integral part of the implementation plan to support the importance of EbA as compared to other adaptation options (especially hard engineering possibilities). This analysis would help in developing an economic argument for infusion of EbA approaches into overall conservation and development planning.</p>	<p>Cost-benefit analyses can provide an objective methodology for quantifying EbA and can be used to guide decision making, including comparing potential EbA interventions with business as usual scenarios or other adaptation options.</p> <p>The publication Making the Case for Ecosystem-based Adaptation: The Global Mountain EbA Programme in Nepal, Peru and Uganda, developed through the Mountain EbA Programme implemented in Nepal, Peru and Uganda, presents lessons learnt throughout the process of ‘making the case for ecosystem-based adaptation (EbA)’ to government and other</p>

2014 Recommendations ²	Progress and further suggestions
	<p>stakeholders. Chapter 3, Making the economic case for EbA, provided the economic case for EbA and the cost-benefit analysis (CBA) carried out through the programme.</p> <p>The project <i>Building the Resilience of Communities and their Ecosystems to the Impacts of Climate Change in Micronesia and Melanesia (RMI-TNC Project)</i> conducted cost-benefit analysis and ecosystem services assessment for Wotho and Mejit Atolls, while the project <i>Management of mangrove forests from Senegal to Benin (Mangrove PAPBio C1)</i> also measured economic, social and cultural values of ecosystem services and goods.</p> <p>Although these are only three examples of the many projects that include an economic valuation piece, these projects showcase and build upon the economic argument for the growth of EbA.</p>
<p>8) Pilot projects in collaboration with Regions and Thematic Programmes need to be analysed from the perspective of successes and the knowledge generated from them. This experience should be consolidated and analysed to provide policy guidance on how EbA can be integrated at all levels and sectors.</p>	<p>IUCN, IIED and UNEP-WCMC beginning in 2017 assessed 13 EbA projects in 12 countries across Asia, Africa and Latin America, working to assess the effectiveness of EbA in these diverse projects. This study culminated in a publication which includes recommendations for policy makers, entitled <i>Is ecosystem-based adaptation effective? Perceptions and lessons learned from 13 project sites.</i></p> <p>Friends of EbA (FEBA) is a global collaborative network of 80+ agencies and organisations involved in Ecosystem-based Adaptation (EbA) working jointly to share experiences and knowledge, to improve the implementation of EbA related activities on the ground, and to have a stronger and more strategic learning and policy influence on EbA. FEBA works to synthesise multi-stakeholder knowledge on EbA; disseminate this knowledge by convening the global EbA community around high-level events, technical workshops, and expert working groups; and raise awareness and understanding of EbA in adaptation planning processes and multilateral policy frameworks. The CBD COP recognises FEBA as a key partner “to support Parties in their efforts to promote ecosystem-based approaches to climate change adaptation” (Decision 14/5). IUCN serves as the FEBA Secretariat.</p> <p>The pilots carried out in the frame of Nature-based Solutions for Resilient Societies in the Western Balkans (ADAPT) for instance will apply the IUCN Global Standard for Nbs throughout all phases of design, implementation and monitoring. Policy analysis is one important part of these, including the development of context specific policy effectiveness indicators. Through the strategic collaboration with IUCN thematic programmes (GEMP, GWP, GFCP, GPGR), local and regional learning and knowledge can be consolidated at global level, while global perspectives and knowledge from other regions can be fed into ADAPT activities.</p>

2014 Recommendations ²	Progress and further suggestions
<p>9) All of the above will help generate data and enhance knowledge, which in turn can be used to develop a toolkit to implement, monitor and assess EbA outcomes from all IUCN projects.</p>	<p>The Guidebook for Monitoring and Evaluating Ecosystem-based Adaptation Interventions contributes to the development of a toolkit for monitoring EbA outcomes, including within IUCN's portfolio.</p> <p>In the spirit of expanding the audiences for EbA, the <i>project Protection of key ecosystem services by adaptive management of Climate Change endangered Mediterranean socio-ecosystems (Life Adapta)</i> produced Didactic Units on ecosystem services for primary and secondary school, which allow for EbA and adaptation work to be taught to younger individuals. Broadening those who understand and recognise the importance of EbA and NbS will allow for greater uptake globally.</p>
<p>10) Climate change and its impacts are now a reality. No conservation and development project can achieve desired impacts without taking this into account. Hence, IUCN needs to undertake “climate smart conservation” for both biodiversity and ecosystem management. This modus operandi would ensure that the explicit appreciation of multiple outcomes, including climate-related, is sought. Thus, the main objectives of biodiversity & ecosystem conservation and well managed protected areas must be aimed at along with integrating the sustainable use of biodiversity and ecosystem services for enhancing human resilience against climate change into these efforts.</p>	<p>IUCN's 2021-2024 programme¹¹ includes the threat of climate change as one of four key pillars. This prioritises climate action within the overall organisation and more strongly integrates climate considerations programme-wide. At this critical time in our planet's history, IUCN has a crucial role to play in helping marshal the conservation community, the public at large, the private sector and governments at all levels, to take the necessary actions and promote just and ecologically sustainable climate solutions.</p> <p>Community resilience, human and animal health, and natural habitats are all interconnected. Healthy ecosystems support human well-being, livelihoods, and resilience – as well as public health (as made explicit in the One Health approach). Almost every major emerging zoonotic disease pandemic over the past couple of decades — including COVID-19 — has jumped to people from wildlife, often starting in communities enduring extreme strain on natural resources. By restoring, protecting, and promoting the sustainable use of ecosystems to address climate change, EbA strategies also have the potential to reduce future emerging disease risk at both a local and global scale. As such, IUCN is working to streamline the holistic view of NbS for climate change and One Health as coordinated approaches.</p> <p>FEBA is a founding member of the Global Green-Grey Infrastructure Community of Practice, led by Conservation International. The Community of Practice serves as a forum for collaboration across the conservation, engineering, finance, and construction sectors to generate and scale green-grey climate adaptation solutions. Green-grey infrastructure combines conservation and/or restoration of ecosystems with the selective use of conventional engineering approaches to provide people with solutions that deliver climate change resilience and adaptation benefits. This multi-disciplinary community is addressing specific issues related to green-grey economics and finance, identifying case studies of hybrid solutions in action, and defining science-based engineering guidelines. FEBA and the Green-Grey Community of Practice launched the Practical Guide to Implementing Green-Grey Infrastructure in late 2020.</p>

2014 Recommendations ²	Progress and further suggestions
<p>11) It is therefore recommended that once adaptation criteria and indicators are developed, and agreed to within IUCN, EbA is made a cross-cutting theme across all IUCN projects in a manner that reflects the importance of additionality and not “business as usual”. This will mean that adaptation criteria are met within projects, and thus ensure the incorporation of climate change associated risks into biodiversity and conservation focused initiatives. This will also enable IUCN to more strategically tap into donor funds, where climate change related projects are an increasingly high priority. EbA is one area where strong synergies can be developed between adaptation, mitigation, and loss & damage – the fast emerging issue at UNFCCC.</p>	<p>Although adaptation indicators are still a work in progress, the FEBA Guidebook for Monitoring and Evaluating Ecosystem-based Adaptation Interventions begins to address the need for an M&E framework for EbA. This work has been continued through other IUCN projects, now in the pipeline, including those related to COVID-19 recovery and One Health, technology, agroecology, coastal and marine adaptation, and more. However, there is still room to grow and these synergies will continue to be built upon into the future.</p> <p>Speaking to further synergies, the project Guiding Mediterranean MPAs through the climate change era: Building resilience and adaptation (MPA-ADAPT) has developed a brochure of recommendations on how to reinforce NbS in Marine Protected Areas (MPAs). While this example may be specific, it is clear that IUCN projects included herein are highlighting and capitalising on the need to develop cross-sectoral approaches.</p>
<p>12) An organisation’s biggest assets are its staff. In the case of IUCN, staff have vast and diverse experiences, both at the field and policy levels, that is essential for the implementation of effective project activities. However, there is no systematic mechanism to capture this knowledge and promote mutual learning in a way that could give IUCN a comparative advantage. Many times, innovative tools are produced and pilot tested but still others start from scratch and reinvent ‘square wheels’. There is a need to improve inter Regional and inter Thematic communications to document all learning. In this age of information overload, the challenge is to come up with an efficient mechanism to promote learning and cross fertilisation, thus making IUCN a truly learning organisation.</p>	<p>2020 and the COVID-19 pandemic have demonstrated how deeply linked our diverse global challenges (health, poverty, climate change, biodiversity conservation) are and in order to be effective, our solutions need to be equally diverse and connected. Interdisciplinary and inter-sectoral linkages are critical to achieve adaptation goals.</p> <p>There has been a recent shift seen from those organisations and government agencies that fund adaptation projects globally (i.e. BMU IKI), to stress inter- and multi-disciplinary approaches in their calls for proposals. As such, IUCN has conducted and is conducting sustained cross-programmatic and multi-regional proposal development to use the strengths of the organisation to plan and implement more sustainable and holistic programmes.</p> <p>Given the complexity of NGOs and similar organisations, further functional linkages need to be established, both within IUCN and with external partners. Growth is needed to expand the current and projected project portfolio to build bridges across academic siloes and to collaborate with non-traditional partners, so that one another’s specialities and perspectives can be added. This will provide value addition to not only projects specifically, but to organisations at large.</p> <p>Collaborations such as enabled through FEBA working groups are further opportunities to strengthen IUCN’s One Programme Approach.</p>

5.2. Recommendations for 2021-2024

The findings of this current analysis highlight several gaps which align with IUCN’s institutional direction on NbS and climate change as laid out in the Nature 2030: IUCN Programme 2021-2024¹¹ and IUCN’s Climate Policy messages as delivered to the 25th UNFCCC Conference of Parties²⁵. Building upon various other key publications on NbS and EbA from IUCN and key partners^{Error! Bookmark not defined.,8,10}, the following initial recommendations are provided, where the focus is to showcase IUCN’s work on EbA, NbS, and related projects, and promote intra- and inter-IUCN learning:

- 1) EbA and all NbS approaches cannot be successfully implemented without the **full engagement and consent** of Indigenous Peoples and local communities in a way that respects their cultural and ecological rights. This is a critical recommendation that should stretch into all NbS and climate change adaptation approaches, including EbA and Eco-DRR directly. This includes the “Principle on Free, Prior and Informed Consent: IUCN’s Environmental and Social Management System (ESMS) describes FPIC as “the right of a party with legitimate rights to their lands, territories and resources to freely grant authorisation to another party, within existing legal frameworks (including customary law), for the execution of certain activity that implies access to, and use of, tangible or intangible resources of the party granting authorisation, or that may affect such lands, territories and resources. By using this definition, IUCN clarifies that it’s ESMS FPIC principle applies to indigenous peoples as well as to other rights-holders such as local communities.”²⁶
- 2) People and communities lie at the centre of all NbS including EbA and Eco-DRR. In strengthening this central role, there is need for the systematic **strengthening of the governance aspects** of EbA measures to address the differentiated and collective rights and benefits of society. To this end, integrating IUCN’s Natural Resource Governance Framework developed by the Global Governance and Rights Programme into project design will serve to address the current ad-hoc manner in which questions of rights and benefits are currently integrated into projects and further bolster Criterion 5 of the *Making Ecosystem-based Adaptation Effective – A Framework for Defining Qualification Criteria and Quality Standards*¹³: *EbA Supports equitable governance and enhances capacities*. The source-to-sea governance approach combines communities of practice from different sectors, including land, water, coastal, marine, energy and more, to produce guidance²⁷, and serves as a good example.
- 3) NbS for adaptation and resilience, as a response to climate change and related impacts, must continue to be **informed by both scientific and traditional assessment and knowledge** – namely to avoid adverse outcomes for both nature and people. This will happen through the systemic identification, assessment and communication of appropriate principles, safeguards and solutions. The existing and growing links between community-based adaptation (CBA) and NbS emphasize the issue of engagement and empowerment

²⁵ IUCN (2019). IUCN’s key messages for UNFCCC COP25. https://www.iucn.org/sites/dev/files/iucns_key_messages_for_unfccc_cop25_-_en.pdf

²⁶ Springer, J. (2016). IUCN’s Rights-Based Approach: A Systematization of the Union’s Policy Instruments, Standards and Guidelines. https://www.iucn.org/sites/dev/files/content/documents/iucn_rba_systematization_compiled.pdf

²⁷ Mathews, R. E., Tengberg, A., Sjödin, J., & Liss-Lymer, B. (2019). Implementing the source-to-sea approach: A guide for practitioners. SIWI, Stockholm <https://www.siwi.org/publications/implementing-the-source-to-sea-approach-a-guide-for-practitioners/>

of local communities, which also emphasizes the topic of dialoguing and connecting traditional/local and scientific knowledge.

- 4) EbA, through its combined focus on biodiversity loss, climate change and sustainable development, has the potential to address climate impacts, reduce biodiversity loss and narrow the gap between country's climate commitments and their development needs in delivering urgent and ambitious climate action. Integrating NbS for adaptation and resilience across programmes and as part of overall adaptation strategies serves to provide **adaptation benefits while providing co-benefits**, including reducing greenhouse gas emissions, creating and improving habitat and conserving biodiversity. Co-benefits also include others according to the societal challenges identified in the NbS conceptual framework.
- 5) While the existing criteria for EbA¹³ and the Global Standard on Nature-based Solutions⁶ have contributed toward standardising NbS and related approaches, more work is needed in **training strong NbS, EbA and Eco-DRR practitioners**. A widely disseminated, online certification course on EbA can provide training in EbA principles, criteria, standards, monitoring and evaluation and communication to an increasing number of global practitioners, further mainstreaming the approach. Engaging in these processes of capacity building encompasses perspective from diverse stakeholders, including actors/decision makers who manage the landscape through territorial and zoning plans, producers, private sector, etc. Simplifying the conceptual aspect and providing tools for action are effective means of achieving broader swaths of stakeholders.
- 6) It is difficult to attribute a benefit or detriment to a project without measurable features. Thus, there is a need for **clear, robust impact indicators** for EbA programmes, thus defining adaptation benefits, for each part of project implementation cycle. Standardised guidance will be most clear to practitioners, which can then be modified/adapted depending on background. “Universally standardised processes in project design, implementation, and monitoring and evaluation will help draw lessons through comparative analysis. This would not only inform and influence conservation policies and practices but also act as confidence building measures for scaled investment policies and strategies by donor communities and enhanced public investment by countries.”²⁸
- 7) Adaptation and resilience projects should be **more robustly screened for climate risks**. While the projects included in this analysis are intended to address climate change impacts, the work must integrate climate change considerations to ensure the resilience of present and planned interventions into the future. Integrating future risks will ensure that IUCN's projects continue to deliver their intended benefits well beyond the project cycle and avoid maladaptation.
- 8) Healthy ecosystem plays a key role in adaptation, resilience and mitigation and as such NbS actions should seek to work at large scales rather than as piecemeal and isolated strategies. Effective NbS are dependent on and contribute to enhancing ecosystem integrity; thus, NbS approaches should be explicitly designed to provide measurable benefits for biodiversity. NbS for adaptation and resilience ought to be implemented as **part of a landscape or system-wide approach** in recognition of the importance of ecosystem integrity – as laid out and emphasised in holistic approaches, such as One Health. There is a need to explicitly highlight the continuum of an approach, including upstream and

²⁸ Wharton Risk Management and Decision Processes Center (2020). Digital Dialogue No. 5: Scaling up Coastal Ecosystem Protection. <https://riskcenter.wharton.upenn.edu/digital-dialogues/coastalecosystemprotection/>

downstream issues, fragmentation of interventions and therefore the need for coherency at scale.

- 9) The [EbA Tools Navigator](#) has successfully compiled over 240 tools that help incorporate EbA into climate adaptation planning throughout the project cycle. To further this work, and to maximise the existing resources, it is imperative that these **tools are applied and improved** rather than focusing on the creation of new tools. In service of this, developing an online, searchable downloadable database of these tools onto which practitioners can provide additional information and inputs will be crucial. These tools are already widely used in project implementation and the online database would ensure that they are more widely accessible. Further, as tools are primarily available in English, there needs to be a re-concentrated effort to translate existing tools and create further tools in other languages, as efforts diversify worldwide.
- 10) The success of EbA, Eco-DRR and other NbS approaches are dependent on their being **part of larger adaptation strategies and overall sustainable development strategies**, including supporting climate mitigation targets. In this regard, we need more holistic approaches that integrate a variety of considerations – biodiversity, livelihoods, health, social development, equity – in effectively addressing climate change. NbS approaches provide part of the solution but ultimately, it’s about understanding how they form an essential part of a mixed portfolio of interventions, designed at scale, within a landscape or system-wide approach. In the same vein, it is critical to remember that NbS approaches, including EbA, cannot be used a substitute for the rapid phase out of fossil fuels⁸.
- 11) To respond to the increasing threat of climate change and to achieve the goals of the Paris Agreement, business-as-usual application of adaptation is not sufficient. Rather, **innovative hybrid adaptation technologies** are needed to help countries further increase the ability to adapt and enhance the climate resilience of communities globally. Forward-looking and sustainable approaches are needed in all aspects of these technologies and at the scale where they can be deployed efficiently. Upscaling hybrid innovative approaches in adaptation, especially those integrating novel technologies, aligns with the need for global “Green Recovery” efforts in response to the actively raging COVID-19 pandemic and the increased need to reduce the vulnerability of societies, ecosystems and species alike. Recovery plans need to consider and include the means to scale up climate action in all forms, including adaptation, to deal with impacts of short-term risks such as the COVID-19-related health and economic crises, while also providing a solution for the ultimate long-term risk: the climate crisis.
- 12) Global, national and local policymakers have a responsibility now more than ever before to **increase intersectoral and interdisciplinary collaboration** in addressing the interlinkages between community resilience, human health, and functioning ecosystems, thereby protecting the ecosystem services that safeguard human health and societal resilience – which are all explicit in holistic approaches, such as the One Health concept. Integrated approaches to adaptation, including prioritising Nature-based Solutions in development planning processes, are critical to address community vulnerabilities holistically by addressing interlinked societal challenges. At minimum, economic investments in recovery must ensure they do not come at the cost of further driving carbon emissions, ecosystem degradation and biodiversity loss. In particular, the health and economic costs of disease risk should be captured in land use planning decisions to ensure costs and benefits are adequately assessed and ecosystem services that protect human health and well-being are safeguarded. A valuable example is that done jointly by IUCN and International Water Association (IWA), which offer a space for the linkages across

water, energy and food to be discussed through the [Nexus Dialogue](#): the Dialogue will help to identify and share water infrastructure and technology solutions for the Water-Energy-Food Security Nexus. “The Nexus Dialogue on Water Infrastructure Solutions is a call to action to those leading transformations in water infrastructure planning, financing and operation.”

- 13) The FEBA network has various expert Working Groups that actively work to **bridge gaps between various sectors that are related to EbA**. For example, FEBA is a founding member of the [Global Green-Grey Infrastructure Community of Practice](#) that serves as a forum for collaboration across the conservation, engineering, finance, and construction sectors to generate and scale green-grey climate adaptation solutions. This sort of cross-sectoral Working Group must be at the forefront of all adaptation networks and across all the entirety of the climate change and conservation sectors. Working beyond academic silos allows for knowledge generation and application at a global level to increase both short-term and long-term benefits that can be reaped and sowed from EbA and adaptation more broadly.

6. Conclusion and next steps

In the 2019 Annual Report, IUCN committed to “continue to make the case for [the] more substantial inclusion [of Nature-based Solutions] in future NDCs and long-term low-emission development strategies in 2020 and beyond.”²⁹ This analysis reviews IUCN’s current portfolio in this context, identifying the current engagement with Nature-based Solutions for climate change in service of the goal for more inclusive and equitable climate action and policy. **IUCN’s portfolio of Nature-based Solutions for climate change adaptation and resilience projects has grown steadily from 45 projects in 58 countries to 100 projects spanning 109 countries over the last five years.** In that same period, IUCN has expanded its evidence base for the effectiveness of these approaches, identified conditions for their success, connected actors across diverse sectors, generated knowledge on a variety of topics related to NbS including defining quality standards and criteria, publishing case studies and providing guidelines for M&E, and influenced policy at the local, national and global levels. At regional and country levels, IUCN’s regional and national programmes have been involved across diverse ecosystems and engaged civil society organisations, national and sub-national government agencies. This mapping analysis illustrates IUCN’s key role in advancing nature-based solutions for adaptation and resilience across its diverse programmes and highlights IUCN’s One Programme Approach through engagement with members, partners and commission members.

Since the Convention on Biological Diversity defined the term “ecosystem-based adaptation” over ten years ago, IUCN’s project successes and lessons learnt have propelled the advancement of nature-based solutions for adaptation and resilience.

²⁹ IUCN (2019). Annual Report. <https://portals.iucn.org/library/sites/library/files/documents/2020-025-En.pdf>.

Annex: Compendium of knowledge products

A compendium of knowledge products and further information from each project, thus far, has been compiled. These include, but are not limited to: documentaries, websites, lessons-learnt documents, publications, case studies, brochures, fact sheets, baseline studies, policy briefs and papers, newsletters, action plans, satellite imagery analyses, environmental action plans, site information and landscape information.

An online compendium of knowledge products is currently in process. Revisit the online version of this document to access it, once finalised.



INTERNATIONAL UNION FOR
CONSERVATION OF NATURE

WORLD HEADQUARTERS

Rue Mauverney 28

1196 Gland, Switzerland

mail@iucn.org

Tel +41 22 999 0000

Fax +41 22 999 0002

www.iucn.org