

The spotlight on youth: Young people as key stakeholders in Biosphere Reserves and the Man and the Biosphere Programme

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ABSTRACT: Sustainable development has at his heart the mission to make our planet a life-sustaining place for future generations. Young stakeholders are key to sustainability transformations, both as active participants that push them forward but also as actors vulnerable to being left behind. As testing sites for sustainable development, Biosphere Reserves (BRs) are home to millions of young people in over 124 countries. Very little research or knowledge exists on how young people experience living in BRs, how they contribute towards BRs' goals, or how they see BRs moving forward under global change. To increase young stakeholder's visibility and inclusion in the MAB programme, UNESCO-MAB has organized two MAB Youth Forums attended by over 300 youth, one in Italy in 2017 and one in China in 2019. Here we present a short commentary on what we believe were the main take-away's generated during these events and the research that followed

them. Firstly, we present a research note of the first global-level study on young stakeholder's perspectives of BR implementation, discussing a thematic analysis of the results generated during the MAB-Youth Forum workshops and surveys. Secondly, we present an overview of the "MAB Youth Declaration", a collaborative text which was generated over the course of four days and which distils the main messages young people living in BRs wish to convey to the MAB community and beyond. Our paper highlights the important role young stakeholders play in BRs, whose understandings reflect the social, economic and ecological complexity in which BRs are embedded. Their concerns span a diversity of topics, from the relevance of fair conservation practices and respect for biocultural diversity, to the importance of sustainable livelihood opportunities and fair youth representation in decision-making bodies. Thus, we highlight research

findings on the need to increase young stakeholder integration and participation within environmental governance. Finally, we urge the BR research community to practice youth-inclusive research that helps generate knowledge to support evidence-based decision making in BRs.

Young Stewards in Biosphere Reserves Matter

Biosphere stewardship has become a common term used to refer to relationships between people and nature that are based on caring, knowledge and action (Peçanha-Enqvist et al. 2018). As we enter the Anthropocene (Malhi 2017) the emergence of biosphere stewardship is a key step towards organizing action for sustainability transformation (Chapin et al. 2010). Young stakeholders have an essential role to play in this transformation. They have the capacity to be agents of change in creating more sustainable societies. However, despite the focus on “future generations” in sustainable development, young actors are at high risk of exclusion in sustainability challenges (Ruesga-Benito et al. 2018), and they continue to be strongly underrepresented in governance bodies that make decisions about their future (Sundström and Stockemer 2020). In addition, young actors are rarely mentioned in the sustainability literature (Barraclough et al. 2021), with very little research aimed at understanding how young people affect and are affected by our efforts to move towards sustainable development, with few exceptions (Treude et al. 2017, Ruesga-Benito et al. 2018).

Biosphere Reserves (BRs) were conceived as sites for learning for sustainable development 50 years ago, and the network currently counts 714 sites in 129 countries all over the world, at the front lines of sustainability practice (Reed and Price 2019). Within the Man and the Biosphere (MAB) programme, efforts to account for young stakeholders in BRs have been made to meet the targets of the Lima Action Plan (2015–2025), which explicitly refers to consideration of young people in “equitable and participatory planning for sustainable development in biosphere reserves” (UNESCO 2016). These efforts, spearheaded by the two MAB Youth Forums in 2017 and 2019, have increased the visibility of young people as important stakeholders in BRs (UNESCO 2019, Donnellan-Barraclough unpubl.).

Over the course of three years the MAB Youth Forums have brought together more than 300 young people from all around the world (in Delta Po BR in Italy 2017, and in Changbaishan BR in China 2019). The Youth Forums are melting pots of exchange and learning, resulting in the creation of youth networks in each of the five BR World Regions (Africa, Arab States, Asia and the Pacific, Europe and North America, and Latin America and the Caribbean). The forums’ workshops also generated vast amounts of information about how young stakeholders see BR implementation, both now and going forward. These

opinions and perceptions are a valuable source of knowledge that can inform a more inclusive management of BRs (Bennett 2016), whilst also increasing recognition, opportunities and integration of young actors.

Recent work on this topic (Donnellan-Barracough et al. unpubl.) has made steps towards compiling this knowledge, filling a gap in the sustainability literature in which investigation of young stakeholder understandings and roles as biosphere stewards is notably absent (Donnellan-Barracough et al. 2021). In the following commentary we wish to close the gap between research and practice related to young stakeholders in BRs. To do this, we reflect on the main findings of the recent research on youth in BR conducted by the main author, whilst also providing a platform for youth voices to speak for themselves, by presenting the BR youth declaration co-produced by young attendees during the latest MAB Youth Forum in 2019.

Capturing the Opinions of Young Stewards

A SWOT (Strengths Weaknesses Opportunities and Threats) analysis conducted during the participatory workshops at the MAB Youth Forum of 2019 has formed the basis of the first comprehensive study of young people's understandings of BRs worldwide (UNESCO 2019, Donnellan-Barracough et al. unpubl). This first insight into young stakeholder's perceptions of BR implementation shows what factors are considered by

youth to influence the successes and failures of BRs (UNESCO 2019, Donnellan-Barracough et al. unpubl). Some of these factors are novel and some fit with the existing literature (Van Cuong et al. 2017), showing that young stakeholders understand the full social and ecological complexity in which BRs are immersed. Thus, their realms of action and knowledge go well beyond just "youth concerns". Their reflections span topics which are at the forefront of environmental governance research and practice, such as the adoption of adaptive and participatory approaches to conservation management (Mohedano Roldán et al. 2019) or the challenges of building BR resilience to global change (Schultz et al. 2018). The wide breadth of topics which arose during the MAB Youth Forum workshops (Donnellan-Barracough et al. unpubl) is shown in Figure 1.

A key novel finding is the significance of sustainable livelihood opportunities for BR communities and their younger members (Figure 1). MAB Youth thought generating sustainable livelihood options in BRs was key to help both avoid environmental degradation and an unfavourable demographic shift in their home territories due to a lack of opportunities. Governance concerns (Figure 1) also dominated the youth conversation, showing participants were fully aware of the practical implementation challenges BRs face in the real world. Thus, lack of legal or institutional frameworks to implement the MAB goals was considered an important obstacle for BRs, as well

as difficulties in implementing management plans that combine development and conservation objectives whilst involving local communities in a fair and equitable way. Political instability, corruption, and lack of political will were also some of the top threats to BRs identified during the workshops, together with major global change drivers, such as land-use and climate change, and overexploitation. Land use change was one of the top threats identified by young stakeholders, fitting within the evaluation of the importance of this threat by the Global Assessment (IPBES 2020).

Ways forward identified by young stakeholders included adaptive and collaborative approaches to conservation management, with a focus on education, capacity building, collaboration, and local community participation within all levels of governance, as well as opportunities for identifying sustainable directions of local livelihoods and tourism (Figure 1). Thus, many young stakeholders believed that biodiversity conservation should be in synergy with local development, ensuring fair benefit sharing and local community wellbeing, particularly of at-risk groups such as women and children. The key importance ascribed by youth to local communities fits within the trend observed in the MAB programme over the last 20 years, where there has been a clear shift towards a “People AND nature” conservation paradigm (Mace 2014). This paradigm places emphasis on the conservation of ecological and biocultural

biodiversity together, through, for example, increased community participation within management and sustainable use of natural resources (Schliep and Stoll-Kleemann 2010, Baird et al. 2018, Winkler 2019).

This research has also revealed the diverse ways in which young stakeholders engage in BRs, spanning all levels of participation, from engaging in governing bodies and management, to working with conservation, entrepreneurship or education (Donnellan-Barraclough et al. unpubl.). The collaboration, outreach and learning functions of BRs were some of the areas where youth were most present, participating in educational or exchange activities and networks. Young stakeholders were also active in conservation, such as in restoration or monitoring initiatives, and in sustainable livelihood projects, such as agroforestry. In addition, young people were active advocates for increasing youth representation in decision-making bodies at all scales, working for more meaningful and recognized forms of participation within governance.

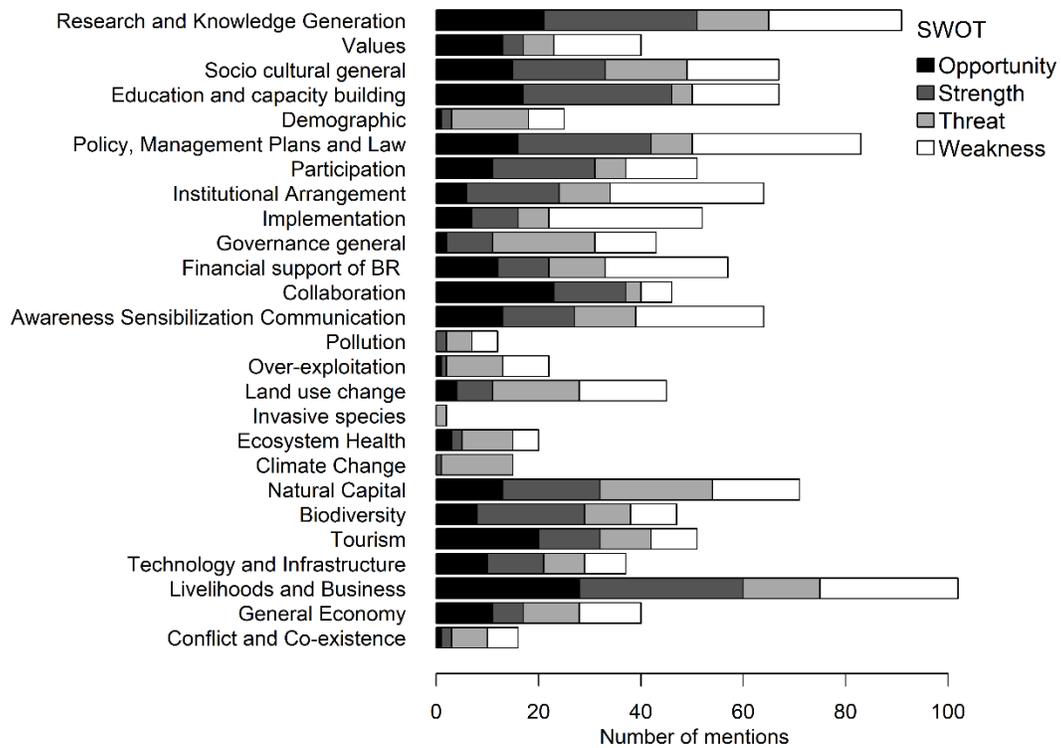


Figure 1. Topics emerging from a SWOT (Strengths, Weaknesses, Threats and Opportunities) workshop conducted at the MAB Youth Forum in 2019 Changbaishan Biosphere Reserve, China. Workshop content was coded and analyzed in NVIVO Software and main themes are represented along the y-axis (Donnellan-Barracough, unpubl).

A Declaration from MAB Youth

Over the course of four days, 171 young people gathered in the interactive workshops at the MAB Youth Forum 2019 in China. These sessions focused on how BRs can reach their goals and be arenas for implementing international environmental agreements such as the Convention on Biological Diversity (CBD) post-2020 biodiversity framework. In addition to the workshop SWOT analysis presented in the previous section, the discussions produced a collaborative text, “The MAB Youth Declaration 2019”, meant to distil the key messages which young BR stakeholders

wish to transmit. In view of the Fifteenth meeting of the Conference of the Parties to the Convention on Biological Diversity (COP15) in Kunming (postponed to 2022 because of the SARS-CoV-2 crisis) the declaration also contains specific points addressed to the Conference of the Parties. These we have included, in view of the role BRs are meant to play in the implementation of multilateral environmental agreements.

*The MAB Youth Declaration**

Youth are an integral part of the MAB Programme and its World Network of Biosphere Reserves:

We welcome the MAB Youth Forum Declarations of 2017 and 2019 and the IberoMAB Youth Forum declaration (MAB Youth 2017) and are aware of the progress that is being made in the inclusion of young people's voice in the MAB Programme and in the World Network of Biosphere Reserves, following the organization of the 1st and 2nd MAB Youth Forum. However, we are conscious that we must continue our hard work to ensure that the requests reflected in the previous declarations can come to reality, believing in the importance to:

1. Ensure the participation of young people in the governance and management of BRs and MAB national committees, through the appointment of young representatives who can take part in decision-making processes at a local, national and international level (e.g., International Coordinating Council of the MAB Programme, Regional Networks). This should include fluent communication of youth with the MAB Programme, receiving support, technical advice and the most up-to-date information, in addition to facilitating the access to financial support for the youth community.
2. Provide training and capacity building activities to improve management abilities of BR, as tools for sustainable socio-economic development of the local population, and request to create attractive and long-term employment opportunities linked to the values of BRs (in particular conservation of biodiversity and habitat

restoration), involving local enterprises and cooperating with local stakeholders.

3. Improve cooperation among youth, BRs, NGOs, private sector, and scientists at the local, national and international levels. Create a platform for exchange among young people and BRs and explore more possibilities of international networking of BRs to share best practices and build cooperation.
4. Increase the communication and visibility of the MAB Programme and develop accessible and comprehensible BR materials.
5. Commit to a zero tolerance policy on all forms of harassment based on race, colour, religion, sex (including pregnancy), gender/gender identity, nationality, age or disability.
6. Refine certain terminologies of the MAB Programme to the 21st century. The name 'Man' and the Biosphere Programme and the term Biosphere 'Reserve' should be adapted to avoid negativity and gender discrimination.
7. We commit to diversifying communication methods and promote BRs through the use of creative, artistic and cultural means to engage all audiences.
8. Advocate within the MAB and UNESCO communities for an effective implementation and assessment of all existing and applicable non-harassment guidelines and policies.

Youth in the Midst of the Biodiversity and Climate Change Crisis

The MAB Youth Community recognize the absolute urgency to address both biodiversity loss and climate change as issues of ultimate global importance, both within and outside of BRs. We are concerned about the lack of political will and corruption, particularly from decision makers within the BRs, to implement concrete actions that address climate change. The lack of climate action, communication and networks among BRs and all stakeholders are of particular concern, as is the lack of understanding of the value of BRs to humans and other living organisms that we share the planet with. We are worried about potential false solutions in impact mitigation such as carbon offsetting, biodiversity offsetting and geo-engineering, which we see as a threat to climate action. We are also concerned by the lack of multiple strategies such as concrete legislation, Environmental Impact Assessments (EIAs), Nature-based Solutions (NBS), use of technology and the Polluter Pays Principle (PPP) in response to the Climate Crisis.

As MAB Youth Community, we demand:

1. Scientists, the private sector, governments, NGOs and the communities to address climate change and its impacts on BRs.
2. UNESCO to take the MAB Youth into consideration in all the MAB Program activities related to climate change and beyond. We recognize that accessible funding for climate action and biodiversity protection is a major challenge for youth in the MAB community to address these issues.
3. MAB Programme to increase efforts to effectively engage marginalised communities especially vulnerable to the impacts of climate change, including women, indigenous people, youth and elderly.
4. MAB Programme to promote incentives for MAB Youth developing good practices in response to the Climate Crisis.
5. And we further commit to create a MAB Youth networking platform to foster collaborations and dialogue on biodiversity conservation and climate change related issues.
6. Participate in the decision-making processes at the local, national and international levels.
7. Promote the potential of BRs playing a key role in climate change adaptation, mitigation and resilience.

Youth are Actors of Change in the Post-2020 Biodiversity Framework:

The theme of COP15 - "Ecological Civilization: Building a Shared Future for All Life on Earth" is very closely aligned with the core values of the MAB Programme, and we recognize that BRs and their actors play a key role in conserving biodiversity around the world and in achieving the objectives of the CBD. To achieve the objectives of the CBD, which are closely linked to the objectives and vision of the MAB Programme, there is a need to acknowledge the linkages between nature and culture and conserve biodiversity and cultural diversity together (Box 1). We believe that for the post-2020 Global Biodiversity

Framework to be truly transformative, a fundamental shift of values in society is of critical importance, including addressing our unsustainable consumption and production habits and existing power inequalities. Similarly, nature conservation is not efficient without ensuring intergenerational equity, gender equality, respect for human rights and the recognition of the rights of indigenous peoples and local communities. Young actors have a key place in the Post-2020 Biodiversity Framework. Children and youth are among the most vulnerable groups to the effects of environmental degradation and our voice needs to be heard in decision-making processes on the environment. Currently, support for youth participation is still very limited, and that more substantial support is needed to ensure meaningful

participation. We as MAB Youth in the Post-2020 Framework will have a crucial role in the implementation of the Post-2020 Framework at the local levels. As young people, we have the tools and means to raise awareness on the targets of the Post-2020 Framework and to support with implementation, capacity building, and non-formal education. Thus, we want to be included in the consultation processes towards the COP15 and beyond at our local and national levels.

We, the MAB Youth Community commit to mobilize our networks to actively engage in the development and implementation of the Post-2020 Global Biodiversity Framework. We commit to raise awareness about the importance of the Post-2020 Framework, and to take concrete actions

Box 1. MAB-Youth recommendations for the CBD post-2020 biodiversity framework.

MAB-Youth call for a Post-2020 framework that:

1. *Is binding, realistic, science-based, and puts a strong emphasis on implementation, ensuring efficient implementation from the time of adoption.*
2. *Promotes biodiversity and heritage education, such as through the integration of biodiversity into school curricula at all levels, including informal education; including through the promotion of interdisciplinary collaboration and exchange.*
3. *Promotes resource mobilization, knowledge-sharing, and technology transfer especially from developed countries to developing countries, many of which contain genetic resources.*
4. *Promotes good and equitable governance and legal frameworks in place to implement at all levels.*
5. *Promotes capacity-building and support for revising and updating NBSAPs at all scales.*
6. *Ensures fair and equitable benefit-sharing.*
7. *Is inclusive and participatory and in particular,*
8. *Empowers and engages indigenous peoples and local communities, women and youth in all phases of the planning and decision-making process.*
9. *Raises local community awareness and capacity to participate.*
10. *Appropriately recognizes and secures ICCAs - territories of life, as they are existing opportunities for CBD implementation. Acknowledges and protects the key role of indigenous and local knowledge in achieving the objectives of the convention.*
11. *Recognizes the common but differentiated responsibilities of state and non-state actors, taking into account the different levels of impact and capacities of countries.*
12. *Scales up communication efforts and prioritizes inclusive and timely communication through both traditional and new media channels, recognizing the role of new media for young people.*
13. *Places a particular focus on gender mainstreaming and the empowerment of women and girls.*
14. *Takes effective measures to ensure mainstreaming across all departments of government, economy, and civil society.*

and lead by example in support of COP15's goals and working constructively to ensure that COP15 will be a success. We welcome the partnership between the MAB Youth and the Global Youth Biodiversity Network that came about during the MAB Youth Forum 2019, and request UNESCO to facilitate the continuous collaboration, specifically with regard to enhance the role of MAB Youth in the CBD process. For the full set of demands on the Post-2020 framework please see the online version of the MAB Youth Declaration (MAB Youth 2019).

Conclusion

Young people are, quite literally, the future of BRs. Thus, if we are to understand how BRs will move forward as model places for sustainable development into a future under global change, we need to shine a light on young stakeholders. The MAB programme has already taken steps to increase participation of youth, in order to meet the goals set by the Lima Action plan. This has generated considerable insight into how young actors see themselves as active participants in BR implementation. In two Forums and two written declarations, youth have expressed their outlook on BRs and the MAB programme: BRs are key to tackling the biodiversity and climate crises and urgent action is needed to ensure BRs meet the challenges of our times. However, young stakeholders are clear that local community wellbeing, especially of marginalized communities, should not be compromised in this effort. Thus, BRs

should strive to improve equity and fair benefit sharing, in addition to biodiversity conservation, and youth are clear that they should be given access to the decision-making table to help make this happen.

It is important that policy and knowledge go hand in hand, and we wish to highlight that young people are conspicuously absent from sustainability research agendas (Barraclough et al. 2021).

Young stakeholders are key to regenerative development and, although they constitute the “future generations” that sustainability is meant to be for, there is much we don't know about youths' roles in sustainable development initiatives like BRs. We propose that transdisciplinary and interdisciplinary approaches are the way forward to producing the knowledge necessary for evidence-based decision making in BRs and other similar place-based conservation programmes. Thus, we recommend increasing research co-production practices that include young stakeholders, in addition to other BR actors, at different stages of the research process (Mauser et al. 2013). This will help complete the additional research that is required to understand the diversity in young stakeholders' perceptions and opinions of BR implementation. Youth is not a single political position and, therefore, closer investigation is needed on how different socio-economic, cultural, and ecological contexts influence young stakeholder's understandings and roles within BR stewardship. Lastly, we believe this

work also highlights recent calls on the need to investigate pathways for effective involvement of young stakeholders, not just in environmental governance, but in political life more broadly (Stockemer and Sundström 2018) across different socio-economic and cultural contexts.

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Author Contributions

Alicia Donnellan-Barraclough formulated and led the writing of the manuscript, Inger Måren funded, wrote and edited the manuscript and the MAB Youth Consortia wrote the Youth Declaration section of the manuscript.

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Notes

* For the original version of the MAB Youth Declaration please visit https://en.unesco.org/sites/default/files/2019_mab_youth_declaration_-_en.pdf

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