



U.S. Biosphere Network Delegate Report - EuroMAB 2022
Nockberge Biosphere Reserve, Austria
September 12-16, 2022

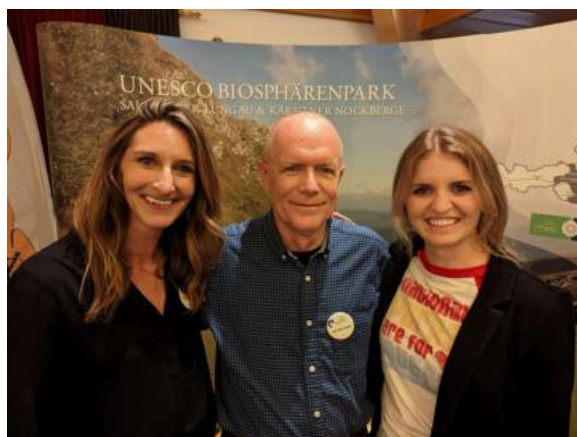
SECTION 1: Introduction

1.1 U.S. Delegation

- Melissa Bade, CDR Associates
- Kelly Cerialo, Co-Chair, Champlain-Adirondack Biosphere Region
- Cliff McCreedy, U.S. National Park Service/Facilitator, US Biosphere Network

1.2 Location

EuroMAB is the regional network of biosphere reserves in Europe, Canada and the U.S. EuroMAB 2022 was located primarily at the Nockberge Resort in Bad Kleinkirchheim, Austria with networking events and some workshops held at satellite locations in the area. Nockberge Biosphere Reserve staff and the Austrian MAB Committee provided excellent service to participants and event management support. The full EuroMAB 2022 program is available at <http://www.euromab2021.at/>



1.3 Rethinking Definitions in Ecosystem and Protected Area Management



Biosphere regions in the U.S. and Europe (referred to as biosphere reserves in Europe) are not the same as traditional parks or protected areas in the U.S. In addition to containing core protected areas, the biosphere model of collaboration includes human communities and their cultural traditions and uses of natural resources in places where people live, work, and care for the landscapes they depend on for their livelihoods. Biosphere reserves fully recognize that people and economic uses are essential parts of ecosystems and must be a major part of cooperative solutions to rapid environmental change. The 2022

EuroMAB host Nockberge Biosphere Reserve illustrates innovative ways to think about economic activity and conservation in a diverse landscape. The biosphere model is epitomized here of humans and nature thriving together and achieving a higher quality of life and vibrant natural resources. In July 2012, the Nockberge National Park was abolished and became the Salzburger Lungau und Kärntner Nockberge Biosphere Reserve via acceptance by the UNESCO MAB Program. The area is characterized by diverse natural and cultivated systems from marsh areas and alluvial forests in the valleys to cultivated meadows to alpine forests, extending up to the glaciers of the alpine summit regions. Managed tourism and recreation, hospitality businesses, alpine pasture farming, dairy and meat production, recreational hunting, residential development, historic sites and light industry all occur within the biosphere reserve and surrounding region. See the Nockberge *Proud to Share*

[video](#). It should be noted that prosperous economic conditions and robust governance in Austria lent themselves to this approach. Economic and governmental reform is needed in many developing nations where poverty and flawed governance have depleted natural resources and hindered progress in biosphere reserves.

SECTION 2: THEMES AND LESSONS LEARNED

2.1 Tying Cultures

The overarching theme for the conference was “Tying Cultures: Crossborder Cooperation Between Societies and Generations.” The importance of this theme was underscored by many examples shared throughout the days of the conference, including a workshop attended by Cliff McCreedy and Melissa Bade on Wednesday titled “Cooperation between BRs across national and regional borders.” Participants highlighted a range of examples of tying cultures and transboundary collaboration including between biospheres, between



countries, between generations, and between sectors. During the series of presentations and discussions about tying cultures, it was evident that crossborder collaboration is a viable approach for large landscape conservation and sustainable development.. This approach allows for opportunities to expand creativity, capacity, resources, and learning for ecoregional cooperation encompassing nature, society, and the economy. Crossborder collaboration also presents significant challenges. Language barriers, cultural differences in management approaches, lack of buy-in or capacity to support implementation, or even competition over resources make it difficult to sustain collaboration across borders and cultures. One key to overcoming these challenges included the importance of relationship-building to help participants and decision-makers better understand perspectives and break down barriers - for example, hosting activities to play games or meet families. Relationship building may even turn into long-lasting marriages, as highlighted by two participants of the conference. Examples of crossborder collaboration highlighted throughout the conference include:

1. [***Biosphere for Baltic***](#) - Biosphere for Baltic is a collaborative effort between multiple biospheres in the baltic region who share similar resources, challenges, and pressures related to changes on the Baltic Sea. This model provides a unique opportunity for UNESCO Biosphere Reserves in the Baltic Sea Region to network and share experiences and results from local initiatives and projects and to find new areas for collaboration. The aim of Biosphere for Baltic is to facilitate learning and disseminate good practices from UNESCO

Biosphere Reserves in the Baltic Sea region, within and beyond the network of biosphere reserves¹.

2. ***Mura-Drava-Danube*** - This new five-country biosphere spans across Austria, Slovenia, Croatia, Hungary and Serbia and is now the largest riverine protected area in Europe². As a transboundary biosphere, this model brings together different languages, cultures, values, economic pressures, and political policies to ensure the protection, restoration and sustainable development of this shared ecosystem. Members of this biosphere noted the importance of shared leadership as a key element of collaboration. One example of this shared responsibility includes the role of the steering committee and the rotating chair and committee host so each country has a chance to lead the decision-making process.



3. ***Student Learning Across Countries*** - Biospheres in Canada, Germany, and South Africa have embarked on an effort for university students to participate in transnational collaboration through TRANSECTS, an expense-paid summer program that enables students to visit and conduct research in participating biospheres. Ultimately, students are provided not only with the opportunity to learn about the landscapes of different biospheres, but also about the cultures and communities connected to the nature that surrounds them.

Opportunities for the US Biosphere Network: As the USBN strengthens its network, collaboration across biosphere regions as well as across countries (US, Canada, Mexico) could include the sharing of best practices, building network and biosphere capacity, and thinking creatively about funding for projects to address transboundary, regional concerns such as climate change and water resources. Biosphere regions may also consider organizing around geographical areas or resource types (coastal, mountain, desert, etc.) for sharing resources and experiences on activities and building capacity.

2.2 Capacity & Governance Issues in BRs

During the plenary sessions, workshops, and informal networking opportunities it became evident that UNESCO Biosphere Reserves across the EuroMAB network face similar challenges with governance, capacity, communication, and funding. U.S. Biosphere Regions are not unique in their struggles and we have an opportunity to learn from other BR's challenges and innovative solutions. Although a wide variety of challenges were discussed, four main themes emerged related to the capacity and governance issues in BRs.



¹ <https://biosfarprogrammet.se/projekt/biosphere-for-baltic>

² <https://www.iucn.org/news/protected-areas/202201/unesco-declares-worlds-first-5-country-biosphere-reserve-along-mura-drava-danube>

1. **Lack of full-time paid BR staff** - Very few EuroMAB BRs have paid full-time employees which presents significant challenges for day-to-day operations, long term planning, communication/outreach, community engagement, project development and planning, fundraising, etc. Some BRs that are also national parks (e.g. the Tuscan Emilian Apennine Biosphere Reserve in Italy) rely on the park staff to absorb the duties of the BR. One example of a BR that has a paid full-time staff is the Minett Biosphere in Luxembourg which has 6 paid full time employees: a general manager, task officer, communication manager, secretary, secretary of the syndicate, and a receiver.
2. **Inconsistent or non-existent funding** - The majority of funding for EuroMAB BRs is provided on a project-basis from a variety of sources including the EU, local governments, national governments, grants, etc. which makes long-term planning extremely challenging and can lead to inconsistency in operations.



3. **Need for knowledge and resource sharing platform** - Currently, there is not a platform for BRs to share knowledge and resources across the World Network of Biosphere Reserves. This need for a knowledge and resource sharing platform has been discussed at two consecutive EuroMABs in 2019 and 2022 and could potentially assist with addressing capacity and governance issues such as lack of funding and no permanent staff by connecting BRs to information, resources, and funding opportunities, etc.

4. **Communication and outreach** - Although the degree of awareness and appreciation for the BR designation varies greatly among BRs in EuroMAB, there was a general consensus that additional capacity is needed in BRs to improve communication and outreach with the local community. By building communication and outreach capacity it will allow BRs to raise awareness about the BR, better support existing community organizations actions to address the UN SDGs, and/or to recruit new BR partners.

2.3 Overviews and Lessons Learned from Workshops

The EuroMAB 2022 program included 13 workshops. The US delegation attended a variety of workshops focused on topics from climate change, tourism, collaboration, mountain biospheres, and agriculture. Key themes and lessons learned from these workshops are highlighted below.

2.3.1 Biospheres as Living Laboratories for Combating Climate Change

The workshop was co-chaired by Gaëlle Tavernier, Luxembourg MAB Committee and Johannes Prüter, German MAB Committee, and had about 30 attendees from various European biosphere reserves. Cliff McCreedy provided a presentation on the Resist-Accept-Direct (RAD) framework developed by U.S. National Park Service and partners as a context offering three distinct choices

(Resist-Accept-Direct) for responding to increasingly profound and complex trajectories in climate change. He provided examples of varied RAD responses in parks from four biosphere regions to illustrate the three strategies. Jenna Cain from Galloway & Southern Ayrshire BR in Scotland presented on the *Biosphere Footsteps* program, a creative training and community outreach program for inspiring local level action and best practices for citizens and residential households to reduce their carbon footprint, consisting of four, two-hour training sessions with resources provided post-training. Johannes Prüter,



German MAB Committee presented on climate adaptation projects in the North German Elbe River Biosphere Reserve, including cooperative floodplain management and nature-based solutions to flooding. The European Network of Living Labs (ENoLL) is the independent non-profit association of benchmarked Living Labs that fosters co-creation and open innovation among citizens, government, industry, and academia. The group joined for lunch and an outdoor session with networking opportunities on a ferry on Lake Millstat. A biosphere reserve ranger led a tour in the town of Millstat, including the Millstat Abbey. Established by Benedictine monks on or about the year 1070, the Benedictines were succeeded by the knightly Order of Saint George in 1469 and the Society of Jesus (Jesuits, SJ) in 1598.

Lessons Learned: The group discussed a Call to Action to address needed changes in systems to forward climate action.

- In addition to project-specific funding, public and private funding sources need to accommodate proposals for core organizational capacity for coordinating biosphere reserves' landscape level responses to climate change and other issues.
- As experienced in the USBN and locally in biosphere regions, formal communication and collaboration is highly labor intensive and requires capacity to manage. (See Capacity and Governance Issues in BRs, 2.2)
- Consumer driven responses to climate change can be addressed with programs such as *Biosphere Footprints*, i.e., saving energy, cutting waste and reducing the carbon footprint.
- The group considered the option of making a EuroMAB recommendation for establishing a UNESCO MAB Thematic Network for Climate Change, but decided that the return on investment from creating and managing such a network is not positive.
- McCreedy argued that the better alternative is collaboration and integration on climate change response across all the Sustainable Development Goals and all the thematic networks.

2.3.2 Sustainable Agriculture

The Sustainable Agriculture and Food in Biosphere Reserves workshop was chaired by Catherine Cibien (France) and co-chaired by Anna Agostini (Italy). The workshop was attended by 23

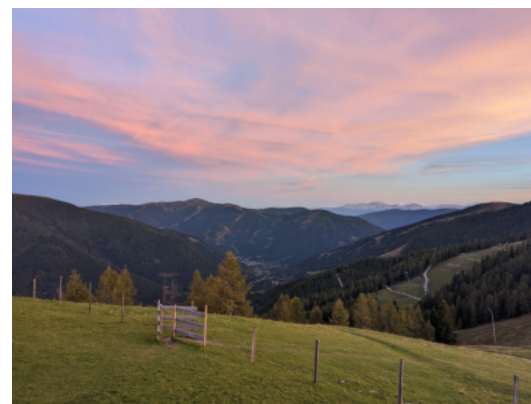
participants, and participants visited a collective dairy and cheese manufacturing organization as well as a local agricultural school. After the morning tours, participants shared best practices from their local biospheres, including projects aimed at adding value to “waste” products. For example, original and new uses for wool, with innovative and creative processes (textile production or house insulation), methanation to produce energy, and experiments to improve carbon storage were highlighted by participants. Many of the biospheres represented at the workshop are working to increase the visibility of committed stakeholders, improving their pride and sense of belonging, as well as their knowledge of the region’s valuable resources. They implement strategies to make local products more visible and attractive with certification and branding strategies (including crafted food certification). A lot is also done to build trust and links with farmers: creation of networks, partnerships (partners, ambassadors, eco-players programmes). Biospheres offer valuable opportunities to increase cooperation and connections between producers, consumers, restaurants, supermarkets, hotels, visitors, etc.



Lessons Learned: Biosphere regions across Europe are increasingly creative in the uses of local products and support for local producers. Representatives of the regions were very proud to share their local products and marketed these products as valuable commodities of the biosphere region. These efforts create a sense of pride and community locally as well as recognition regionally, ultimately bolstering the value of the biosphere model.

2.3.3 Status of Mountain BRs

The Status of Mountain BRs workshop was chaired by Dr. Pamela Shaw from the Mount Arrowsmith Biosphere Region in Canada with about 25 participants. Prior to the workshop, participants completed a short guided hike around the Windeben Lake in Reichenau before arriving at Karlbud, a rustic mountain spa and restaurant. During the workshop participants discussed best practice examples of management, research, and sustainable development initiatives in mountain BRs. The presentations were delivered in a casual story-telling style without PowerPoints or audio/visual technology. Some examples included the use of GIS and ARCGIS technology to monitor and manage ecological impacts in mountain BRs, and how American economist Elinor Ostrom’s concept “[the non-tragedy of the commons](#)” applies to rural mountain BRs and can be used to effectively manage natural resources in BRs from the bottom-up. Based on Ostrom’s work, Stefano Zannoni from the Ledro Alps and Judicaria BR defined common pool resources (CPRs), also known as common goods, as goods that are shared and



available to the general public but have a limited supply of outputs (e.g. forests, fisheries, pastures, groundwater basins, etc.) and require management to prevent overconsumption.

Stefano Zannoni and Tommaso Beltrami from the Ledro Alps and Judicaria BR (Italy), Giuseppe Vignali, Tuscan-Emilian BR (Italy) and Kelly Cerialo from the Champlain-Adirondack BR (USA) jointly presented case studies from their BRs that illustrated examples of how “the commons” and bottom-up management of natural resources are used in their BRs. The three BRs created a “Joint Declaration for Environmental Ethics for Mountain Sustainability” in May 2022 that provides a strategy to share resources and knowledge about sustainable development in rural mountain BRs.



Workshop participant Meriem Bouamrane, Chief of Section for MAB Research and Policy: Ecology and Biodiversity, shared that [UNESCO MAB invited Elinor Ostrom](#) in 2011 prior to her passing to discuss management of sustainable socio-ecological systems and has since created programs related to “the commons” in memory of Elinor’s legacy. The MAB office is interested in continuing this emphasis in BRs. Workshop participants discussed how rural mountain BRs provide critical ecosystem services for interdependent urban areas (e.g. Champlain-Adirondack BR provides ecosystem services for New York City) and that bioregional planning and management can be used to improve the management of natural resources in mountain BRs.

Lessons Learned:

- Elinor Ostrom’s [“8 rules for managing the commons”](#) can be used by BRs to assist with shifting natural resource management efforts from traditional top-down approaches to integrating citizens' voices and needs with an inclusive bottom-up approach.
- Based on Ostrom’s model, BR communities (instead of external authorities) are well-positioned to manage their own natural resources, but in certain contexts this model can be challenging to implement due to existing political, social, economic and environmental conditions.
- When considering the concept of “the commons” to manage natural resources in BRs, it is important to recognize the roles that both urban and rural areas play in sustainable development and natural resource conservation.



2.3.4 Responsible Tourism in BRs

Workshop #15 Responsible Tourism in Biosphere Reserves (BRs) was co-chaired by Simone Beck (Luxembourg MAB Committee) and Kelly Cerialo (Champlain-Adirondack Biosphere, USA) and consisted of approximately thirty participants with six case study presentations that highlighted the primary challenges,

opportunities, and ideas for the future of responsible tourism in BRs. Prior to the workshop, participants toured a local farm and traditional Austrian family-owned hotel that integrated innovative technology including a robot in the kitchen to assist waitstaff with food delivery and clean up. The principal problems discussed during the workshop were visitor management and monitoring and the critical need to consistently assess the social, economic, and environmental impacts of tourism in BRs. The case studies provided forward-thinking solutions of how to evaluate visitation as well as the social and economic effects of tourism in BRs.

Kelly Cerialo presented her research on the social impacts of tourism in the Champlain-Adirondack Biosphere Reserve (CABR). Findings highlighted the importance of responsible inclusive leadership to address social inequalities related to tourism development and the critical need to incorporate residents' perspectives in tourism planning, contributing to the broader discussion on the social sustainability of tourism in UNESCO Biosphere Reserves. Kelly offered a new conceptual model to assess the social impacts of tourism in international UNESCO Biosphere Reserves that consists of 4 dimensions that tourism managers in BRs should consider in destination management planning – destination assets, shifts in tourism patterns, tourism tensions and inequalities, and capacity and governance issues.

Tourism is key for economic development in international BRS, but in many regions it is considered a threat if not properly monitored and managed. UNESCO's Visitors Count Guide provides innovative and comprehensive strategies for BRs to accurately count visitors and to measure the economic impacts of tourism in BRs on several levels to prevent tourism leakage. Although tracking and analyzing visitor data is challenging, especially in biosphere reserves where there is not a central entrance gate, it is critical to effectively manage the social, economic and environmental impacts of tourism on a destination. Additionally, a precise analysis of visitor behavior and spending serves many levels - it proves the economic significance of sustainable tourism, it allows tourism planners to adapt tourism strategies to mitigate negative impacts and to maximize the positive socio-cultural, economic, and ecological outcomes.



Lessons Learned:

- Biosphere reserves cannot effectively manage tourism if they cannot accurately measure visitor use (ie. who, what, why, and when visitors are spending time and money in the BR).
- Tourism in BRs should be managed as a whole-system. Comprehensive planning that incorporates diverse stakeholder perspectives is critical for sustainable destination management in BRs.
- Visitor conflicts in BRs need to be studied and addressed with measures that protect the natural and cultural heritage of the region while simultaneously improving the quality of the visitor experience.
- There is an opportunity to use technology such as QR codes and cell phone apps to improve environmental

- education and reduce the negative impacts of outdoor recreation on the natural environment.
- “Happy places to visit must first be happy places to live.” – (Natasha Hutchison, Wester Ross Biosphere, Scotland)
- Community cooperatives are an effective tool to bring locals’ voices to the table in tourism management and to connect visitors with high quality tourism experiences and locally-produced products.
- Workshop participants expressed an interest and need to create a platform to exchange knowledge, ideas, and resources about sustainable tourism in BRs on a consistent basis, not just at EuroMAB. A post-EuroMAB call has been organized to arrange a series of 3 online sustainable tourism workshops in 2023 to share case studies, best practices, and resources.

2.3.5 Youth Engagement

Youth participants convened in a pre-meeting prior to the opening of EuroMAB 2022 and conferred throughout. They reported on their findings and submitted the following Call to Action in the final plenary. The EuroMAB Youth Committee established a newsletter, available [here](#). The youth delegation expressed concerns about full access and meaningful involvement, stressing that integration of youth input is frequently difficult. They stressed the importance of having a “safe space to meet” at meetings, as well as a “seat at the table” in leadership of EuroMAB and biosphere reserves locally. Their motto is: “Nothing about us without us.”



Youth Call to Action

“We call on the attendants of the EuroMAB conference, delegations from biosphere reserves, national committees and UNESCO representatives to ensure the genuine and meaningful participation of young people in the governance and management of biosphere reserves and the MAB program, through the appointment of young representatives who can take part in decision-making processes at local, national, and international levels, by electing young members in BR coordinating bodies and councils, MAB national committees and regional network steering committees. Moreover, we call on the EuroMAB Steering Committee to create a seat for a youth representative who will represent the EuroMAB youth network in discussions, coordination and preparation of the next EuroMAB conference. We recommend this be an extra seat given to the next hosting country. This will ensure true and meaningful participation of young members of the MAB Programme in the activities of the regional network and beyond.”

The youth delegation invited EuroMAB participants in the plenary to sign this declaration. Most participants in attendance did so, including Cliff McCreedy for the U.S. delegation. See Recommendations 3.1 and 3.2.

SECTION 3: RECOMMENDATIONS AND NEXT STEPS FOR USBN

3.1 Support BR Capacity & Governance

- Consistent with the findings on capacity and governance issues in Section 2.2, provide funding for full-time coordinators in biosphere regions and additional staff support for the USBN.
- Establish a mentorship program for active BRs to assist with activating other BRs and with ongoing program growth of newly established BRs.
- Establish an online platform for BRs to share resources and ideas about conservation and sustainable development challenges and solutions.
- Advocate for funding to support organizational growth and operational capacity of biosphere regions from public and private sources in addition to project-based funding.



3.2 Collaborate Across Biosphere Regions, International Borders, and Generations

- Establish and/or continue partnerships and collaborations with international BRs.
- Convene BRs regionally based on their common geographic features, or other affinities, to share best practices and ideas to address conservation and sustainable development challenges.
- Strengthen youth engagement, particularly of diverse racial and ethnic identities, through authentic

power-sharing in the World Network of Biosphere Reserves and through professional development opportunities and input into decision-making in the USBN. Emphasize the USBN Youth Board and empower the YB seat created on the USBN Steering Committee. Seek funding for scholarships for US youth to attend regional and international meetings and forums such as EuroMAB.

- Facilitate transboundary projects such as youth exchanges or internships hosted by BRs and ecoregional responses to environmental change. Utilize funding and support from the Commission on Environmental Cooperation similar to the European Union in Europe and other sources. Conduct a North American Biosphere Network Conference in 2024.

3.3 Focus on Climate Change Resiliency

- Develop interdisciplinary science to support integrated responses to climate change that assess impacts on ecosystem services to people and communities as well as impacts to biodiversity and the environment.
- Convey knowledge and conduct training on best practices for citizens to reduce their carbon footprint at the community and household levels, similar to the *Biosphere Footprints* training program at Galloway and Ayrshire Biosphere Reserve in Scotland and the U.S. National Park Service's (NPS) [Conservation-at-Home](#) guide.

3.4 Highlight Unique BR Attributes and Contributions to Communities

- Celebrate and highlight pride in unique local and regional products within the biosphere regions and market brands as biosphere region products.
- Provide support to meet the significant need to track and manage visitor use in BRs in order to preserve both their natural and cultural heritage. The NPS [Socioeconomic Monitoring](#) and [Visitor Spending Effects Program](#) can be used as a method to measure the socio-economic impacts of tourism in BRs across the U.S.

Submitted by Cliff McCreedy, Kelly Cerialo and Melissa Bade
U.S. Delegation to 2022 EuroMAB

