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Biosphere Reserves in the Anthropocene

S Stoll-Kleemann, University of Greifswald, Greifswald, Germany
T O’Riordan, University of East Anglia, Norwich, United Kingdom

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The Anthropocene and the Bane of Growth

It is now widely accepted that our current epoch is called Anthropocene because “humans and our societies have become a global geophysical force” (Steffen et al., 2007, 614). The term Anthropocene suggests that “the Earth has now left its natural geological epoch, the present interglacial state called Holocene. Human activities have become so pervasive and profound that they now rival the great forces of nature and are pushing the Earth into planetary terra incognita” (Steffen et al., 2007, 614). Elsewhere in this volume there is extensive coverage of how various planetary boundaries are already being exceeded in some areas such as biosphere integrity and geochemical cycles.

Tackling the Anthropocene shows the urgent need for innovative ways in which to showcase sustainable living practices in the light of dominating unsustainable patterns of human consumption. Sustainable development is often cited as the ability to “meet the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987). This is so frequently quoted that readers’ eyes glaze over the familiar words in the same way as seasoned air travelers ignore the mandatory safety advice from the cabin crew.

Yet lying within these words is a powerful message. We have in our collective hands the scope for continuing the destructive activities of the Anthropocene to render to the verge of perilous a decent living for the majority for most of their future lives. It is also within our abilities to redefine the Anthropocene to enable future generations to flourish in a decent and habitable world (O’Riordan and Lenton, 2013). Part of this legacy is to retain the life-support services and functions of Planet Earth. And part of this mission, in turn, is to safeguard and promote biodiversity as the lynchpin of the ecosystems of the living world. In an environment driven primarily by the fortress mindsets promoting economic growth, the criteria for real sustainability are impossible to meet. According to Kallis et al. (2015, 6) growth is “unjust and ecologically unsustainable.”

It is unjust because of systematic distortion of goods and wealth between core and periphery. Furthermore, the extractive resources of energy, water, and materials are, more often than not, removed from the collective property rights of the poor. Waste is frequently dumped where its toxicity and degradation are in the domains of the politically defenseless. It is ecologically unsustainable because both materials consumption and greenhouse gas emissions correlate with indices of GDP. Even a shift to a low-carbon energy technology favors the wealthy unless the poor are explicitly subsidized. On top of this, wealthy countries outsource their pollutants and ecological destruction with no thought of either precaution or compensation. Kallis et al. (2015, 7) sum up that “with continuous global growth, most planet ecosystem boundaries will be surpassed.”

This often repellant behavior is difficult to change because of power relations: “the benefits accrue to those who hold power, and the costs are shifted to those who are marginalized. Commodification, which is part and parcel of growth, is eroding sociality and mores. Care, hospitality, love, public duty, nature conservation, spiritual contemplation; traditionally, these relations or ‘services’ did not obey a logic of personal profit” (Kallis et al., 2015, 6).

The sustainability prize is the evolution of societies in which fewer natural resources are used and life is organized differently with “sharing, simplicity, care, and the commons as primary significations” (Kallis et al., 2015, 5). Equitable downsampling of production and consumption would reduce societies’ throughput of energy and raw materials and engender the creation of a new set of local commons with innovative forms of living and producing, such as eco-communities, cooperatives, urban or rural gardens, and local currencies.

One test case here would be creating landscapes that took care of the needs of both humans and the natural environment coupled in responsible cooperation. Such lived-in landscapes would correspond to large tracts of land where biodiversity conservation is practiced in coherence with people living and working in the area and striving for sustainable livelihoods. Different models of living landscapes already exist of which the biosphere reserve (BR) model is the most well-known (Batisse, 1997; O’Riordan and Stoll-Kleemann, 2002; Pool-Stanvliet, 2014).

In this article, we look at the origins of and challenges for BRs and provide some ideas for a creative transformation toward more (ecologically) livable, sustainable biosphere landscapes.

Introduction: BRs in the Anthropocene

UNESCO launched the Man and the Biosphere (MAB) Programme in 1970. This was designed to balance human responsibility for maintaining nature and the human need to use natural resources to enhance the social and economic well-being. The concept of BRs was subsequently developed within the framework of the MAB Programme (Batisse, 1997). BRs form a worldwide network of representative landscapes, with the primary goal of serving as learning sites for information exchange on environmental policy, sustainable development, and appropriate management practice. Furthermore, they were explicitly designed to be experimental
where environmental change could be monitored and policies or practices could be “tested” (Price et al., 2010). Therefore, BRs, with their impressive distribution of 669 sites across 120 countries, were regarded as an adequate response to the complex challenges of the Anthropocene.

According to the Seville Strategy (UNESCO MAB, 1996), BRs are expected to fulfill three main functions:

1. in situ conservation of natural and seminatural ecosystems and landscapes;
2. establishment of demonstration areas for sustainable use;
3. logistic support for demonstration projects, research, monitoring, environmental education, and training.

These functions are implemented through a zonation system including one or more core areas (strict protection), buffer zones (sustainable management), and transition areas that can extend beyond the territory where cooperation for sustainable development with local people can be organized (UNESCO MAB, 1996). In general, BRs were recognized as a protected-area category in the first categorization system by the IUCN in 1978, but were excluded from the list in the revised version of 1994. This was based on the argument that BRs do not adhere to the primary goal of biodiversity protection.

Reed (2016) distinguished two phases in the evolution of BRs. In Phase 1 (1974–94), BRs were to be representative ecosystems based on an international classification of biogeographical provinces. Although this ideal was never achieved, the focus on representativeness over uniqueness was aimed at understanding and redressing widespread environmental challenges across a diversity of landscapes rather than focusing on biological exceptions. The network was to include natural and seminatural ecosystems; individual sites were to have a strictly protected area at their core with zones of increasing human influence, thereby allowing for monitored, manipulative research. The development function (see above) became prominent in Phase 2 (1995 to present) once the Statutory Framework for BRs was introduced. Reed (2016, 3) describes these changes as a gradual shift in orientation from “a research-driven to a management-driven program” with a broadening of focus from conservation science to sustainability science.

The Lima Action plan and the MAB Strategy (both valid until 2025) are founded on the continuity of the Seville Strategy and the Statutory Framework of the World Network of BRs (WNBR). This current policy framework is based on the evaluation of the implementation of the Madrid Action Plan for Biosphere Reserves adopted at the 3rd World Congress of BRs. The Madrid Action Plan is important because it provides the potential for managers of BRs to address new sustainability challenges. “BRs should now act as places for investments and innovation to mitigate and adapt to climate change, to promote the greater use of renewable energy in sustainable futures of rural and urban areas, and to enhance and capitalize upon ecosystem services and products in sustainable development for human well-being” (UNESCO, 2008; for more detailed and profound information on the evolution of the BR concept see Price et al. (2010)).

The vision of the Lima Action Plan and the new MAB Strategy is stated to be “a world where people are conscious of their common future and interaction with our planet, and act collectively and responsibly to build thriving societies in harmony within the biosphere” (UNESCO, 2016, 2).

This mission remains broadly similar to previous aspirations:

- “to develop and strengthen models for sustainable development in the WNBR;
- to communicate the experiences and lessons learned, facilitating the global diffusion and application of these models;
- to support evaluation and high-quality management, strategies and policies for sustainable development and planning, as well as accountable and resilient institutions;
- to help Member States and stakeholders to urgently meet the sustainable development goals (SDGs) through experiences from the WNBR, in particularly through exploring and testing policies, technologies, and innovations for the sustainable management of biodiversity and natural resources and mitigation and adaptation to climate change” (UNESCO, 2016).

SDGs must guide all development policies and strategies of all nations from now on. The UN has agreed that progress toward reaching these goals with their 167 targets will be assessed on a regular basis, with a major global stocktake set for 2030. These are outlined in Fig. 1. They are frequently criticized for overlapping, for confusing targets and idealism, and for being seemingly irrelevant for the main drivers and power-brokering processes of conventional diplomacy and economic policy.

Although on paper BRs seem to offer innovative thinking toward socially inclusive environmental management and are designed to be laboratories of research and education, they are experiencing different degrees of effectiveness in realizing their prescriptive functions with regard to addressing SDGs.

Challenges for BRs in the Anthropocene

BRs, Sustainable Development, and the SDGs

Sustainable development is the concept that lies at the heart of BRs, yet it remains contested. Kothari et al. (2014) criticize the concept of sustainable development “as an oxymoron” because to them it is not an adequate response to unsustainability and inequity. Kallis et al. (2015, 5) add that “development, even if beautified with adjectives such as balanced, local or sustainable, is a problematic key word.” The word would suggest “an unfolding towards a predetermined end. A premise of modern liberal societies, however, is the denial of any ultimate collective end as well as the denial of anything but ascent. Development becomes self-referential: development for the sake of development” (Kallis et al., 2015, 5).
Accepting this critique, it is also necessary to critically examine the SDGs themselves before they are implemented in BRs on a one-to-one basis. Kothari et al. (2014) list nine points of critique of which three are relevant to the theme of this article. This is because they should be considered in BRs much more than is currently the case. The first relevant point is that culture, ethics, and spirituality are rarely considered, and the “importance of cultural diversity, and of ethical and spiritual values (especially towards fellow humans and the rest of nature) is greatly underplayed” (Kothari et al. 2014, 365). Secondly, according to the authors, “unbridled consumerism is not tackled head-on.” Without attending to this, “the majority of humankind will never have the space needed to become more secure and genuinely prosperous” (Kothari et al. 2014, 365). And thirdly, of particular importance for the evolution of a spatial concept such as that of BRs: “global relations built on localization and self-reliance are missing.” The authors argue that there is “little attention to the need to create relatively self-reliant communities” in which a degree of genuine democratic autonomy prevails (Kothari et al. 2014, 365). One interesting example of more self-reliance is the establishment of local currencies (such as the Brixton Pound, the Totnes Pound, or the Bristol Pound) because this is a way to achieve a low-carbon society via more transparent economies based on local ownership. Supply chains can be shortened and dependence on fossil-fuel-intensive transport infrastructure reduced. It is an appealing idea to be applied in BRs because these kinds of local money schemes are among the most immediate and tangible manifestations of a transition that captures the spirit of the place where one lives (https://transitionnetwork.org/stories/has-related-content/).

In general, it appears to be important that “sustainable development depoliticizes genuine political antagonisms about the kind of future one wants to inhabit” (Kallis et al., 2015, 9), while BRs should follow the general vision of an “ecologizing society” and demonstrate how it could work. This means that they have to imagine and enact alternative visions to modern development instead of merely implementing better or greener development as an alternative.

In addition to the very concrete suggestion of implementing local currencies, Kothari et al. (2014) list and explain a range of various (cultural and social), more philosophical notions that have emerged in various regions of the world that seek to envision and achieve a more fundamental transformation. One example would be Buen Vivir (South America), a culture of life that encompasses harmony with nature; cultural diversity, and pluriculturalism; coexistence within and between communities; inseparability of all of life’s elements (material, social, spiritual); opposition to the concept of perpetual accumulation; return to use values; and movement even beyond the concept of value. Others are South Africa’s ethical concept of Ubuntu (and its analogs in other parts of the Continent), with its emphasis on human mutuality; Swaraj in India, with its focus on self-reliance and self-governance; and—from Europe—“degrowth,” the hypothesis that we can live well with less.

These more “authentic” world views and forms of life should be highly appreciated and fully incorporated by the VNBRs, as they unify many of the principles promoted by the UNESCO MAB Programme: they are responses that are perfectly adapted to the encompassing environment and have evolved bottom-up from the grassroots level. Depending on the local, regional, or national culture different approaches can be adapted in different BRs.

**Implementation of BRs**

BRs face several challenges in fulfilling their appealing visions, missions, and goals. Although, theoretically, all BRs included in the WNBR share the same rationale, overall goals, and designation and assessment criteria, local contexts and multiple management approaches provide ample diversity and extensive variation (Stoll-Kleemann and Welp, 2008; Ishwaran et al., 2008).
Pool-Stanvliet (2014) analyzed the South African BR network, with its excellent conservation-related legislation and strategies addressing pressing topics such as sustainability and climate change. In a somewhat contradictory manner, BRs do not feature significantly in the national system of legislation and policies. Although BRs are nominated with support from national government, each BR is usually left on its own to find ways to successfully make a difference through effective implementation of the MAB Programme (Pool-Stanvliet, 2014).

From case studies in the Czech Republic, Hungary, and Poland, the MAB label is sometimes perceived as a “cosmetic add-on without content” (Schliep and Stoll-Kleemann, 2010). This can be ascribed to a number of causes, such as a perceived lack of effectively managed BRs, insufficient knowledge of the inherent opportunities for promoting the MAB Programme, visionary shortcomings with regard to the true nature of sustainable development, and the nonpolitical nature of BRs. The implementation of the MAB Programme is struggling with horizontal integration at the local level, as well as vertical integration with national authorities (Pool-Stanvliet, 2014). In general, BRs do not primarily function as self-governing planning units. Their purpose is more often to develop and initiate cooperation among authorities and other involved parties. Strengthening BRs’ advisory boards by adding representatives from different interest groups and agencies is one way to institute better overall cooperation. In cases where a BR administration does not have a strong regulative role, it could nevertheless become an initiator and mediator of efforts toward improved participation and cooperation. This would also bundle limited resources, which has been mentioned previously as an obstacle to effective participation.

In cases where the BR administration has a strong regulative function in regard to land use and construction activities, such as in some areas of Germany, the outcome can be more difficult. The administration might be too involved in promoting nature and landscape-protection interests to be acknowledged by all actors as a legitimate “neutral” governing partner. Although such a strong formal regulative position makes it possible to hinder unwanted development, the possibilities of acting as a parallel learning organization are limited (Stoll-Kleemann and Welp, 2008). On the other hand, in most BRs many agencies are involved in the management of the area, forcing the administration to adopt some negotiation strategies. Many, however, still perceive the typical BR administration primarily as an authority for promoting nature conservation to the point of single-mindedness. Yet few other similar parties are currently in a position to take on such a coordinating role that extends beyond narrow sectoral designation. Therefore, the many advantages of the special status of BR as model regions, as stated in the Seville Strategy, should be acknowledged and tested.

Reed (2016) discovered that “scientists, policy and decision-makers, and even local communities where they are situated, remain unaware of the purpose, activities and potential benefits of BRs.” They claim that “their value as a network has been significantly underutilized.” As a result, the plight of most BRs has failed to be noted on the research and action agendas of scientists and policymakers.

Concerning the third goal of BRs (research and monitoring), more validation with data from the realm of natural science is required. One aim could be to standardize the methodology of ecological monitoring and natural-science research in order to make systematic comparisons between BRs possible. In addition, there is a significant lack of methods for a systematic social-scientific comparison of human-environment relationships between BRs. In general, more interdisciplinary research and monitoring are needed. This would promote the conceptual and practical knowledge of people-environment relationships and the consequences of biodiversity conservation. BRs can become models for this kind of integrated monitoring and, as such, come closer to their goal of being model regions for true sustainability. Bridgewater (2016, 5) adds that the UNESCO-MAB programme should contribute to address the research needs for implementing and monitoring the SDGs by providing its expertise in the natural and social science sectors, and “bring together programmes which thus far remain in their silos” and is able to continue to “work across scales and disciplines, to deliver place-based outcomes for science and society.”

A further problem is the use of the word “reserve,” which appears to convey the message of an area where people are excluded. This is a very sensitive issue in a lot of countries, for example, South Africa. Pool-Stanvliet (2014) points out that inhabitants of BRs find it difficult to grasp the meaning of a BR and its terminology, a task that remains to be addressed adequately by all BRs. In numerous languages, the term “reserve” has a rather negative connotation. A more positive-sounding alternative exists in Austria, where BRs are called Biosphere Regions.

A search for new criteria for the establishment and transformation of BRs seems to be needed. These criteria should embrace both natural and human relationships and values. Here is where the BRs should become showcases of the SDGs and beyond (including the above-mentioned new forms of life) and portals of the positive message of the Anthropocene.

Community Participation and Stakeholder Involvement in BRs

Unfortunately, the designation of an BR usually remains an “outside intervention.” The zonation of core areas or other restrictions in the use of natural resources may conflict with local property rights, commercial interests, or local people’s perceptions of the main problems in the region. If BRs want to become an accepted local partner, all relevant stakeholders and the local people should have the opportunity for their voices to be heard.

Furthermore, the cross-sectoral nature of the tasks of BRs, which are linked to the responsibilities of various administrations and institutions (agriculture and forestry authorities, administrations for water management, coastal protection and land use, as well as national park authorities and local governments) makes clear how important it is to be skilled in organizing coordination and cooperation among various administrations, authorities, and stakeholders (Stoll-Kleemann and Welp, 2008).
The various official plans emphasize that participatory and good management approaches, allowing multiple stakeholders to be an integral part of BRs, manifest themselves in effective partnerships through cooperation across all governmental levels, the private sector, mass media, civil society organizations, indigenous and local communities, as well as research, monitoring, and education centers. As such, BRs can be regarded as forums for involving people and generating new ideas to solve local problems that work toward a dynamic, mutually beneficial relationship between man and nature (UNESCO MAB, 2008).

O’Riordan and Stoll-Kleemann (2002) put forward three main arguments for participatory conservation: it promotes democratic decision-making, increases legitimacy of conservation actors and programs, and facilitates knowledge sharing and exchange. Active community engagement creates a rewarding sense of ownership and common purpose.

Nevertheless, the task of effectively engaging communities in the governance and management of BRs is a complex one that involves many hurdles. Substantial, long-term commitments of financial and human resources are needed to establish continuity, competence, and trust. Power asymmetries between conservation institutions and local populations, and among local actors themselves, need to be better related and resolved. Parties capable of and willing to work for common conservation compromises need to be found, championed, and negotiated with.

These ideal conditions are rarely in place. In addition, factors beyond the control of the BR communities and their management, such as structural poverty, corruption, and weak governance, may overrule even the best-designed programs, with degradation and destruction of biodiversity as the final output of these failures.

Facilitating high-quality community participation in BR management requires a broad spectrum of skills and the use of appropriate methods. A range of public participation, moderation, and conflict-management methods, as well as statistical-survey methods, has been outlined in the respective literature and handbooks (cf., e.g., Creighton, 2005). Nowadays, there are innovative tools that can be applied for involving even larger numbers of people, with group sizes ranging from 20 to several hundred. Such tools provide a means for creating a setting in which dynamic, energetic, and creative learning processes can take place. So far, these promising intervention methods have remained relatively unknown and have rarely been applied in BRs. Successful BR management requires more experimentation with participatory methods and a more systematic reflection of success and failure factors.

**Strengthening the Urban–Rural Sustainability Link by Establishing More Urban BRs**

de la Vega-Leinert et al. (2012) argue for BRs as learning laboratories to foster sustainable initiatives and practice at urban–rural interfaces. This is also supported by the Madrid Action Plan, which explicitly requests the establishment of urban BRs (UBRs). Urbanization is among “the most critical transformations that has had profound impacts on land use from local to global scale since the mid-twentieth century” (de la Vega-Leinert et al. 2012, 26). More than half of the world’s population lives in cities; furthermore, urban growth is most rapid in developing countries. The transformation of urban landscapes is twofold. In both emerging and developed countries, it represents one of the greatest challenges to ensuring basic human welfare and the functioning of viable ecosystems. Whereas the poor people who inhabit them have only limited access to basic services, are deprived of meaningful participation in decision-making, and face extreme vulnerability to natural disasters, urban areas are also loci of concentrations of knowledge, innovation, and productive resources that could be used for UBRs. They can be seen as priority areas and large-scale laboratories for observation of the effects of global change on ecosystems (e.g., significant warming and increased nitrogen deposition). In the case of the São Paulo City Green Belt Urban Biosphere Reserve, de la Vega-Leinert et al. (2012) summarize that through the reactivation of local economies, real sustainable alternatives are created, thereby contributing to the improvement of livelihoods in rural and peripheral urban area and easing the pressures on natural resources from ever-growing urban areas.

Beyond the establishment of more UBRs, it is useful to include not only cities but also urban–rural interfaces, where major environmental and societal transformations are occurring, and which critically affect the availability of and access to natural resources. This provides a welcome opportunity to found initiatives that help to adequately value and protect ecosystems for their own sake, as well as to improve local livelihoods (de la Vega-Leinert et al., 2012). Despite serious restraints due to a lack of powers and resources, BR managers, by adjusting and revisiting their practices, have evolved power and responsibilities in actively supporting small but critical transformations at the local scale near large cities. In this respect, we suggest key areas in which BR managers can make a difference. These include encouraging social learning, positive leadership, accountability, and transparency, while recognizing and valuing the contribution of local populations can make to shaping conservation action (de la Vega-Leinert et al., 2012).

In detail, the particular value of specially designed UBRs is their role as laboratories that contribute to bridging the gaps between challenging environmental conservation and societal issues. Such laboratories provide a valuable framework for addressing urban–rural interconnections, such as social marginalization, adaptation to global change, resource use, and dispute in an integrative approach. UBRs, in principle, permit the combination of different domains, such as collaborative environmental governance, organization through planning and management, and knowledge exchange through research, capacity building, and education. The embedded mandate of UBRs to involve parties in consensual manner, if challenging, stimulates the creation of platforms and mechanisms of communication and negotiation. At the same time, the designation of UBRs acknowledges the value of natural resources and makes them more visible, while formalizing a delimited space where paths toward sustainable resource use can be explored.
**Outside Pressures: The Contradiction of Sustainability in the Neoliberal World Dominating the Anthropocene**

Tackling sustainability goes against the grain of neoliberal economies and power politics. The overwhelming concern regarding the failure of conventional government and of the markets to deliver fair sustainability has been universally noted. It is therefore a sign of the maturity of the true Anthropocene that BRs embrace decency, ecosystem care, and human well-being. This is why we advocate that they change their designation from BRs to biosphere landscapes to reflect the coordination over land and water and the interconnection with living and aspiration (Stoll-Kleemann and O’Riordan, 2017).

BRs will work with local economies to help strengthen fair-trade regimes and to deliver social fairness and justice for all of their inhabitants. BRs are not islands: the impacts of a globalized world with a few big players in the energy area and forestry and agricultural spheres weigh heavily on what happens within them.

For example, the pressure on agricultural land in the wake of the sharp increase in meat and dairy-product consumption and the concomitant demand for huge swaths of terrain devoted to massive feed cultivation (especially of soya and maize) constitute a major problem that is detrimental to the implementation of BRs worldwide. The consequences of the accompanying dramatic increase in the intensification of agriculture have not spared BRs, and the land-grab plague now affects BRs and other protected areas on every continent.

Even in Germany, where, according to the Federal Environment Agency (UBA), 60% of agricultural land is used for the intensive production for feed for animal products (meat, dairy products, and eggs) and a further 20% for bioenergy plants (UBA, 2015), agricultural production is placing increasing pressure on BRs, and the negative consequences of the unsustainable intensive production is extending into BRs. This makes it clear that the BRs’ destiny depends less on classical nature conservation measures than on individual consumption patterns and the political and social pressure exerted by the true beneficiaries of this development, namely, large-scale agro-businesses (Stoll-Kleemann and O’Riordan, 2017).

It is obvious that BRs face a number of challenges, both familiar and new, and that the issue of sustainable consumption will have to be more forcefully addressed—in practice and not merely in theory, for example, in BRs’ information centers or in other environmental-education activities organized by BR staff. In order to overcome these challenges, BR management requires political tailwind, for example, through the provision of human and financial resources that are adequate to meet the range of its tasks, combined with courageous political support, particularly vis-a-vis the agro-lobby (including fertilizer, pesticide, and seed producers). In particular, the reduction of harmful subsidies will lead to more biodiversity and sustainability both inside and outside BRs (Stoll-Kleemann and O’Riordan, 2017).

**Conclusions**

In the new era of the Anthropocene—understood as global geophysical force—characterized by exceeded planetary boundaries with negative consequences not only for “the environment” in an abstract sense but also for humans themselves there is an urgent need for innovative ways in which to showcase sustainable living practices in the light of dominating unsustainable patterns of growth and human consumption. The sustainability prize is the evolution of societies in which fewer natural resources are used and life is organized differently with “sharing, simplicity, care and the commons as primary significations” (Kallis et al., 2015, 5).

The idea of implementing BRs potentially is such an innovative way. The global growth in the number and area of BRs, as well as the concept’s further evolution toward the implementation of the SDGs are already fundamentally positive developments.

Yet, BRs still need to build (more) trust through real relationships with communities and other relevant stakeholders. To make this happen, they need to be initiated and then established in real local and bottom-up processes. Stakeholders need to be convinced of the added value of implementing the BR model amidst a range of regional and national initiatives. Though it might appear superficial, it is felt that replacing the term “biosphere reserves” with “biosphere landscapes” (BLs) or biosphere regions (such as in Austria) would better reflect these institutions’ positive aspects. This also means that we have to change the criteria for designating and managing BRs away from representativeness of landscapes toward an integration of their ecological, social, and economic potentials, set in a framework of genuine sustainability governance. Urban BRs also need to be established to address the challenges related to urbanization and to improve the important urban–rural sustainability linkages.

To sum up, BRs can provide a dynamic framework for the establishment of valuable laboratories to address the challenges of the Anthropocene and contribute to a more sustainable world. In order to achieve this, some—or preferably all—of the visions described previously, such as strengthening the urban–rural link and emphasizing the needed critical assessment of the concepts of growth and sustainable development, and even the SDGs themselves, have to be taken more seriously. Only this will make it possible to make progress toward more consequent patterns of sustainable living (e.g., Buen Vivir, Swaraj or degrowth).

**References**


Further Reading


Relevant Website

https://transitionnetwork.org/stories/has-related-content/.