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International Coordinating Council of the Man and the Biosphere (MAB) Programme

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ITEM 9 OF THE PROVISIONAL AGENDA: MAB AND WORLD NETWORK OF BIOSPHERE RESERVE (WNBR) – POST RIO + 20 OPPORTUNITIES AND TOWARDS A STRATEGY FOR 2014-2021

1. The present document has been prepared pursuant to the decision of the MAB ICC at its 25th session to entrust the Bureau of the MAB ICC and its 'Electronic Reference Group' in collaboration with the MAB Secretariat with the preparation of a draft future strategy on MAB and its WNBR to be presented at the 26th session of the MAB ICC.

2. The document consists of two sections: Section I outlines the background to and the process behind the preparation of the draft strategy together with a proposed timeframe and suggested working methods for the continued elaboration of the new Strategy that hopefully would be finalized for adoption by the MAB ICC in 2015. Section II contains the 'zero' draft of the strategy elements based on inputs received from MAB National Committees and Focal Points.

3. The MAB Council is invited to examine, discuss and adopt the proposed timeframe and working methods for the further elaboration of the new MAB Strategy outlined in Section I of the attached document and to take note of the content of the 'zero' draft strategy contained in Section II.

SECTION I

BACKGROUND AND PROPOSAL FOR TIMEFRAME AND WORKING METHODS FOR THE CONTINUED PREPARATION AND FINALIZATION OF THE NEW MAB STRATEGY

1. At its 25th session, the MAB ICC discussed the development of a new Strategy for MAB and the World Network of Biosphere Reserves (WNBR) that would follow on the implementation of the Madrid Action Plan - MAP (2008-2013). The Council subsequently decided that a draft of the new Strategy should be presented to the MAB ICC at its 26th session (Jönköping, Sweden 10 - 13 June 2014) and that the text should be developed in harmony with the UNESCO mid-term strategy (2014-2021) and be supportive of relevant Sustainable Development Goals (SDG's) that are to be integrated into the UN's post-2015 Development Agenda. It was also agreed that the MAB Secretariat would support the strategy development processes, which is to be overseen by the Bureau of the MAB ICC and its 'Electronic Reference Group' (formerly referred to as the 'Electronic Working Group', and that the draft should reflect the outcomes of the ongoing evaluation of the MAP.
2. On 6 March 2014, the MAB Secretary issued a MAB Circular Letter inviting all MAB National Committees and Focal Points to contribute to the strategy development process by providing key elements for the new strategy focusing on 8 questions drafted in consultation with the Electronic Reference Group.
3. A good number of inputs were subsequently received from MAB National Committees and Focus Points and a regional network. These inputs are available in their original format in a compiled reference document available for consultation on the MABnet web page for the 26th MAB ICC (<http://www.unesco.org/new/en/natural-sciences/environment/ecological-sciences/man-and-biosphere-programme/about-mab/icc/icc/26th-session-of-the-mab-council/>).
4. Based on the inputs received (up to 21 May 2014), the MAB Bureau/Electronic Reference Group together with the MAB Secretariat prepared a preliminary 'zero' draft of the new MAB Strategy, reflecting as faithfully as possible the suggestions and recommendations made, with reference kept to the originator of the input through endnotes, sometimes grouping them together under what appears to be priority issues for several Member States. In cases where text has been introduced from other sources, such as from the UNESCO Medium-Term Strategy 2014-2021, they are marked with footnotes. Paragraphs without endnotes or footnotes have been produced by the MAB Bureau/Electronic Reference Group together with the MAB Secretariat.
5. In terms of structure, the zero draft builds on the questions raised in the MAB Circular letter organized under eight 'Strategy Elements' (SEs):

SE1. Vision and mission statements for MAB and the World Network of Biosphere Reserves (WNBR) for enhanced visibility, impact and public recognition

SE2: Identifying International Key Issues and Processes and Implementing Related Long-term Strategic MAB and WNBR Goals and Expected Achievements

SE3. Development and Effective Delivery of MAB and WNBR Services To the Benefit of UNESCO Member States

SE4. Focused and integrated MAB Research, Policy and Action Agendas

SE5. Enhancing the Functioning of the MAB Regional and Thematic Networks

SE6. MAB Governance Mechanisms

SE7. Funding Mechanisms and Implementation Partners

SE8: Effective MAB and WNBR use of contemporary communication, information and data sharing tools and instruments for enhanced visibility and benefit to Member States and to society

6. Timeframe and working methods. As outlined in the MAB Circular Letter of 6 March 2014, the proposed timeframe for the preparation of the new MAB Strategy, starting from the 26th session of the MAB Council, is one year (i.e. the new strategy should be ready for adoption at the 27th MAB ICC in 2015). For this purpose, it is suggested that following the deliberations at the 26th MAB ICC on the zero draft strategy, the MAB Secretariat should produce a more condensed draft which brings together common statements made by the ICC and distributes this to the MAB Bureau/Reference Group.

7. A two-day working meeting will then be organized by the MAB Secretariat in October-November 2014 in order to prepare the first draft of the new strategy that should be widely circulated for consultation and comment in November-December 2014. It is foreseen that this iterative process, which will take place through electronic communication, including through the MABnet engaging all MAB stakeholders, including the regional and thematic MAB and biosphere reserve networks, will produce several drafts, the almost-final version of which should be ready in time for the 27th session of the MAB ICC for final clearance and adoption.

SECTION II

ZERO DRAFT OF THE NEW MAB STRATEGY 2014-2021

Strategy Element 1. Vision and mission statements for MAB and the World Network of Biosphere Reserves (WNBR) for enhanced visibility, impact and public recognition

1. Succinct, easy to understand, while sufficiently comprehensive vision and mission statements are critically important in order to provide MAB and its WNBR with the visibility and public recognition required to achieve more substantive impact. Framed by the overall MAB and WNBR vision and mission statements, regional and thematic networks, as well as individual BRs could also find it useful to develop their own respective statements.
2. Several MAB Nat Coms are of the opinion that the mission and vision statements contained in the MAP are still valid and that no changes are needed.¹ Some other MAB Nat Coms propose minor changes.² Other Member States, a regional network and some BRs propose more substantive modifications or additions.³
3. It should be noted that the Vision and Mission statements in the MAP focus primarily on the WNBR (albeit as part of MAB). Should there be separate statements for the overall MAB Programme (in addition to the statements focusing on the WNBR) or should the existing statements be amended to feature MAB more prominently?
4. The continued use of 'Man' in the title of the MAB Programme is viewed by some as outdated and the term 'Biosphere Reserve' (BR) is not acceptable in many countries that rather refer to their BRs as 'Biosphere', 'Biosphere Area', 'Biosphere Park', 'Biosphere Region' etc. – or equivalents in languages other than English. A more significant action would be for UNESCO to give comparable levels of prominence to World Heritage Sites and BRs, possibly renamed as 'World Biosphere Regions' or 'World Biosphere Sites'. Making changes to these names could have benefits as well as disadvantages.⁴
5. In the following paras, inputs received from Member States are grouped into 3 main categories: amendments proposed to the original vision and mission statements; proposals for entirely new statements; and comments of a more general nature on both the vision and mission statements respectively.
6. Original Vision Statement for the World Network of Biosphere Reserves (WNBR) within the Man and the Biosphere (MAB) Programme contained in the MAP:

The World Network of Biosphere Reserves of the Man and the Biosphere Programme consists of a dynamic and interactive network of sites of excellence. It fosters harmonious integration of people and nature for sustainable development through participatory dialogue, knowledge sharing, poverty reduction and human well-being improvements, respect for cultural values and society's ability to cope with change, thus contributing to the MDGs. Accordingly, the WNBR is one of the main international tools to develop and implement sustainable development approaches in a wide array of contexts.

7. Proposed amendments to the original vision statement:

The World Network of Biosphere Reserves of the Man and the Biosphere Programme consists of a dynamic and interactive network of sites of excellence. It

fosters harmonious integration of people and nature for sustainable development through participatory dialogue, facilitating research and⁵ knowledge sharing, poverty reduction and human health and⁶ well-being improvements - restorative theories, empirical findings and potentials,⁷ respect for cultural values and society's ability to cope with change, thus contributing to the achievement and/or implementation of:⁸ [to the [MDGs and the]⁹ SDGs.¹⁰ Accordingly, the WNBR is one of the main international tools [to] for strengthening synergies with Multilateral Environmental Agreements and¹¹ develop and implement sustainable development approaches in a wide array of contexts via a reduced environmental impact.^{12]}

*It sets out to achieve, by 2025, conciliation between biological diversity conservation and development whilst maintaining associated cultural values, thus contributing to peace and the MDGs and SDGs. An intention to make significant contributions to addressing the three emerging challenges is outlined in the MAP: The WNBR is one of the main international tools to develop and implement sustainable development approaches in the context of climate change adaptation and/or mitigation, biodiversity and ecosystem services loss and rapid urbanisation.*¹³

*- It supports environmental education of the new generations in order to maintain a sustainable future.*¹⁴

- *the main outcomes of the Rio+20 Conference, particularly to the set of Sustainable Development Goals (SDGs) to be developed and building upon the Millennium Development Goals (MDGs) and converging with the post 2015 development agenda*
 - *the post 2014 agenda of the UN Decade of Education for Sustainable Development*
 - *the Aichi targets of the Convention on Biological Diversity by 2020*
 - *the Dresden Declaration on Biosphere Reserves and Climate Change*
- Accordingly, the WNBR is one of the main international tools to develop and implement sustainable development approaches in a wide array of contexts.*¹⁵

8. Proposed alternative vision statements:

- a. *The WNBR is a dynamic and interactive network of sites of excellence. These sites are the main international tool to implement and understand sustainable development.*¹⁶
- b. *The WNBR is a dynamic and interactive network of sites of excellence, being the main international tool to develop and implement sustainable development.*¹⁷

9. Proposed MAB Programme vision statement:

- c. *The vision of the MAB programme is to contribute decisively to the strengthening and implementation of strategies for the harmonious integration of people and nature, to promote sustainable development through participatory dialogue, exchange of knowledge, poverty reduction, improved welfare, respect for cultural values and adaptive capacity of society to change, thus contributing to the achievement of the Millennium Development Goals (MDGs).*¹⁸

- d. - *The intergovernmental MAB Programme of UNESCO is one of the guides of the international community on its way towards sustainable development, offering a unique world network of model regions for sustainable development.*
- *The intergovernmental MAB Programme of UNESCO contributes, in the framework of its mandate and in coordination with other relevant institutions and programmes, to guide the international community on its way to sustainable development, in particular to implementing the sustainable development goals and to comply with its commitments in the framework of Multilateral Environmental Agreements as well as social and cultural conventions and agreements including those on human rights and on the diversity of cultural expressions.*
- *Through its World Network of Biosphere Reserves it supplies its Member States with the necessary knowledge and tools to sustainably use and protect their biological resources.*
- Member States have strong criteria and structures in place to take full advantage of the Programme at national level, to use it for international cooperation and for channeling ODA resources.*
- *The MAB Programme is recognized by the international community as a major contribution to implement the Sustainable Development Goals and as an asset to sustainably use and conserve biological diversity and ecosystem services to thereby fulfill the CBD-goals.¹⁹*

10. General comments on the vision statement:

- e. The vision statement is quite broad and could provide a better explanation of the link between MAB and WNBR.²⁰
- f. It would be helpful to outline the strategy of the MAB Programme in other areas than BR development.²¹
- g. As problems are getting worse, there is a need to add 'testing of the ecological transition' to the mandate of the WNBR.²²
- h. The protection of biodiversity and nature values should be specified.²³
- i. The vision statement should be replaced by a shorter and more compelling vision defining an optimal future state.²⁴
- j. If the current version of the vision statement is used as a basis for a new version, it should be updated to remain relevant in the context of global sustainable development processes.²⁵
- k. New changes in society, culture and nature, are challenging us to develop an education mechanism or system of actions that will bring self-awareness to the people, which will foster intergeneration connections that will underline the solidarity, cooperation, collective spirit and responsible attitude towards the communities.²⁶
- l. The vision should be to promote BRs as places of "excellence" where it is possible to apply the principles of sustainability. Excellence here refers to an ethical commitment, institutional strengthening, an utility paradigm of shared management and open dialogue, learning, intangible heritage and solidarity.²⁷

- m. The WNBR should primarily serve nature conservation, preservation of natural biodiversity of species, landscapes, conservation of the natural mechanisms of the ecosystems cyclic development.²⁸

11. Original Mission Statement for the World Network of Biosphere Reserves (WNBR) within the Man and the Biosphere (MAB) Programme

To ensure environmental, economic, social (including cultural and spiritual) sustainability through:

- *development and coordination of a worldwide network of places acting as demonstration areas and learning sites with the aim of maintaining and developing ecological and cultural diversity, and securing ecosystem services for human well-being;*
- *development and integration of knowledge including science for advancing our under-standing of interactions between people and the rest of nature;*
- *building global capacity for the management of complex socio-ecological systems particularly through encouraging greater dialogue at the science-policy interface, environmental education and multi-media outreach to the wider community.*

12. Proposed amendments to the original mission statement:

To ensure environmental, economic, social (including cultural and spiritual) sustainability through:

- *development, operation²⁹ and coordination of a worldwide network of [places] areas³⁰ acting as [demonstration] model³¹ areas and learning sites with the aim of maintaining and developing ecological and cultural diversity, and securing ecosystem services for human well-being and stimulating economic activities that are consistent with sustainable development in the face of climate change adaptation and/or mitigation, biodiversity and ecosystem services loss and rapid urbanisation.³²*
- *development [and]³³ integration and sharing³⁴ of knowledge including science for advancing our understanding of interactions between people and [the rest of]³⁵ nature;*
- *promoting specific actions to build [building]³⁶ global capacity for the management of complex socio-ecological systems particularly through encouraging greater dialogue at the science-policy interface, stimulating research on tools and methods for environmental management and development,³⁷ [environmental]³⁸ education for sustainable development and [multi-media outreach to the wider community]³⁹ efficient outreach to the wider community through all available channels.⁴⁰*
- *devising acceptable mechanisms that will inhibit vested interest groups from ravishing biodiversity and culture-rich sites for commercial exploitation;*
- *development and strengthening of linkages with academic institutions with the aim in view of coming up with innovative learning and research programs for the youth regarding key issues like climate change, biodiversity loss/conservation, impacts of burgeoning population, growth of urban centers, etc.⁴¹*
- *Biosphere reserves shall be places in which responses to adapt to worldwide change will be tried and tested with emphasis on sustainability so that successful responses can subsequently be applied in the rest of the territory.⁴²*

By 2021, the World Network of Biosphere Reserves (WNBR)

- consists only of biosphere reserves with recognized high quality standards based on the Seville Strategy and the Statutory Framework for the WNBR. The high quality standards are verified and maintained by the Periodic Review Process.
- Member States propose biosphere reserves for designation only in as far they add value to the World Network as model areas for sustainable development.
- Member States increasingly designate and manage transboundary biosphere reserves to ensure ecosystem based management of natural resources, and improve the management of existing areas.
- The MAB Secretariat seeks and disseminates knowledge and information within the WNBR and to all relevant partners, in particular UN agencies, processes and conventions.⁴³

13. Proposed alternative mission statements:

- n. *MAB is a network of sites that operationalize sustainable development in a wide array of local contexts.*⁴⁴
- o. *The WNBR fosters the harmonious integration of people and nature for sustainable development through participatory dialogue; knowledge sharing; poverty reduction and human well-being improvements; respect for human rights and cultural values, particularly of indigenous peoples and society's ability to cope with change - thus contributing to the Post 2015 Sustainable Development Goals.*⁴⁵
- p. *Considered as «Small UNESCO's» the WNBR comprises places for testing and implementation of adaptive responses to global change in terms of sustainability, that foster the harmonious integration of people and nature for sustainable development through participatory dialogue; knowledge sharing; poverty reduction and human well-being improvements; respect for human rights and cultural values, particularly of indigenous peoples and society's ability to cope with change - thus contributing to the Millennium Development Goals.*⁴⁶

14. General comments on the mission statement:

- q. The mission statement could further emphasize the need for an interdisciplinary approach in the study of the environment at regional and global scales.⁴⁷
- r. The original mission statement as formulated are more like strategic objectives to complement the vision and mission statements rather than an integral part of the mission.⁴⁸
- s. It may also be recalled that Biosphere Reserves are of interest to all UNESCO areas of competencies, not just to the Natural Sciences Sector.⁴⁹
- t. The protection of biodiversity and nature values should be specified.⁵⁰
- u. The WNBR mission statement should be to focus, implement and demonstrate a balanced relationship between humans and the biosphere at all levels, providing test sites and learning methods for conservation and sustainable development, through planned and coordinated management with the effective participation of social actors, and taking as reference the ethical commitment and protective role

in the development of research, innovation and best practices for efficient use of resources, in order to preserve the environmental and cultural values that identify and promote the comprehensive development of the local population. In short, the mission statement can be characterized by promoting a "Green economy beyond the tangible - the human being as a value and cohesion at the nexus of living space".⁵¹

15. In addition to the question raised in para 3 above (on if there should be separate statements for MAB and the WNBR), a final question that emerges is if it is useful to maintain mission as well as vision statements, or if they possible could be merged into a single statement?

Strategy Element 2: Identifying International Key Issues and Processes and Implementing Related Long-term Strategic MAB and WNBR Goals and Expected Achievements

16. Peace and equitable and sustainable development are the overarching objectives in the UNESCO Medium-Term Strategy 2014-2021 (37 C/4).ⁱ This Strategy recognizes that sustainability issues are at the centre of the international debate as current and foreseeable patterns of human activity are fundamentally altering Earth systems, testing the biophysical limits of our planet. This is having profound impacts on the Earth's freshwater resources, on the ocean, atmosphere and climate, and on terrestrial ecosystems and biodiversity.ⁱⁱ Subsequently, greater knowledge-sharing is critical to induce the transformative changes needed to address the complex and inter-related challenges of sustainable development.ⁱⁱⁱ This is also underscored in the Rio+20 Outcome document.^{iv}

17. From the above follows that a considerable number of key issues that are relevant to MAB and the WNBR can be identified. This diversity is a challenge; and the key issues will vary from one region, country, or BR to another.⁵²

18. This said, several of these concerns were captured in the Madrid Action Plan (MAP), which focused on challenges associated with climate change, loss of biological and cultural diversity, and urbanization.^v The type of problems that humanity faces have not changed in nature since the adoption and conclusion of the MAP (2008-2013), but they are now more acute, especially because of climate change and its consequences on biodiversity and development.⁵³ The MAP is therefore very much still valid in terms of identification of issues and related long-term MAB and WNBR goals.⁵⁴ This was also evident from the Final MAP Evaluation.^{vi}

19. In line with the UNESCO Medium-Term Strategy 2014–2021, the MAP and the Final MAP Evaluation, the following section outlines the international key issues and process and associated long-term strategic MAB and WNBR goals and expected achievements covered in this strategy.

I. International Key Issues and Processes

I.1 Equitable and Sustainable Development, post 2015 development agenda – Sustainable Development Goals (SDGs)

20. Member States agreed at the Rio+20 Conference (June 2012) to launch a process to develop a set of SDGs that should apply to all countries and be based on the fundamental

ⁱ UNESCO Medium-Term Strategy 2014-2021 (37 C/4), available on:

<http://unesdoc.unesco.org/images/0022/002268/226841e.pdf>
amendments: <http://unesdoc.unesco.org/images/0022/002274/227488e.pdf>

ⁱⁱ UNESCO Medium-Term Strategy 2014-2021 (37 C/4), para 50

ⁱⁱⁱ UNESCO Medium-Term Strategy 2014-2021 (37 C/4)

^{iv} The Future We Want, available on: <http://www.uncsd2012.org/thefuturewewant.html>

^v Madrid Action Plan for Biosphere Reserves (2008-2013), available on:

<http://unesdoc.unesco.org/images/0016/001633/163301e.pdf>

^{vi} Ref. <http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/SC/pdf/SC-14-CONF-226-6-MAP-eng.pdf> and http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/SC/pdf/MAP-Final_draft_evaluation-mai2014.pdf

principles of human rights, equality, and sustainability.^{vii} The Working Document prepared for the 5-9 May 2014 Session of the Open Working Group on the SDGs included a total of 16 Focus Areas for the SDGs (see Annex I), several of which match those of the MAP and the UNESCO's Medium Term Strategy, as highlighted below.

I.II. Climate Change Mitigation and Adaptation

21. Climate change continues to be of paramount concern to the future of humankind and a big challenge of our time.⁵⁵ According to the IPCC's 5th Assessment Report, warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea level has risen, and the concentrations of greenhouse gases have increased and it is now extremely likely that human influence has been the dominant cause of the observed warming since the mid-20th century.^{viii} The IPCC also reports that in recent decades, changes in climate have caused impacts on natural and human systems on all continents and across the oceans. Evidence of climate-change impacts is strongest and most comprehensive for natural systems. Some impacts on human systems have also been attributed to climate change.^{ix} Examples from BRs include deglaciation of the mountains that are in the core zone of Huascarán BR in Peru.⁵⁶

I.III. Biodiversity and Ecosystem Services

22. Conservation and sustainable use of biodiversity is a critically important challenge⁵⁷. Habitat loss and fragmentation due to human development and unsustainable consumption and production patterns are considered as the major cause of diminishing biodiversity globally. Loss of biodiversity results in a reduction in ecosystem services (e.g. food and fiber production, disease control, crop pollination and recreation) and will ultimately cause a direct threat to human survival.⁵⁸

23. Increased demand for food globally has led scientists to manipulate plant DNA to produce strong and drought and disease resistant crops. There is the general concern that GMO products are harmful to human beings. When GMO food products are released to the environment, they may not be recalled, making it a dangerous global experiment.⁵⁹

I.IV. Water and Natural Resources

24. The current scales of unprecedented exploitation of our natural resources calls for improved governance and stewardship of the world's natural resources.⁶⁰ Equity of resource use/access is also called for.⁶¹

^{vii} Member States agreed at the Rio+20 Conference (June 2012) to launch a process to develop a set of Sustainable Development Goals (SDGs) that should apply to all countries and be based on the fundamental principles of human rights, equality, and sustainability. Background and updated information on the work of the Inter-governmental Open Working Group that will submit a report to the 68th session of the UN General Assembly with a proposal for SDGs for its consideration and appropriate action is available on: <http://sustainabledevelopment.un.org/?menu=1300>

^{viii} IPCC, 2013: Summary for Policymakers. In: *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, available on:

http://www.climatechange2013.org/images/report/WG1AR5_SPM_FINAL.pdf

^{ix} IPCC, 2014: Impacts, Adaptation, and Vulnerability. *WGII AR5 Summary for Policymakers*, available on: http://ipcc-wg2.gov/AR5/images/uploads/IPCC_WG2AR5_SPM_Approved.pdf

25. Freshwater remains a critical element of security, sustainability, inclusion and peace, with its vital importance increasing due to, among other factors, demographic growth, urbanization and climate change.^x The quality of inland water is under compromise from dumped industrial and chemical wastes, untreated sewage, pesticide's residues and fertilizers and chemical run off. The above activities worsen the already existing problem of water pollution. The increased use of underground water in coastal regions results in the intrusion of salt water.⁶²

I.V. Urbanization and Population Increase

26. Rapidly expanding cities and urban areas and a burgeoning world population have resulted in overconsumption of limited natural resources, intensification of urbanization, overexploitation and unsustainable use of natural resources, accelerating pollution and environmental degradation.⁶³

27. Demographic change is a threat to many biosphere reserves – people are leaving rural areas and concentrate increasingly in urban areas. The relation of cities with their rural environments must be subject of BR management.⁶⁴

II. Measures to be Undertaken to Address the Above Issues and Challenges / Long-term Strategic MAB and WNBR Goals and Expected Achievements

28. The key strategic objective related to MAB in the UNESCO Medium-Term Strategy 2014-2021 (strategic objective 5) is formulated as: *Promoting international scientific cooperation on critical challenges to sustainable development*. It covers the full range of issues outlined above.^{xi}

29. The challenge, particularly given the limited capacity of the MAB Secretariat and all those involved in MAB in individual regions and countries, is to prioritize efforts in order to most effectively deliver on the implementation of MAB's strategic objective, vision and mission statements.⁶⁵ Indeed, MAB must have one understanding of what the programme is and should do.⁶⁶ The conceptual core essence of MAB's efforts should be based on the principles of public participation and citizen collaboration, innovation and lifelong learning, solidarity, cooperation and exchange of knowledge and experience, and active and adaptive management.⁶⁷

30. The proposed activities identified below, which focus both on what MAB and the WNBR can and should deliver, as well as on how MAB and the WNBR could be strengthened to deliver more, have been elaborated taking the above concerns and objectives into consideration.

II.I. Promoting Equitable and Sustainable Development and the Implementation of the Post 2015 Development Agenda – Sustainable Development Goals (SDGs).

31. Building on its experience in leading intergovernmental and international science programmes and bodies and on their global observation capacities, UNESCO will contribute to shaping the research agenda of global and regional scientific cooperation, based on the Rio+20 outcome document and the post - 2015 development agenda.^{xii}

^x UNESCO Medium-Term Strategy 2014-2021 (37 C/4), para 53.

^{xi} UNESCO Medium-Term Strategy 2014-2021 (37 C/4), Strategic objective 5, page 15

^{xii} UNESCO Medium-Term Strategy 2014-2021 (37 C/4), para 51

32. While the assessment of reaching the Millennium Development Goals (MDGs) by 2015 is still outstanding and as the precise shaping of the SDGs is still work in progress, MAB and its WNBR should be strategically positioned to assume their roles in the international development arenas and to support the future SDG implementation.⁶⁸

33. Preparing for climate change impacts, preservation of ecosystem services (e.g. freshwater, soil ecosystems etc.), protecting biological diversity and traditional living practices (farming, forestry, fisheries, social habits etc.). These are important heritage and basic pillars for developing new methods.⁶⁹ MAB should continue to provide the scientific and institutional frameworks to ensure UNESCO's inputs into the post- 2015 development agenda.⁷⁰

34. Focus should be on operationalizing sustainability (including social and economic) at the local level, supported through community-based research and the new economy,⁷¹ promoting sustainable livelihood and sustainable enterprise principles to achieve poverty reduction,⁷² and sustainable coexistence of nature and human society.⁷³

35. BRs should enhance their active role as learning sites and real model areas (not laboratories⁷⁴) for developing and testing solutions which leads countries to sustainable development, and that countries can apply the results of the models developed also in other areas.⁷⁵ The WNBR and regional networks should promote a partnership approach and integrated international, national and local efforts to meet global development targets.⁷⁶

36. Overall, MAB and the WNBR could make a key contribution to the SDGs implementation process through promoting the effective integration of most, if not all, of the SDGs in a concerted and coherent fashion within a given BR.

II.II. Climate Change Mitigation and Adaptation

37. Climate change will be one of the main challenges for BRs. Strategies for adaptation and mitigation need to be developed – the Dresden Declaration^{xiii} is an excellent basis in this respect.⁷⁷ The potential of BRs to address climate change should be realised through the direct involvement of existing and future sites in projects and adaptation/mitigation plans and strategies.⁷⁸ Such as through the creation of corridors (altitudinal, latitudinal and longitudinal) across large landscapes,⁷⁹ and through monitoring and research programmes.⁸⁰

38. MAB should be involved in the climate change discussion/ negotiations for the stabilization of greenhouse emissions,⁸¹ and contribute to the development and adoption of renewable and clean energy.⁸²

II.III. Conservation, Restoration and Sustainable Use of Biodiversity and Ecosystem Services

39. Protection of biodiversity and ecosystem services is a key topic for MAB.⁸³ Research programmes to improve resilience of ecosystems to maintain and restore ecosystem services should also be high on the MAB agenda.⁸⁴

40. More integrated approaches to the provision of ecosystem services and their contribution to health and well-being, both within BRs and more widely are called for.⁸⁵ This requires that current and potential contributions to, and enhancement of, ecosystem services by the administrations, businesses, and citizens of urban areas embedded within BRs. Rights and

^{xiii} Dresden Declaration on Biosphere Reserves and Climate Change is available on:
http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/SC/pdf/DRESDEN_DECLARATION_MAB.pdf

responsibilities of those utilizing and benefiting from ecosystem services deriving from BRs – both within BRs and extending more widely, including to sometimes distant urban areas – including investment in their effective management needs to be elucidated.⁸⁶ BRs should provide local experiences on mainstreaming ecosystem services into policy making, ensuring food security and restoring degraded ecosystems.⁸⁷

41. MAB should promote intelligent marketing of BR eco-friendly products and eco-tourism,⁸⁸ and support the green economy sustained in responsible tourism and quality economies.⁸⁹ BRs shall contribute to green economies by *inter alia* implementing the TEEB-Programme in BRs.

II.IV. Promote the Sustainable Use and Management of Water and Natural Resources

42. As part of the UNESCO Medium-Term Strategy, the Organization will continue to build institutional and human capacities of Member States in the various fields of freshwater resources management. The Organization will make available updated knowledge for policy guidance on freshwater resources via the periodic World Water Development Reports, produced by the World Water Assessment Programme (WWAP), on behalf of UN Water.^{xiv} MAB and the WNBR should contribute to this knowledge base.

43. In order to address the future global challenge on water resources scarcity especially in BRs, MAB need to join the UNESCO IHP Programme on Eco-hydrology. A new thematic group should be initiated to deal with this aspect.⁹⁰

44. Highly profitable economic activities such as mining and extraction of hydrocarbons often raises questions concerning what the degree of interaction should be with biosphere reserves especially in the buffer and transition zones.⁹¹

II.V. Developing and Managing Biosphere Reserves as Model, Learning and Demonstration Sites

45. In line with its Medium-Term Strategy, UNESCO will endeavor to strengthen the role and potential of the UNESCO-designated biosphere reserves and other UNESCO-affiliated sites, along with their associated networks, as pilot sites for research on mitigation and adaptation to climate change, green economies and as sites for collaboration with other international innovative environmental initiatives. They will further serve to build scientific knowledge and identify best practices for natural resource use and ecosystem management, restoration and rehabilitation, as well as geosciences, and to strengthen the interface between science, policy and society at local, national, regional and global levels.^{xv}

46. Biosphere reserves should [be real model areas and learning sites (not laboratories)]⁹² [used as learning laboratories]⁹³ for sustainable development, creation of scientific knowledge, climate change adaptation, and building of peace and sustainability.⁹⁴ BRs that function as “sites of excellence” or models of sustainable development will also serve as a models for sustainable development of the regions at large,⁹⁵ and they should play a key role as testing grounds for the ecological transition, linking between the local and the global, at the interface between science and society.⁹⁶

47. MAB must have a unique focus on the operationalization of sustainability (including social, economy, cultural diversity and heritage) at the local level, supported through community-based research and the new economy.⁹⁷ The WNBR constitutes a unique arena

^{xiv} UNESCO Medium-Term Strategy 2014-2021 (37 C/4), para 53.

^{xv} UNESCO Medium-Term Strategy 2014-2021 (37 C/4), para 55.

for co-production of knowledge for sustainable development between practitioners and researchers.⁹⁸

48. For this purpose, BRs should support social development, environmental protection, sustainability of ecosystems, conservation of biodiversity, resource management by active engagement of the local communities and their indigenous knowledge,⁹⁹ and facilitate access to and sharing of methods and approaches to zoning, planning and decision-making to address the priorities of local communities residing in BRs.¹⁰⁰

49. BRs should be places in which to establish alliances between conservation officials, development promoters and economic and social stakeholders in order to put genuinely sustainable development models into practice, including proper governance models.¹⁰¹ The implementation of sustainability should be a way of life for the residents of the BR and act as a general guideline for all stake holders in decision-making.¹⁰²

50. BRs have the potential to act as learning and demonstration sites for the implementation of the ecosystem approach, the conservation and management of biological and cultural diversity, adaptation to climate change. As such they should contribute to the implementation of global initiatives and should be centre stage in this regard.¹⁰³

51. BRs established in disputed territory among countries can also act as peace parks making our planet a safe place for the harmonious coexistence of people and nature, but also among people by establishing an enabling environment for promoting a culture of peace with regard to the use of and benefit from shared natural resources, especially at the trans-boundary level.¹⁰⁴

52. Biosphere reserves should be considered as “small UNESCO’s”, encapsulating the goals of UNESCO regarding education, the natural and social sciences, as well as culture.¹⁰⁵

53. In order for MAB and the WNBR to reach their full potential in developing and managing BRs as model, learning and demonstration sites, efforts are needed to strengthen them in accordance with the below priorities.

54. The WNBR must consist of fully functioning, well managed sites that work in concert with the MAB programme,¹⁰⁶ in compliance with Seville Strategy and the Statutory Framework.¹⁰⁷ BRs that maintain an effective activity should be further strengthened, and the exit strategy implemented for those BRs that cannot comply. Overall, this should result in an increase in the delivery, value and prestige of the MAB Programme and the WNBR.¹⁰⁸

55. As part of the exist strategy, it will be important to define the terms of references for the finalization of the overview and qualification of “old” and non-fully functional BRs.¹⁰⁹

56. Analysis of zonation schemes and determining percentage minimum sizes for core areas and buffer zones. Countries must develop strict national-specific criteria, including optimal and efficient functional zonation schemes based on the Statutory Framework of the WNBR and the Seville Strategy.¹¹⁰

57. Efficient evaluation systems must generally be linked, in collaboration with the biosphere reserves themselves and, in particular, with the MAB National Committees, in order to identify the best demonstration cases and implement the exit strategy efficiently.¹¹¹

58. MAB must work to build BRs’ capacities through enhanced discussions and knowledge sharing among BRs working at the local level, through reinforced recognition and

participation of indigenous people and local communities in BR's,¹¹² stronger partnerships with academia, decision-makers, community stakeholders, economic sectors industry and private sector in order to design and implement actions aimed at improving socioeconomic and environmental conditions in existing BRs,¹¹³ and enhanced network interactions with research programmes (e.g. on water issues and climate change).¹¹⁴

59. MAB also needs to facilitate the establishment of a common language and methods to better evaluate similar (larger-scale) research projects in order to generate broader conclusions and build a community of practice, and partnerships between conservation managers, development promoters and economic and social actors, to implement real sustainable development models, including appropriate governance models.¹¹⁵

60. The needs of women and the importance of ensuring their participation and access to the sustainable use of natural resources need to be taken into account. The needs of indigenous and local communities and the importance of ensuring their participation and access to the sustainable use of natural resources need to be taken into account.¹¹⁶

61. WNBR guidelines should be developed on good management of BRs¹¹⁷ and on how BRs best can be used as tools/platforms for promoting sustainable development and the SDGs.¹¹⁸

62. As part of the search for synergies with programs, projects and conventions of UNESCO, MAB program should be based among other things on the report on possible ways to protect and enhance the brand recognition of BRs, World Heritage sites and possibly Global Geoparks. In this context it is also necessary to coordinate upstream processes at the national level for these labels so that states can have clear guidelines for the recognition of their sites.¹¹⁹

63. MAB should encourage enhanced interests in incorporating BRs in national land use plans (and maps), national legislation and harmonization among BRs at the regional level and mitigate, and seek to ensure more equal levels of expertise in BR management among the different MAB BR Networks.¹²⁰

II.VI. Promoting International, Regional and National Cooperation

64. In accordance with its Medium-Term Strategy, UNESCO will promote scientific collaboration, especially South-South and North-South-South triangular cooperation, as a catalyst for dialogue and co-production of scientific knowledge, in synergy with local and indigenous knowledge brokers, and for science diplomacy. The Organization will further promote joint management of transboundary areas and resources, including transboundary surface and groundwater resources and transboundary biosphere reserves, as a means for sharing knowledge and best practices, building peace and promoting dialogue among nations.^{xvi}

65. Furthermore, greater knowledge-sharing is critical to induce the transformative changes needed to address the complex and inter-related challenges of sustainable development. UNESCO will promote international scientific cooperation and integrated scientific approaches to support Member States in effectively managing natural resources, reducing knowledge divides within and among countries, and building bridges for dialogue and peace.^{xvii}

^{xvi} UNESCO Medium-Term Strategy 2014-2021 (37 C/4), para 56.

^{xvii} UNESCO Medium-Term Strategy 2014-2021 (37 C/4), para 49.

66. Strengthening international cooperation between neighboring countries in transboundary sites of the WNBR and 'site-to-site' cooperation that leads to sustainable development of the regions and maintenance of neighborliness.¹²¹ Promote the establishment of new transboundary Biosphere reserves for management of ecosystems and promote peace among the neighboring countries especially with regards to solving conflicts around natural resource use and benefit sharing.¹²²

67. Promote the integration, closer linkages and coordination of MAB and the WNBR with other relevant sites (World Heritage Sites, Geoparks etc), UNESCO and other programmes that are seeking to achieve similar objectives.¹²³ Link Biosphere Reserves to National and Regional Protected Areas Networks.¹²⁴

68. The MAB program should encourage the harmonization of national/EU agricultural support systems for sustainable conservation of natural and cultural values of land use, by focusing on the costs and availability of demonstrated results.¹²⁵

II.VII. Promoting Education, Training and Capacity Building

69. Education for Sustainable Development is a prerequisite for and a leading instrument in all BR-related activities to follow-up the outgoing decade.¹²⁶

70. MAB's educational efforts should be broadened from the specialized scientific communities to involve all partners of civil society, including closer cooperation with the UNESCO Associated Schools Project Network (ASPNet),¹²⁷ and a more focused approach on how capacity building for indigenous communities should be integrated in the MAB programme.¹²⁸

71. MAB should promote capacity building programmes directed to BR managers and BR authorities that allow for improvement of the sustainable development actions implemented and technologies applied in individual BRs,¹²⁹ and encourage exchange of expertise between BR networks, regional training and capacity building efforts.¹³⁰

72. MAB should promote training and capacity building at the interface of the interlinked issues of conservation and sustainable use of biodiversity, mitigation and adaptation to climate change, and socio-economic and cultural well-being of human communities.¹³¹ In doing so, focus should give to participation and education of young people and on programmes designed to enable both new knowledge and a better understanding of the past history, as well as new and emerging changes and challenges that could be addressed through proper use of technology and sustainable and smart use of natural resources.¹³²

73. Emphasis should be put in enabling the people to act more responsibly, to act and think according to ethical and moral principles.¹³³

II.VIII. Contribute to Research [to be cross-references with SE4]

74. Following its Medium-Term Strategy, UNESCO will put into practice integrated approaches to science and engineering for sustainable development, called "sustainability science". These integrated, "problem-solving" approaches draw on the full range of scientific, traditional and indigenous knowledge in a trans-disciplinary way to identify, understand and address economic, environmental, ethical and societal challenges.^{xviii}

^{xviii} UNESCO Medium-Term Strategy 2014-2021 (37 C/4), para 52.

75. The WNBR should be further developed in order to increase the interdisciplinary research efforts between the developing and industrialized countries¹³⁴ and MAB should provide a platform facilitating the dialogue between the scientific and policy making communities and society for sustainable development¹³⁵, and help strengthen international science cooperation and culture for peace, sustainability and social inclusion.¹³⁶

76. MAB should introduce the concept of “Sustainability Science” which is the integrated approach of natural science, humanities and social sciences.¹³⁷ In order to enhance the involvement of researchers in MAB, consideration should be given to the appointment of an international advisory scientific committee, with the task to suggest measures promoting co-production of knowledge in BRs.¹³⁸

77. There are many national and international opportunities where BRs can play key roles at the interface of environmental conservation, research on human-environment interactions, sustainable development, cultural identity, and learning for a sustainable future¹³⁹, MAB and its WNBR should therefore seek to fully engage with existing relevant international, regional and national research initiatives and programmes, such as:

- a. The Intergovernmental Platform on Biodiversity & Ecosystem Services (IPBES).¹⁴⁰
- b. Future Earth.¹⁴¹
- c. Intergovernmental Panel on Climate Change (IPCC).¹⁴²
- d. The Group on Earth Observation (GEO) – GEO-BON, GCOS, the Global Ecosystem Monitoring Networks and Programmes.¹⁴³
- e. International Model Forest Network.¹⁴⁴
- f. Activities of IUCN, especially the World Conservation Congresses and World Parks Congresses.¹⁴⁵

78. In doing so, MAB should seek to establish solid, prioritised positions of MAB and the WNBR within these initiatives, programmes and activities that also would benefit management and planning within the WNBR and at the level of individual BRs.¹⁴⁶

79. MAB should design research programmes to mitigate climate change,¹⁴⁷ and priority studies on how to clean the environment from accumulated solid wastes without any further damage and avoid any negative impacts of GMOs on human health.¹⁴⁸ Analysis of long term observations conducted in the WNBR should be undertaken and the results presented to decision makers and positive results of applied research should be widely distributed and promoted.¹⁴⁹

80. In promoting scientific research, recognition should be given to cooperative strategies applied to cultural identity principles of knowledge and socialization favoring continued innovation.¹⁵⁰

81. Consideration should be given to regional cooperation programmes, such as European Commission programmes including Horizon 2020 and Erasmus+, which can include activities and partners not only in the European Union but in other European countries and other parts of the world.¹⁵¹

II.IX. Promote the Implementation of Relevant International Conventions

82. In addition to its contributions to the realization of the SDG's, MAB should also produce measurable deliveries and contributions to and partnerships with the Rio Conventions: UN Framework Convention on Climate Change (UNFCCC), Convention on Biological Diversity (CBD), UN Convention to Combat Desertification.¹⁵²

83. In focusing on knowledge-sharing and systematic observation platforms, research programs, and outreach strategies, mechanisms should be devised to maximise the involvement and enhance dialogue between MAB and specific programs and processes under relevant conventions in a way that ensures that BRs are seen as learning sites of excellence by donors and implementing agencies and to enhance opportunities for support through convention related financial mechanisms.¹⁵³

84. Regional MAB and BR networks should be encouraged to work on reaching the CBD Aichi Targets and updated CBD Global Strategies.¹⁵⁴

85. Collaboration with the World Heritage Convention for natural world heritage and with the emerging Global Geoparks Network will provide great latitude for creating synergy effects regarding the visibility of UNESCO-designated sites the world over, while at the same time maintaining the specific identities and functions of biosphere reserves.¹⁵⁵ Enhanced cooperation should also be sought with the UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions, reflecting the links between cultural diversity and biodiversity,¹⁵⁶ as well as with the Ramsar Convention on Wetlands (UK).¹⁵⁷

86. MAB should also seek to engage in mutually beneficial partnerships with financial institutions associated with the above-mentioned conventions, such as the Global Environment Facility (GEF), the Adaptation Fund and the Green Climate Fund. [to be cross-references with SE4]

Strategy Element 3. Development and Effective Delivery of MAB and WNBR Services to the Benefit of UNESCO Member States

87. In line with the international key issues and processes and the related strategic MAB and WNBR goals and expected achievements outlined under strategic objective 2, the WNBR should act as an integrated global network of learning and demonstration sites for innovation in sustainable development, including ecosystem-based management, the conservation of biological and cultural diversity, mitigation and adaptation to climate change, and economic activities based on and supporting regional identity. These activities should be supported by research and monitoring (both biophysical and socio-economic), including evaluation of the implementation of integrated policies. This would benefit both the Member States where individual BRs are located, through contributing to innovative management and policy, and much wider constituencies (e.g., the international initiatives mentioned above). BRs should be clear examples of the implementation of many aspects of global conventions.¹⁵⁸

88. While these activities and services are outlined in some detail below, they could also be subject for more in-depth elaboration in a new MAB Action Plan accompanying this Strategy.

89. However, given the availability of resources MAB should focus on coordination activities and its multiplier role based as much as possible on existing programs and projects.¹⁵⁹

90. Services are here divided into two main categories: I) services to be delivered by MAB and the WNBR to the benefit of society; II) enabling services necessary to ensure effective delivery of category I services.

I. MAB and the WNBR: Supporting Sustainable Development - BRs as Model Sites for Sustainable Development

I.I. Research and Learning from Doing [cross ref to SE4]

91. BRs should be model sites to conserve biodiversity, reduce poverty, and contribute to economic development and sustainable use of natural resources including environmentally, socially and economically viable models for boosting green economies and local livelihoods by providing a wide range of both direct and indirect ecosystem services including clean water supply, production of fuel wood and raw materials for charcoal, timber for construction, food, medicinal plants, socio-cultural and spiritual services, as well as support to sustainable tourism activities and relevant capacity building that promote environmental awareness, conservation and protection of ecosystem, respect biodiversity and cultural diversity and related policy making.¹⁶⁰

92. MAB ecosystem services were articulated around the Millennium Ecosystem Assessment and were grouped into 4 service categories: supporting, provisioning, regulating and cultural.¹⁶¹ MAB should continue to elaborate the four distinct categories of services but more attention should be given to socio-cultural services in transition zones.¹⁶² Given the resources available this approach should be re-evaluated and appropriate prioritization should be introduced taking into account the added value the Organization can provide. The public and private sector partnerships in ecosystem services should be further developed in areas where MAB has a specific comparative advantage.¹⁶³

93. Promote and support research programs that involve academic and traditional knowledge stakeholders and social organisations aimed at providing solutions to sustainability problems experienced in BRs.¹⁶⁴ Enhance cooperation between experts and

practitioners in relevant key issues on innovative practices.¹⁶⁵ As mentioned above, the WNBR constitutes a unique arena for co-production of knowledge for sustainable development between practitioners and researchers, but in order to fully exploit this potential, thresholds for cooperation between, on one hand, practitioners in the BR community and, on the other hand, the research community should be lowered. Other key elements for this purpose include recognizing youth as driver for change and civil society cooperation and local participation from civil society, institutions and enterprises to ensure an inclusive process for new BRs.¹⁶⁶

94. Increase cooperation and coordination with existing international programmes and initiatives and increased linkages between biosphere reserve activities and sustainable development initiatives at multiple scales and levels,¹⁶⁷ including as model sites for strengthening synergies with Multilateral Environmental Agreements and other relevant conventions,¹⁶⁸ and by Member States in their work with other UNESCO programmes, including IOC and MOST.¹⁶⁹

I.II. Data and Information Service Provider

95. As a network gathering knowledge from research and practice of BRs on the operationalization of sustainability (including social, economy, cultural diversity and heritage) at the local, regional, and international levels, MAB should identify, promote and publicize the many innovative and successful approaches from different social, cultural and environmental contexts, ranging from rural to urban, and act as a clearinghouse and distribution center of such knowledge, supporting learning exchanges among BRs internationally and sharing of best practices and guidelines with focus on success stories and on the post 2015 global agenda including the SDGs.¹⁷⁰

96. MAB should provide information and support to build regional sustainable development models of recycling-based social and economic systems that can enjoy sustainable benefits from ecosystem services.¹⁷¹

97. To ensure added value of services, the MAB Secretariat should host (or facilitate, through one or more appropriate partners), an internet database of research needs/questions posed by BRs across the world, and examples of good practice.¹⁷²

98. MAB should make full and effective use of the web as a main tool for information and data exchange,¹⁷³ and seek to provide information in multiple languages in addition to English and French.¹⁷⁴

I.III. Servicing Cooperation and Peace Building

99. MAB and the WNBR should promote collaboration and exchange among and within BRs, and encourage BRs to actively engage different BR stakeholders groups, including local communities, decision-makers, politicians and economic sectors and researchers, with emphasis on young people, in joint international cooperation projects.¹⁷⁵

100. MAB shall promote multicultural dialogues and the establishment of transboundary BRs as 'peace parks'.¹⁷⁶

I.IV. Education, Training, Capacity and Public Awareness Building Services

101. BRs shall be used as platforms for education of local young people, pupils and students to enhance their interest in nature preservation,¹⁷⁷ and projects aiming at education and capacity building among UNESCO-MAB member countries promoted.¹⁷⁸

102. MAB and Its WNBR shall provide services, such as, capacity building, skill acquisition, improved technology practices and machinery in communities within and around biosphere reserves.¹⁷⁹

II. Enabling MAB and the WNBR to Deliver Effective Services

103. BRs as places of excellence for sustainable development involves a rigorous and effective network management support,¹⁸⁰ and that BRs in many cases are given a real boost in terms of service support and resources to allow them to fulfill their roles as model spaces for sustainability and for meeting the MDGs and the SDGs.¹⁸¹

II.I. Resource Mobilization Services

[cross ref to SE7]

104. The MAB programme should aim to secure funding, and in particular, sponsorship for this function, which links to the implementation of initiatives including post-2015 Sustainable Development, Future Earth, and European Commission programmes, all of which are implemented in individual countries.¹⁸²

105. To increase organizational resilience of the BRs, different means for funding has to be explored, including through social innovation and entrepreneurship.¹⁸³ MAB should promote improved financial mechanisms for biosphere reserves and regional networks and improved generation of profits and livelihood benefits through sustainable production, harvesting, processing and marketing of biosphere reserve products, as well as increased involvement, support and buy-in of private sector.¹⁸⁴

II.II. Servicing the Information, Data and Communication Infrastructure

[cross ref to SE8]

106. The MAB Programme must service as a hub and clearinghouse of knowledge, information and data derived from BRs and BR network research and practice,¹⁸⁵ hosting (or facilitate, through one or more appropriate partners), an internet database of research needs/questions posed by BRs across the world, and examples of good practice.¹⁸⁶ This may require further clarity regarding data sharing conditions from the perspective of researchers and UNESCO MAB.¹⁸⁷ Such a clearinghouse should also facilitate and enable learning from experimentation and therefore also “failures” through which a wealth of valuable experiences could be made available.¹⁸⁸

107. There is a need to enhance the visibility of MAB and the WNBR at all levels. All MAB stakeholders should therefore be involved in a major new MAB communication operation.¹⁸⁹ MAB should assist BRs and MAB Nat Coms to create awareness at International (international celebration days) as well as national level of member states of the value of MAB and BRs as a tool in the quest to showcase sustainable development and promote sustainable living practices.¹⁹⁰ Opportunities to enhance the contacts between the MAB Secretariat and stakeholders in BRs, such as elected local officials, for example through, mutual study visits, should be examined,¹⁹¹

108. The UNESCO- MAB website (the MABnet) should be developed to respond to the information needs of different users and stakeholders. Politicians should be provided with information on the connections between knowledge-politics-practice.¹⁹² The MABnet must be updated continuously and possibly made more accessible through provision of information in languages in addition to English and French.¹⁹³ MAB and BRs must also take full advantage of online social-network opportunities to disseminate key MAB Programme messages.¹⁹⁴

II.III. Training, Capacity Building and Technical Assistance Services

109. MAB should provide technical assistance to Member States and MAB Nat Coms on how existing BRs could better contribute, including through improved networking, to addressing climate change, rapid and unplanned urbanisation and biodiversity/ecosystem services loss, including on socio-economic evaluation of natural resources,¹⁹⁵ and support learning exchanges among BRs internationally on post 2015 global agenda in general.¹⁹⁶ Mechanisms for easy feedback of research to practitioners in BRs shall be developed. Education, training and capacity-building are possible mechanisms. The MAB secretariat can assist by coordination/facilitation.¹⁹⁷

110. MAB and Its WNBR should provide services, such as, capacity building, skill acquisition, improved technology practices and machinery in communities within and around biosphere reserves,¹⁹⁸ and the Earth Sciences should be strengthened, especially in developing countries, for the better appreciation of ecosystem services. In particular the understanding and management of surface and ground water resources in tropical sub humid-semi arid savannahs.¹⁹⁹

II.IV. Servicing the Periodic Review and Exit Strategy of the WNBR

111. The periodic BR review process is a key element for achieving and supporting a functional WNBR. Generating a dynamic process of adaptive management of sites according to a 10 year timeframe, the periodic review process allows Member States to assess progress, review weaknesses, re-engage stakeholders and to improve the functioning of the sites in the light of experience gained.²⁰⁰ The periodic review process also offers the MAB Secretariat with the possibility to produce status reports of the overall WNBR network. For this to be successful, the MAB Secretariat shall support the development and availability of operational databases, cartography tools, and performance indicators.²⁰¹ This would also help in the implementation of the exit strategy.²⁰² MAB should also seek to develop a standardized BR management plan format.²⁰³ Overall, the effective implementation of the Seville Strategy should be promoted.²⁰⁴

II.V. Promote Policy Integration, Including Legal Provisions

112. Provision for open and participatory procedures and processes in the designation, planning and implementation of BRs and for enhanced legal safeguards and recognition should be promoted.²⁰⁵

113. MAB should seek to more effectively ensure that its recommendations and lessons learnt are appropriately and more fully reflected in relevant national plans, policies and legal frameworks.²⁰⁶ Consideration could be given to development of a UNESCO convention on MAB and BRs in this context.²⁰⁷

Strategy Element 4. Focused and integrated MAB Research, Policy and Action Agendas

114. Consistent with the items developed under strategy elements SE1- SE3, this strategy element (SE4) aims at further sharpening MAB's future agendas in relation to research, policy and action. As under SE3, the items identified can be grouped into two main categories: actions targeting and directly benefiting external stakeholders; and actions aiming at reinforcing MAB and the WNBR. Several of the included elements could likely be subject for more detailed elaboration under a new MAB Action Plan.

115. A wide variety of themes (e.g., ecosystem services and their trade-offs, and related policy and practice; socio-economic development; climate/environmental change and biodiversity loss/change; biological and cultural diversity; contributions of, and linkages to, urban areas) have been listed within the SE2 and SE3. A key challenge therefore is to prioritize efforts in order to most effectively deliver on the implementation of the vision and mission statements (SE1). This needs to be discussed further as the strategy and eventual action plans evolve.²⁰⁸

116. Recognizing that research, policy and action agendas in the context of MAB and the WNBR often would and should be overlapping and intertwined, no attempt has been made to separate them. As mentioned above, a clear distinction is sought between agendas focusing on what MAB and the WNBR should deliver (section I) and on how it could do so effectively, including related required enabling factors (II).

I. Research, policy and actions agendas – key issues, processes, stakeholders and goals

117. As recalled under SE2, in-line with its Medium-Term Strategy, UNESCO will put into practice integrated approaches to science and engineering for sustainable development, called "sustainability science". These integrated, "problem-solving" approaches draw on the full range of scientific, traditional and indigenous knowledge in a trans-disciplinary way to identify, understand and address economic, environmental, ethical and societal challenges.^{xix}

118. In the case of MAB, this implies promoting and conducting research in the areas of biodiversity and ecosystems services, climate change, socio-economic issues, including the protection of both natural and cultural values using participatory processes. MAB and the WNBR should help provide the tools people need to be able to cope with changes and to promote sustainable development.²⁰⁹

119. In general terms, MAB's research agenda(s) should be multidisciplinary and innovative, promoting the interface between science, policy and society.²¹⁰ incorporating a wide field of knowledge and actors, including national research councils, science agencies, universities, and local communities.²¹¹ Traditional knowledge should be used as a "knowledge input" while recognizing the importance of empowering indigenous communities as vulnerable guardians of unique knowledge.²¹²

120. Future MAB research should focus on activities and enterprises that promote improved livelihood and sustainable development of biosphere reserves, as well as provide fora for exchange of ideas. MAB must also facilitate and encourage financial support for these activities.²¹³

^{xix} UNESCO Medium-Term Strategy 2014-2021 (37 C/4), para 52.

I.I. Biodiversity and ecosystem services

121. MAB and the WNBR must make decisive contributions to biodiversity conservation, sustainable use and benefit sharing, including towards the achievement of the 2010 biodiversity target of the CBD to achieve a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on Earth.²¹⁴

122. This should include site-based policy-relevant research programmes in BRs, including on key ecosystem services,²¹⁵ restoration, conservation and sustainable use of ecosystems²¹⁶, as well as studies on the role of payments for environmental services in the creation of long-term financial strategies to support conservation and sustainable development activities in BRs.²¹⁷

I.II. Climate change

123. Research, action and policy-related work on climate change, mitigation and adaptation, remain high on the agenda of MAB and the WNBR.²¹⁸

124. Few countries have the capability of projecting ecosystem responses to global warming and climate change. There is need for new visions on land use-global warming response of ecosystems, particularly in regions where livelihoods are highly dependent on basic ecosystem services. This should include the capability of developing ecosystem responses to the combination of land use and climate change.²¹⁹

I.III. Green economy and sustainable finance

125. Green economies will have to be built on in-depth knowledge of natural and cultural heritage, and on socio-economic realities,²²⁰ BRs are thus uniquely well placed to support the transition to green economies and green societies more broadly. Issue proposed for this purpose, include:

- a. Methodologies and tools to develop organic production systems that ensure a minimum use of chemical substances;²²¹ and promote the coexistence of nature and local development;²²²
- b. Eco-tourism development;²²³ and tourism management systems coordinated and labeled with BR label;²²⁴
- c. Establishment of microfinance systems;²²⁵
- d. Infrastructure which supports environmental conservation and green business opportunities;²²⁶
- e. Energy transitions (alternative and renewable energy, renewable), circular economy, territorial ecology;²²⁷
- f. Researches demonstrate the results achieved by extensive land use methods;²²⁸
- g. Agro ecological transition: what changes do according to levels of action and governance (consumer exploitation territory, state and beyond), integration biodiversity objectives into production;²²⁹
- h. Conversion of economic systems that negatively affect conservation and the sustainable use of biodiversity;²³⁰
- i. Local development based on protection and preservation of the natural environment;²³¹
- j. Livelihood diversification and involvement of local business.²³²

I.IV. Natural resources

126. MAB and the WNBR can usefully contribute to agendas focusing on the sustainable, rational and fair use of natural resources, through the promotion of:

- k. Equitable sharing of benefits of natural resources;²³³
- l. Joint work with the mining and hydrocarbon sectors to support research and conservation initiatives in BRs to enhance understanding and sharing information on sustainable mining practices, built on the outcome of local engagement processes and by better understanding and applying ICMM sustainable mining principles in local context and to exchange information with similar networks.²³⁴
- m. Studies on water and land use management, aquatic pollution and environmental flows and estimation of exploitable natural resources.²³⁵

I.V. Education for sustainable development

127. Contribute to follow-up and implementation of the post 2014 agenda of the Decade of Education for Sustainable Development (DESD) programmes with educational and research institutions including through exchange of educational resources for widespread adaptation and application.²³⁶

128. Actions in education should be oriented towards promotion of responsible attitudes of people towards their environment and other people. It is necessary to introduce critical thinking into society where interdependence of living systems processes are understood and respected.²³⁷

II. Research, policy and action agenda items on enhancing the effectiveness and service delivery of MAB and the WNBR

129. A rich portfolio of ways and means to enhance and ensure the contribution of MAB and the WNBR to address the research, policy and action priorities above have been identified.

II.I. Evaluation, assessments and demonstration

130. MAB should enhance dialogue between science and policy-makers in order to generate consensus regarding the BRs potential to address climate change, unsustainable urbanisation and biodiversity/ecosystem services loss and encourage best practices in decision-making.²³⁸

131. There is need for research ON BRs (BRs as objects of research), considering that research IN BRs (BRs as sites for research) is important but well established already.²³⁹

132. BRs should promote research which is useful for BR management. This means that managers, stakeholders and communities should participate in framing the research question (“co-design” of research); they should participate in devising methods and in the knowledge-generation (“co-production” of knowledge). Interdisciplinarity, transdisciplinarity, co-design and co-production are usually referenced as key aspects of “Sustainability Science”.²⁴⁰

133. Due to burgeoning population, and growth of urban centers,²⁴¹ more research studies should be oriented towards urban areas, providing them with proper solutions and procedures to be undertaken in order to enable the quality environment for the people.²⁴²

134. At the scale of individual BRs, high priority should be given to research which shows how communities, businesses, and organizations within these BRs – and, where appropriate, in adjacent or nearby urban areas – can benefit from supporting the aims of BRs (e.g. studies into social enterprise, and the economic benefits from products and services which draw from and feed back into BRs).²⁴³

135. MAB should explore the potential links between BRs and reforestation/prevention of forest degradation activities, biodiversity conservation strategies and land use planning frameworks in Member States.²⁴⁴

136. BRs should also be sites for research which test and evaluates regional approaches to adapt to, and mitigate the impacts of, climate change, and how they can combat climate change (e.g. by sequestering carbon, REDD+ (Reducing Emissions from Deforestation and Forest Degradation)). Such activities will assist in many ways to increasing public and government (at all scales) support and resources for BRs, and contribute to policy and practice not only in BRs but more widely; successful examples from BRs should be suitable for wide implementation elsewhere.²⁴⁵

137. Demonstration of methodologies for implementation of research actions, at regional and local levels is an important responsibility for the regional networks.²⁴⁶

138. Global research studies on the true effectiveness and efficiency of Biosphere Reserves in fulfilling the three functions of the Biosphere Reserve concept and making a difference in the lives of people living and working in BR, and on the economic impact of the existence of BRs – within the respective region of individual BRs, but also with respect to national economic impacts and influences.²⁴⁷

139. Studies on how better valorization of demonstration sites/ research findings in BRs can be achieved.²⁴⁸

140. BR conducted research programmes linked to the development of the management plan and zoning, and incorporation of research recommendations targeted at improving management routines and practices.²⁴⁹

141. BRs encouraged to experiment with innovative responses to conditions of worldwide change and to disseminate success in the form of demonstration cases.²⁵⁰

142. MAB Nat Coms and BR authorities are to be provided with periodic summary reports on available methods, technologies and approaches to BR's zoning, planning and monitoring.²⁵¹

143. Enhance the understanding in private businesses on how supporting BR values can improve their business activities,²⁵² and the promotion of business and public associations to develop the BR brand as beneficial for their activities e.g. tourism; clean/green production particularly in agriculture and aquaculture.²⁵³ Consider promoting the implementation of special labels to enhance the commercial attractiveness of products that are generated in BRs.²⁵⁴

144. Strengthen the role of BRs as demonstration areas and research ways and means of including BRs into national development policies, land-use planning and the environment (laws, policies and programmes).²⁵⁵

145. Incite BRs to experience innovative responses to global change conditions and to disseminate the achievements in the form of show cases.²⁵⁶

146. Focus on implementation mechanisms, guidelines and solutions of what are "sites of excellence" and "models of sustainable development".²⁵⁷

147. Reinforce the concept of transition zone as specific to RBs and as examples for non-protected areas, integrating the functions of conservation, development and logistics of BRs into transition zones projects.²⁵⁸

II.II. Monitoring, observation and inventories

148. MAB should promote integrated comparative monitoring schemes (piloting and implementation) of ecological and socio-economic effects of BRs over the time (development monitoring) and in comparison with other BRs and similar non-BR areas (structural monitoring) as an important strategic management tool.²⁵⁹

149. An evaluation of the BRIM framework is proposed in order to move from Biosphere Reserve Integrated Monitoring (BRIM) to Biosphere Reserve Integrated Assessment (BRIA), by distinguishing between observation and monitoring on the one hand and assessment and management on the other.²⁶⁰

150. Development of cost-effective methods and tools to conduct more effective and continuous monitoring of the ecosystem services provided by BRs and the success of actions implemented to promote sustainable development.²⁶¹

151. Establishing a data base of the WNBR including biotic monitoring (flora, fauna - as vertebrates and invertebrates); abiotic monitoring (hydrology and surface water objects quality/quantity); and social monitoring.²⁶² Establish an integrated comparative monitoring schemes for ecological and socio-economic effects in BRs.²⁶³

152. Promote the creation of capacities for long-term monitoring and to support research, e.g. through capacities for processing of data, of IT-based model building etc.²⁶⁴

153. Generate database on traditional knowledge, innovations and practices of indigenous peoples and local communities.²⁶⁵

154. Identify all available databases, articles and reports about past research on the biosphere reserve and help creating inventories of empiric data and make accessible to BRs all primary or secondary data (as far as possible within the limits of intellectual property rights).²⁶⁶

155. Improve the mapping capacity of the biosphere reserve, including GIS referenced data, exact zonation, and map overlays.²⁶⁷

156. Summarized information on climatic characteristics in BRs (temperature, humidity, pressure, snow and blanket of snow, cloudiness, wind etc) over decades will allow further analysis of the interaction of biodiversity and climate change.²⁶⁸

157. Strategically collect and document/report open questions and limits of knowledge.²⁶⁹

II.III. Advocacy and integration

158. More emphatic lobbying and horizontal activities with other initiatives (eg. UNESCO World Heritage, Ramsar Convention, IPBES, Global Network of National Geoparks, European Geopark Network etc.).²⁷⁰

159. The international scientific community needs to be better informed on the potential of the WNBR to facilitate efficient North-South and South-South cooperative research on climate change and biodiversity.²⁷¹ One of the indicators in CBD annual report should be reflected by the number of biosphere reserves present in the country.²⁷²

160. Strengthen cooperation between BR management structure and local community.²⁷³

161. BR managers should have an open mind towards traditional knowledge and promote its use as complementary to scientific research, improving management effectiveness.²⁷⁴

162. BR managers could organize “biosphere research day” and promote partnerships in general, including establishing framework agreements or MoUs with suitable universities and research institutes.²⁷⁵

163. BRs should be highlighted as major tool in relation to the SDGs and integrated with other programmes targeting the SDGs.²⁷⁶

164. BR needs to be more intensely used as learning sites for local and regional sustainable development.²⁷⁷

165. Increased use should be made of the BR as research facilities in developed and industrialized countries to conduct integrated environmental research, making use of the archives of long time observations and environmental monitoring and management experiments in the core, buffer and transition zones.²⁷⁸

166. Cultural events which highlight BRs, such as an international meeting on promoting cultural activities in support of environmental conservation should be considered.²⁷⁹

167. Better alignment between policy frameworks and implementation.²⁸⁰

168. MAB could promote the SLIQ approach (System thinking; Landscape planning; Intersectoral coordination; Quality economy) to facilitate the understanding and management of BRs as institutions that effectively integrates a system of different components and objectives.²⁸¹

169. Public associations support and activities should be encouraged.²⁸²

170. Methods to incorporate BRs into national development, territorial planning and environment policies (legislation, policies and programs) should be explored.²⁸³

II.IV. Education, training and capacity building

171. A global agenda to train BR and/or coordinators and other stakeholders in implementing the BR concept to the benefit of all.²⁸⁴

172. Provision of technical assistance to Member States on how existing BRs could better contribute to addressing climate change, rapid and unplanned urbanisation and biodiversity/ecosystem services loss.²⁸⁵

173. Training on the ecosystem services concept and on how to use it within BRs, the creation of a database including research themes, initiatives and research associates and the promotion of scientific research and case studies of BRs, should be promoted.²⁸⁶

174. Development and publication of teaching materials with an interdisciplinary approach for managers of BRs and other valuable territories of high international status in printed and electronic form.²⁸⁷

175. Special attention should be given to the applied aspects of MAB and more case studies based on recommendations of the conducted fundamental ecological research should be organized with involvement of different business communities and local population. Sharing the results of such case studies will help in capacity building of regional networks and should be included into bilateral agreements covering also transboundary cooperation of BRs.²⁸⁸

176. Formulation of step by step guidelines for policy development is needed.²⁸⁹

177. Education and research support roles well established.²⁹⁰

II.V. Cooperation

178. Also as stated under SE2, there are many national and international opportunities where BRs can and should play key roles at the interface of environmental conservation, research on human-environment interactions, sustainable development, cultural identity, and learning for a sustainable future²⁹¹, MAB and its WNBR should therefore seek to fully engage with existing relevant international, regional and national research initiatives and programmes, such as: The Intergovernmental Platform on Biodiversity & Ecosystem Services (IPBES);²⁹² Future Earth;²⁹³ Intergovernmental Panel on Climate Change (IPCC);²⁹⁴ The Group on Earth Observation (GEO) – GEO-BON, GCOS, the Global Ecosystem Monitoring Networks and Programmes;²⁹⁵ International Model Forest Network;²⁹⁶ Activities of IUCN, especially the World Conservation Congresses and World Parks Congresses.²⁹⁷

179. MAB's research agenda should, when appropriate, also include cooperation with the International Union of Biological Sciences (IUBS), Scientific Committee on Problems of the Environment (SCOPE), United Nations Environment Programme (UNEP), the International Geosphere Biosphere Programme (IGBP), and WWF.²⁹⁸

180. Transnational and international collaboration is essential to add value to MAB and WNBR activities. It is notable that, while there are databases for the WNBR, there are no comparable databases for scientists working in BRs. Thus, the MAB Secretariat should host (or facilitate, through one or more appropriate partners), an internet database of active researchers in BRs, including their fields of activity, and their outcomes from research in BRs.²⁹⁹

181. More focus on regional collaboration for research, implementation and monitoring.³⁰⁰ BRs should conduct research programmes on analyses of ecosystem services and their management through stakeholder participation.³⁰¹ Exchanges between BRS in the WNBR should be promoted.³⁰²

182. The partnership approach to achieve the vision and mission of the MAB Programme requires action implementation by many actors. Cooperation and collaboration for implementation at regional levels should therefore be strengthened.³⁰³

183. The interaction of BR managers and scientists must be a win-win-situation, from which both benefit. For win-win-situations, managers and scientists need to openly discuss to identify their respective expectations, rules and constraints. Enhanced cooperation with the policy of local community (local government). BRs should provide co-operative conservation and development strategies.³⁰⁴

184. Promotion of transboundary biosphere reserves, for cooperation, environmental diplomacy, peace, security and conflict management.³⁰⁵ Reinforce transboundary BRs by facilitating multi-scale dialogue, supporting national MAB Nat Coms in capacity building, specific to transboundary issues.³⁰⁶

185. Collaborating with locals with their specific traditions and traditional knowledge, including, where it is the case, indigenous Peoples; by a rethink of our approach and the engagement of communities as rights-holders and hosts of BRs.³⁰⁷

186. Put forward tools to build collaboration by exploring the tools and opportunities available to enhance sustainability of BR management, by evaluating success, and by sharing developments in technology for enhanced citizen engagement.³⁰⁸

II.VI. Institutional and administrative MAB and BR issues.

187. As UNESCO is the only UN Specialized Agency with a mandate to designate specific areas as BR the development of the WNBR should continue to be a key priority for MAB.³⁰⁹

188. Formulation of national policy on MAB Programme and allocation of budget for MAB activities.³¹⁰

189. Financial and legal support for BR actions should be permanently established.³¹¹

190. Building cooperating management methods of BR consisting of multiple communities.³¹²

191. Regular undertaking of periodic reviews and related actions to update zonation, management and other changes to meet Seville & MAP requirements and recommendations.³¹³

192. Establish functional zonation, taking into account the interrelationship of all three zones.

193. The delineation of the BR zones, especially of the older BR, still needs to be improved.³¹⁴

194. Strengthen the “transition zone” concept and highlight the need for them to be large enough; stress their major role in achieving strategic biosphere reserve objectives by hosting the bulk of the population and economic development activities.³¹⁵

195. “Exit strategy” process implemented for BRs that don’t meet the MAB criteria. The completion of the process should be a milestone.³¹⁶

Strategy Element 5. Enhancing the Functioning of the MAB Regional and Thematic Networks

196. There is general agreement that the network mechanism is useful (no submission received disputes this) but that the functioning of most if not all networks could be enhanced, in some instances significantly.³¹⁷ Expressions of support include seeing strong value of regional and thematic networks, such as by providing strategically important and interesting platforms for international cooperation and research.³¹⁸

197. The aims and activities of the networks generally seem to be poorly communicated/disseminated, with little or no action between meetings and a poor sense of progress/resolution of issues over time. However, where adequate resources, especially funds for a dedicated secretariat, exist there can be a real added value to the networks.³¹⁹

198. The importance of the networks was also duly emphasized in the MAP evaluation that recommends, in order to strengthen the value of the WNBR for BRs and their active involvement in the networks activities, to increase the outreach and inclusiveness of regional and thematic network activities, especially in certain areas of the world.³²⁰

I. Modalities for enhancing the networks

I.I. Financial resources [cross ref to SE7]

199. Regional and thematic networks require sufficient and stable financing in order for them to operate effectively. Although the financial situation is not necessarily entirely satisfactory for any of the networks, it is particularly severe for several of the networks focusing on developing countries. Therefore, mobilization of financial resources is an imperative for most networks and there are several ways and means to do so, including through:

- a. Developing creative twinning and tripartite arrangements;³²¹
- b. Stimulating private sector involvement and corporate sponsorship;³²²
- c. Support from the Secretariat to the regional networks;³²³
- d. Development of regional network projects for external funding, such as through existing regional inter-governmental structures, focusing on regional priorities and action-oriented results.³²⁴
- e. Thematic networks built within or around projects that contribute to the costs of the network for the project's life span.³²⁵

I.II. Communication and visibility [cross ref to SE8]

200. The visibility of and communication within and from networks are often limited, resulting in reduced impact and effectiveness. Enhanced visibility and communication is therefore a priority for the networks³²⁶ and it could be promoted through:

- a. Improved communication to the general public of the good work done;³²⁷
- b. The use of web-based resources and platforms;³²⁸
- c. Development of an interactive web based online communication network to increase participation and streamline knowledge-sharing processes and where BR staff and other stake holders could post questions and requests and where information and records of results and other resources could be kept and be open for the public,³²⁹ and through the UNESCO-MAB website that could feature the main high-value products of each network.³³⁰

I.III. Organizational arrangements and working methods

201. Organizational arrangements and working methods have a direct impact on the operations, outreach and effectiveness of the networks. While recognizing that the regional networks have variable working methods and statutes which address local needs and that they perhaps should be kept flexible in order to keep relevant and efficient in the context of their areas of work,³³¹ and that the thematic networks typically should be self-organized,³³² they could often be improved, such as through:

- a. Strengthened participation of Member States,³³³ including UNESCO National Commissions and MAB Nat Coms,³³⁴ Ministries of Environment³³⁵, as well as of universities and grass-roots NGOs;³³⁶ and through stronger cooperation with new partners in general;³³⁷
- b. Establishment of permanent, full time regional network secretariats;³³⁸
- c. Establishment of permanent reference centers, or offices for thematic networks focusing on their respective themes;³³⁹
- d. Establishment of national BR associations;³⁴⁰
- e. Identification of Member States long-term commitment towards the networks;³⁴¹
- f. Support from the UNESCO MAB Secretariat to help ensure coordination among the networks;³⁴²
- g. Network activities coherent with and integrated into the UN post 2015 development agenda;³⁴³
- h. Improved collaboration and coordination between BRs and relevant conventions and agreements and similar initiatives;³⁴⁴
- i. Building thematic networks within or around projects that can contribute to the costs of the network during the life span of the project;³⁴⁵
- j. Sharing of information on measures, characteristics and good practices of each BR, and exchange of BR managers, focal points and liaison officers;³⁴⁶
- k. Favouring the use of web-based resources and platforms to increase participation and streamline knowledge-sharing processes;³⁴⁷
- l. Accountability of network Bureau Members;³⁴⁸
- m. Introduction of sun set clause for thematic networks;³⁴⁹
- n. Annual assessment of the performance of the regional networks;³⁵⁰
- o. Periodic reviews (ten years) of thematic networks assessing whether or not they should continue;³⁵¹
- p. Closing down of networks when they do not deliver the expected results.³⁵²

II. Regional and thematic coverage of networks

202. In terms of establishing new networks, Member States are divided among those that a) believes there are enough networks, if not too many, already;³⁵³ b) those that support additional networks in principle but provided certain conditions are met;³⁵⁴ and c) those that would support additional networks on new themes.³⁵⁵

203. Arguments against establishment of new networks include that:

- a. It is not useful to promote the multiplicity of networks, but to rely on those that work best and to share and transfer their experiences;³⁵⁶
- b. In general there is no need for additional networks.³⁵⁷ The number of already existing networks is very high already. The capacity of the Secretariat to effectively support these networks is also rather limited;³⁵⁸
- c. There are too many thematic networks. It should be possible to find a more flexible system to address important issues. For example, constitute thematic task forces that might be needed with sunset clauses.³⁵⁹

204. In case new networks are to be established, several suggestions are made concerning preconditions that should be considered prior to their establishment, notably:

- a. New thematic networks must have a sunset clause and an inbuilt review mechanism;³⁶⁰
- b. MAB should secure the future and the quality of existing networks before starting any new ones;³⁶¹
- c. Informal networks should be promoted according to expressed needs;³⁶²

205. Proposals for establishing new networks include the following:

- a. A Network of Transboundary Biosphere Reserves allowing participants and stakeholders of the TBRs to share best practices for solving cross-border issues;³⁶³
- b. MABWET - Network of wetlands within the MAB Programme;³⁶⁴
- c. Thematic networks on arid and semi-arid areas, mountains, Amazon, coastal and marine areas, governance, management models of biosphere reserves;³⁶⁵ energy, livestock breeding and agriculture, tourism;³⁶⁶ and on interactions of BRs and urban areas.³⁶⁷

206. The alternative to add new themes or groups under existing networks is also proposed. This would require that the network statutes should be flexible enough to allow for the inclusion of new themes within existing networks.³⁶⁸ Some regional networks have already established such thematic sub-networks or groups.³⁶⁹

207. Views have been expressed concerning the geographical coverage and structure of EuroMAB.³⁷⁰

Strategy Element 6. MAB Governance Mechanisms

208. Well structured and effectively implemented and managed governing mechanisms are at the foundation of a successful MAB Programme. While several Member States and individual BRs consider the existing governance mechanisms as being appropriate,³⁷¹ most submissions point at opportunities for improvement, either in the effective execution of existing governance frameworks, or through proposed changes to the mechanisms in question.

I. General considerations

209. In view of the fact that the design of governance mechanisms should be effective in support of the implementation of the new MAB Strategy, it may prove premature to settle these issues firmly until later when the new strategy is starting to take shape. This would also allow for an assessment process aimed at establishing the strengths, weaknesses and possible alternatives to the current governing mechanisms is included within the future strategy, so decisions are made on an informed basis.³⁷² Important lessons have certainly been drawn from many years of experiences working with the Seville Strategy and from the implementation and evaluation of the MAP,³⁷³ but continuous monitoring and evaluation of the action and governance mechanisms is called for in order to ensure timely and effective adaptation to change.³⁷⁴

210. Given the increased constraints on resources, a cost-benefit analysis of the governing mechanisms could be conducted and cost saving measures could be proposed especially by reinforcing electronic consultation processes and electronic communication.³⁷⁵

211. A further assessment of governance mechanisms should also seek to elucidate the competencies of different international groups and committees of the MAB Programme and UNESCO's executive office.³⁷⁶

212. A more rigorous and consistent application of existing governance norms/procedures is critical for the future success of the MAB Programme.³⁷⁷

II. National Level

MAB National Committees and Biosphere Reserves

213. MAB Nat Coms have a critical role to play regarding the implementation of the vision and mission of the MAB Programme.³⁷⁸ It is therefore important that there be MAB Nat Coms or National Commissions for UNESCO that see to the development of the MAB Programme, including that they provide well-defined institutional support.³⁷⁹

214. MAB Nat Coms and BRs should be recognised legally by central governments and their activities should be integrated into the governmental and sectoral policies, especially National Agenda 21 and national priorities of social-economical plans at all levels.³⁸⁰

215. Countries should have MAB Nat Coms which are to be docked with the Ministry in charge of conservation and/or land management. This allows a vertical information flow from the model biosphere reserve to the authorities in charge of political decisions.³⁸¹

216. The composition of the membership of the MAB Nat Coms should be multi-transdisciplinary and include representatives from the public and private sectors,³⁸² and a wide range of stakeholders from diverse sectors, including representation from BRs to widen

the understanding of, and involvement in BRs, and to bring in additional sources of funding.³⁸³

217. There is a need to revisit the governing mechanism, especially on the role and responsibility between MAB Nat Coms and regional networks and how they could complement each other.³⁸⁴

218. Guidelines for MAB Nat Coms, including their preferred structure and responsibilities may be disseminated to those countries without MAB Nat Coms, or with just a Focal Point for MAB.³⁸⁵ Management models could be developed in each biosphere reserves, providing organizational structure with MAB Nat Coms including a minimum budget required to perform specific activities.³⁸⁶

219. At the national level, the terms depend on the countries,³⁸⁷ and the stewardship of the MAB program in different countries is country specific, this implies that revision of strategies concerning the MAB Nat Coms is a national matter.³⁸⁸ (see 1997 Guidelines for Establishing MAB Nat Coms).^{xx}

220. The communication between the MAB Nat Coms and the National UNESCO Commissions needs to be strengthened further.³⁸⁹

221. MAB Nat Coms should be represented by their focal points, and BRs by their managers, local community representatives and relevant Govt. officers as part of various BR Management committees.³⁹⁰

222. Countries shall share the composition of their MAB national/ regional committees with the UNESCO MAB Secretariat and progress regarding MAB programme should be communicated in the form of an annual report to the regional networks and MAB Secretariat.³⁹¹

III. International level

III.I. Regional and thematic networks

223. At present, there are no governing mechanisms per se at regional level; the regional networks have the potential to play a variety of roles, including linkage to regional institutions and processes, collaborative research and policy development, and mutual support. However, this implies a need for adequate resources.³⁹²

224. Regional networks should have governing mechanisms. The networks should present the challenges and needs of their respective regions at the MAB ICC sessions.³⁹³

225. Functioning of regional networks should be based on: Members charter; Statutes of the network including new themes; Short term and long term action plans and targets. The regional networks should have the following organs: A general assembly comprising of the member states. A Bureau which should be elected at general assembly meeting. The Bureau shall be composed of: A Chairperson; A Secretary General; Five technical coordinators facilitating intellectual and scientific activities of the network.³⁹⁴

226. New stakeholders and partners, such as leading research groups, private sectors and civil society organizations should be engaged in the networks.³⁹⁵

^{xx} Available on <http://unesdoc.unesco.org/images/0011/001115/111527eo.pdf>

III.II. Statutory Framework of the World Network

227. The Statutory Framework of the World Network remains entirely appropriate.³⁹⁶
228. The WNBR should review the legal situations and issue relevant guidelines to apply to all BRs within in the network.³⁹⁷
229. Designation of BRs should be for a 10 years period (not-permanent), renewal only upon resubmission (rather than periodic review).³⁹⁸
230. The periodic BR review form should be made simpler and support and guidance provided to MAB Nat Coms and BRs in preparing them. A joint MAB - World Heritage programme working group established to learn from respective experiences of periodic reviews should be considered.³⁹⁹

III.III MAB ICC and Bureau

231. Delegations to the ICC should always include representatives from national government institutions to provide political in- and oversight.⁴⁰⁰
232. A prominent/outstanding and experienced person chairing the MAB-ICC, well known and respected by donor organizations and institutions relevant for cooperating with MAB and who is lobbying for the MAB-programme and acts as a broker in funding questions would be beneficial. This would also result in an increased international visibility and recognition of the MAB programme.⁴⁰¹
233. ICC MAB sessions should include issues on their agendas identified by regional networks.⁴⁰²
234. Globally, the ICC is working much more effectively, especially since meetings have become annual. It may be appropriate to review the membership and remit of the Bureau; and it is essential that all of its members to contribute fully to its activities; such a commitment should be made by any prospective member before being elected to the Bureau.⁴⁰³
235. The Bureau of ICC MAB with representatives of all regions recognized by UNESCO should meet more often for better management and coordination of MAB activities.⁴⁰⁴

III.IV. International Support Group (ISG) for the Madrid Action Plan and the MAB Secretariat

236. The ISG of Permanent Delegates to UNESCO is increasingly working well for advocacy for the MAB programme and should continue to contribute to communications and advocacy to the benefit of MAB; this requires continued strategic work by the MAB Secretariat.⁴⁰⁵

III.V. International Advisory Committee for Biosphere Reserves.

237. More transparency in the appointment of members of the IAC is required.⁴⁰⁶

IV. UNESCO MAB Secretariat and UNESCO Regional Offices

238. UNESCO's Regional Offices can play an important part in communication flows between countries and the MAB Programme Secretariat so that all countries may genuinely participate in strategic MAB Programme decisions and in transmitting recommendations from the Programme to the biosphere reserves.⁴⁰⁷ However, the UNESCO Regional Offices should be reformed into multi-sectorial regional offices with all the five sectors represented to improve implementation of UNESCO programmes. To keep the regional dimension of the MAB programme, a coordination mechanism among these multi-sector regional offices should be put in place within the same UNESCO region.⁴⁰⁸

Strategy Element 7. Funding Mechanisms and Implementation Partners

239. There seems to be an (unfortunate) consensus on the issue of financing: there is not, and probably never has been, sufficient financing for MAB and the WNBR, and that this is a critically important challenge to overcome. On a more positive note, there is also general agreement that the potential for raising and generating funds is good. The issue at stake resembles to some extent that of the question of the chicken and the egg in terms of what comes first: funding or service delivery? In other words, would a larger budget be a precondition for MAB and the WNBR to function better, or could MAB with the resources actually available improve service delivery and thus prospects for increased access to additional financial resources? Inputs received outline both scenarios. Combined they offer a rich package of fund raising and more targeted service delivery proposals.

I. General remarks

240. In terms of the recommendations contained in the final MAP evaluation, the following general suggestions were made to strengthen the financial resource base of the WNBR:^{xxi}

- Consider establishing a multidonor trust fund;
- Promote the BR concept at the appropriate national policy and political levels to obtain adequate financial support for BRs and their support structures;
- Promote financial sustainability at the BR level through a diversification of the funding base.

241. During the long history of the MAB Programme, no reliable funding mechanisms were ever established at the national, regional or global levels.⁴⁰⁹ Many BRs therefore struggle financially facing a constant challenge to secure long-term monetary resources, especially with regards to operational funding, notably in countries where MAB is not supported and funded by national governments.⁴¹⁰ Creation of a sustainable financing mechanism aimed at strengthening the biosphere reserves, MAB and regional networks and to promote the implementation of plans and strategies is therefore a key priority.⁴¹¹

242. While the basic operational resources of the MAB Programme and the biosphere reserves must be provided from regular budgets for all levels of implementation: the UNESCO Secretariat, the Regional Offices, the MAB Nat Coms / National Commissions for UNESCO, each BR etc,⁴¹² there is a clear need to bring in new implementation partners, leading research groups, private sector enterprises or groups, and civil society organizations.⁴¹³ However, in doing so, attention needs to be given to so that local communities do not lose their independence and influence, especially if the partners are from other regions.⁴¹⁴ To increase organizational, including financial resilience in MAB and BRs, different means of funding should be explored, including through enhanced social innovation and social entrepreneurship.⁴¹⁵

243. UNESCO has one of the most famous and best-recognized global 'brands'. MAB's priority should be to establish how this brand can be used to raise funds for the WNBR and its BRs without damaging the image which built the brand in the first place. Funders generally require results-based activities. However, MAB generally does not have a good evidence base of effectiveness. This needs to be pulled together to grab the attention of donors. In other words, there is a clear need for a review of how MAB, at all levels, works with the private and philanthropic sectors on action and implementation, and what opportunities exist.⁴¹⁶

^{xxi} See document SC-14/CONF.226/6

244. Clearly, if the WNBR would be seen as a global collection of sites of excellence to promote learning and pilot concrete actions on climate change adaptation and mitigation and biodiversity conservation etc, individual BRs would then have much more easy access to financial resources from existing programs led by multilateral agencies and international funds.⁴¹⁷

245. Today, major public and private institutions are all equipped with lobbying structures favoring their interests. Why has UNESCO no such similar structures? ⁴¹⁸

246. It should be recalled that, in addition to financing, new partnerships might also foster a rise in public awareness and involvement of local communities and such cooperation among partners could be very useful in promoting and implementing sustainable development.⁴¹⁹

II. National and BR levels

247. UNESCO approved BRs should receive basic funding from public budgets to cover administration and personnel costs of the BR. Such funding should not be project based because it is an indefinite public task and responsibility that also underly the sovereignty of the country/state in respect to the establishment, management and review of BRs.⁴²⁰ Subsequently, a sustainable financial mechanism should be mainstreamed in national priorities.⁴²¹ As MAB and BR activities covers several disciplines and competencies, financing must be subject for cooperation among all relevant ministries and experts and MAB activities must be positioned in the policy of local governments.⁴²²

248. This said, the budgets available to the state for strengthening national, regional and global strategies, are very limited in developing countries, including for ensuring conservation and development models, such as BRs. It is therefore important to engage a multitude of public and private partners.⁴²³ At both the national level and for individual BRs, widening the range of stakeholders involved in governance will not only widen understanding of, and involvement in BRs, but should also bring in additional sources of funding. For individual BRs, a key need is to find ways in which communities, businesses, and organizations within and close to BRs (e.g., in nearby urban areas) can benefit from supporting the aims of BRs, e.g., through social enterprise, products and branding which help promote income generation from activities which enhance BRs and support local livelihoods.⁴²⁴

249. More technical solutions include the establishment of independent national BR trust funds;⁴²⁵ twinning arrangement of BRs that in addition to financial resources also encourage transboundary and transnational cooperation and engendering good will;⁴²⁶ and capacity building in member countries for writing project proposals to funding institutions and for fund administration.⁴²⁷

250. Member states could also consider incorporating in their fiscal and tax regulations for individuals and businesses, a percentage for the benefit of MAB and BRs to address sustainability issues.⁴²⁸

251. It is also the responsibility of the individual BRs, and through their national associations and governments, to find proper financing and partnerships.⁴²⁹

252. MAB should help to build and market expertise within the network and within individual organizations to develop own-source revenue, since many countries cannot rely solely on public funding and private-sector altruism to support BRs.⁴³⁰

III. Regional and international levels

253. In countries eligible for ODA the MAB Coms should strive to increase the importance of MAB and BRs internally for bilateral negotiations with donor countries and international funding organizations.⁴³¹ Fundraising should also include active participation in “calls” from regional funding mechanisms as the EU Horizon 2020.⁴³²

254. MAB should strategically consider how its goals are aligned with those of the major international organizations, initiatives etc. identified under SE2. There are, for example, opportunities with regard to the 2014-2020 programming period of the European Commission.⁴³³ Indeed, in the case of Europe, it is essential that MAB works with the European Union for funding research projects. European funds are commonly used in the territories. More formal partnerships for financing cooperation projects and networking should therefore be established with the EU.⁴³⁴

IV. UNESCO and MAB Secretariat

255. The Secretariat should assist Members in writing project proposals and act as a broker.⁴³⁵ The MAB secretariat should also try to strengthen cooperation with the secretariats of the different UN Conventions, with GEF, UNDP, World Bank etc.⁴³⁶

256. More flexible mechanisms are needed to address short term research and capacity building needs and awareness raising projects. The MAB Special Account is a useful mechanism in this context.⁴³⁷

257. We must analyze if the MAB Secretariat has the resources needed and what is the potential of the programme to attract partners. Otherwise the risk is great to consume a lot of resources in research of funds without obtaining meaningful results. The financing mode proposed by the Global Geoparks Network with contributions per site should be studied. This system is interesting, but it does not take into account the distribution of wealth globally and could potentially disadvantage economically weaker countries or regions.⁴³⁸

258. UNESCO should design funding mechanism at the level of regional and individual BRs for management plans, research, community programmes, training workshops and meetings of the national as well as regional MAB networks. UNESCO together with UN funding agencies should divert some of their funds in conservation activities in BRs to encourage the establishment and management of BRs and international financial institutions, within their respective mandates, may be requested by UNESCO to provide financial resources for the promotion of sustainable development and poverty eradication through the WNBR. The UN should make it mandatory for member states to allocate an appropriate fund for establishment and management of biosphere reserves.⁴³⁹

259. It is the responsibility of the MAB secretariat and regional networks to promote international level partnerships and to ensure that BRs benefit from partnerships that they would not have the leverage to establish on their own.⁴⁴⁰

V. Alignment with international processes, conventions and donors

260. MAB should promote and maintain its contribution to international conventions on biodiversity, climate change, and desertification and facilitate the establishment of funding mechanisms and co-operation for joint project implementation with international, regional organizations.⁴⁴¹ Focusing on the key strategic and policy issues and related MAB and WNBR goals outlined under SE2, MAB should specifically explore how BRs best can be

used to achieve mutually beneficial outcomes and reduce pressure on Member States in terms of implementation and reporting commitments from global conventions. Universities have key roles to play; they are increasingly required to undertake applied research and provide practical learning opportunities, so that partnerships with universities have great potential for bringing money and other resources into BRs.⁴⁴²

261. Funding mechanisms have evolved over the last few years in order to facilitate the alignment of proposals submitted to donors and the work-programme of UNESCO. More work in that direction is needed to increase medium term funding-mechanisms to co-finance research in priority areas such as the SDG's and the 3 Rio Conventions.⁴⁴³

262. The WNBR could be promoted and positioned as a long-standing, well established option to developing and financing climate change mitigation and adaptation pilot projects under the umbrella of the GEF, the Adaptation Fund and the Green Climate Fund.⁴⁴⁴

263. Leading research groups and think tanks should be more effectively brought in by MAB. Arrangements could be established in a way that research on ecosystem monitoring and methods for environmental management targets individual BRs or BR regional networks, and results are shared amongst BRs authorities and national committees.⁴⁴⁵ However there must be a clear skills and technology transfer framework spelt out in the partnership for capacity building.⁴⁴⁶

264. Networks of practitioners, including NGOs, that work internationally in the field of sustainable development (e.g with focus on energy, organic farming, local food etc) are potentially important partners.⁴⁴⁷

265. Strengthened collaboration with other key international organizations, e.g. UNDP, WWF, IUCN etc would also be helpful, especially to developing country member states.⁴⁴⁸

VI. Private sector partnerships

266. There is a crucial need to enhance level of partnership around the MAB programme. The goal should be to generate private sector partnerships.⁴⁴⁹ These partnerships need to be promoted at local, national and international levels.⁴⁵⁰

267. There should be a deeper involvement of -- and guidance provided to -- entrepreneurial sector of BRs, especially those supporting social enterprises and green economies.⁴⁵¹ Large companies could contribute through their earnings.⁴⁵²

268. Potential partnerships with private enterprise already active in the BRs or their surrounding regions that could be explored including mining and oil companies, agriculture and industry, should only involve partners that are genuinely committed and dedicated to conservation and sustainable development and that they view BRs as an opportunity to promote and enhance their sustainability practices to mutual benefits.⁴⁵³

269. A stocktaking exercise of success cases could be used to gather private actors and increase MAB's buy-in from an economic perspective, whilst ongoing projects and actions on sustainable production in existing BRs could be listed and periodically updated on a web-based clearing-house that companies and donors could have access to.⁴⁵⁴ UNESCO MAB could perhaps also organize a special International MAB BR Business Forum to highlight good practices and explore and promote new partnership opportunities with the private sector.⁴⁵⁵

VII. Civil society, research groups, think thanks

270. The list of civil society organizations, research groups, think thanks, NGOs etc that potentially could engage with and help support MAB and BRs financially, and through their public awareness and other activities is almost endless.⁴⁵⁶

VIII. Innovative financial tools

271. MAB should experiment with new tools, in particular “crowd funding” (which could also have a double benefit of increasing visibility of the projects).⁴⁵⁷

272. Funding of Mega projects to be initiated in BRs could generate carbon finance for sustainable development and community programmes.⁴⁵⁸

273. Innovative programmes like trophy hunting should be encouraged in BRs for conservation and financial uplifting of local communities.⁴⁵⁹

IX. Due diligence

274. In-line with UNESCO’s overall partnership and due diligence policies, for most partnerships outlined above, there should be some mechanisms or criteria established with MAB against which a partner could be approved as an appropriate one. Taking into account not only the financial contribution, but also the respect and reputation, the trust and confidence, gained while acting as environment friendly entities that are proud to promote and sustain biodiversity, cultural diversity, and protection of natural and cultural heritage and smart use of resources.⁴⁶⁰

Strategy Element 8: Effective MAB and WNBR use of contemporary communication, information and data sharing tools and instruments for enhanced visibility and benefit to Member States and to society

275. Effective and open communication, data and information exchange is a prerequisite for a successful MAB Programme. Contemporary communication and information and data sharing tools have huge potential for the MAB Programme, which operates globally through a large number of Member States, BRs, regional and thematic networks. While the MAB Secretariat, MAB Nat Coms, regional and thematic networks and individual BRs are starting to make good use of these contemporary communication, social media and information tools,^{xxii} there is a perceived urgent need to further improve information and data sharing within and from MAB, the WNBR, regional and thematic networks.⁴⁶¹ In doing so, it should however be remembered that many countries still have poor access to modern communication facilities calling for continued focus also on more traditional means of communication and information exchange.⁴⁶²

276. The task to communicate MAB matters more effectively is not only a function of how well MAB mobilizes communication tools and instruments available, it also depends on how successful MAB is in terms of producing good results and services that are appreciated. Good results will attract press and media and public attention and help us communicate on our behalf.⁴⁶³ In addition to relevant, timely and tangible results, communication would likely also be facilitated by a 'modernization' of some of the key words associated with MAB, including the reference to 'Man' and 'Reserve' and by having short and easy-to-understand MAB and vision and mission statements.⁴⁶⁴

Measures to enhance communication, information and data sharing

I. Open access

277. Promote an open access policy to MAB and WNBR related documents, data, information and multimedia materials.^{xxiii} This shall include that information gathered by researchers in or on BRs shall be made easily accessible for both practitioners and other researchers and that UNESCO's information on BRs shall be made easily accessible.⁴⁶⁵

II. MABNet

278. The UNESCO MAB web site, the MABNet, shall be further developed as the key communication, data and information hub.⁴⁶⁶ It shall promote electronically sharing of resources, publications, case studies and good practises.⁴⁶⁷ As an interactive clearinghouse platform, the MABNet shall provide information on and allow feedback from MAB Nat Coms, individual BRs, regional networks, partner organizations and individual experts and allow

^{xxii} Examples include:

UNESCO MABNet: www.unesco.org/mab

UNESCO MAB Facebook page: <https://www.facebook.com/manandbiosphere>

UNESCO MAB online community of practice:

https://teams.unesco.org/_login/default.aspx?ReturnUrl=%2fcop%2fmab%2f_layouts%2f15%2fAuthenticate.aspx%3fSource%3d%252Fcop%252Fmab&Source=%2Fcop%2Fmab

Biosphere Smart Initiative: <http://www.biospheresmart.org/>

Renewable Energy Futures for UNESCO Sites (RENFORUS) Initiative: <http://www.renforus.net/>

^{xxiii} Open Access Policy to be discussed at the 26th MAB ICC under item 13.

http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/SC/pdf/SC-14-CONF-226-2_Provisional_annotated_agenda_en.pdf

sharing of MAB-related technical and scientific documents, success cases, workshops, invitations⁴⁶⁸ and discussions through dedicated web-based fora.⁴⁶⁹ The MABNet shall provide accurate, timely and regularly updated information and be structured so as to ensure easy availability of information.⁴⁷⁰ MAB should open the MABNet to, or create a new internet presence specifically for, BRs to use to promote their activities and cooperation around similar initiatives.⁴⁷¹ The MABNet can also include on-line training courses.⁴⁷² The MABNet shall include a "MAB Agenda" with the main planned programmes, events and tasks related to biosphere reserves and MAB.⁴⁷³ Available on the MABNet, but also issued by email, a periodic information newsletter shall be produced and circulated to all the Members.⁴⁷⁴

279. MAB shall consider developing guidelines on graphical layouts, structure and content that could provide coherence to web pages of individual BRs, MAB Nat Coms, thematic and regional networks.

280. MAB Nat Coms that have not created their own webpages, should do so⁴⁷⁵, and link them to the MABNet.

III. Administration

281. Communication with Member States should be standardized and MAB Nat Coms recognized as the official focal points for sharing strategic tools and documents.⁴⁷⁶ Member States need to continuously provide current information to the MAB Secretariat.⁴⁷⁷

282. MAB should consider hiring a professional communication specialist.⁴⁷⁸

283. Strengthen the MAB Secretariat's information management capacities.⁴⁷⁹

IV. Data and mapping

284. Develop an online database of information on BRs targeting different types of audiences.⁴⁸⁰ Establish key word searchable databases on MAB and BR issues,⁴⁸¹ improved mapping tools,⁴⁸² and access to satellite, remote sensing and GIS data.⁴⁸³ Following the example of the IPCC data-clearing centre, MAB could consider developing a similar facility especially for ecosystem and other biofunctions models.⁴⁸⁴

285. The establishment of the joint BiosphereSmart Initiative goes in the right direction to make information on biosphere reserves easily available. The links to the individual BR on the interactive map are very useful. Also it is appreciated that the new forms for the periodic review and nomination have standardized formats for the description of individual biosphere reserves. The Secretariat should continue to complete the initiative.⁴⁸⁵

286. The data base can only be as good as the data provided and put in by National Committees and BRs. They should be requested to regularly update their inputs,⁴⁸⁶

V. Conferences

287. International WNBR meetings should be considered to exchange information and demonstration of successful implementation among members of all regional networks and thematic groups, while regular regional network meetings should be increased to strengthen the communication between BRs.⁴⁸⁷ Sharing of information within networks should be improved via the organisation of research conferences.⁴⁸⁸ MAB side events could be held in the margins of conferences of the Parties of major relevant conventions⁴⁸⁹ and the MAB Secretariat should assist Biosphere Reserves to convey the message to respective

governments to ensure better visibility of the MAB Programme at large international conferences and workshops.⁴⁹⁰ MAB should promote video conferencing for meetings, seminars and workshops.⁴⁹¹

288. Organize a fourth World Congress of Biosphere Reserves.⁴⁹² 2015 will be 20 years since the Seville Conference in 1995. There is value in trying to hold another gathering, preferably in a developing country. The purpose would be not just to refresh MAB, but to deal with rejuvenation. Both Seville and Madrid were good impulsion points for change; it is time for another global meeting to mark the implementation of the new Strategy and ensure that BRs fulfill all their great potential.⁴⁹³

VI. Social media

289. Simple, cheap and accessible communication through social media among BRs is critically urgent.⁴⁹⁴ MAB and the WNBR should have a presence in social networks.⁴⁹⁵ and every BR and MAB Nat Com should have their own dedicated Facebook accounts.⁴⁹⁶ MAB's updates, key messages and events could be published on a continuous basis in major social networks⁴⁹⁷ and a more active MAB presence on social networking sites (such as Facebook) is called for.⁴⁹⁸ Information and communication technologies like Facebook, Twitter, and Skype may be used for knowledge sharing and communication, technical cooperation and capacity building.⁴⁹⁹ While Internet and social networks are very powerful mechanisms of communication at the present time we need to discuss all details how better to use them.⁵⁰⁰

VII. Networks

290. Communication and information/data sharing tools and instruments would be of advantage if comprehensive network could be sustained and guaranteed⁵⁰¹. Improve the transdisciplinary function of the networks.⁵⁰²

VIII. Publications

291. Cooperative arrangements (such as with SCOPE) to publish joint publications and policy briefs for decision makers on scientific and technical issues.⁵⁰³

292. Consider developing a flagship synthesis publication on BRs.⁵⁰⁴ For example, publication in 2016 of the results of the MAB Programme over 45 years.⁵⁰⁵

293. Develop an online repository of knowledge with (references to) key publications BR-related priority themes.⁵⁰⁶

IX. TV and video

294. UNESCO should convince its country-members to produce more TV and Video presentations about their achievements in implementing MAB Program and to support their show at the prominent Broadcasting systems (or may be UNESCO could have its own TV channel for such purpose).⁵⁰⁷

X. Key audiences

295. Greater emphasis needs to be placed on the benefits of BRs for urban areas: their administrations, businesses, and citizens (where the majority of the Earth's population live).⁵⁰⁸

XI. Branding, labeling and marketing

296. MAB must work with BRs to establish a unified brand that can be marketed to the general public and encourages community engagement by creating a simple logo and a slogan, as well as a simple but flexible description of and message from BR's. MAB should also launch a campaign to market the BR brand globally.⁵⁰⁹

297. BRs throughout the world produce many excellent products, and collectively they represent a large international market; any website which helps BRs to buy from and sell products and activities to each other would create huge opportunities for both individual BRs and the WNBR.⁵¹⁰

XII. Partnerships

298. UNESCO MAB should consider partnering with major international sports teams etc for granting us visibility (e.g. football clubs etc).⁵¹¹

XIII. Miscellaneous

299. MAB broadband networks should be developed for both public and professionals at local, regional, and international level, where new innovations, success stories and issues related to MAB Programme could be highlighted for general awareness.⁵¹²

300. MAB should clearly position the WNBR (e.g. through the Secretariat) in international debates on sustainable development and related themes.⁵¹³

301. The Secretariat should elaborate a system of how to retrieve information from BRs as UNESCO's contribution to IPBES.⁵¹⁴

302. The Secretariat should establish and maintain a list of calls for proposals from funding organizations (EU, World Bank etc.) where BR-managers and National Committees explore and examine current financing opportunities.⁵¹⁵

303. Means should be found for the production by the Secretariat of e-learning opportunities for capacity building. MAB information materials should be made available in the form of apps for android and iOS.⁵¹⁶

XIV. Communication strategy/action plan

304. Develop a comprehensive communication strategy [action plan] (with differentiated targets and tools) with corresponding means and tools within the network (web page performance, social network), updated directories and libraries, with easy access.⁵¹⁷

ANNEX I: SDG Focus Areas contained in the Working Document for the 5-9 May 2014 Session of the UN SDG Open Working Group

1. **Poverty eradication, building shared prosperity and promoting equality** - End poverty in all its forms everywhere
2. **Sustainable agriculture, food security and nutrition** - End hunger and improve nutrition for all through sustainable agriculture and improved food systems
3. **Health and population dynamics** – Healthy life at all ages for all
4. **Education and life-long learning** - Provide quality education and life-long learning for all
5. **Gender equality and women’s empowerment** - Attain gender equality and women’s empowerment everywhere
6. **Water and sanitation** - Water and sanitation for a sustainable world
7. **Energy** - Ensure access to affordable, sustainable, and reliable modern energy for all
8. **Economic growth, employment and infrastructure** - Promote sustainable, inclusive and sustained economic growth and decent jobs for all
9. **Industrialization and promoting equality among nations** - Promote sustainable industrialization and equality among nations
10. **Sustainable cities and human settlements** - Build inclusive, safe and sustainable cities and human settlements
11. **Sustainable Consumption and Production** - Promote sustainable consumption and production patterns
12. **Climate change** - Take urgent and significant action to mitigate and adapt to climate change - Build a climate change goal based on the outcome of COP21 of the UNFCCC
13. **Conservation and sustainable use of marine resources, oceans and seas** - Take urgent and significant actions for the conservation and sustainable use of marine resources, oceans and seas
14. **Ecosystems and biodiversity** - Protect and restore terrestrial ecosystems and halt all biodiversity loss
15. **Means of implementation/Global partnership for sustainable development** - Strengthen global partnership for sustainable development – Trade; Financing and debt sustainability; Capacity building; Strengthened global partnership for sustainable development
16. **Peaceful and inclusive societies, rule of law and capable institutions** - Peaceful and inclusive societies, rule of law and capable institutions.

(source: <http://sustainabledevelopment.un.org/focussdgs.html>)

Proposed /supported by:

- ¹ Chile, Lebanon, Nigeria, Peru, South Africa, Switzerland, Zimbabwe,
- ² Egypt, France, Hungary
- ³ Austria, Belgium, Canada, Colombia, Philippines, UK, EuroMAB, Karst BR (Slovenia), La Palma BR (Spain),
- ⁴ UK
- ⁵ Austria
- ⁶ Austria
- ⁷ Austria
- ⁸ Germany
- ⁹ Colombia, Pakistan,
- ¹⁰ Belgium, Canada, Sudan, UK,
- ¹¹ Pakistan
- ¹² Austria
- ¹³ Colombia
- ¹⁴ Hungary
- ¹⁵ Germany
- ¹⁶ Canada
- ¹⁷ EuroMAB
- ¹⁸ La Palma BR (Spain)
- ¹⁹ Germany
- ²⁰ Belgium
- ²¹ Belgium
- ²² France
- ²³ Hungary
- ²⁴ UK
- ²⁵ UK
- ²⁶ Karst BR (Slovenia)
- ²⁷ La Palma BR (Spain)
- ²⁸ Black Sea BR (Ukraine)
- ²⁹ Germany
- ³⁰ Germany
- ³¹ Germany
- ³² Colombia
- ³³ Colombia
- ³⁴ Colombia
- ³⁵ Germany
- ³⁶ Colombia
- ³⁷ Colombia
- ³⁸ Germany
- ³⁹ Germany
- ⁴⁰ Germany
- ⁴¹ Philippines
- ⁴² Spain
- ⁴³ Germany
- ⁴⁴ Canada, EuroMAB
- ⁴⁵ Canada
- ⁴⁶ EuroMAB
- ⁴⁷ Belgium
- ⁴⁸ Canada
- ⁴⁹ France

- ⁵⁰ Hungary
- ⁵¹ La Palma BR (Spain)
- ⁵² UK
- ⁵³ France
- ⁵⁴ Colombia, France, Peru,
- ⁵⁵ Germany, Pakistan, Peru, Philippines, Russian Federation, Sweden, UK, Chile
- ⁵⁶ Peru
- ⁵⁷ Pakistan, Peru, Philippines, UK
- ⁵⁸ Pakistan
- ⁵⁹ Pakistan
- ⁶⁰ Pakistan
- ⁶¹ UK
- ⁶² Pakistan
- ⁶³ Pakistan, Philippines, Sweden
- ⁶⁴ Germany
- ⁶⁵ UK
- ⁶⁶ EuroMAB
- ⁶⁷ La Palma BR (Spain)
- ⁶⁸ Pakistan, Belgium, Colombia, Germany, UK, Vietnam, Zimbabwe
- ⁶⁹ Hungary
- ⁷⁰ Pakistan
- ⁷¹ Canada
- ⁷² Nigeria
- ⁷³ Japan
- ⁷⁴ Germany
- ⁷⁵ Germany, Peru
- ⁷⁶ Sudan
- ⁷⁷ Germany
- ⁷⁸ Colombia, Sweden. Switzerland
- ⁷⁹ South Africa
- ⁸⁰ Pakistan
- ⁸¹ Zimbabwe
- ⁸² Pakistan
- ⁸³ Switzerland
- ⁸⁴ Pakistan
- ⁸⁵ UK, Germany
- ⁸⁶ UK
- ⁸⁷ Sweden
- ⁸⁸ Egypt
- ⁸⁹ La Palma BR (Spain)
- ⁹⁰ Sudan
- ⁹¹ Peru
- ⁹² Germany
- ⁹³ Pakistan
- ⁹⁴ Pakistan
- ⁹⁵ Belarus, Germany
- ⁹⁶ France
- ⁹⁷ EuroMAB
- ⁹⁸ Sweden
- ⁹⁹ Pakistan

- ¹⁰⁰ Colombia
- ¹⁰¹ Spain
- ¹⁰² Ramat Menashe BR (Israel)
- ¹⁰³ UK
- ¹⁰⁴ Pakistan
- ¹⁰⁵ EuroMAB
- ¹⁰⁶ Canada, Chile
- ¹⁰⁷ Colombia
- ¹⁰⁸ Spain, Chile, EuroMAB
- ¹⁰⁹ Hungary
- ¹¹⁰ Germany
- ¹¹¹ Spain
- ¹¹² South Africa, EuroMAB
- ¹¹³ Colombia, EuroMAB
- ¹¹⁴ EuroMAB
- ¹¹⁵ EuroMAB
- ¹¹⁶ Germany
- ¹¹⁷ Egypt
- ¹¹⁸ Vietnam
- ¹¹⁹ Switzerland
- ¹²⁰ Lebanon, Chile
- ¹²¹ Belarus
- ¹²² Pakistan
- ¹²³ South Africa
- ¹²⁴ Lebanon
- ¹²⁵ Hungary
- ¹²⁶ Germany
- ¹²⁷ Belgium
- ¹²⁸ South Africa
- ¹²⁹ Colombia
- ¹³⁰ Lebanon
- ¹³¹ Sudan
- ¹³² Karst BR (Slovenia)
- ¹³³ Karst BR (Slovenia)
- ¹³⁴ Belgium
- ¹³⁵ Belgium, Pakistan
- ¹³⁶ Pakistan
- ¹³⁷ Japan
- ¹³⁸ Sweden
- ¹³⁹ Colombia, Pakistan
- ¹⁴⁰ Pakistan, Switzerland, UK
- ¹⁴¹ Pakistan, Sweden, Switzerland, UK
- ¹⁴² UK
- ¹⁴³ Colombia
- ¹⁴⁴ UK
- ¹⁴⁵ UK
- ¹⁴⁶ Colombia
- ¹⁴⁷ Pakistan
- ¹⁴⁸ Russian Federation
- ¹⁴⁹ Russian Federation
- ¹⁵⁰ La Palma BR (Spain)
- ¹⁵¹ UK
- ¹⁵² Belgium, Pakistan, UK,
- ¹⁵³ Colombia
- ¹⁵⁴ Lebanon, Germany

155 Pakistan
156 UK
157 UK
158 UK
159 Switzerland
160 Pakistan
161 Belgium
162 Sudan
163 Belgium
164 Colombia
165 Germany
166 Sweden
167 Germany
168 Pakistan
169 Germany
170 Canada, France,
Germany, Hungary,
Lebanon, Peru, Spain,
Turkey, EuroMAB, Karst BR
(Slovenia), Ramat Menashe
BR (Israel)
171 Japan
172 UK
173 France, Peru, Spain,
EuroMAB
174 Peru
175 Belarus, Colombia,
Hungary
176 Pakistan, Karst BR
(Slovenia)
177 Belarus
178 Turkey, Karst BR
(Slovenia)
179 Nigeria
180 France
181 La Palma BR (Spain)
182 UK, France
183 Sweden
184 Germany
185 Spain, Sweden, Peru,
Turkey
186 UK
187 France
188 Sweden
189 Spain, Karst BR
(Slovenia)
190 South Africa
191 France
192 EuroMAB
193 Peru
194 Spain
195 Colombia, Lebanon,
Peru
196 Canada
197 Sweden
198 Nigeria
199 Zimbabwe
200 France

201 France
202 Spain, EuroMAB
203 Turkey
204 Germany
205 Germany
206 Russian Federation
207 Russian Federation
208 UK
209 KARST BR (Slovenia)
210 Pakistan
211 Belgium, Canada ,
Germany, Lebanon,
Pakistan, Peru, Philippines
212 Germany
213 Nigeria
214 , Germany, Japan,
Pakistan, Philippines, La
Palma BR (Spain)
215 Germany
216 Japan, Pakistan
217 Colombia
218 France, Pakistan,
Philippines, Sweden,
Vietnam
219 Zimbabwe
220 LA PALMA BR (Spain)
221 Colombia
222 Japan
223 Pakistan
224 Vietnam
225 Pakistan
226 Vietnam
227 France
228 Hungary
229 France
230 Colombia
231 Japan
232 Pakistan
233 Pakistan
234 Peru, EuroMAB
235 Pakistan
236 Germany
237 KARST BR (Slovenia)
238 Colombia
239 EuroMAB
240 Germany
241 Philippines
242 KARST BR (Slovenia)
243 UK
244 Colombia
245 UK
246 Sudan
247 South Africa
248 South Africa
249 Germany
250 Spain
251 Colombia
252 Vietnam

253 Vietnam
254 Colombia
255 Spain
256 EuroMAB
257 EuroMAB
258 EuroMAB
259 Austria
260 Austria
261 Colombia
262 Belarus
263 EuroMAB
264 Germany
265 Pakistan
266 Germany
267 Germany
268 Belarus
269 Germany
270 Hungary
271 Belgium
272 Pakistan
273 Japan
274 Germany
275 Germany
276 Pakistan
277 Belgium
278 Belgium
279 Vietnam
280 South Africa
281 Vietnam
282 Vietnam
283 EuroMAB
284 South Africa, Germany
285 Colombia
286 EuroMAB
287 Belarus
288 Russian Federation
289 Sudan
290 Vietnam
291 Colombia, Pakistan
292 Pakistan, Switzerland,
UK
293 Pakistan, Switzerland,
UK
294 UK
295 Colombia
296 UK
297 UK
298 Philippines
299 UK
300 Sudan
301 Germany
302 Germany
303 Sudan
304 Germany
305 France, Germany,
Pakistan, EuroMAB
306 EuroMAB
307 EuroMAB

308 EuroMAB
309 Belgium
310 Pakistan
311 Vietnam
312 Japan
313 Germany
314 Belgium
315 Spain
316 Hungary
317 Austria, Belarus, Belgium,
Canada, Chile, Colombia,
Egypt, France, Germany,
Hungary, Japan, Lebanon,
Nigeria, Pakistan, Peru,
Russian Federation, South
Africa, Spain, Sudan,
Switzerland, UK, Zimbabwe,
EuroMAB, La Palma BR
(Spain)
318 Belgium, Canada,
Germany, Switzerland,
EuroMAB
319 UK
320 MAB Evaluation Rep.
321 Belgium
322 Belgium, Nigeria
323 Germany
324 France, UK
325 Germany
326 Austria, South Africa,
Spain
327 Austria
328 Colombia
329 Colombia, South Africa,
Spain
330 Spain
331 Belgium, Canada,
EuroMAB
332 Germany
333 Colombia
334 Peru
335 Egypt
336 Egypt
337 Germany
338 South Africa
339 La Palma BR (Spain)
340 Canada, EuroMAB
341 Spain
342 France
343 Pakistan
344 Pakistan
345 Germany
346 Japan
347 Colombia, Lebanon
348 Lebanon
349 Belgium
350 Sudan
351 Spain, EuroMAB

352 Germany
353 France, Germany, South
Africa, Switzerland
354 Canada, Colombia,
Spain, UK, EuroMAB, Karst
BR (Slovenia)
355 Belarus, Canada,
Hungary, Peru, Russian
Federation, Spain, UK
356 France
357 Germany, South Africa
358 Germany
359 Switzerland
360 Spain, EuroMAB
361 UK
362 Canada, EuroMAB
363 Belarus
364 Hungary
365 Peru
366 Spain
367 UK
368 Colombia
369 Karst BR (Slovenia)
370 Hungary, Russian
Federation (V. Neronov)
371 Hungary, Germany,
Nigeria, Lebanon,
Zimbabwe, Ramat Menashe
BR (Israel), Karst BR
(Slovenia)
372 Colombia
373 Sudan
374 La Palma BR (Spain)
375 Belgium
376 Switzerland
377 Canada, EuroMAB,
Lebanon
378 Sudan
379 Spain, EuroMAB
380 Vietnam
381 Germany
382 Germany
383 UK, Spain, Philippines,
EuroMAB
384 South Africa
385 Sudan
386 Peru
387 France
388 Belarus
389 Belgium
390 Pakistan
391 Pakistan
392 UK
393 Russian Federation
394 Pakistan
395 Belarus
396 France
397 Vietnam

398 Canada
399 EuroMAB
400 Germany
401 Germany
402 Russian Federation
403 UK
404 Russian Federation
405 UK
406 Germany
407 Spain, EuroMAB
408 Sudan
409 Russian Federation
410 South Africa
411 Chile, Colombia, Egypt,
Hungary, South Africa,
Pakistan, Russian
Federation, Sudan, Vietnam,
Zimbabwe.
412 Spain
413 Hungary, Germany,
Japan, Pakistan, Spain,
Sudan, UK,
414 Japan
415 Sweden
416 UK
417 Colombia
418 La Palma BR (Spain)
419 Karst BR (Slovenia)
420 Germany
421 Vietnam
422 Japan, Peru
423 Peru
424 UK
425 South Africa
426 Zimbabwe
427 Germany
428 La Palma BR (Spain)
429 Canada, EuroMAB
430 EuroMAB
431 Germany
432 Belgium, France, UK
433 UK
434 France
435 Germany
436 Russian Federation
437 Belgium
438 Switzerland
439 Pakistan
440 EuroMAB
441 Sudan
442 UK
443 Belgium
444 Colombia
445 Colombia
446 Zimbabwe
447 France
448 Zimbabwe

449 Canada, Germany,
Lebanon, Nigeria, Spain,
EuroMAB
450 Canada
451 EuroMAB
452 La Palma BR (Spain)
453 Peru
454 Colombia
455 Russian Federation
456 Lebanon, Karst BR
(Slovenia)
457 Austria, EuroMAB
458 Pakistan
459 Pakistan
460 Karst BR (Slovenia)
461 Strong consensus on this
point
462 Sudan
463 France
464 UK
465 Sweden
466 MAP Evaluation Rec.
467 Austria, Belarus,
468 Colombia, Philippines,
Spain, Sudan, UK
469 EuroMAB
470 Hungary, UK
471 Lebanon, UK, EuroMAB
472 Columbia
473 Hungary
474 Ramat Menashe BR
(Israel)
475 Germany
476 Hungary
477 UK
478 MAP Evaluation Rec.
479 MAP Evaluation Rec.
480 MAP Evaluation Rec.
481 Belgium, Japan, Spain,
EuroMAB
482 Belgium
483 Zimbabwe
484 Zimbabwe
485 Germany
486 Germany
487 Sudan
488 EuroMAB
489 Colombia
490 South Africa
491 Spain
492 MAP Evaluation Rec.
493 UK
494 Canada
495 Germany
496 Egypt
497 Colombia
498 Hungary
499 Pakistan

500 Russian Federation
501 Nigeria
502 Austria, EuroMAB
503 Belgium
504 MAP Evaluation Rec.
505 Belarus
506 MAP Evaluation Rec.
507 Russian Federation
508 UK
509 EuroMAB
510 UK
511 La Palma BR (Spain)
512 Pakistan
513 MAP Evaluation Rec.
514 Germany
515 Germany
516 Germany
517 France