

# AUSTRIAN CONTRIBUTIONS TO UNESCO'S MAN AND THE BIOSPHERE PROGRAMME (MAB)

Summary Report for the Year 2015

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c/o Austrian Academy of Sciences  
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## **1. NATIONAL COMMITTEE ACTIVITIES AND FUNDING:**

In 2011 the Austrian Academy of Sciences has started the reorganization of its international research programmes. MAB is now part of the new research structure "Earth System Sciences (ESS)". ESS, an initiative of the Austrian Academy of Sciences (ÖAW), financed by the Federal Ministry of Science, Research and Economy (BWF), aims at studying the physical, chemical, hydrological, biological, social, technological and economic processes of the Earth System and their interaction. ESS is structured around the three research themes of Future Earth, a 10-year international research initiative that will develop the knowledge for responding effectively to the risks and opportunities of global environmental change and supporting transformation towards global sustainability in the coming decades. ESS is an interface between Austrian science and international research and is directly integrated in international research programmes and cooperation (e.g. UNESCO's MAB, IGCP and IHP programmes, IGBP, IHDP, WCRP, UNISDR, LTER, ISCAR, Future Earth) through its three National Committees (NC) *Global Change*, *Geo/Hydro-Sciences*, and *Man and the Biosphere (MAB)*. These NCs, made up of renowned scientists and representatives of several ministries and federal organizations, monitor the Austrian research scene, analyse its strengths and knowledge gaps and work out targeted new research foci.

### **Members of the Austrian MAB National Committee:**

#### *Chair:*

Assoc. Prof. Dipl.-Ing. Dr. Arne Arnberger, Institute of Landscape Development, Recreation and Conservation Planning, Department of Spatial-, Landscape-, and Infrastructure-Sciences; University of Natural Resources and Life Sciences Vienna. Peter-Jordan-Straße 65, 1180 Vienna Austria. Phone +43-1-47654-7205, Fax +43-1-47654-7209, [arne.arnberger@boku.ac.at](mailto:arne.arnberger@boku.ac.at);  
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#### *Vice Chair:*

Ao.Univ. Prof. Dipl.-Ing. Dr. Marianne Penker, Institute for Sustainable Economic Development, Department of Economics and Social Sciences, University of Natural Resources and Life Sciences Vienna, Feistmantelstraße 4, A-1180 Vienna, Austria. Phone: +43-1-47654-3580, Fax: +43-1-47654-4429; [marianne.penker@boku.ac.at](mailto:marianne.penker@boku.ac.at);  
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#### *Executive Secretary:*

Dr. Günter Köck, Austrian Academy of Sciences, International Research Programmes, Dr. Ignaz Seipel-Platz 2, A-1010 Vienna, Tel. ++43 1 51581-2771, Fax: ++43 1 51581-1275; [guenter.koeck@oeaw.ac.at](mailto:guenter.koeck@oeaw.ac.at);  
<http://www.oeaw.ac.at>

#### *Other Members:*

Univ. Prof. Dr. Georg Grabherr (University of Vienna)  
Univ. Prof. Dr. Axel Borsdorf (Austrian Academy of Sciences and University of Innsbruck)  
Univ. Prof. Dr. Friedrich Ehrendorfer (University of Vienna)  
Univ. Prof. Dr. Marianne Popp (University of Vienna)  
Univ. Prof. Dr. Marina Fischer-Kowalski (Alpen-Adria University Klagenfurt Vienna Graz)  
Univ. Prof. Dr. Norbert Weixlbaumer (University of Vienna)  
Dr. Karolina Begusch-Pfefferkorn (Ministry of Science, Research and Economy)  
Mag. Stephan Vavrik (Ministry of Europe, Integration and International Affairs)  
Dr. Elfriede Fuhrmann (Ministry of Agriculture, Forestry, Environment and Water Management)  
Mag. Gabriele Eschig (Austrian Commission for UNESCO)  
Mag. Wolfgang Mattes (Environmental Agency Austria)  
DI Maximilian Albrecht (Austrian Federal Provinces)  
DI Arno Mohl (World Wildlife Fund for Nature)

In the year 2015 two meetings of the Austrian National Committee for MAB took place. The managers of the Austrian biosphere reserves (BRs) joined the meetings and reported about activities in their area and discussed future research strategies with the committee members. One of the meetings was held in the BR “Wienerwald” including consultations with stakeholders and the visit of a Green Care project.

For the year 2015 the total funding for MAB, provided by the Austrian Ministry for Science, Research and Economy, was

**EURO 150.000,- = US\$ 162.426,-<sup>1</sup>**

<sup>1</sup> Exchange rate per 01/02/2016

This funding was entirely used for research projects.

## **2. FUNDING CONTRIBUTION TO UNESCO**

MAB Biannual Activity Report 2012 - 2013: The Austrian MAB National Committee has supported the publication of the “MAB Biannual Activity Report 2012 – 2013” with an amount of approx. US\$ 13,650. The publication, coordinated by Maria Cardenas Rosa, Miguel Clusener-Godt and Günter Köck, summarizes the activities undertaken by the MAB Programme and its World network of Biosphere Reserves in 2012 and 2013. The production of the report, also supported by the Austrian Ministry of Europe, Integration and International Affairs, was carried out by the Austrian publisher EDITION LAMMERHUBER, worldwide recognized for his photography books. The Book (ISBN 978-3-901753-93-0) is available in English, French and Spanish languages.



## **3. CURRENT RESEARCH PROJECTS WITHIN THE FRAMEWORK OF MAB:**

According to the research agenda for the Austrian MAB Programme, and in response to the priorities set by the International MAB Council, the Austrian National MAB-Committee has focused its research activities predominantly on the needs of the biosphere reserves in Austria. However, to deepen the involvement of Austrian expertise in international MAB research, the MAB national committee has started funding international research cooperations with BRs and BR projects in foreign countries.

Currently six projects are funded by the Austrian MAB Programme.

<b>Project Title</b>	<b>Coordinator</b>
Biosphere reserve landscapes and human health benefits: Analysing the potential of the Biosphere reserve Wienerwald on life quality and psychological well-being (HealthSpaces)	B. Alex
Regional economic and perceptual analysis in an UNESCO biosphere reserve. Future strategies for regional development in the BR Großes Walsertal against the background of demographic changes: What comes next? (REPA-next)	M. Coy
Establishing a complete Biosphere Reserve Integrated Monitoring scheme for the transboundary Biosphere Reserve Salzburger Lungau & Kärntner Nockberge (BRIM_Lungau&Nockberge)	M. Jungmeier
Biosphere reserves - Prospects of innovations or Constraints. Perceptions of farmers in the Biosphere reserves Salzburger Lungau Kärntner Nockberge (A), Entlebuch (CH) and Berchtesgadener Land (D) (AgriBioRes - Agriculture in biosphere reserves)	H. Humer-Gruber
40 Years MAB Program – Man and the Biosphere School Twinning	C. Diry
Outlining a sustainable future for the island of Samothraki (Greece) as a MAB reserve, and creating a regional showcase – Phase 3	S. Singh

An additional MAB research project (T. Frank: Alpine landscapes under global change: Impacts of land-use change on ecosystem services and human health and well-being) is funded through the ESS research initiative.

#### 4. CURRENT STATUS OF BIOSPHERE RESERVES IN AUSTRIA:

Until 2014 Austria had a total number of seven biosphere (including four pre-Seville sites). In its “National Criteria for Biosphere Reserves in Austria” published in 2006, the Austrian MAB National Committee has allowed a five-year transition period for the “first generation” sites to be transformed into modern Seville-style biosphere reserves. At the same time, the National Committee started “re-design” initiatives (e.g. in the BR “Neusiedler See”) to transform this “first-generation” sites into modern Seville-style biosphere reserves. At the 26<sup>th</sup> Session of the MAB-ICC Austria informed the participants that the “Gurgler Kamm” and “Gossenköllesee” Biosphere Reserves (both approved 1977) are withdrawn from the World Network of Biosphere Reserves (WNBR) due to their non-conformity to the Statutory Framework of the WNBR.

In 2012, the National Committee started to discuss re-zonation strategies for the “Untere Lobau” Biosphere Reserve with the Authorities of the City of Vienna. However, after comprehensive discussions of all aspects and obstacles it turned out that the stakeholders clearly prioritize the nature protection status provided through the existing IUCN Category II National park. Following these reviews and the consultation with stakeholders and local authorities, it became clear that this BR does not meet the criteria for BR accreditation. In consequence, the Austrian MAB Committee has decided in Dezember 2015 to withdraw the biosphere reserve “Lobau” (approved 1977) from the World Network of Biosphere Reserves (WNBR). The MAB Secretariat and the MAB-ICC are and will be informed by official letters and oral statements in the plenary session, respectively.

<b>Approved: 3 areas</b>	
<b>In accordance with Seville Strategy: 3 sites</b>	
<i>Großes Walsertal</i> (approved 2000)	In Western Austria, reaching from mountain river alluvia, mountain farmlands to high alpine peaks; this parks is designed and implemented according to the Seville Strategy. The periodic review report has recently been accepted by the Advisory Committee. The Advisory Committee recommended that the site is considered as a model site which practices should be shared within the World Network of Biosphere Reserves.
<i>Wienerwald</i> (approved 2005)	The Vienna Woods are the largest contiguous area of deciduous woodland in Central Europe. The area is situated in close vicinity to the city of Vienna. The location of such a large area of woodland on the outskirts of a major city is unique.
<i>Salzburger Lungau und Kärntner Nockberge</i> (approved 2012)	The area consists of a representative example of inner-alpine landscapes with high mountains and deep valleys. The region is a cultural landscape far removed from large conurbations and major traffic routes. A large part of the agricultural land consists of alpine meadows and pastures, and the specialties of the region – most of them organic – are of a high quality.
<b>First generation biosphere reserves: 1 site</b>	
<i>Neusiedlersee</i> (approved 1977)	An extensive cross-border lake shared by Austria and Hungary. Three research projects dedicated to the re-design of this “first generation” BR were undertaken in the past years.
<b>In planning stage: one area</b>	
<i>Danube/Drava/Mura</i>	Drava alluvia; trans-boundary biosphere reserve (Austria, Slovenia, Croatia, Hungary, Serbia). The Austrian MAB Committee is actively involved in the international Coordination Board.
<b>At present, a total number of seven Austrian regions are discussing chances and options of the biosphere reserve statur for their communities.</b>	

At present, the “Neusiedlersee” Biosphere Reserve is the only Austrian pre-Seville site where UNESCO’s international guidelines (Seville Strategy, Madrid Action Plan) are still not implemented. According to MAB’s “Exit Strategy” the MAB Committee has sent letters to the Government of the Federal Province Burgenland to inform them officially about the current status of the modernization progress of the WNBR. The Committee has set a deadline until November 2015 to receive detailed information about intentions, chances and timelines to upgrade the respective “first generation” biosphere reserves from the relevant provincial governments. However, no reply has received yet. The NC also informed the Hungarian representatives of the “Lake Fertö Biosphere Reserve” about the current status of the Austrian side.

##### **5. OTHER ACTIVITIES, AWARDS:**

May 2014: The MAB Committee organized a concept workshop at the EuroMAB Conference 2015 “Biosphere Reserves: from heritage to sustainable innovation”, 19-23 May 2015, Haapsalu (Estonia). The successful workshop “Biosphere reserve landscapes as resources for human health and well-being”, coordinated by Arne Arnberger, Günter Köck and Christian Diry, was aimed at exploring the potential for biosphere reserve landscapes to play a greater role in human health and well-being.

June 2015: Austria is one of the first nations to get involved in the MAB programme. Established in 1973, just two years after the start of the MAB programme, has now celebrated its 100<sup>th</sup> meeting of the NC.

The Austrian MAB Committee faced a change of vice-chairmanship. Committee member Axel Borsdorf handed over the chairmanship to his designated successor Mrs. Marianne Penker. Her research interests focus on collective management and use of rural resources (landscapes, local food products, energy, biodiversity, traditional knowledge and skills), formal and informal rules governing regional socio-ecological systems (e.g., geographical indications, protected areas, regional agri-environmental schemes), and co-learning in regional development and methods for transdisciplinary knowledge production across disciplines and between science and society (transdisciplinary scenario processes and regional vulnerability assessments).

Oktober and December 2015: Two members of the Austrian MAB Committee, Marina Fischer-Kowalski (Institute of Social Ecology, Alpen-Adria University Klagenfurt Vienna Graz) and Friedrich Ehrendorfer (Department of Botany and Biodiversity Research, University of Vienna), were awarded in recognition for their exceptional research the Austrian Cross of Honour for Science and Art, First Class, the highest possible decoration permitted for a scientist in Austria.

November 2015: During the 38<sup>th</sup> UNESCO General Conference Austria (represented by Günter Köck) was re-elected for a another four-year term in the MAB International Coordinating Council (MAB-ICC).



Marina Fischer-Kowalski and Heinz Fischer  
(President of Austria)

December 2015: The evolution of the MAB Programme made a revision of the “National Criteria for BRs in Austria” necessary. Ten years after the launch of the criteria catalogue in 2006 the Austrian MAB Committee has now updated the catalogue in line with the new MAB Strategy 2015-2025. In its 101<sup>st</sup> meeting the updated version of the National Criteria were adopted by the members of MAB Committee.

In 2015, “Großes Walsertal” BR celebrated its 15<sup>th</sup> anniversary and Wienerwald BR its 10<sup>th</sup>, with numerous public events.

In December 2015, the new visitor center of the BR “Walsertal” (see picture) including a BR exhibition, a show dairy, a small restaurant and a shop for local products has been opened.



## 6. PUBLICATIONS:

### Project reports:

Based on a successful cooperation with the Austrian Academy of Sciences Press (AASP) all Austrian MAB project reports are now published online at the AASP homepage. At present 25 documents can be downloaded from <http://epub.oeaw.ac.at/Projektberichte>.

*Erhalt der biologischen und kulturellen Vielfalt. Modelle für nachhaltige Entwicklungsstrategien im 21. Jahrhundert. Orte der Forschung, Bildung und Umweltbeobachtung* (doi: 10.1553/ibk; ISBN-13: 978-3-7001-3742-9)

*Biosphere Reserves in Austria - Grundlagenerhebung und Stand der Forschung* (ISBN-13 Online: 978-3-7001-3599-9)

*Nachhaltiges Waldbiomassenmanagement im Biosphärenpark Wienerwald* (doi: 10.1553/wald, ISBN-13: 978-3-7001-3839-6, ISBN-13 Online: 978-3-7001-3839-6)

*EUROMAB AUSTRIA 2005 Meeting of the Euromab Biosphere Reserve Coordinators and Managers* (doi: 10.1553/euromab\_austria2005, ISBN-13 Online: 978-3-7001-3715-3)

*Leben in Vielfalt* (doi: 10.1553/3-7001-3337-5; ISBN-13: 978-3-7001-3337-7 ISBN-13 Online: 978-3-7001-3374-2)

*Inspired by diversity* (ISBN-13: 978-3-7001-3596-8 ISBN-13 Online: 978-3-7001-3612-5)

*Leitfaden für Forschung und Monitoring im Biosphärenpark Wienerwald* (doi: 10.1553/lfbmw)

*Leitfaden für Forschung und Monitoring im Biosphärenpark Großes Walsertal* (doi: 10.1553/lfbmgw, ISBN-13: 978-3-7001-3717-7)

*Re-designing the Research Agenda of MAB-Austria, in special consideration of BRIM: A Feasibility Study Final Report* (doi: 10.1553/rra\_mab)

*Monitoring von Luftschadstoffen (NO<sub>x</sub> und SO<sub>2</sub>, Schwermetall-, Stickstoff-, Schwefel- und PAH-Depositionen) mittels Moosen im "Biosphärenpark Wienerwald"* (doi: 10.1553/luft, ISBN-13: 978-3-7001-3852-5, ISBN-13 Online: 978-3-7001-3852-5)

*Biosphere Reserves in Austria – Grundlagenerhebung und Stand der Forschung* (ISBN-13 Online: 978-3-7001-3599-9)

*Integrated Sustainable Wildlife Management in the Biosphere Reserve Wienerwald* (doi: 10.1553/ISWIMAB, ISBN-13 Online: 978-3-7001-6626-9)

*Redesigning the Biosphere Reserve Neusiedler See* (doi: 10.1553/rbrns, ISBN-13: 978-3-7001-6692-4, ISBN-13 Online: 978-3-7001-6692-4)

*Ökologische und soziale Tragfähigkeiten als Managementherausforderungen für suburbane Biosphärenparke am Beispiel Untere Lobau* (doi: 10.1553/MAB-OEST, ISBN-13 Online: 978-3-7001-6781-5)

*Part\_b: Partizipationsprozesse in Biosphärenparks – Interventionstheorie, Strategie-analyse und Prozessethik am Beispiel vom Biosphärenpark Wienerwald, Großes Walsertal und Nationalpark Nockberge* (doi: 10.1553/mab-partB, ISBN-13 Online: 978-3-7001-6870-6)

*Transboundary Information Exchange for Revision and Functional Improvement of Zonation of the Lower Morava Biosphere Reserve (Czech Republic)* (doi: 10.1553/mab-tierafiz-lmbr-2010, ISBN-13: 978-3-7001-7025-9, ISBN-13 Online: 978-3-7001-7025-9)

*CheckKid - Kids entdecken die Kernzone* (doi: 10.1553/Checkid2010, ISBN-13 Online: 978-3-7001-7038-9)

*Geophysikalische Messungen in Tulum (Mexiko) - 2010* (doi: 10.1553/mab-geophys-tulum-2010, ISBN-13: 978-3-7001-6971-0 ISBN-13 Online: 978-3-7001-6971-0)

*Biokulturelle Vielfalt* (doi: 10.1553/MAB-MOBDIBRGW; ISBN-13 Online: 978-3-7001-7347-2)

*Exploring management options of a heavily used urban biosphere reserve confronted with new urban developments in its neighbourhood considering a restricted potential for ecosystem development* (doi: 10.1553/Lobau2020, ISBN-13 Online: 978-3-7001-7288-8)

*Biodiversity and Ecosystem Services as scientific foundation for the sustainable implementation of the Redesigned Biosphere Reserve "Neusiedler See"* (doi:10.1553/bioserv-neusiedler-see, ISBN-13 Online: 978-3-7001-7289-5)

*Integrative Sustainable Wildlife Management - Principles, Criteria and Indicators for Hunting, Forestry, Agriculture, Recreation* (doi: 10.1553/ISWIMAN, ISBN-13 Online: 978-3-7001-7216-1)

*IESP - Towards Integrated Ecological Spatial Planning for the Wienerwald Biosphere Reserve* (doi: 10.1553/IESP-Wienerwald, ISBN-13 Online: 978-3-7001-7292-5)

*Biosphärenpark School-Twinning* (doi: 10.1553/MAB-BST, ISBN-13 Online: 978-3-7001-7691-6)

*Reservas de la Biosfera de Chile Laboratorios para la Sustentabilidad* (doi: 10.1553/ReservasBiosferas1, ISBN-13 Online: 978-3-7001-7624-4)

*Biosphere Reserve Integrated Monitoring – Salzburger Lungau & Kärntner Nockberger* (doi: 10.1553/MAB-BRIM, ISBN-13 Online: 978-3-7001-7753-1)

#### Articles in scientific journals:

A number of projects and activities sponsored by the Austrian MAB Programme lead to the publication of articles in renowned peer-reviewed scientific journals.

#### *List of selected articles:*

Arnberger, A., Köck, G., Eder, R. (2015). Biosphere reserve landscapes as resources for human health and well-being. In: A. Giorgi, A. Borsdorf, G. Köck, T. Scheurer (eds). Proceedings of the ForumAlpinum 2014 "Alpine Resources – Use valorization and management from local to macro-regional scale", 19-21 September 2014, Darfo Boario Terme (Italy). ISBN online: 978-3-7001-7855-2; ISBN print: 978-88-98490-30-1; DOI: 10.1553/forumalpinum2014; 200 pp; p. 116-118.

Höglhammer, A., Muhar, A., Stokowski, P., Schauppenlehner, T., Yalcintepe, E., Renner, J. (2015). Accessibility of public recreation areas to immigrants as a democratic challenge. Defining Landscape Democracy, 3/6 June 2015, Oslo, Norway.

Höglhammer, A., Muhar, A., Schauppenlehner, T., (2015). Outdoor recreation of Turkish immigrants in the Wienerwald Biosphere Park, Austria: A stakeholder process to identify research questions. In: Bruns, D., Kühne, O., Schönwald, A., Theile, S. (Hrsg.): Landscape Culture - Culturing Landscapes:

The Differentiated Construction of Landscapes. S. 129-140; Springer VS, Wiesbaden; ISBN 978-3-658-04283-7.

Höglhammer, A., Stokowski, P., Muhar, A., Schauppenlehner, T., Yalcintepe, E., Renner, J. (2015): Experiences and Meanings of Leisure for Members of the Turkish and Chinese Communities in Vienna, Austria. *World Leisure Journal* 57 (3), 196-208.

Humer-Gruber, H. (2015). Perceptions of Biosphere Reserves - Prospects of Innovation or Constraints for Farmers. Agricultural perceptions of farmers in biosphere reserves in Austria and Switzerland“. International Conference “Perth III: Mountains of our Future Earth”, 4-8 October, 2015, Perth (Scotland).

Köck, G., Brenner, H. (2015). Appropriate behaviour in foreste of the Wienerwald Biosphere Reserves. *eco.mont - Journal on Protected Mountain Areas Research* 7(2), 78-82.

Muhar, A., Höglhammer, A., Schauppenlehner, T. (2015). Recreation Demands in a Segmented Society as Planning Challenges. 9 Apr. 2015 Department of Tourism Studies Seminar, Holar University College, Island.

Salazar, A., Moreira-Muñoz, A., del Río, C. (2015). La Campana-Peñuelas Biosphere Reserve in Central Chile: threats and challenges in a peri-urban transition zone. *eco.mont - Journal on Protected Mountain Areas Research* 7(1), 66-71.

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