

The Man and the Biosphere Programme (MAB) And its World Network of Biosphere Reserves (WNBR) over the last 50 years (1971-2021) Past, Present and Future



United Nations
Educational, Scientific and
Cultural Organization



Man and
the Biosphere
Programme

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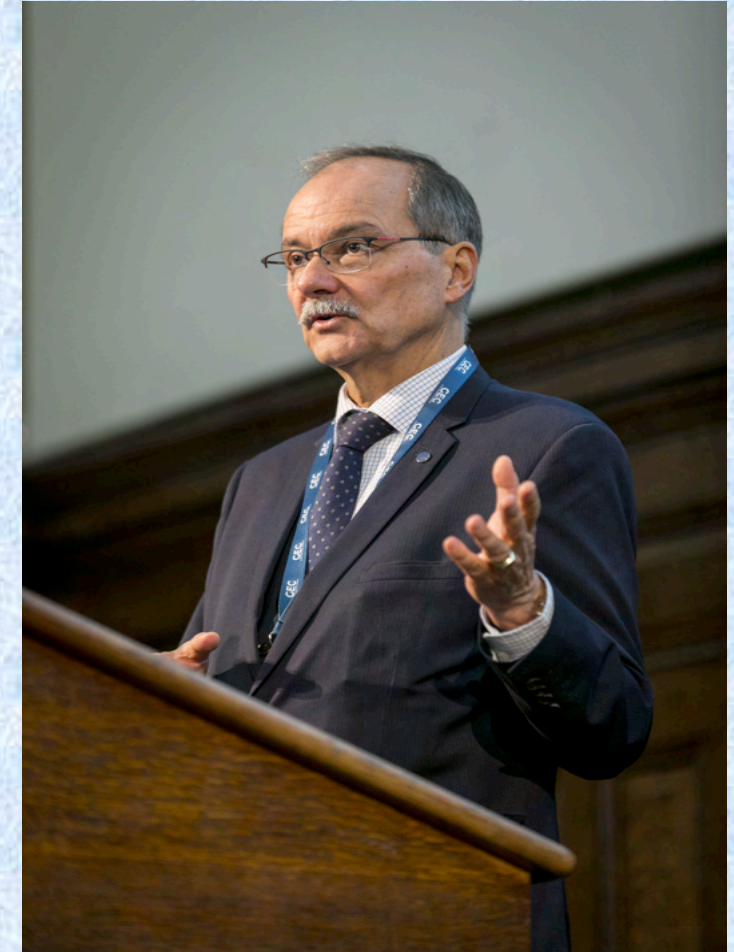
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UNESCO's Efforts for Conservation and Sustainable Development in the past 50 Years



World Heritage Convention, created in 1972



Man and the Biosphere Programme, created in 1971



UNESCO
Global
Geoparks

**UNESCO Global Geoparks Programme,
created in 2015**



United Nations
Educational, Scientific and
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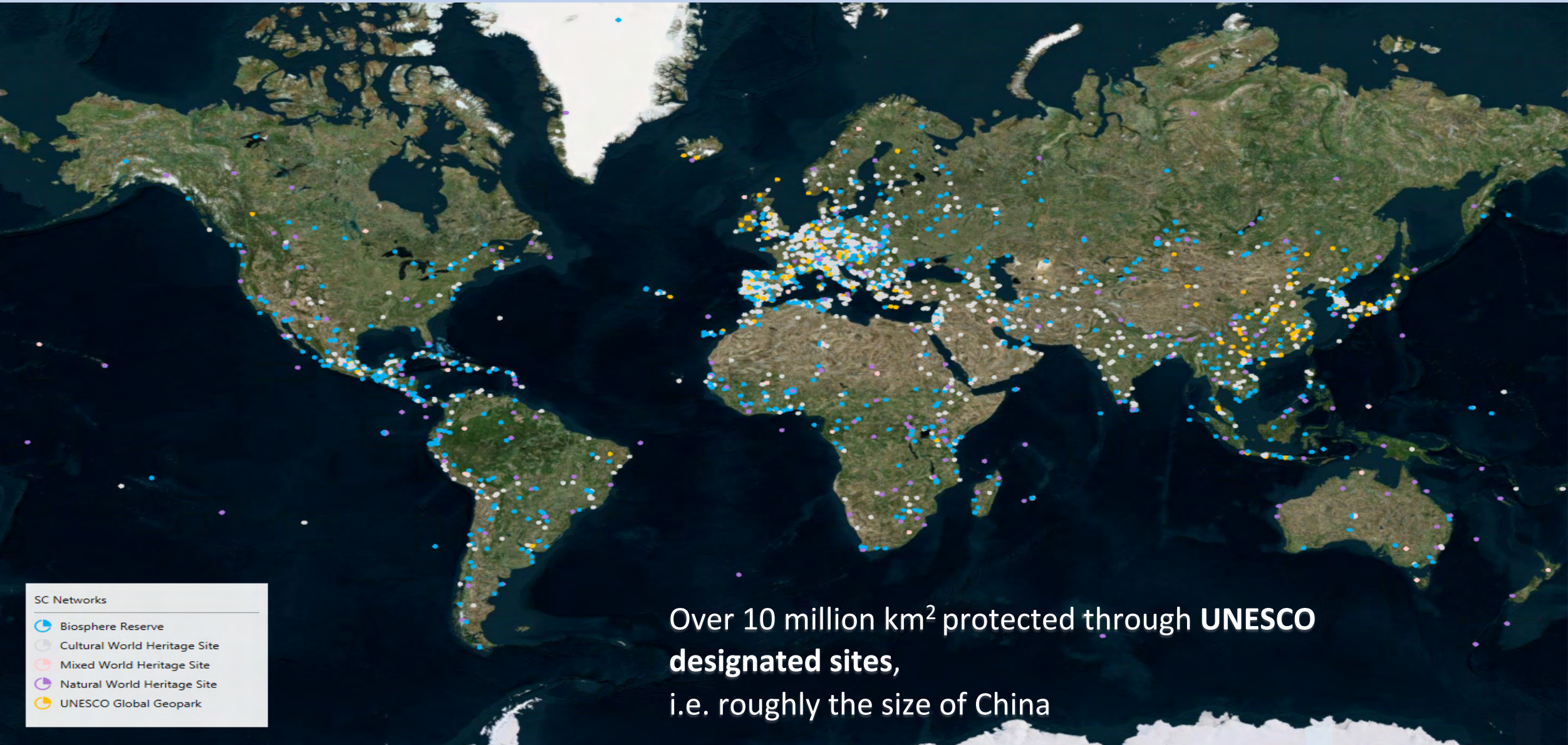


Sustainable
Development
Goals

UNESCO for Conservation and Sustainable Development



NATURAL SCIENCES

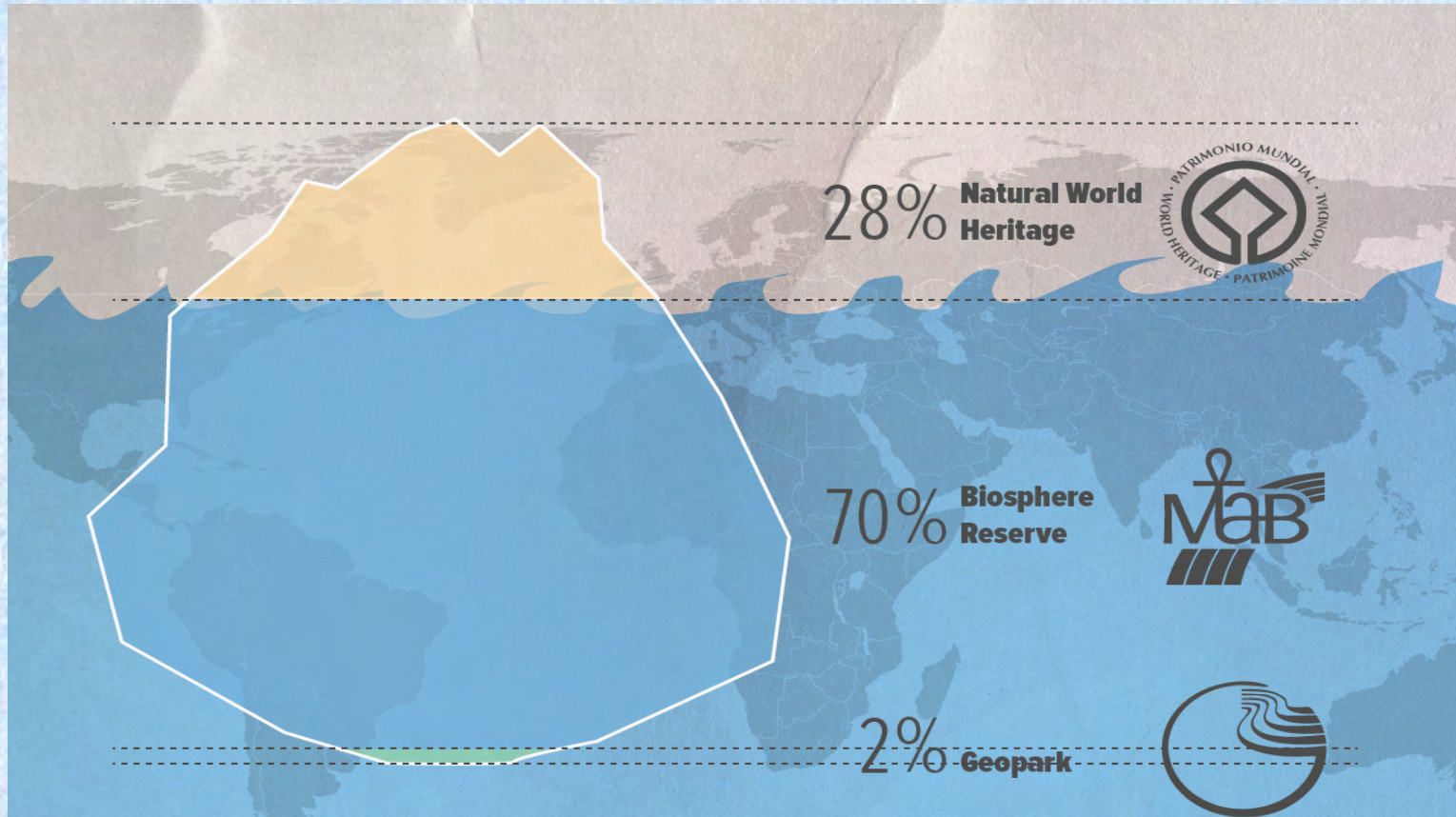


SC Networks

- Biosphere Reserve
- Cultural World Heritage Site
- Mixed World Heritage Site
- Natural World Heritage Site
- UNESCO Global Geopark

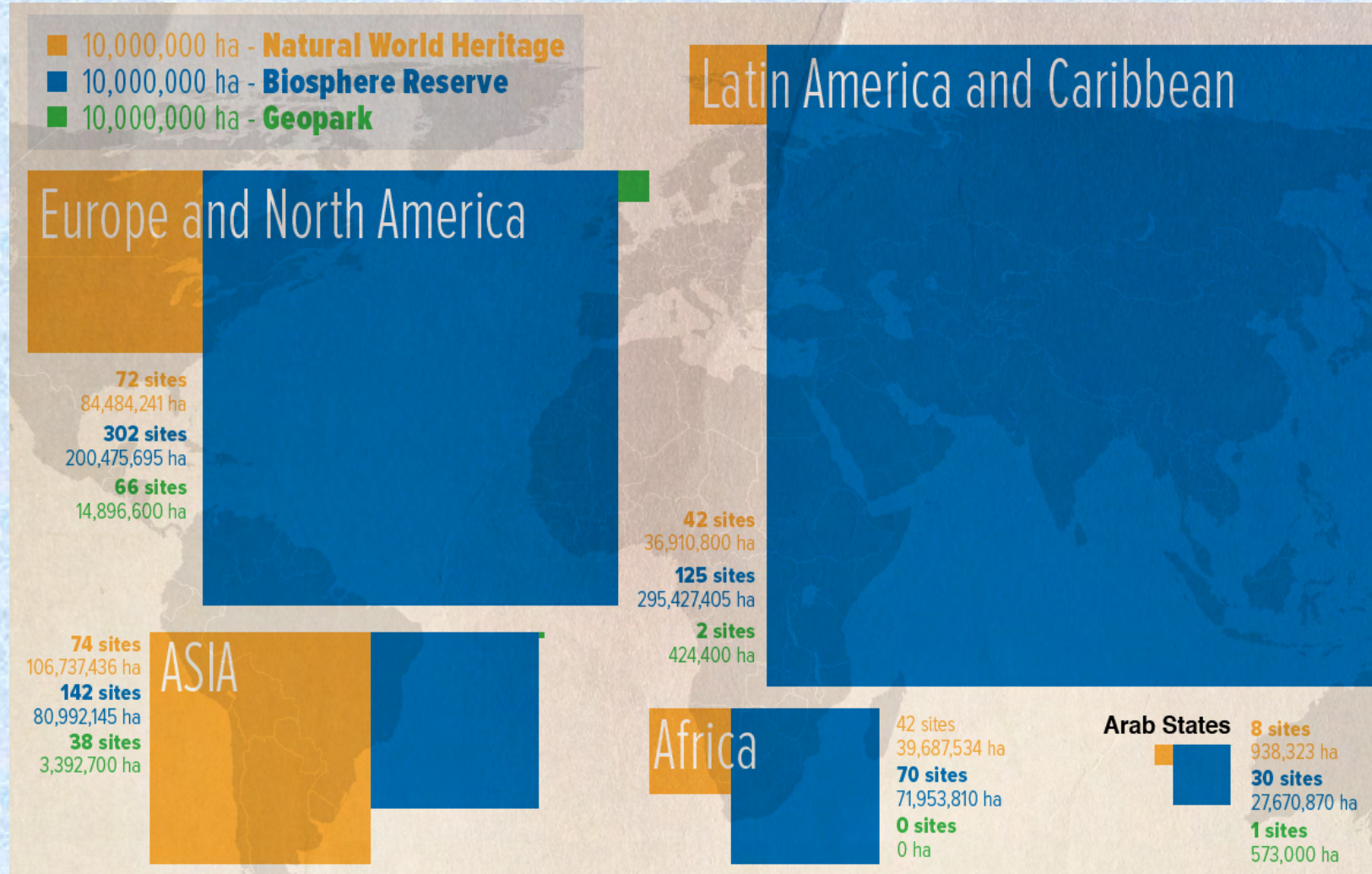
Over 10 million km² protected through UNESCO designated sites, i.e. roughly the size of China

UNESCO designated sites



UNESCO designates sites to encourage national governments and local communities to identify special sites and work together to ensure their conservation and sustainable use for current and future generations.

Area (ha) protected by UNESCO sites at the global level



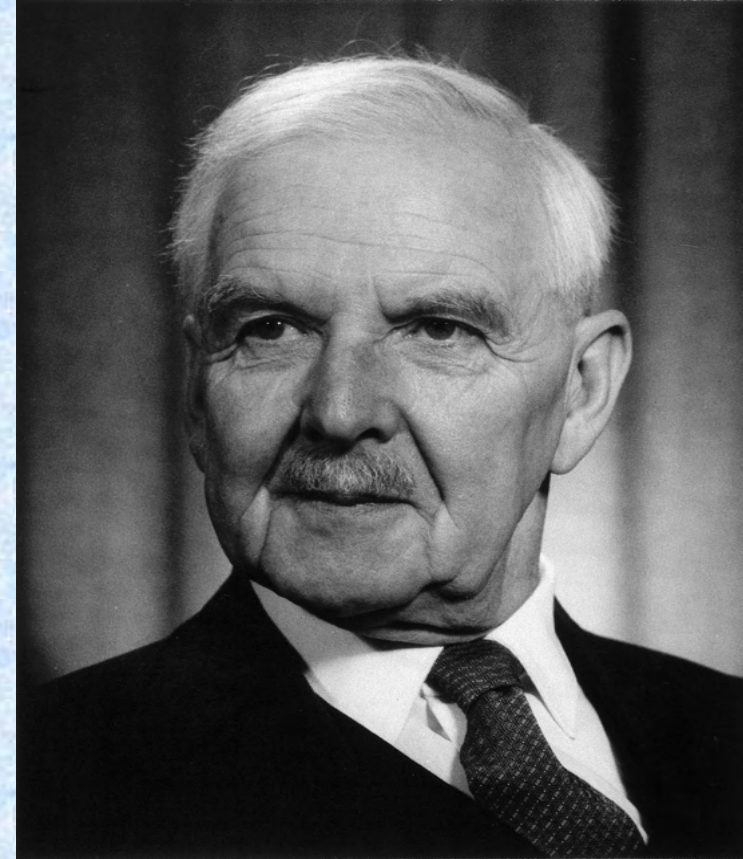
The History of UNESCO's, Man and the Biosphere Programme (MAB)

- 1946 Establishment of UNESCO
- In the aftermath of World War II and in the framework of the creation of the United Nations, UNESCO is established with the goal at promoting Peace through Education, Science and Culture.



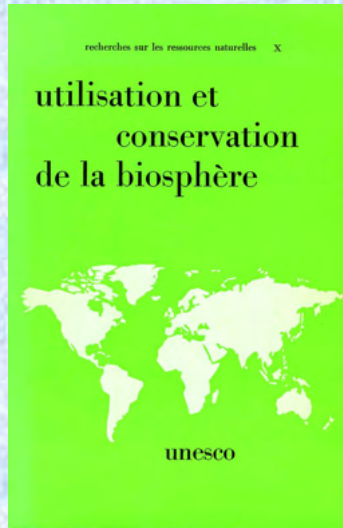
The History of UNESCO's, Man and the Biosphere Programme (MAB)

- 1964 Creation of the International Biological Programme
- Under the leadership of Giuseppe Montalenti, Rudolf Peters and C. H. Waddington, the 5-year research programme focused on the "biological basis of productivity and human welfare". The programme was dedicated to the study of ecosystem dynamics in the world's major biomes and the implication for humans.



A. C. Barrington Brown
CAMBRIDGE

The History of UNESCO's, Man and the Biosphere Programme (MAB)



- 1968 September 4 – 13 The Biosphere Conference
- Jointly organized by UNESCO, the UN, FAO, IBO and IUCN, the theme of the Conference was the scientific basis for the rational use and conservation of the resource of the biosphere.
- Representatives from more than 60 countries discussed the preservation of the basis of our livelihood.
- Michel Batisse was the Secretary General of the Conference, where the term 'biosphere' was proposed for the first time on the international stage.

The History of UNESCO's, Man and the Biosphere Programme (MAB)



- 1971 November 9 - 19 First Meeting of the MAB International Co-ordinating Council (ICC)
- The main of UNESCO's main governing body marks the beginning of the Programme.
- In his opening speech, the UNESCO Director-General René Maheu (France) welcomes the meeting's goal to define the scope and missions envisioned for the MAB Programme

The History of UNESCO's, Man and the Biosphere Programme (MAB)



- 1971 November 10 – 1982 November 10
- First Secretary of the MAB Programme: Francesco di Castri (Italy)
- University professor and author of numerous books on ecology, member of the Italian Academy of Sciences and the International Academy for the Environment, he was Professor of ecology at the Universities of Santiago de Chile and Valdivia and executive vice-rector of the Valdivia University.

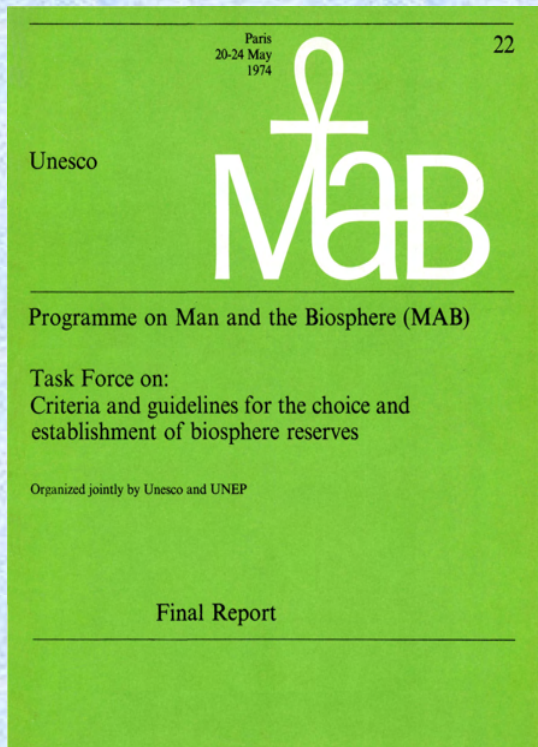
The History of UNESCO's, Man and the Biosphere Programme (MAB)



© UN Photo/Yukata Nagata

- 1972 June 5 – 16 United Nations Conference on the Human Environment
- Held in Stockholm, Sweden, it was the first global summit focusing on human interactions with the environment. The UNESCO Director-General René Maheu spoke of the MAB Programme's goal “to develop the basis within the natural and social sciences for the rational use and conservation of the resources of the biosphere and for the improvement of the global relationship between man and the environment”.

The History of UNESCO's, Man and the Biosphere Programme (MAB)



- 1974 May 20 – 24 Special UNESCO-UNEP Taskforce
- This taskforce laid out the objectives and functions of biosphere reserves. For the first time, they were formally described under the three criteria: protective function, development function, and logistical support.
- The idea of 3-level zoning was also introduced and continue to evolve over time. However, the conservation function prevailed as the most important in the Programme's beginning.



Le programme **MAB**
Vivre dans la biosphère et la protéger



BIODIVERSITÉ

CONSERVATION

RECHERCHE

SURVEILLANCE
CONTINUE

ÉDUCATION

FORMATION

DÉVELOPPEMENT
DURABLE



The classical zonation of a Biosphere Reserve (UNESCO 2020)



- Core Areas are legally strictly protected zones that are designed to ensure the conservation of landscapes, ecosystems, species and genetic variation.
- Buffer Zones should surround all Core Areas to buffer and reduce impacts. They also can serve conservation purposes, in particular if their valuable ecosystems depend on specific human intervention such as traditional farming or herding, landscape management etc. More generally, they are used for activities compatible with sound ecological practices that mutually reinforce with scientific research, monitoring, training and education.
- Transition Areas are those parts of a Biosphere Reserve, which should not be governed by additional regulation but through incentives and innovation, such that communities are empowered to conduct socio-culturally and ecologically sustainable activities, in particular truly Green Economies. Biosphere Reserves provide a lot of examples for 'Best Practices' and inspire all territories beyond their borders.

The History of UNESCO's, Man and the Biosphere Programme (MAB)



© UNESCO/Wester Ross Biosphere Reserve
(UK) This BR was one of the first created in 1976

- 1976 The MAB Bureau designated Biosphere Reserves for the first time. In the early years of the programme, most nominations concerned pre-existing protected areas, such as national parks, where most of the research was academic-based. Therefore, the designation had few impact on the site's management, unlike today.
- The 57 biosphere reserves designated in 1976 were located in former Zaire, Iran, Norway, Poland, Thailand, the United Kingdom, the United States of America, Uruguay and former Yugoslavia. By 1980, their number has increased to 156.

The History of UNESCO's, Man and the Biosphere Programme (MAB)



- 1983 October 2 – November 9 First International Congress of Biosphere Reserves, Minsk, Belarus, former USSR.
- More than 250 scientists from around the world. The Congress aimed to review the experience of the past 10 years and establish a framework for the future development of the World Network of Biosphere Reserves.
- The first 'Action Plan for Biosphere Reserves' was created and endorsed in the following year by UNESCO's General Conference and UNEP's Governing Council.

The History of UNESCO's, Man and the Biosphere Programme (MAB)

- 1983 – 1991 Second Secretary of the Programme: Bernd von Droste zu Hülshoff (Germany)
- He studied forestry in Göttingen (Germany), where he completed his PhD in Forest Ecology in 1969.
- In 1992, he created the World Heritage Center (WHC), uniting thus the natural and cultural parts of the World Heritage Programme of UNESCO. He became the first Director of the WHC.



The History of UNESCO's, Man and the Biosphere Programme (MAB): Creation of the Networks

- The first meeting of the EuroMAB Network took place in 1986 České Budějovice, in former Czechoslovakia.
- EuroMAB comprises all the biosphere reserves in Europe and North America. It is currently the largest MAB regional network which includes 53 countries.



The History of UNESCO's, Man and the Biosphere Programme (MAB)

- 1987 Brundlandt Commission formally defines “Sustainable Development”.
- The World Commission on Environment and Development (WCED), known after his Chair Gro Harlem Brundlandt, defined the term “Sustainable Development” for the first time in the ‘Our Common Future’ report, as a *“kind of development that meets the needs of the present without compromising the ability of future generations to meet their own needs”*.
- The concept crowns the pioneering approach of UNESCO's MAB Programme and its World Network of Biosphere Reserves.



The History of UNESCO's, Man and the Biosphere Programme (MAB)



- 1992 First Transboundary Biosphere Reserve.
- For the first time, two transboundary biosphere reserves were nominated: Krkonoše / Karkonosze between Czech Republic and Poland; and Tatra between Poland and Slovakia.
- Today, there 22 transboundary biosphere reserves and many initiatives are taking place.
- Some of these are located in areas where a military conflict has taken place in the past.

The History of UNESCO's, Man and the Biosphere Programme (MAB): Creation of the Networks

- 1992 Creation of the IberoMAB Network
- The IberoAmerican Network (IberoMAB) comprises 24 countries from Latin America and the Caribbean, Portugal and Spain.



The History of UNESCO's, Man and the Biosphere Programme (MAB)



UN Photo / Michos Tzovaras

- 1992 June 3 – 14 Rio Summit
- UN Member States formally adopted the concept of ‘Sustainable Development’ during the **United National Conference on Environment and Development**, also known as the Rio Summit, a major United Nations Conference held in Brazil in 1992.
- This meeting establish the link between nature conservation and sustainable development.
- The first meeting of the International Advisory Committee for Biosphere Reserves was convened in Paris the same year.

The History of UNESCO's, Man and the Biosphere Programme (MAB)



- 1993 – 1999 Third Secretary of the MAB Programme: Pierre Lasserre (France)
- A marine biologist, oceanographer with proven knowledge and field experience of coastal seas, coastal lagoons and estuaries, wetlands, and small islands, he held a PhD from the University of Bordeaux.

The History of UNESCO's, Man and the Biosphere Programme (MAB): Creation of the Networks

- 1994 Creation of the EABR Network
- The East Asian Biosphere Reserve Network was launched in 1994.
- Today, it consists of the People's Republic of China, the Democratic People's Republic of Korea, Japan, Kazakhstan, Mongolia, the Republic of Korea and the Russian Federation.



The History of UNESCO's, Man and the Biosphere Programme (MAB)

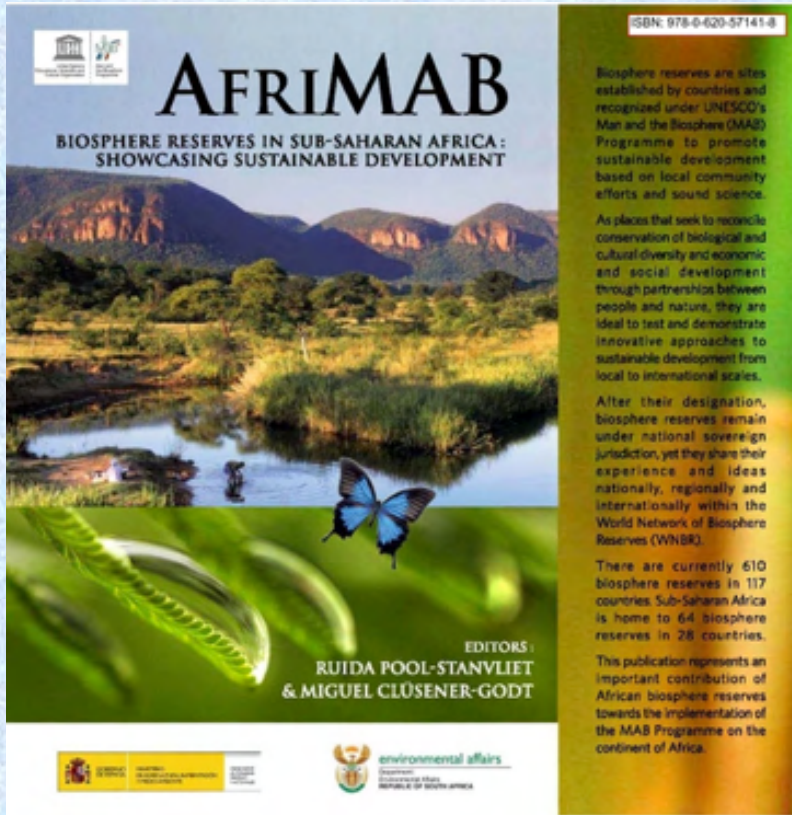


- 1995 Second International Congress on Biosphere Reserves
- About 400 experts from 102 countries participated in the Congress, held in Seville, Spain, as well as representatives of 15 international and regional organizations.
- The relevant outcome was the realization that biodiversity protection could no longer be considered independently from human needs. In order to pursue biodiversity protection, humanity should be involved as an integral element. To do this, it was recognized that biosphere reserves should include human settlements that are economically active in ways that can be sustained in the long term.
- In this context, the Seville Strategy and the Statutory Framework for Biosphere Reserves were approved. ->

The History of UNESCO's, Man and the Biosphere Programme (MAB)

- 1995 Second International Congress on Biosphere Reserves (continued)
- The criteria for biosphere reserves were reformed to include the social, cultural, spiritual and economic needs of society alongside scientific research. According to the Seville Strategy, which aimed to prepare the network for the challenges of the 21st century, biosphere reserves should carry out the three functions:
 - Conservation of genetic resources, species, ecosystems and landscapes,
 - Development fostering sustainable economic and human progress,
 - Logistic support to research and monitoring to demonstration projects and to environmental education and training.

The History of UNESCO's, Man and the Biosphere Programme (MAB): Creation of the Networks



- 1996 Creation of the AfriMAB network
- AfriMAB comprises all African countries of Sub-Saharan Africa and was created in 1996 in Dakar, Senegal, during the Regional Conference for the Establishment of Cooperation on African Biosphere Reserves for biodiversity Conservation and Sustainable Development.

The History of UNESCO's, Man and the Biosphere Programme (MAB): Creation of the Networks



Wadi Allaqi BR in Egypt

- 1997 Creation of the ArabMAB Network
- The ArabMAB Network was officially launched in Amman Jordan in 1997.
- The Network encompasses 33 biosphere reserves in 12 countries.
- It embraces a diverse arena of habitats, conserving natural, semi-natural and man-made ecosystems including forests, savannah, desert, oasis, wetlands, rivers and agricultural terraces. Each of the UNESCO Biosphere Reserves in the Network is a small world per se where people live in harmony with the natural world and their neighbourhood.

The History of UNESCO's, Man and the Biosphere Programme (MAB): Creation of the Networks

- 1998 Creation of the SEABRNET
- The South-East Asian Biosphere Reserve Network (SeaBRnet) was created in 1998.
- Today, it includes Cambodia, China, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Thailand, Timor-Leste and Viet Nam.



10th SeaBRnet Network Meeting 2017 in Jakarta, Indonesia

The History of UNESCO's, Man and the Biosphere Programme (MAB)

- 1999 – 2003 Fourth Secretary of the Programme: Peter Bridgewater (Australia)
- Holding a PhD from Durham University, he was chief scientist of the UK Nature Conservancy Council 1989 – 1990 and chief executive of the Australian Nature Conservation Agency and director of the National Parks and Wildlife Service (1990 – 1997).
- After his time as Secretary of the MAB Programme, he served as the Executive Director of the RAMSAR Conventions and consequently as visiting professor at the United Nations University in Tokyo, Japan.



The History of UNESCO's, Man and the Biosphere Programme (MAB)

- 2000 Seville + 5 Meeting
- An international expert meeting was organized to review the first five years of the implementation of the Seville Strategy (1995 – 2000). This 'Seville + 5' meeting was held in Pamplona, Spain in November 2000, and was based on the three levels of implementation of the Seville Strategy (international level, national level, and site level). The recommendations of the Seville + 5 meeting took up an array of the main challenges and the perceived difficulties in implementing the Seville Strategy and were addressed to several different groups. Recommendations for establishing transboundary BRs (TBRs) were made during the meeting.
- Prior to this meeting, all existing TBRs were established as separate biosphere reserves in individual countries before being designated as TBRs. From that moment on, interested countries were given the possibility to jointly establish a TBR in one step.



The History of UNESCO's, Man and the Biosphere Programme (MAB): Creation of the Networks

- 2002 Creation of the South and Central Asia MAB Network (SACAM)
- The South and Central Asia MAB Network (SACAM) was created in 2002 and comprises Afghanistan, Bangladesh, Bhutan, India, Islamic Republic of Iran, Kazakhstan, Kyrgyzstan, Maldives, Nepal, Pakistan, Tajikistan, Sri Lanka and Uzbekistan.



2nd Meeting of SACAM in Zibakenar, I. R. Iran, 2004

The History of UNESCO's, Man and the Biosphere Programme (MAB)



- 2003 2012 Fifth Secretary of the MAB Programme: Natarajan Ishwaran (Sri Lanka)
- He studied animal ecology and zoology at the University of Peradeniya in Sri Lanka before obtaining a PhD in Science and Wildlife Management from Michigan State University in the United States of America.
- He worked on the implementation of the natural component of the World Heritage and other environmental initiatives such as the MAB Programme.
- He encouraged the use of UNESCO recognized sites, such as World Heritage properties, biosphere reserves and geoparks, to implement sustainable development practices around the world.

The History of UNESCO's, Man and the Biosphere Programme (MAB): Creation of the Networks

- 2006 Creation of the Pacific Man and the Biosphere Network (PACMAB)
- PacMAB was created in 2006 and consists of the Federated States of Micronesia, Kiribati, Palau, Papua Mew Guinea, Samoa and Tonga.
- The UNESCO Apia Office for the Pacific States have launched during the 4th Meeting of the network, which took place in Nadi, Fiji, 23-25 April 2014, an initiative which allowed participants to acknowledge better each other needs, aspirations and expectations regarding the MAB Programme and the establishment of Biosphere Reserves as tool for sustainable development in the Pacific.



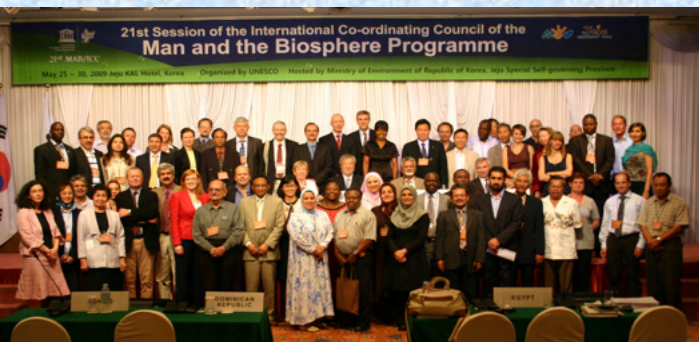
The History of UNESCO's, Man and the Biosphere Programme (MAB)



- 2008 April Third International Congress of Biosphere Reserves, Madrid, Spain
- The Madrid Action Plan (2008 – 2013), approved during this Congress, laid the guidelines to prepare the network for the 21st century by promoting research, training and capacity building.

The History of UNESCO's, Man and the Biosphere Programme (MAB)

- 2009 21st Session of the MAB – International Coordinating Council (ICC)
- For the first time, the MAB ICC met in a biosphere reserve: the Jeju Island Biosphere Reserve, Republic of Korea. Since then, the MAB-ICC sessions are regularly held outside of UNESCO Headquarters: Dresden/Radebeul (Germany) in 2011; Jönköping, East Vettern Landscape Biosphere Reserve (Sweden) in 2014; Lima (Peru) in 2016; Palembang (Indonesia) in 2018.
- During the 21st Session, the International Support Group (ISG) was set up. It is open to Member States with delegations at UNESCO Headquarters to advise the Secretariat on the implementation of the MAB action plans.



The History of UNESCO's, Man and the Biosphere Programme (MAB): Creation of the Networks



1st Meeting of the Network in Menorca, Spain, 2012

- 2012 Creation of the World Network of Island and Coastal Biosphere Reserves (WNICBR)
- This Network was established to foster sustainable development in islands and coastal areas and to promote adaptation and mitigation strategies on climate change.
- Two technical secretariats work together: the Island of Jeju (Republic of Korea), which focuses on climate change issues, and Menorca (Spain), dedicated to sustainable development.
- The Network has currently 36 member countries.

The History of UNESCO's, Man and the Biosphere Programme (MAB)

- 2013 – 2017 Han Qunli (China) Sixth Secretary of the Programme.
- He started in 1990 in UNESCO and worked in several duty stations, especially for the MAB Programme in Europe, Southeast and Central Asia and took management positions including the Director of Tehran Cluster Office (2007-2011) and Director of the Executive Office of the UNESCO Natural Science Sector (2011-2013).
- He graduated from the University of Science and Technology of China (CAS) in 1980, and he carried out several projects in Xinjiang and Loess Plateau under the Commission for Integrated Survey of Natural Resources (1981-1989) of CAS.



The History of UNESCO's, Man and the Biosphere Programme (MAB)

- 2013 Adoption of the Exit Strategy
- The International Coordinating Council of the MAB Programme adopted the Exit Strategy in 2013 in order to improve the credibility and quality of the World Network of Biosphere Reserves.
- Some 220 biosphere reserves in 47 countries were concerned by this Strategy.

The History of UNESCO's, Man and the Biosphere Programme (MAB)



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- 2016 Fourth World Congress on Biosphere Reserves, Lima, Peru, with more than 1100 participants from 104 countries.
- The Congress approved the Lima Action Plan and the new MAB Strategy (2015-2025).
- Both documents have been developed in a completely collaborative process, taking on lessons learned from the Madrid Action Plan.
- On this occasion, representatives passed a motion to promote a more active participation of youth constituencies in the MAB Programme.

The History of UNESCO's, Man and the Biosphere Programme (MAB): Creation of Networks



- 2017 First MAB Youth Forum was held in the Po Delta Biosphere Reserve in Italy.
- The creation of the MAB Youth Network was the main outcome Forum. It counts now with five regional networks.
- Several international, regional and national MAB Youth meetings have been organized since throughout the World Network of Biosphere Reserves.
- MAB Youth members work actively on a volunteer basis to promote youth activities and involvement in biosphere reserves, and the network is constantly expanding.

The History of UNESCO's, Man and the Biosphere Programme (MAB)



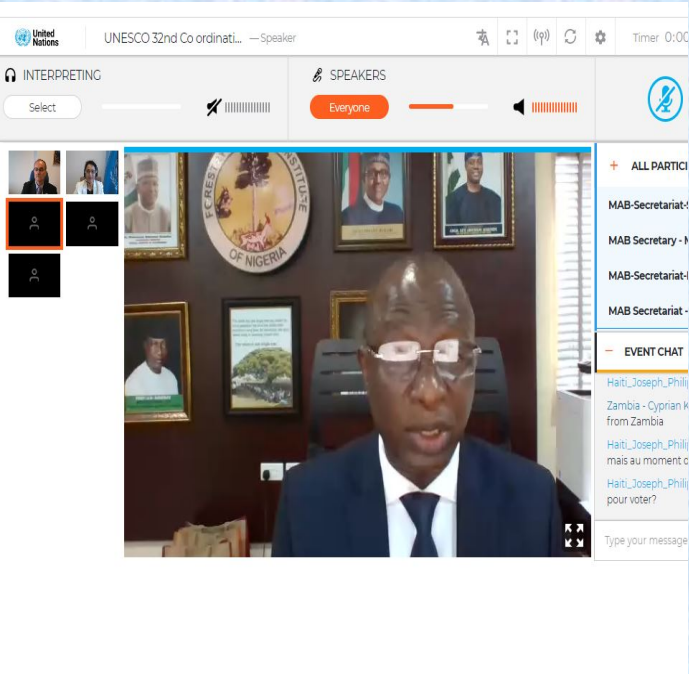
- 2017 – 2021 Miguel Clüsener-Godt (Germany) Seventh Secretary of the Programme.
- He holds a Masters in Biology/Ecology and a PhD in Systems Ecology from the University of Osnabrück, Germany.
- Working for more than 30 years within in UNESCO, he directed the Division of Ecological and Earth Sciences from 2017 to 2021. He was also temporarily the interim Secretary of the Geoparks Programme.
- He introduced the concept of “UNESCO Sites” as very different but complementary concepts for conservation and sustainable development.

The History of UNESCO's, Man and the Biosphere Programme (MAB)

- 2019 Second MAB Youth Forum
- The 2nd MAB Youth Forum took place in the Changbaishan Biosphere Reserve, China.
- Under the theme 'Committed to Biodiversity' the Forum mainly worked towards the 15th Conference of the Parties of the Convention on Biological Diversity (CBD COP 15) which was held in Kunming, China in 2021.



The History of UNESCO's, Man and the Biosphere Programme (MAB)



- 2020 First ICC virtual meeting
- Due to the COVID-19 health crisis, for the first time a session of the International Coordinating Council of the MAB Programme was held virtually.
- More than 270 participants joined the meeting, where the Technical Guidelines for Biosphere Reserves were adopted.
- Twenty-five new sites were nominated in 18 countries at this MAB-ICC session


The History of UNESCO's, Man and the Biosphere Programme (MAB)

The World Network of Biosphere Reserves

727 
Biosphere Reserves

Present in **131** countries 

22 Transboundary Biosphere Reserves

3 in Africa, 12 in Europe & North America, 3 in Latin America & the Caribbean 


2 Transcontinental Biosphere Reserves

Intercontinental del Mediterraneo (Europe/Arab States) and Great Altay (Europe/Asia & Pacific)


275 million people call Biosphere Reserves their home

 **5%**

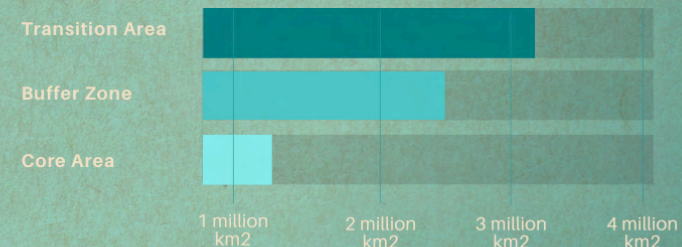
of the world's surface

Altogether, **7,040,031 km²**, approximately the size of Australia 



Strictly protected core areas, altogether, amount to **1,381,132 km²**, bigger than Peru

 **1%** of the entire world surface



The History of UNESCO's, Man and the Biosphere Programme (MAB)



UNESCO Biosphere Reserves: ideal sites to implement the SDG's



History of the MAB Programme: The Way ahead - The 30 by 30 Challenge

- The 30 by 30 challenge is a worldwide initiative for governments to designate 30% of Earth's land and ocean area as protected areas by 2030. The 30x30 target aims to halt the accelerating loss of species, and protect vital ecosystems that are the source of our economic security.
- UNESCO has a network of around 2000 sites covering almost 6% of terrestrial surface.
- It is important that all 195 countries adhere to the High Ambition Coalition by 2025, and that the 30 by 30 initiative be promoted at all major UN meetings. Countries can contribute to achieve 50% of the challenge by nominating additional sites to UNESCO.

THANK YOU!

MERCI ¡GRACIAS!

ありがとうございました

СПАСИБО!

شكرا
谢谢你!

