

ARGAN BIOSPHERE RESERVE: TOWARDS A PARADIGM SHIFT.

The first edition of the International Argan Congress, organised in 2011, focused on strengthening teamwork, investigating new research questions and promoting an active involvement of all stakeholders as well as knowledge sharing. Since then, a strong dynamic has been developed around the Argan sector. The 4th edition, which will take place in November 2017, will undoubtedly constitute another step to consolidate what has been achieved so far and to confront current issues facing the sector, while introducing the integrated human rural development concept as a key model for the management and conservation of the Argan socio-economic and ecological system.

Under the incentives of the Green Morocco Plan, the professional organizations and the research community, a new dimension of the Argan tree, which asserts its multiple roles, has been added to previously established ones. In particular, it was possible to put forward an ecosystemic approach thanks to dedicated efforts to involve all actors, in an innovative and pragmatic way, with the management and the future of the ABR. Besides the environmental role of the Argan ecosystem and besides stakeholders' interests, the emergence of the agriculture/orchard dimension via arganiculture will help attenuate the pressure exerted on the natural Argan forest. In light of this, and in view of the degradation extent, reported here and there, of the vegetation cover, of local institutions, culture and heritage evolving around the Argan forest, the scientific community is currently challenged to define new avenues for reflection and to favour multi-institutional and cross-disciplinary approaches within collaborative research programs.

This 4th edition will take place a year after the organisation of COP 22 in Marrakesh, during which Morocco presented 3 flagship initiatives to reduce Africa and its ecosystems' vulnerability to climate change; namely the «Adaptation of African Agriculture» (AAA), the «Blue Belt», and the «Sustainable Oasis» initiatives. It will also take place right before the next evaluation of the ABR, recognised by UNESCO. This will constitute an opportunity to draw new outlines, in particular in terms of readjustments that need to be applied to the ABR framework plan, in light of new data and changes that have emerged at the local, national and international level. Indeed, during the last World Congress of Biosphere Reserves held in Lima in 2016, the international community worked to put Biosphere Reserves back at the heart of Sustainable Development Goals (SDGs). However, changes at the national, and more importantly the local level, will be more impactful and decisive for the future of the ABR. In presence of socio-ecological changes as well as promising advances emerging around the valorisation of ecosystem services, community-based management, heritage management, etc., the scientific and management communities are challenged to present new management

options for the sustainable development of the ABR.

The «Argan program contract», through its different components, reflects an intelligent arrangement of the ABR environmental, social and economic dimensions, hence embodying a true paradigm shift. Such «paradigm shift» can only be achieved through the involvement of top-level scientific research.

The International Argan Congress, held every two years, is an opportunity to share scientific and technical knowledge among national and international researchers, ecosystem managers and economic players in the ABR.

The 4th Edition of the International Argan Congress will be an opportunity to capitalize on previous achievements and to initiate a process of multidimensional reflection, which will open the way to new research perspectives in order to design new development paths for the Argan sector and the ABR, on the basis of sound scientific knowledge. The ultimate ambition of the Congress is to capture scientific contributions that can accompany the «paradigm shift» that has already begun.

Congress axis :

1. Argan Ecosystem: Operation, state of play and innovation for development

This research axis focuses on the characterization of the ABR's state of play in order to improve knowledge on and monitoring of the ecosystem, in particular by testing and using new information, collection and data processing technologies.

2. Biotechnology and genetic engineering for a sustainable Arganiculture

To take stock of the work and research results in the fields of genetic characterization, vegetative propagation, cultivation techniques and the creation of new varieties of Argan tree in order to successfully set up an Arganiculture practice.

3. Innovative valorisation and evaluation methods for Argan products

The Argan ecosystem provides various products and services that would benefit from an innovative valorisation. In addition to the treatment of processes and products, it would be useful to include therapeutic, cosmetic, nutraceutical and industrial uses. Diversifying the economy of the Argan sector is of great interest to users and local players, particularly through the use of «sustainable value chain» approaches and innovative tools for the valorisation of ecosystem services.

4. Institutional, legal and cultural innovations in the light of socio-ecological changes in the Argan ecosystem:

The management of the ABR faces major challenges that impact its sustainability. This axis deals with the causes and impacts of the changes taking place in this area, in light of new demographic and ecological dynamics in the Argan ecosystem. It will also aim at presenting governance approaches based on institutional, legal and cultural innovations.