



United Nations  
Educational, Scientific and  
Cultural Organization



## Success Stories

### Educating for Sustainable Development in the Shouf Biosphere Reserve (Lebanon)

by Dina Karam



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The Lebanese education system has thoroughly embraced the concept of sustainable development. Due to small projects and extensive training of the public, teachers and institutions have been mobilized in favour of Education for Sustainable Development (ESD).

ESD has become an essential mission of the country's national education which aims to have it included as part of general education for all students from primary school through the university level. A major challenge to our society is also seen as a challenge to the Lebanese education system.

#### The protected environment of the Shouf

For centuries, cedar has been felled by man. Today in the Shouf Reserve, this majestic tree is protected by the Association of the Shouf Cedars. The living symbol is so closely linked to the Lebanese land that is the national emblem. The Shouf Cedar Reserve covers an area of 550 km<sup>2</sup>, at an altitude between 1,200 and 1,900 meters, and has parallel peaks to the sea. The flora of the region includes a wide variety of trees, shrubs, plants, flowers and herbs. The fauna includes a large number of mammals, birds, reptiles and amphibians.

The provisions for the protection and preservation of the reserve have contributed to the gradual increase of plant and animal species. It is the largest natural reserve in Lebanon (through the PA-Protected Areas under the name *mahmiyat*).

**Discover, promote and protect the living**, this is the mission of the Association for Shouf Cedars Nature and Man from a sustainable development perspective. The Association of the Shouf Cedars (ASC) manages the reserve under the Ministry of the Environment. The financial resources of the reserve come from international organizations, various donations and fees collected at the entrance to the reserve. In 1999 a programme for rural development was created. Its objective is to improve the lives of the rural population while introducing them to the sustainable use of resources of the reserve in order to preserve them. Three workshops have been designed to ensure product quality.

Thirteen of the 70 products on sale recently received the certificate LibanCert<sup>1</sup> as an organic product. For sustainable protection, local participation is necessary. A programme funded by the Canadian Embassy aims to create a link between the reserve and the inhabitants of the surrounding villages. Products are sold at the entrance of the reserve that have been made from local products such as honey. In 2005, this area was declared a Biosphere Reserve by UNESCO and is part of the ArabMAB connected to the World Network of Biosphere Reserves (WNBR). It includes two protected areas: the nature reserve and the Shouf swamp *Aammiaq* and 28 surrounding villages. In July 2011 under the MAB Programme of UNESCO, the "Michel Batisse" grant was awarded to Mr. Nizar Hani (former director of the Shouf Biosphere Reserve Lebanon) for his case study on "Creative approaches and innovative fighting against poverty improves livelihoods and ensures the sustainability of the biosphere reserve of Shouf."

### **Educational activities**

Education and raising children's awareness to protect the environment is an important task of the Reserve. Facilitators offer several educational workshops focused on the role of a nature reserve, knowledge ecosystems, eco-citizen actions, and environmental pollution.

Dalia Gham, 13 years old, in the EB7 class at Niha Public School, describes the benefits of trees, as follows:

*"The trees are the first environmentally and guarantee the continuity of life through the many benefits that result from their presence:*

- *They reduce temperatures, act as a barrier against the wind, help clean the air, absorb carbon dioxide and release oxygen, and prevent soil erosion which is the main habitat and the most important for birds and other species.*
- *They provide resources for humans: food, medicine, firewood and construction.*
- *We must maintain this natural resource for us and for future generations by organizing the felling process, the prevention of fire hazards and to increase reforestation. Tree protection is essential for the environment and for humans. "*

In 2011-2012 a national awareness campaign on the environment was launched as part of the International Year of Forests, with the support of the French Fund for the Environment (FFEM) and the French Development Agency (AFD).

A rally was organized among 500 students between the ages of 12 to 14 to recognize the different types of cedars and the importance of forests. A closing festival was held to honor the winners from public schools Khreibet, Baruk and Ain Zhalta. And with Italian architects, a Tour Bird Observatory was built with students from schools in the Shouf region because it is an important area for birds.

### **To protect the reserve**

Guides and rangers have been trained to ensure the safety and cleanliness of the locality. They accompany the walker. The cedar forest renews itself naturally because grazing is prohibited. To prevent visitors from trampling the shoots, trails have been built. An artificial lake was built with assistance from the Embassy of Japan. Migratory birds and mammals come to drink.

### **New projects**

Sponsor a cedar! The sponsor pays for a tree and the costs for treatment and will then be able to follow it on a website. Pairing has been established with the University of Balamand for detailed scientific biodiversity of fauna and flora study. A herbarium is also being prepared. Mrs Marie-Madeleine Chibli, principal of secondary school at the Notre-Dame de Jamhour College, organized an ecological assignment for her students, in March 2013, on the theme of biodiversity contained in the

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<sup>1</sup> <http://www.libancert.org>

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new life sciences programme (SVT in the French system) that students follow in the grade 10 class, and review again in grade 12. The theme of the assignment was the discovery and observation of specific rare plant and animal species of Lebanon, which are well-preserved in the Shouf Reserve as well as educating students to respect the environment (for example they begin by avoiding trampling plants and ensuring cleanliness in nature). This approach is based on interdisciplinary mechanisms that combine science, culture and education.

**Further information:**

[www.shoufcedar.org](http://www.shoufcedar.org)

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As lead agency for the UN Decade of Education for Sustainable Development (2005-2014), UNESCO promotes an education that allows every human being to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future.

Education for Sustainable Development means including key sustainable development issues into teaching and learning; for example, climate change, disaster risk reduction, biodiversity, poverty reduction, and sustainable consumption. It also requires participatory teaching and learning methods that motivate and empower learners to change their behaviour and take action for sustainable development.

It engages people through innovative ways of learning about biodiversity by focusing on education and training to address the interlinking issues of ecosystems and livelihoods, the interactions of nature with culture, society and economy, and the actions we can take without affecting our quality of life.

Biosphere Reserves are sites recognized under the UNESCO's Man and the Biosphere (MAB) Programme which innovate and demonstrate approaches to conservation and sustainable development. The Decade offers an opportunity to develop and enhance the concept of Biosphere Reserves as learning sites for sustainable development, and strengthen their education and outreach programmes.

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