DRY-WALLS BUILDING TECHNIQUE FOR A SUSTAINABLE AGRICULTURAL SYSTEM

By Kim Assaël

In Jeju Island that sits off the southern coast of Korea an ancient processing technique of dry-walls called Batdam has been a keeper for Jeju agriculture since thousands of years, in a windy and rainy environment.

The volcanic soils of the island were poor for being rocky and exposed to high winds. As most arable land is made by lava stone fields, local farmers had to find solutions to increase yields removing the stones and piling them aside.

Since ancient times in Jeju, farmers built the Batdam system of walls with the stones collected in the soil, to create a suitable space for the crops and at the same time to protect them from the winds. The system of dark basaltic rock fences, also called Black Dragon, with its length of 22,000 kilometers, built with care and wisdom, managed to mitigate the oceanic climate and create the conditions to grow food on the island. The Batdam system has survived natural disasters over 1,000 years.

In consideration of its extraordinary features Jeju Batdam system has been recognized by the Globally Important Agricultural Heritage Initiative, coordinated by the UN's Food and Agriculture Organization (FAO). In the GIAHS web page all the characteristics of this system and the technology adopted are presented.

The fences represent a demarcation of ownership creating transition areas between the continent and the ocean, consequently functioning as windbreak by preventing damages from the ocean water over the arable land; they protect livestock and block cattle transit into the fields; the dry-stone walls can also be a path on stone walls for neighbours to move around in the fields where no routes are available.

The difference with techniques adopted in different contexts is the lack of earthen foundations and adaptation to the wind. Their air holes allow Jeju's hearty gusts to burst through, increasing the chances of them staying erect year-round.

Maintaining soil richness and increasing water retention, Jeju Batdam has contributed to preserve biodiversity and agricultural culture of Jeju, but also to implement new crop cultivations.

Despite many threats of modern urbanisation like urban sprawl, and road constructions, mechanization, introduction of high-tech farming like greenhouse facilities and fertilizers, and diversified crops, Batdam system is still in force. Traditional crops suitable to characteristics of soil, such as millet and barley have been successful in promoting commercial agriculture, and new crops have been developed.

Reflecting the volcanic heritage of the area, the Batdam technique shows the ability of people in Jeju to overcome an unfavourable environment and continue to do farming for hundreds of years. Batdam has become a trend all over the island, in respect of many of Jeju's people social, ecological, agricultural, also artistic values for the aesthetic scenery they create. In fact Batdam has become an important element in landscaping the whole island, turning out to be a shared cultural identity mark, and generating the interest of the entire population in its conservation and development.

Jeju Island also achieved important UNESCO recognitions. In particular the Island is recognized as one of the Biosphere Reserves of the MAB UNESCO Programme and a site of the UNESCO Natural Heritage and Global Geoparks Network.

To know more

Jeju Batdam Agricultural Systeem in GIAHAS Initiaive

Jeju in MAB UNESCO website

MAB UNESCO Reserves

Jeju in UNESCO Natural Heritage and Global Geoparks Network.

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