



## **Bridging Mediterranean cultures in the IYS: A documentary exhibition on irrigation techniques in water scarcity conditions**

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Brescia, an industrial city in Northern Italy, is now experiencing a crucial change in its traditional structure. In recent years in fact it has been elected as living and working seat by many foreigners and it is now one of the cities with the greatest percentage of migrants in the Country. This is an important challenge for the city and an opportunity to merge, compare and integrate different cultures to build its future. In this context some students of different Courses (engineering and medicine), belonging both to the Arabian and local community, met together and with researchers in the study team “Al-Bīrūnī, for culture, science and society”. The team aims at organising cultural events in which, starting from the figure of the Persian scientist Abū Raiḥān Al-Bīrūnī (about 973, 1051), the contribution of the Arabian and Islamic culture to the development of the European one in the middle ages is investigated.

Moving from the initial idea of the study team Al-Bīrūnī and from the suggestions of the World Soil Day 2014 and of the International Year of Soils 2015, we built a documentary exhibition entitled “Irrigation techniques in water scarcity conditions”. The exhibition, which stresses the importance of the irrigation techniques for the soil conservation, is focused on the idea of disseminating two main concepts, i.e. (1) the technological continuity of some water supply systems in countries, around the Mediterranean Sea, affected by similar conditions of water availability, and (2) the possibility of building environments where, due to severe or extreme climatic conditions, the sustainability is reached when the man lives in equilibrium with the nature.

The exhibition, which is written in Italian and will move around in the city during all 2015, consists of about twenty posters organized into three main chapters, corresponding to three main classes of water supply systems which are common in most of the countries surrounding the Mediterranean Sea. These are (1) systems using the rainfall water (*wadi, reservoirs, barrages*), (2) systems using the groundwater (*qānāt, foggara, wells*) and (3) systems based on the use of the air humidity (*erg oasis, cob walls and dry-stone walls*). For each class of techniques the hydraulic concept, the traditional spread and building techniques, and some historical examples are briefly presented in a suitable way to be appreciated by a wide public.