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1. Although Portugal has no access to the Mediterranean Sea, it has very similar ecosystems and is therefore considered Mediterranean.

European Commission

Science for Environment Policy

Mediterranean land degradation threatens food security

Climate change, tourism and population growth are all accelerating land degradation in the Mediterranean region, according to recent research. This can have severe impacts: the amount of available agricultural land per capita in the region could have dropped by half by 2020, compared with 1961, the study estimates.

The Mediterranean region covers about 850 million hectares in 22 countries across Southern Europe, the Middle East and North Africa. Its 46 000 km coastline is ecologically important: 1 million hectares of wetlands provide crucial ecosystem services, including water purification and carbon sequestration, which have been valued at €2.4 million per square kilometre per year. Around 14% of land is agricultural, although this figure rises to 34.4% in the eight Mediterranean countries that were part of the EU in 2012 (Cyprus, France, Greece, Italy, Malta, Portugal[1], Slovenia and Spain).

These important land resources and ecosystem services are being lost to urbanisation and degradation. The study presents information on the current status of the Mediterranean's land resources and considers the region's future prospects.

In 2005, the population of the Mediterranean countries was 428 million – 50% higher than 30 years previously. Furthermore, predictions show that it could reach as much as 543 million by 2020. This growth has seen many cities expand into surrounding countryside, 'sealing' the land in the process. All the EU Mediterranean countries have experienced major losses of agricultural land to urban expansion, particularly along the coast.

Coastal development is heavily influenced by tourism, particularly in Europe. Around 300 million people go on holiday in the Mediterranean each year; more than 75% of international tourists to the region visit France, Italy and Spain alone. Turkey will soon become the fourth most visited tourist destination in the region. Tourism is economically very important, but also exacerbates problems, particularly along the coast. It has accelerated a form of land degradation known as 'littoralisation' (a French term for coastal overdevelopment). Problems include loss of agricultural land and increased flood risk.

Climate change is expected to further degrade land by creating conditions that are generally drier and hotter, but with more cases of intense rainfall. Problems linked to climate change include coastal flooding, erosion, aridification, desertification, reduced groundwater reserves for irrigation and landslides.

Drylands cover 33.8% of the Mediterranean and poor soil management, overgrazing, deforestation and wild fires are turning large sections of these areas into deserts. Some studies have estimated that 30% of semi-arid Mediterranean drylands are now affected by desertification, which is also a security issue as it has the potential to speed up migration from the Middle East and North Africa into Europe, studies suggest.

By 2020, 8.3 million hectares of agricultural land will have been lost since 1960 in the Mediterranean, if present rates of urbanisation and land degradation remain unchanged. In that same period, its population will have doubled, effectively more than halving agricultural land per capita from 0.48 to 0.21 hectares and bringing food security issues, especially in Middle Eastern and North African countries.

While there is no simple solution to land degradation, the study suggests that the UN, EU, international and national organisations need to co-ordinate agricultural efforts in light of the coming challenges.

The study calls for the roles and potential of agriculture in the region to be completely reassessed. Possible options include shifting farming to the most favourable areas and preserving the best soils for growing crops. Closer links between agriculture and ecotourism and renewable energy production could also be explored.