
Urbanisation as a driver of changes in ecosystem services demand and supply in the Mediterranean Region – Demand side

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Abstract

The urbanisation process as one of the most outstanding driver in the Mediterranean region, was presented in a previous poster. In this abstract, we focuses on preliminary assessments based on, in particular, the transition of rural to urban population the Mediterranean region and its impact spatial and temporal mismatches between ecosystem services demand.

Five large urban areas in the Mediterranean basin (three in Europe and two in North Africa) were determined and we explored the differences between the demand of rural and urban populations in a demand profile containing several services (representing the three categories) and how these demand profiles depended on regional service supply.

The analyses of supply and demand combined gave an impression of how urbanisation is likely changing the ecosystem service supply and demands and how the demanded services depend on a regional supply.

For some services, the demand increased with urbanisation, such as for the provision of food and certain cultural services like education and recreation. This increase, however, could not always be translated directly to a higher demand for regional services, but instead were partly met by a services supply at a higher spatial resolution, such as national and international scale. The supply of regulating services demanded by urban populations tended to remain mostly local and regional, but within the urban areas the regulating benefits were increasingly produced by technical and man-made solutions (e.g. rain water capture systems) and became to a lesser degree dependent on ecosystems and their services (e.g. soil water infiltration).

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Based on the comparison of the demand profiles and related supply flows, it seems that urbanisation generally increased the demand for services while simultaneously decreasing the dependency on regional services supply. Depending on the service, the supply of the service can become more detached from the regional ecosystems. Future research should distinguish to which extent the services are being supplied from a new local source (e.g., urban green) or that the services are imported from elsewhere.