

RIVEAL PROJECT

RIPARIAN FOREST VALUES AND ECOSYSTEM SERVICES – CULTURAL SERVICES

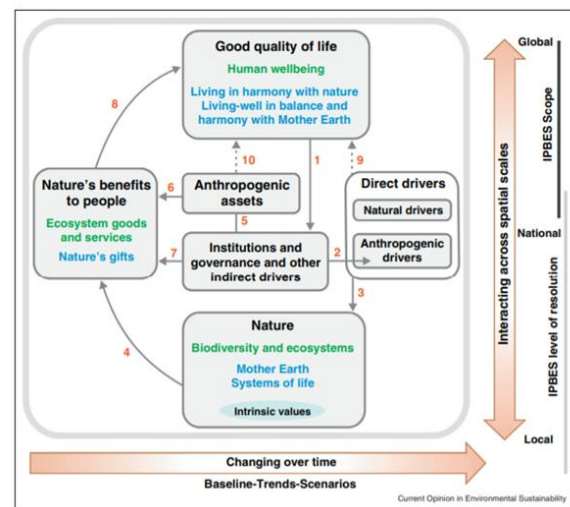


CULTURAL ECOSYSTEM SERVICES ARE...

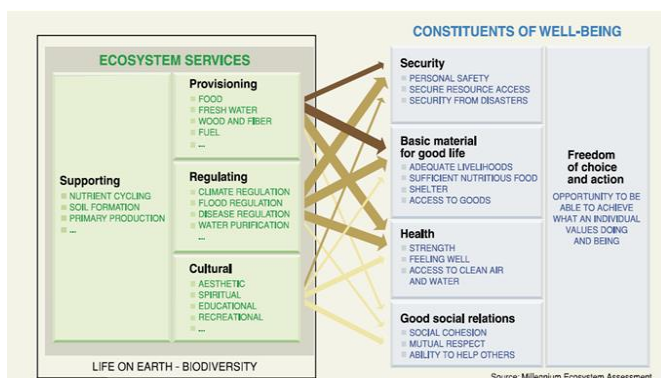
...non-material benefits of ecosystems through spiritual enrichment, cognitive development, reflection, recreation and aesthetic experience (*Living Beyond Our Means*, Millennium Ecosystem Assessment, 2005).

According to the same source, these services include:

- Cultural diversity
- Spiritual and religious values
- Knowledge systems
- Education values
- Inspiration and aesthetic values
- Social relations
- Sense of place
- Cultural heritage values
- Recreation and tourism



Modelo conceitual IPBES (Diaz et al. 2015. *The IPBES conceptual framework — connecting nature and people*. *Curr Opin Environ Sustain* 14:1-16. DOI: 10.1016/i.cosust.2014.11.002).



Linkages between Ecosystem Services and Human Well-being (MEA 2005. *Ecosystems and Human Well-being*. Synthesis Island Press).

The challenge posed by cultural ecosystem services is highly complex. In the entire literature on ecosystem services in general, cultural dimensions are among the most difficult to assess and quantify, as they are admittedly intangible. These analyzes shouldn't be reductive and strict, merely economic or technical. Hence the importance of social science studies on the landscape and on residents' perceptions, attitudes and values.

CULTURAL ECOSYSTEM SERVICES IN RIVEAL

RIVEAL tackle the value of river landscapes in the sense that they are used for economic activities (such as tourism), leisure, enjoyment of natural heritage, health and relaxation purposes according to the perceptions and relations of local populations and visitors, tourists and other users (fishermen, hunter, etc.). The assessment of Cultural Ecosystem Services was carried out through a questionnaire survey of residents in the two study areas. Furthermore, a workshop with stakeholders and end-users will define potential future socio-economic scenarios, land-uses and freshwater needs.



Map of Parishes of Fronhas.

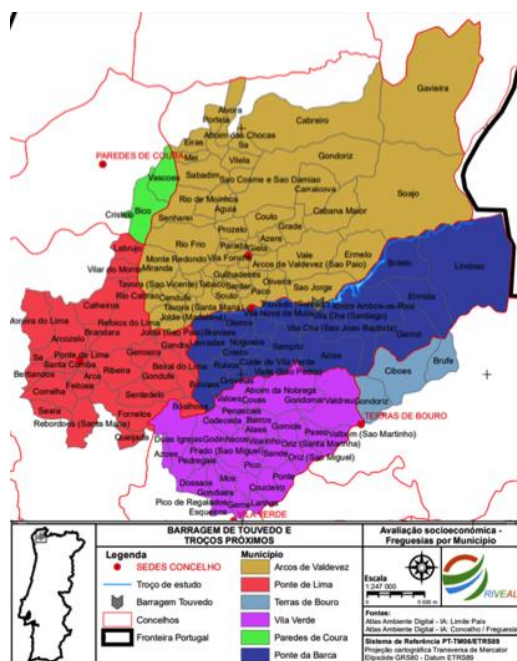
SOCIAL PROFILE OF FRONHAS

The study area of Fronhas includes 56 parishes of 9 municipalities bordering River Alva, upstream and downstream the reservoir dam. According to 2011 Census data, the Fronhas study area had 51,174 inhabitants and 19,925 classic families, 78% of which were family groups with children. In this area, the housing density is 43.1 inhabitants per km². Between 2001 and 2011 the evolution of the population was negative (variation rate of -5.9%).

With regard to the sociodemographic distribution of residents, there is a slight prevalence of women (52%) and older (25.9% of residents are over 65 years old) over younger people (22.6% under 25 years old). Educational attainment rates are low: 73% did not go beyond basic education and only 9% completed higher education. Pensioners and retirees represent 41% of residents over 15 years of age. Among employed residents, most work in the tertiary sector (61%) and only 4% in the primary sector.



River Alva.



Map of Parishes of Touvedo.

SOCIAL PROFILE OF TOUVEDO

The study area of Touvedo includes 136 parishes of 6 municipalities bordering River Lima, upstream and downstream the run-of-river dam. According to 2011 Census data, the Touvedo study area had 77,468 inhabitants and 27,757 classic families, 91% of which were family nuclei with children. In this area the housing density is 84.31 inhabitants per km². Between 2001 and 2011 the study area lost population (variation rate of -4.7%).

With regard to the sociodemographic distribution of residents, there is a slight prevalence of women (52%) and the proportion (24%) of the elderly (residents over 65 years old) is identical to that of the youngest (under 25 years old). Educational attainment rates are low: 74% did not go beyond basic education and only 9% completed higher education. Pensioners and retirees represent 42% of residents over 15 years of age. Among employed residents, most work in the tertiary sector (58%) and only 6% in the primary sector.

