



recharge.green – balancing Alpine energy and nature

The Alps have great potential for the use of renewable energy. Thereby they can make a valuable contribution to mitigating climate change. This, however, means increasing pressures on nature. What could be the impact of such changes on the habitats of animals and plants? How do they affect land use and soil quality? How much renewable energy can reasonably be used? The project recharge.green brings together 16 partners to develop strategies and tools for decision-making on such issues. The analysis and comparison of the costs and benefits of renewable energy, ecosystem services, and potential trade-offs is a key component in this process. The project will last from October 2012 to June 2015 and is co-financed by the European Regional Development Fund in the Alpine Space Programme.

www.recharge-green.eu

Choose the level of potential:

Theoretical

Estimates potential bioenergy depending on forest increment, forest management and forest treatment based on the periodic/annual increment. This option creates an energy potential map correspondant to the the hypothetical maximum energy available in the analyzed area without compromise forest regeneration and functionality. The conversion between wood biomass (m3) and energy (Mwh) is obtained through the use of calorific parameters.

Legal

Estimates potential bioenergy depending on forest increment, forest management and forest treatment based on the prescribed yield, derived by the forest plans. The conversion between wood biomass (m3) and energy (Mwh) is obtained through the use of calorific parameters. The map output of this module represents the theoretical available energy based on forest planning indications.

Technical

Technical bioenergy considers woody biomass obtained from a forest surface where extraction is possible given a particular level of mechanisation. The conversion between wood biomass (m3) and energy (Mwh) is obtained through the use of calorific parameters. The estimation of the technical bioenergy takes into account a series of technical/environmental variables, such as distances that the different means used in the exploitation can reach from main forest roads, slope conditions, roughness, natural barriers etc.

Economic

Economic bioenergy is the part of the bioenergy that can be collected to supply heating plants or biomass logistic centres since it is associated with a positive net revenue for the entire production process. The model excludes all the areas in which exploitation is not

economically convenient with the given exploitation methods, costs and parameters. The conversion between wood biomass (m³) and energy (Mwh) is obtained through the use of calorific parameters. The costs taken into account are exploitation costs, labor costs, transport costs and administrative/management costs. This module permits to simulate different scenarios on the base of the financial/economic situation of the area analyzed.

Potential

The produced map represents the available energy on the territory analyzed on the base of the chosen options in the selection panel of Pilot Region r.green biomass. The potential bioenergy map is expressed in MWh and is standardized on the base of the cell dimension. It's possible to query the map and obtain the potential energy available in each cell with the dimension equal to the map spatial resolution.

Legend

The legend shows the level of the potential energy available in each cell with a dimension that corresponds to the map spatial resolution.

Note:

The results refer to the municipality of the valleys. For this reason, the result can be not in agreement with the pilot boundaries.