Foreword
Wool from EU sheep farming and butchery industry is essentially a worth noting by-product perceived as waste which is mostly disposed of. The specific objective of the Life+GreenWoolF project is to demonstrate that green hydrolysis with superheated water is an effective and profitable way to convert wool waste into organic nitrogen fertilisers with good soil amendment properties. This will be carried out designing, building and testing a transportable, demonstration hydrolysis plant. An environmentally and economically sustainable management model will be proposed for the Piedmont wool clip and the results will be disseminated to through out the EU Countries with the largest sheep population.

Long range objectives are:
• to reduce wool waste disposed of in landfills where it does not readily degrade or thrown away, with environmental threats or infection risks;
• to exploit renewable resources recycling organic wastes into value added fertilisers;
• to develop a chemical free treatment of raw wool (unwashed) to be carried out with an easy to manage, small-sized transportable plant;
• to reduce effluents from wool scouring;
• to improve the quality of pasture lands with harmless and valuable fertiliser, reducing the use of synthetic fertilisers;
• to improve soil properties for organic carbon content and water retaining ability;
• to develop marginal areas increasing grassland extensions, improving landscapes;
• to reduce soil threats (decline of organic matter, contamination, sealing, compaction, erosion, floods and landslides);
• to reduce transport costs of both fertilisers and wool waste which are subjected to the restrictions provided by the Commission Regulation (EU) No 142/2011 for Class 3 Materials;
• to increase employment and profit of sheep farming in the EU.

Description of project steps
-Construction of a demonstrative plant for wool hydrolysis with overheated water.
-Modulation of the hydrolysis degree to change the nutrient speed release of the obtained fertiliser.
-Development of a sustainable management of hydrolysis plants in relation of sheep population density.
-Disclosure of project progresses and results to Italian and european stakeholders.