

CHALLENGES OF STEEP SLOPE VINEYARDS WHERE ROBOTICS COULD HELP

The characteristics of steep slope vineyards (heroic viticulture):

- Vineyards at altitudes above 500 meters above sea level
- Vineyards on slopes of the land greater than 30%
- Vineyards on terraces and/or steps
- Vineyard systems of small islands



Common difficulties for heroic viticulture which complicate mechanization:

- Orographic conditions
- Terraces
- Climatic challenges

Roles of the cultivation of the vine for the community:

- Environmental protection, limitation of hydrogeological risks, and soil erosion
- Reduction of costs for area management
- Resource for the tourism sector
- Maintenance of the historical/cultural heritage of the landscapes



Mechanization is important for making heroic viticulture economically sustainable and preventing abandonment of these areas

Robotics can help to contain part of labor costs so that cultivation stays competitive so viticulture can remain attractive for the new generations

The SCORPION project aims to provide a solution to mechanization in viticulture, reducing the use of pesticides and water, making viticulture more sustainable

- The technology developed intends to refine the choice of the optimal time to carry out the treatment.
- The use of ultraviolet technology is also being developed to combat fungal diseases and reduce the need for pesticides and water





This project has received funding from the European GNSS Agency under the European Union's Horizon 2020 research and innovation programme under grant agreement No 101004085