PRIMA
PARTNERSHIP FOR RESEARCH AND INNOVATION
IN THE MEDITERRANEAN AREA

ECHINO SAFE MED

ECHINO-SAFE-MED is part of the PRIMA programme supported by the European Union. The PRIMA programme is supported under Horizon 2020 the European Union's Framework Programme for Research and Innovation.

"**ECHINO-SAFE-MED** will implement the pasture-based livestock farming systems by delivering sustainable and cost-effective tools, as well as innovative strategies to control cystic echinococcosis in sheep farms with the final goal to improve health, welfare and productivity of small ruminant livestock sector in the Mediterranean regions"

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A NEW EU CO-FUNDED PROJECT, PRIMA ECHINO-SAFE-MED, will provide new solutions for improving agrosystem resilience to climatic change in the Mediterranean area, developing sustainable solutions to control Cystic Echinococcosis (CE) in order to increase sheep productivity, thus improving the agro-livelihood, income and satisfaction by farmers in these areas.

ECHINO-SAFE-MED (*New sustainable tools and innovative actions to control cystic ECHINOcoccosis in sheep farms in the MEDiterranean area: improvement of diagnosis and SAFEty in response to climatic changes*) is a co-financed project receiving € 0.7 M funding from the EU PRIMA Programme (Total budget € 1.30 M) and will run for 3 years (May 2021- May 2024). ECHINO-SAFE-MED will promote novel management practices based on sustainable and efficient use of natural resources (increasing sheep productivity) and decreases the use of chemical inputs. This will be obtained by the use of high throughput diagnostic, surveillance and control strategies in order to establish guidelines for sustainable CE control to be further extended to other endemic Mediterranean areas. **ECHINO-SAFE-MED**, beyond improving control of CE in Mediterranean areas, will render benefits at different levels: *i*) **for farmers**, redesigning the applied management systems against CE minimizing the risk of production losses due to inappropriate prevention/treatment systems and secure farmers' income protecting in the same time public health; *ii*) **to the scientific community**, improving knowledge on CE, allowing the development of standardised tools and protocols; *iii*) **to the authorities**, supporting government/commission regulation agencies policy in CE, reporting and monitoring harmonisation according to national legislation; *iv*) **to the society**, contributing to food safety by establishing consistent protocols for their ultimate application in monitoring and controlling CE, optimizing drug use. Finally, in perspective of the "One Health" concept, ECHINO-SAFE-MED activities will also have an impact of CE on human health, reducing the burden of human disease in the Mediterranean area.

SMALL RUMINANT PRODUCTION SYSTEMS are a major component of the dairy and meat sector in the Mediterranean region and the only possible enterprises in less favoured areas. Thus, it is fundamental to ensure sustainability and prevent diseases (e.g. parasitic diseases) that affecting small ruminants' production, health and welfare. Cystic echinococcosis (CE) is one of the most important parasitic diseases of grazing sheep in the Mediterranean area. CE is caused by the larval stages of the small tapeworm ***Echinococcus granulosus***, a zoonotic Taeniidae of veterinary and public health importance. The life cycle of ***E. granulosus*** includes dogs and other canids as the definitive hosts of the adult parasite and livestock (mainly sheep) and humans as intermediate hosts. Climatic changes (e.g. global warming) may influence the epidemiology of CE, due to their direct effect on the survival and the viability or infectivity of eggs, released in the environment by the dog, and an indirect impact on sheep, through an increased exposure to the parasite. Therefore, sustainable control strategies are needed to mitigate the negative effects of increasing spread of CE in these areas. To date, control and prevention of this disease is very difficult due to the complex epidemiology of ***E. granulosus*** and to the lack of suitable diagnostic tools as well as of sustainable control strategies.