Drivers of adoption of sustainable practices and technologies for soil protection among winegrowers in North-west Italy

Federica Caffaro1, Eugenio de Gregorio2, Giorgio Capello3, Lucia Vigoroso3, Giorgia Bagagiolo3\*, Eugenio Cavallo3, Marcella Biddoccu3

1Roma Tre University, Department of Education, Via del Castro Pretorio 20, 00185 Rome, Italy

2Link Campus University, Via del Casale di San Pio V n. 44, 00165 Rome, Italy

3Institute of Sciences and Technologies for Sustainable Energy and Mobility (STEMS) of the National Research Council of Italy (CNR), Strada delle Cacce 73, 10135 Turin, Italy, \*correspondence: giorgia.bagagiolo@stems.cnr.it, +39 338 859 2064

**Keywords.** Soil management, mixed methods research, sustainability, winegrowers perception

**Abstract.** The study aimed at investigating drivers of adoption of good practices and technological innovations for soil protection in a group of winegrowers in Piedmont region, North west of Italy. Many previous studies addressed soil conservation and degradation, but the points of view of land operators have not been frequently addressed. Understanding farmers’ perceptions, intentions and needs could help in a better suited implementation of measures for soil protection in vineyards. Four focus groups has been conducted with winegrowers (N=17) in Piedmont region, North-west Italy. Topics addressed in the focus groups were related to: perception of soil erosion and the role of the human factor in preventing/causing it, adoption and intention to adopt good practices and technological innovations for soil protection and, finally, barriers and drivers for their adoption. A questionnaire assessing participants’ socio demographic characteristics and operation, vineyard management practices and perceived causes of soil erosion was administered to the respondents and the responses were used to encourage the discussion. Preliminary results showed that soil erosion was perceived as a relevant issue by the majority of the participants. Wide use of machinery during vineyard plantation and management was acknowledged as affecting soil and water conservation. Cost‐benefit ratio did not sufficiently capture the complexity of farmers' decision making and behaviours, since the adoption of sustainable practices and technological innovations was more often related to place attachment and landscape protection. Social norms and peer pressures were not perceived as critical drivers for good practices adoption, whereas tradition and habits appeared to play a role in hindering the adoption of soil protection practices and technologies. Some recommendations arise from the present study: to encourage the adoption of soil protection practices and technologies, access to economic support should be spread but it does not seem to be enough. Personal values and habitual processes emerged as critical variables which could be targeted with awareness raising and education interventions. To maximize the fit between farmers' needs and sustainable innovation, these interventions should be based on a participatory approach and the co-creation of tailor‐made solutions to better support the transition toward a more sustainable farming paradigm.