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Service-Learning projects to educate young generations in fighting wildfires

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Abstract

Fires represent a force of environmental change and habitat degradation worldwide. In general, fires are intrinsically related with factors as deforestation, agriculture, livestock pressure, invasive species, forestry plantations, habitat fragmentation, or climate change. A good understanding of ecological and technical aspects of fire is necessary but social aspects are less explored. Here, the reinforcement of training capacities is needed to overcome technical, social an economic limitations in fire management. Within the current context, the perception of fire as an environmental but also a social problem is increasing, and society is willing to participate in environmental actions. Thus, education and communication are essential to meet this challenge. Although limitations are numerous, new approaches increase the capacity and sensibility of the society in fire management. Multiple activities focus on education to raise public awareness but act as complements *outside the educational system*. Here, Service-Learning (S-L) represents an experiential and education methodology combining learning and community service through projects with a civic-academic base integrated *within the educational system*. S-L projects bring together students, academia and staheholders whereby all become teaching resources, problem solvers and partners. Students learn, identifying and acting to solve real-world necessities, obtaining academic credit, and integrating community service in the curriculum. Stakeholders -individuals or communities-possess large and intimate knowledge that serve to include the social perspective in fire management,

increasing community engagement in environmental protection. Their perceptions, experiences and relationships are unique and differ from those of researchers and practicioners, becoming essential to design locally adapated, effective management practices. Starting from a local initiative (Plantando Cara o Lume, 2016), the project "Plantando Cara al Fuego" (Spanish National Project, FECYT-2020) and its European counterpart "Facing Fire" (Earsmus+, 2020) are based on independent S-L projects designed to prevent, protect, and restore areas affected by forest fires in Southern Europe (Spain, Portugal, Italy, and Greece). With an important role also played by communication, S-L projects focus on different aspects of pre/post fire management: prevention through biomass removal, education in schools, social educative campaigns, restoration of burned areas, or the protection of endangered species and spaces, among others. Through the design and implementation of activities adapted to local realities, S-L projects allows future managers, ecologists, practicioners, and students from different disciplines (environmental, forestry, education, economics, communication) to learn based on real experiences. Students learn, train, and develop competences and skills for the future in collaboation with the community where they live.

Keywords: Service-Learning, student training, fire management, participative projects, community engagement

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