

### Submitted Abstract

ID IMC22-FSAbstr- 895

<b>First Author</b> First Name Last Name	Manuel (1) Villar-Argaiz
<b>Submitting Author</b> First Name Last Name	Manuel Villar-Argaiz
<b>Correspondence</b>	mvillar@ugr.es
<b>Co-Authors</b> >> E-Mails will be not listed	Medina-Sánchez, Juan Manuel (1); López-Rodríguez, Manuel Jesús (1); Corral Arredondo, Eulogio (1); González-Olalla, Juan Manuel (1); Vilá Duplá, María (1); Zamora, Regino (1); Pérez-Martínez, Carmen (1); Ramos Rodríguez, Eloisa (1); Conde-Porcuna, José María (1); Picazo, Félix (1); Llodrá, Joana (1); Garrido Cañete, Guillermo (1); Fernández-Zambrano, Alejandra (1); Morales Baquero, Rafael (1); Camacho-Páez, José (1); Tierno De Figueroa, José Manuel (1); Sánchez Castillo, Pedro (1); Carrillo, Presentación (2); Jiménez Tejada, Pilar (1); Romero López, María Del Carmen (1); Barón López, Sergio David (1); Fernández Ferrer, Gracia (1); Abellán, Pedro (3); Jáimez Cuéllar, Pablo (4); Fernández, Pilar (5); Jiménez, Antonio (6); Quesada, Antonio (7); Barea Arco, José Miguel (8); Pérez, Flora (9); Delgado Molina, José Antonio (10); Martín Cingla, María Isabel (11); Castro, Jorge (1); Barea Márquez, Andrés (1); Llodrá Correa, José Antonio (1); Medina Gálvez, Manuel (11)
<b>Organisations</b> >> for readability limited to 9 >> full list can be found online	3: University of Sevilla, Spain 4: Biotecnología y MedioAmbiente S.L., Spain 5: IES Albayzín, Granada, Spain 6: IES Albayzín, Granada, Spain 7: IES Zaidín-Vergeles, Granada, Spain 8: IES Mariana Pineda, Granada, Spain 9: IES Fuente Vaqueros, Granada, Spain
<b>Country</b>	Spain
<b>Region</b>	Western Europe
<b>Title</b>	Citizen Science In Sierra Nevada: A Necessary Step Forward In Mountain Water Research And Conservation.
<b>Keywords</b>	Keywords
<b>Type</b>	List Of Focus Session
<b>Focus Session ID</b>	62

## Abstract

Citizen Science involves the innate fascination of volunteers in contributing to scientific knowledge. It is therefore an unique way that offers citizens to actively engage in the various parts of the research process: from collecting and providing the essential data to contributing to guide the flow of information from scientific forums to decision-makers and society. We here describe two citizen science initiatives in Sierra Nevada (Spain) where scientists and citizens can learn and benefit from each other. The first initiative under the name of “74 High Mountain Glacial-Lake Oases” was launched in 1998 in order to promote the research and conservation of glacial lakes. These lakes regarded as sentinels of global change are unique ecological laboratories in which scientists with the help of citizen volunteers monitor and test the effects of global stressors such as temperature, dust deposition from the Saharan desert or UV radiation, among others. Because lakes are located in difficult-to-reach locations, the help of mountaineers allows to strengthen Long-Term Monitoring Programs by contributing to gather scientific data that would otherwise be unapproachable by scientific team means. The second initiative under the name of “Ríos de Vida” (Living rivers) is a hands-on environmental education program for the promotion of scientific vocations in high school students. With their science teachers assisting, dedicated instructors guide the students in hands-on stream sampling for biological, physico-chemical and hydromorphological information, sample analyses and data interpretation. Groups of students monitor the health of river waters as they meander their way down from the most pristine sites in mountain headquarters to the more human degraded sites down the valleys. The participation of students as citizen scientists leads to a wider community engagement and implementation of sustainable freshwater management policies.

This work is part of Smart EcoMountains, the Thematic Center on Mountain Ecosystems of LifeWatch-ERIC.