

EGU2020-21652

<https://doi.org/10.5194/egusphere-egu2020-21652>

EGU General Assembly 2020

© Author(s) 2022. This work is distributed under the Creative Commons Attribution 4.0 License.



Use of Unmanned Aerial Systems for Hydrological Monitoring

Salvatore Manfreda¹ and the HARMONIOUS TEAM*

¹Università degli Studi di Napoli Federico II, DICEA, Napoli, Italy (salvatore.manfreda@unibas.it)

*A full list of authors appears at the end of the abstract

Unmanned Aerial Systems (UAS) are offering an extraordinary opportunity to improve our ability to monitor river basins. The wide use of UAS led to a significant growth of the number of applications and methodologies developed for specific scopes of environmental monitoring. For this reason, there is a serious challenge to harmonise and provide standardised guidance applicable across a broad range of environments and conditions. In this context, a network of scientists is cooperating within the framework of a COST (European Cooperation in Science and Technology) Action named “Harmonious - Given the wide use of UAS within environmental studies”. The intention of “Harmonious” is to promote monitoring strategies, establish harmonised monitoring practices, and transfer most recent advances on UAS methodologies to others within a global network. The working groups of Harmonious are currently working on the definition of practical guidance for environmental studies identifying critical processes and the interconnection of each step for a successful workflow. Given the number of environmental constraints and variables, it is impractical to provide a protocol that can be applied universally under all possible conditions, but it is possible to systematise the fragmented knowledge on this topic identifying the best-practices to improve the overall quality of the final products. Preliminary results of the HARMONIOUS COST Action will be given.

HARMONIOUS TEAM: Salvatore Manfreda, Brigitta Toth, David Helman, Giorgos Mallinis, Richard Lucas, Pauline Miller, Antonino Maltese, Petr Dvořák, Sander Mùcher, Giuseppe Ciraolo, Yijian Zeng, Zhongbo Su, Jana Müllerová, Nunzio Romano, Xurxo Gago, Ruodan Zhuang, Goran Tmusic, Helge Aasen, Mike James, Gil Concalves, Eyal Ben-Dor, Anna Brook, Maria Polinova, Jose Juan Arranz, Janos Meszaros, Ruodan Zhuang, Kasper Johansen, Yoann Malbeteau, Matthew McCabe, Isabel Pedroso de Lima, Corine Davis, Sorin Herban, Sophie Pearce, Robert Ljubcic, Salvador Peña-Haro, Matthew Perks, Flavia Tauro, Alonso Pizarro, Silvano Fortunato Dal Sasso, Dariia Strelnikova, Salvatore Grimaldi, Ian Maddock, Gernot Paulus, Jasna Plavšic, Dušan Prodanovic, Rafi Kent, Josef Brůna, Martynas Bučas, Joan Estrany, Adrien Michez, Martin Mokroš, Maria Tsiafouli, João L. M. P. de Lima