**Application form**

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***Executive summary***

**Alert system for Algal Bloom detection in inland waters of Latin America**

Algal blooms (ABs) occur when certain kinds of algae grow very quickly, forming patches, or "blooms", in the water. These blooms can emit powerful toxins which endanger human and animal health. Moreover, they sometimes can cause awful smell that requires more costly treatment for public water supplies, having also a strong impact on tourism and real state value (Clark et al., 2017; Dudgeon et al., 2006; Echenique & Aguilera, 2014; Funari & Testai, 2008; Mishra, 2013; NOAA, 2019; Tian et al., 2017).

Therefore, with the collaboration of several institutions and organizations, this project proposes the use of GEE to map AB over the main water bodies and reservoirs in Latin America. The proposed methodology has been developed over the last two years based on in situ measurements. First, we intend to apply the methodology to areas where in situ data is available for validation purposes, called pilot sites. Once the approach is developed and validated using pilot sites, the method will be transferred to stakeholders at several levels to provide AB information for main water bodies/reservoirs in Latin America.

1. *Creating an alert system for detecting algae bloom occurrence in the main Latin American water bodies, mostly reservoirs and water bodies used for water supply.*
2. *Creating a time-series of algae occurrence for end-users and water managers.*
3. *Engaging Latin American stakeholders to access and use the information about water quality degradation caused by AB.*

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