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MONITORING SURFACE WATER QUALITY USING SENTINEL 2 IMAGES

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Surface water is water restored in streams, rivers, lakes, oceans, and wetlands, which is vitally important to every life for survival, and to guarantee the balance of hydrological circle of the atmosphere. Flowing surface water which transport sediment is one of the major processes that help shape the Earth's surface. Surface water quality is very sensitive to changes fo climate factors, and human activities resulting in the change of shape, volume, temperature, turbidity, physical and chemical components of surface water. An increase of sediment, trash, waste (both household and industry), animal waste, fertilizers, plastic, etc has been poisoning surface water resources. Thus, monitoring surface water quality is necessary to secure surface stream flows and our life. Remote sensing techniques can be used as an ideal replacement for in-situ measurements which are economic and quick responses. Both optical and thermal images can be used to monitor spatial and temporal changes in water quality parameters, such as turbidity, chlorophyll (watercolor), and temperature. In this paper, we will mainly focus on one of free source optical images, Sentinel 2 to reveal its potential application in assessing surface water quality.

Keywords: surface waterquality, monitoring, Remote sensing techniques, Sentinel 2.