

SYMPOSIUM ON INTEGRATED APPLICATIONS (B5)
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GLOBAL FRESHWATER - HAZARD POLLUTION MONITORING (GF-HPM) FOR REAL-TIME
CONTAMINATION DETECTION**Abstract**

Recent breakthroughs in the field of bio-detector technologies allow the in-situ analysis of water for various pollutants with high detection capabilities (ppm - ppb). The real time detection of contamination remains a challenge for remote freshwater regions. The GF-HPM system is an effective way to monitor hazardous threats and to track their origin. This wetware sensor concept provides global positioning and map tracing capabilities within a few hours of pollution occurrence - enabling effective hazard control. This proposal application utilizes airborne distributed floating buoys consisting of optical biosensor1, GPS receiver and an ARGUS2 network transmitter [fig1]. The compact modular concept of the GF-HPM system enables global entities to monitor the evolution of their freshwater resources and prevent or constrain the disaster impact in a precise and cost effective way.