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The multi actor approach enabling engagement of actors in sustainable use of chemicals in agriculture

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Water quality in rural areas is largely depending on farming practices. Despite numerous efforts to reduce nutrient and plant protection product concentrations in surface water and groundwater, many water bodies are not in good status and hotspots of contamination persist. The stagnation of the water quality is not only due to the long term storage of agrochemicals in soil and groundwater systems, but also to the lack of implementation of good agricultural practices and mitigation measures that prevent the chemicals to enter the water system. Over the past two to three decades, our understanding of the behavior of the water system and the effect of farming practices and mitigation measures on water quality has increased tremendously, but somehow we fail to exploit this knowledge to actual implementation of measures at a scale which is necessary to create improvement of water quality. We think that a paradigm shift from purely top-down regulation and enforcement to local actor engagement is needed to revert the trend. Therefore, we present a multi-actor approach to engage actors at the scale of a surface water catchment or a groundwater body in a so-called action lab. Within such an action lab, key actors in promoting water quality are engaged in setting up governance strategies including four key aspects of alternative financing regimes, participatory monitoring approaches, best management practices and collaborative software applications. In this contribution, we describe the methodological approaches and steps to create engagement in a multi-actor setting, including these four key aspects in order to facilitate the process of implementation of mitigation measures. The different aspects of the methodology and preliminary results will be illustrated based on two cases related to plant protection products posing actual risks to drinking water production.