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In situ measurements and mapping to support characterization of NORM Contaminated Sites.

The state-of-the-art in portable instrumentation and visualization/interpretation tools offer multiple choices to implement in-situ surveys for a variety of environmental purposes. Geo-referenced measurement results can be used to generate maps depicting the most probable distribution of radioactive contaminants over large areas.

In-situ techniques have reached a high level of analytical performance and offer several advantages over other more traditional techniques such as those depending on sample collection and laboratory analysis. The advantages include g fast determination of contaminant concentrations/activities, , cost reduction for the investigations, and fast determination of the contaminant's spatial distribution (including the identification of hot spots). In-situ measurements can also improve subsequent targeted sampling strategies to be complemented by higher accuracy laboratory analysis whenever appropriate.

The paper presents the support that IAEA NSIL laboratory provides to foster the use of these techniques as a cost effective alternative for radiological characterization of sites, including the work of INSITU group within the ENVIRONET Mobile Unit for Site Characterization initiative, the organization of meetings, training activities and site characterization demonstration exercises. An open source software developed for representation of measurement results and creation of maps will be presented as well.

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