1st International Real-LIFE emissions workshop on small-scale combustion: The measurement methods and emission components for the solid fuel combustion appliances

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Session A	Particle emission characterization: Evaluation of emission components to be measured
Description	Measurement of chemical and physical parameters of particulates from the residential combustion systems is imperative because of their adverse effects on health and environment. To date, emissions inventories have not included many of these harmful chemical compounds and physical parameters and there is even a lack of knowledge about their adverse effects on human health and surrounding environment. Therefore, it is important to fill this knowledge gap and identify the most important constituents of particle emissions and measure them appropriately. This session will provide an understanding of physical parameters and chemical components of PM emissions and their adverse effects on health and environment. One question remains at large; which chemical compositions and physical parameters need to be measured and how easy to measure them with low cost and available measurement techniques? The results obtained from the literature reviews and data analyses of previous combustion experiments for the chemical components and physical parameters to be measured will be revealed and discussed.
Session B	Sampling and dilution of particle emissions: Assessment of different particulate sampling methods
Description	Different types of sampling and dilution methods are available for both the lab scale and the fields. However, different countries have adopted varied sampling and dilution methods in their national standards for the measurement of PM emissions from residential combustion systems. In addition, a comparison of different sampling and dilution methods should be studied in detail so that the best sampling method/s which can collect both the solid and condensable fractions of the PM emissions can be identified. The session will provide an understanding of the challenges and successes associated with different methods of testing - specifically focused on different dilution sampling methods and hot flue gas sampling methods. The session will discuss both the full-flow and partial-flow dilution systems such as dilution tunnel and other smaller compact diluters. Additionally, this session will also discuss different hot flue gas PM sampling methods and comparative results with dilution systems. The session will also discuss the feasibility and modernization of sampling and dilution methods for the lab scale and field measurements.

Session C	Outlook of other activities in Europe
Description	There are several other ongoing projects related to residential combustion emissions and measurement methods in different European countries. It is imperative that all people working in the field get informed of the activities done and exchange knowledge generated in their projects. This can help people in different projects to work together to achieve the same goal of overcoming current issues on the PM emission measurement practices and applied standards in the EU in general. The session will provide information on various ongoing projects and measurement campaigns held in different EU countries which are associated with residential combustion emissions measurements. The experts in this session will also discuss their knowledge and ideas for future emission measurement methods as well as test results performed in their institutions with different PM emission measurement standards. This session will help expand the network and to make possible cooperation between various project partners having the same ambition.