



**SmokeFree
Homes**
NEPAL

Results sharing Workshop

on Technological and socio-economic solutions to reduce indoor air pollution in Nepal

Date: 15.4.2026

Venue: Square hotel (<https://maps.app.goo.gl/Gi7mrSngdovzaKGSa>), Lalitpur, Nepal & online

Project is part of DEVELOP2 academy programme and funded by Ministry for Foreign Affairs of Finland

Project partners:

- ❖ University of Eastern Finland, Fine Particle and Aerosol Technology Laboratory / Small scale combustion group, Research Director (PI) Dr. Jarkko Tissari
- ❖ University of Eastern Finland, Indoor Environment and Occupational Health group, University Lecturer Dr. Marko Hyttinen
- ❖ Kathmandu University, Department of Mechanical Engineering, Renewable and Sustainable Energy Laboratory, Professor Dr. Sunil Prasad Lohani
- ❖ Tribhuvan University, Central Department of Environmental Science, Professor Dr. Rejina Maskey Byanju





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Introduction

Household air pollution (HAP) from cooking with solid fuels remains a major public health and environmental challenge in Nepal. Recent national estimates indicate that HAP contributes to more than 28,000 premature deaths in Nepal each year, and more than half of Nepalese households still rely on solid fuels for daily cooking. This leads to exposure to high levels of harmful particulate and gaseous pollutants that adversely affect both human health and the climate. The burden of HAP disproportionately impacts individuals who spend long periods indoors, particularly women and young children.

SmokeFreeHomes Nepal project was conducted to identify effective, techno-economic, and socially acceptable solutions for reducing emissions from biomass cooking and for lowering indoor air pollutant exposure in Nepalese households. The project combined laboratory experiments, field measurements in real household in rural Nepal, and questionnaires. The work focused on assessing different stove technologies, measuring emissions and HAP levels, improving understanding of cooking practices and factors influencing the adoption of cleaner cooking solutions, and developing emission inventories and mitigation models. The outcomes of this work provide valuable inputs for strengthening Nepal's emission databases and informing national and provincial energy and environment policies.

This workshop has been organized to disseminate the key findings of the project among broad range of stakeholders, including academic and research institutions, government agencies, and organizations engaged in clean energy and clean air initiative. During this final workshop, we will:

- ❖ Present key results from laboratory and field measurements and surveys
- ❖ Discuss emission, HAP levels and exposure aspects of different cooking technologies
- ❖ Provide updated insights into household cooking emission inventories in Nepal
- ❖ Explore socio-economic, cultural, and policy dimensions of clean cooking transition
- ❖ Identify key lesson learned and recommendations for future



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Schedule

Time ^a	Activity
10.00–10.25	Registration & tea/coffee
10.25–10.30	Opening session
10.30–10.45	Welcome remarks & Project Overview ❖ Prof. Dr. Rejina Maskey Byanju
10.45–11.10	Emissions from cookstoves: key findings from laboratory studies ❖ Henna Rinta-Kiikka
11.10–11.30	Secondary Organic Aerosol emission potential from cookstoves ❖ Dr. Jarkko Tissari
11.30–12.00	Tea/coffee break
12.00–12.30	Indoor Air Quality and Emission Characteristics of Household Cooking Practices in 3 Ecological Regions of Bagmati Province, Nepal ❖ Enna Mool & Charan Bhattarai & Balkrishna Poudel
12.30–13.00	Experimental campaigns in Nepal: main results and conclusions ❖ Dr. Marko Hyttinen
13.00–13.10	Group photo
13.10–14.00	Lunch
14.00–14.20	Emission Inventory and mitigation potential of GHGs and harmful air pollutants from household cooking in Nepal ❖ Dr. Bhupendra Das
14.20–14.40	Clean Cooking Transition: How Behaviour, Finance, and Technology Shape Adoption Pathways ❖ Prof. Dr. Sunil P. Lohani
14.40–14.55	Cooking Practices and Key Survey Insights ❖ Sophiya Bista
14.55–15.00	Closing words

^a Nepal standard time (UTC+5.45)