

SRT Guatemala: Indoor Air Pollution



Lake Atitlan, Guatemala

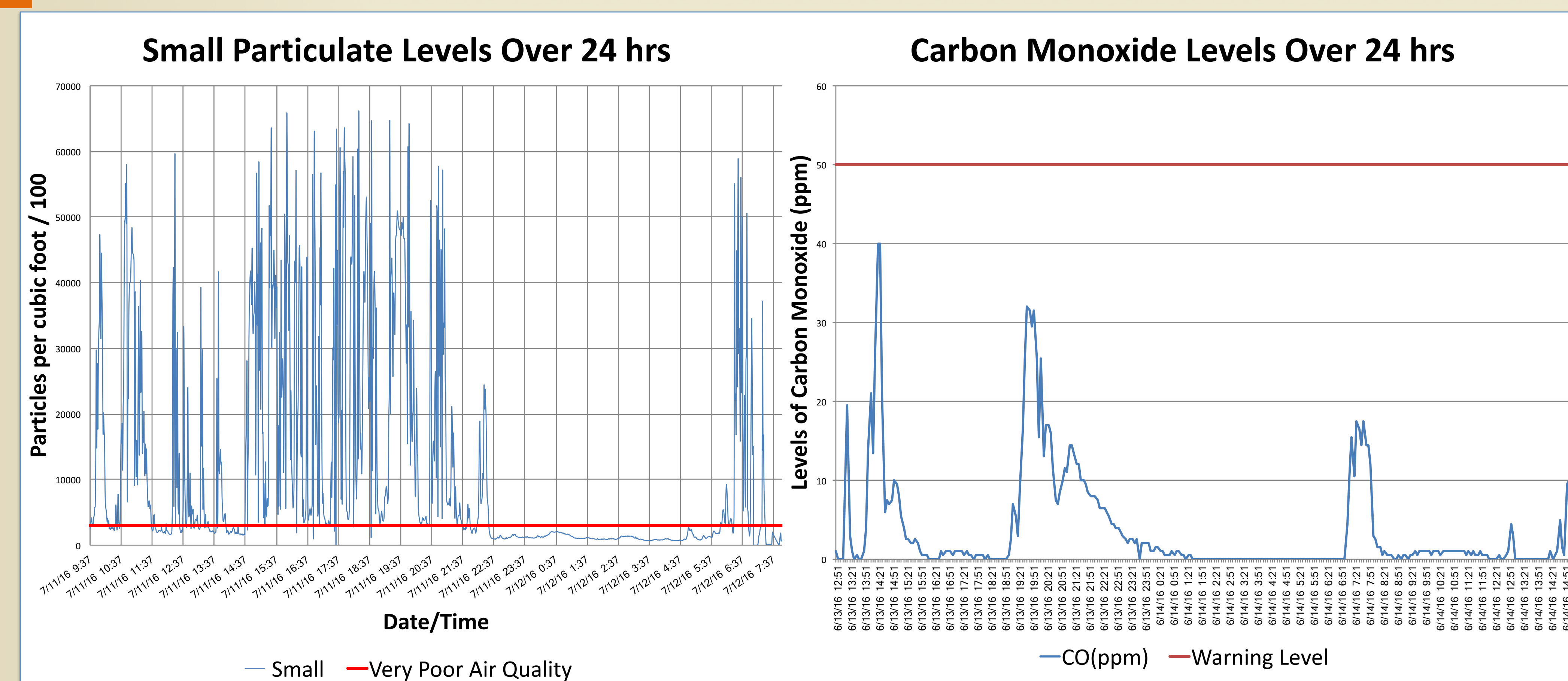
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Project summary: Indoor air quality, cooking, and bathing habits were investigated in Indigenous Mayan households in six villages surrounding Lake Atitlan in Guatemala. Testing revealed that large and small particulate matter reached unsafe levels in 100% of the homes investigated while 50% had unsafe CO levels.

OBJECTIVES

- Assess the levels of large and small particulate matter and carbon monoxide in kitchens over 24 hours
- Investigate cooking, bathing, and trash burning habits
- Inform community members of ways to reduce exposure to indoor air pollution



Example graphs for levels of small and large particulate matter (left) and carbon monoxide (right) over 24 hours

METHODOLOGY

- Visited 24 homes in six villages around Lake Atitlan in Guatemala
- Conducted interviews asking specific question about cooking habits, bathing habits, and trash burning habits as well as gathered observational data such as type of stove, presence/absence of chimney, and wall material
- Used air quality monitors to test particulate matter and CO in the kitchens over a 24 hour period
- After conducting the research, organized community-centered talks in each community to give tips on how to reduce production and exposure to indoor air pollution

CONCLUSIONS

- In 100% of the homes investigated, small and large particulate matter reached unsafe levels within the 24 hour period.
- We found extraordinarily high levels of small particulate matter – an average of 90,000 particles per cubic ft/100.
- In 50% of homes, CO levels reached above the warning level during the 24 hour period.
- Future investigation is needed to study the health consequences of such high pollution levels.



A young girl in front of her family's heating stove



Our translator Micaela (right) and a participant after conducting an interview

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