

AWASUKA & PRACTICAL ACTION: CHIMNEY-HOODS - HEALTH BENEFITS I

NEPAL CONTEXT



IN NEPAL

- **74,4 % households** depend on solid **biomass** for **cooking energy**. It is most polluting fuel, harmful to human health and environment.
- Every **year** around **35.000** persons (mainly **women** and **children**) **die** prematurely and 225.558 are ill because of indoor smoke
- Pneumonia, bronchiolitis chronic bronchitis (long-term cough with mucus), emphysema (serious damage to the lungs over time), asthma and lung cancer are among top **illnesses**.
- Significant time (around **100days/** household per **year**) is spent for fuel **collection** & processing
- **Women** are **most vulnerable** to household air pollution and drudgery related to fuel collection/processing.

PROJECT INTERVENTION



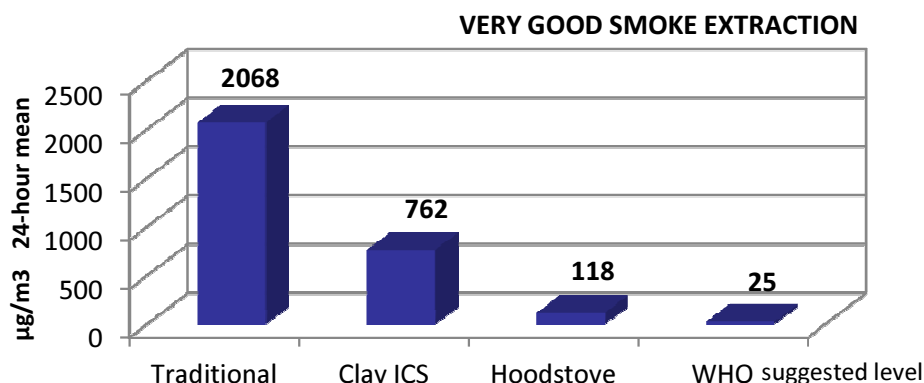
CHIMNEY-HOOD

A package of specifically designed **smoke-hood** and an **improved biomass cook-stove (ICS)**

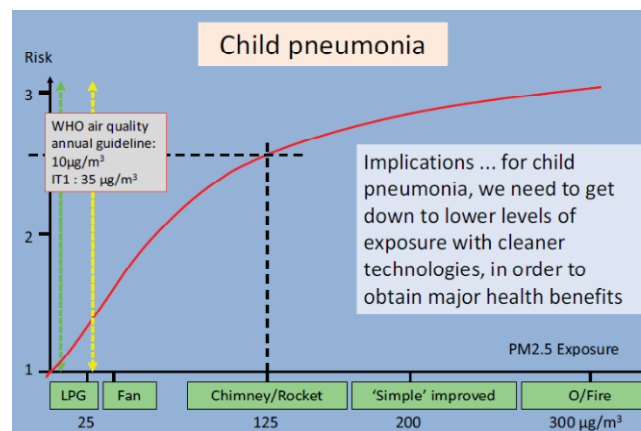
- More than **80% reduction** in household **air pollution** (good extraction of smoke) leading to respiratory health improvement of users
- **40% fuel saving** leading to time saving and drudgery reduction

Nepal Government is committed for providing *Clean Cooking Solutions for All*.

CHIMNEY-HOOD HEALTH BENEFITS



HOUSEHOLD AIR POLLUTION AND HEALTH IMPACT



AWASUKA & PRACTICAL ACTION: CHIMNEY-HOODS - HEALTH BENEFITS II

LOCAL CONTEXT IN BHIMPHEDI

In 2013 Amics del Nepal conducted a health report in Bhimphedi VDC performed by Dr Paula Minguell (ICRC). In 2019 these results were consulted with Bhimphedi Health Center and they were verified to be still valid.

According to the updated results, these are the leading death-causing diseases in Nepal per year:

| | |
|----------------------|--------|
| 1. Respiratory | 23.04% |
| 2. Cardiovascular | 19.63% |
| 3. Perinatal & Natal | 10.90% |
| 4. Cancer | 10.86% |
| 5. Digestive | 7.75% |
| 6. Stroke | 7.65% |



Following the same results, these are the most common diseases in Bhimphedi, per year:

| | |
|----------------------|-------|
| 1. Upper Respiratory | 9.62% |
| 2. Pyrexia | 7.09% |
| 3. Pharyngitis | 6.80% |
| 4. Falls | 6.65% |
| 5. Impetigo | 6.08% |
| 6. Viral influenza | 4.39% |



INVOLVEMENT OF LOCAL COOPERATIVES

Local Cooperatives are encouraged to get involved in the chimney-hood construction process by creating credit-lines, as they can obtain many benefits from it:

- Contribution to the improvement of health and living conditions for all Cooperative members, as well as for other underprivileged collectives (social chimneys)
- Contribution to forest conservation
- Fostering of new employment sectors : chimney awareness and marketing, managing, manufacturing...
- Incentives from Practical Action



THERMAL CONFORT AND SAFETY IN WINTERTIME

UNSAFE SITUATION

In winter, many villagers get warm around bonfires. But this practice, apart from being unhealthy due to smoke, also causes many injured by burns, with serious injuries that can lead to coma or death.



SAFE SITUATION

Chimney-hoods can provide a healthy, warm and safe environment, so that many people can sit around them and get warm. The fire's dangerous flames are confined inside the cooking stove.



AWASUKA & PRACTICAL ACTION: CHIMNEY-HOODS - CONSTRUCTION PROCESS I

USER'S RESPONSIBILITIES & AWARENESS TRAININGS

During the **awareness trainings** and after talking about the **health benefits**, the social mobilizer plays a **video** featuring him interviewing the first chimney-hood users in Bhimphedi. The video covers extensive details and information about the chimney installation, so that the users will not have any doubts about its flawless functioning. Questions like: *"will water come inside my home from the chimney hole at the roof?"* are perfectly answered and explained. Later on he talks about the **user's responsibilities** if they want to have a chimney installed in their home: material collection (1) and transportation (2).

1. LOCAL MATERIALS TO BE COLLECTED BY EACH USER'S FAMILY

5 Stone Baskets (Dhoko)



3 Water Pots (Gagri)



4 Clay Sacks (Dhoko)



USER'S RESPONSIBILITIES: MATERIAL COLLECTION

Once a chimney-hood has been ordered, the users must contribute in the construction works by gathering some local materials - stones, clay and water - and carrying them to the place where the chimney has to be installed.

"AWASUKA CHIMNEYS" AWARENESS VIDEO



2. METAL SHEETS PORTED BY USER'S FAMILY MEMBERS



USER'S RESPONSIBILITIES: METAL SHEET TRANSPORTATION

Besides collecting the local materials, the users must also collaborate in the chimney construction process by carrying the metal-sheets from the closest motorable road to their homes.

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MANUFACTURER'S WORK

1. IMPROVED-COOKING-STOVE -ICS- CONSTRUCTION

All materials collected by the users – stones, clay and water – are used by the masons to construct the improved cooking stove, also called: ICS.



2. HOOD INSTALLATION

After the ICS has been built, all the metal sheets corresponding to the chimney-hood can be assembled on top of the cooking stove.



3. CHIMNEY INSTALLATION

Once the chimney-hood has been installed inside the house, the masons are ready to install the chimney on the roof. They use a special piece called “apron”, which does not let water inside. There is another important piece called “cap”, which covers the upper part of the chimney, but still lets the smoke out.

