

Traditional Fish Smoking & Testing Prototype Smoke House Designs Development and Appropriate Technology (DATE) in Cambodia



Traditional smoking method



Much fuelwood is required



Smoke fumes are unconfined



It is mainly the women who are responsible for fish smoking and therefore suffer the most from inhalation



Children and people surrounding the fish being smoked are exposed to the fumes



Wood is harvested from the surrounding flooded forest



Temporary camps are set up during the fish smoking season

- ❖ ***Inefficient fuel use leads to unsustainable levels of deforestation of surrounding flooded forest***
- ❖ ***Smoke inhalation from open smoking methods leads to respiratory health problems and results in eye and skin diseases***

New Smoke House Prototypes

Chonkran Chha'é Trey (A1)



Model A1: Made from steel frame and smoking racks covered with woven bamboo sheet walls. Costs approximately 40USD (durability est. about 3 years)



Model A2: Made from steel frame covered with metal sheet walls. Costs approximately 60USD (durability about 4-5 year)

Chongkran Chha'é Trey Diek Thung (B1)



Model B1: Made from used steel drum with 3 metal smoking racks. Costs approximately 60 USD (durability about 4-5 year)

New prototypes smoke houses have 4 main benefits

- ❖ *More efficient use of woodfuel (saves approximately 40 %).*
- ❖ *Reduces the time required to collect fuelwood and helps reduce the degradation of forest resources.*
- ❖ *Smoke fumes are more confined which reduces the risk of smoke inhalation and associated respiratory health implications.*
- ❖ *Reduced eye and skin health problems*
- ❖ *Improved preservation of fish increasing the storage life and quality of the product.*
- ❖ *Portable - can be moved to fish smoking camp*

The Fish Smoking Process

1. The fish used must be fresh. Any size and weight of fish can be used, but each batch to be smoked must be of a similar type and size.
2. The fish must be well prepared by cutting and cleaning.
3. The fish are skewered using small bamboo sticks about 20 cm long and 3 mm in diameter. Normally, the fish is skewered at the head with 12 to 14 fish placed on each skewer.
4. The prepared fish skewers are placed in the fish smoke house in vertical rows and a 1 cm gap is left between each skewer to allow for the smoke to circulate.
5. On average 100-150 skewers of fish are placed in the smoke house together.
6. The fish are smoked for 5 to 6 hours.
7. Once the fish are smoked it must be dried again by smoking or sun dried 2 to 3 times a week.