

Better kitchens make for better energy use and healthier homes

THE ROLE OF THE KITCHEN HAS BEEN LONG NEGLECTED BY ARCHITECTS, ENGINEERS AND HOME USERS THEMSELVES, WHEN IT COMES TO ENERGY USE FOR SUSTAINABLE DEVELOPMENT, WRITES *MARIA NYSTRÖM*, AN EXPERT AND AUTHOR ON KITCHENS AT LUND UNIVERSITY IN SWEDEN.

CONDITIONS LIKE THOSE DESCRIBED by the Nobel literature laureate, Mr. V.S. Naipaul, persist today in many developing countries. The kitchen, after all plays a most important role in the home, and has done so throughout history dating back to some of the earliest archaeological remains of early human settlements. However, the role of the kitchen has been neglected by architects, engineers and people at home.

Why should the kitchen be given high priority? Because it plays a key role as the place where family meals are prepared and cooked, and where the energy and technology requirements of a dwelling intersect. It must be safe, efficient, clean and healthy. In reality, as discovered by Mr. Biswas, neglect makes the kitchen a frequently dangerous and unhealthy place for those working or spending time there. In developing countries, those are predominantly women and children.

Where traditional fuels are used, which is the case for over the half of the population of the world, kitchen users are exposed to indoor air pollution, with the risk of acute or chronic respiratory diseases, cancers, or carbon monoxide poisoning. Burns and scalds from unprotected stoves and fires are also major health hazards, especially among children. Other risks come with increasing

"Then Mr Biswas had another surprise. Through the doorway at the far end he saw the kitchen. And the kitchen had mud walls. It was lower than the hall and appeared to be completely without light. The doorway gaped black; soot stained the wall about it and the ceiling just above; so that blackness seemed to fill the kitchen like a solid substance" —

V.S. Naipaul in
A House for Mr Biswas.

use of modern and supposedly safer sources of energy such as electricity. This can be an unforeseen cause of danger due to poor understanding by the user of the risk of open wires or contact with water.

Energy saving cooking stoves have come in for a good deal of attention the recent decades, mainly because of deforestation, desertification, energy crises, environmental pollution, and other problems connected on the global level. The main reason why much attention is given to stoves is that cooking demands a lot of energy. Some 50-70 percent of all the wood used in the world ends up under someone's cooking pot.

Experience with previous stove projects shows that economic realism alone will not persuade people to accept a new stove. People's cooking patterns often lie deep in tradition, and behaviour cannot meet priorities like time saving and energy efficiency. Technology change requires that the stove and its immediate surroundings, as well as the user must be included. The time and energy saving argument has not been strong enough to persuade families to use better stoves.

The first step in designing a kitchen is to learn to understand the kitchen environment, acknowledge and learn about local customs, practices, and traditions so that the people living in a home have a say in what is best.

It is important to recall that the whole range of culinary activities defines the boundaries of kitchens. These may take place indoors, outdoors, or both. Architects and engineers must take thinking beyond physical walls into account.

The kitchen area is a complex environment with the *culinary activity chain* as its main function.

This process has a flow of activities and sub-systems. These entail food preparation, cooking, dishing up, dining, washing up, drying and storage. Kitchen activities are linked to working positions, sitting, standing, squatting or bending while cooking.

Saturating the market with energy saving cooking stoves, or extending stove projects so that they comprise the entire culinary area, is not enough if the aim is to reduce and optimize energy consumption of households.

Household energy is more than fuel for cooking. Water for washing and drinking must be heated, the house must be heated or cooled, lighting is required, animal food must be boiled.

The design of a house, a neighbourhood and a city is therefore of great importance for indoor climate, congenial surroundings, energy consumption patterns, and to health and well-being.

