Evolution of Solar Cooking technology in India and way ahead

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Abstract:

Indian government has been promoting solar cooking since its Independence in year 1947 and by 1985 there were already more than 550,000 Solar Cookers (Box type).

Solar Box Cookers were supported with subsidy and promoted among rural population to reduce deforestation.

550,000 solar cookers sound impressive and a big number but for a country like India it does constitute a fraction of its population.

There is substantial number of people who use and love the Solar Box Cooker as cooking happens at low-temperature and retains its nutritious values and it has been seen that major users are school teachers and semi-urban house holds but the Target group of rural women did not accept the same as it was found to be too slow and that it could not cook all items.

Sk 10/ Sk 14 Parabolic Solar Cookers were introduced in 1990's by Gadhia Solar and Eco Center ICNEER based on technical support from Dr Dieter Seifert of Germany and they were more acceptable as it could cook fast, fry but affordability remained a major hurdle as people who could afford it did not need (as they has access to subsidized Liquidified Petroleum Gas-LPG) and people who needed it could not afford it. Middle Class women refused to use same as it required to go out and cook and they demanded that why cannot they have same luxury like man who sit and work in Comfort of their air-conditioned offices.

Thus Scheffler Parabolic Concentrators were introduced that enabled cooking in comfort's of the kitchen but to over come the price hurdle it was introduced as Community Solar Cookers and introduced in Mid-day Meal programs and for schools and hostels and Ashram.

On request of a Spiritual Institution Brahma Kumari's a NGO an Institutional Solar Steam Cooking System was developed for first time in World that cooked with solar steam.

In the presentation different types of Solar Steam Configurations and with different types of Solar Concentrators that have now evolved in India will be presented and discussed.

The way forward to make them more users friendly by over coming the limitations of timing (to be able to cook at night and to be able to fry) with different storage systems will be shared and discussed.

Key words: Experience with different models, integrations, acceptance, challenges, Networking, Interacting, sharing and learning, co-operation