

A study to assess potential, deployment issues, challenges, awareness level and solutions to promote solar cooking at household level in India

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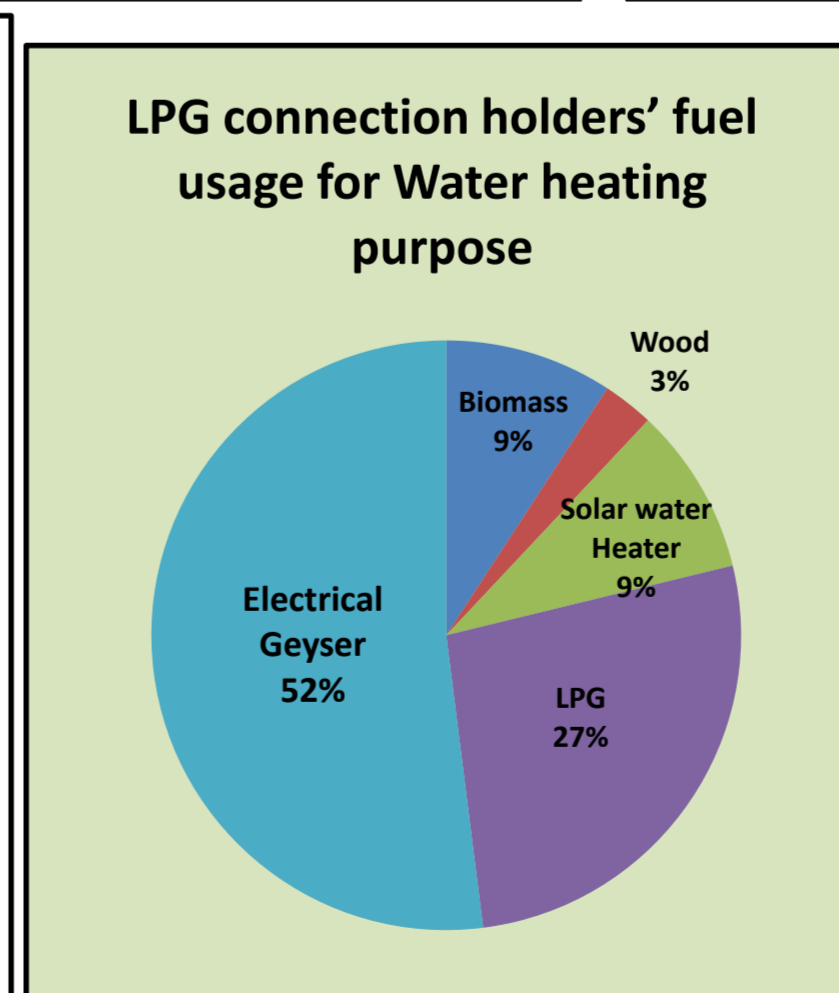
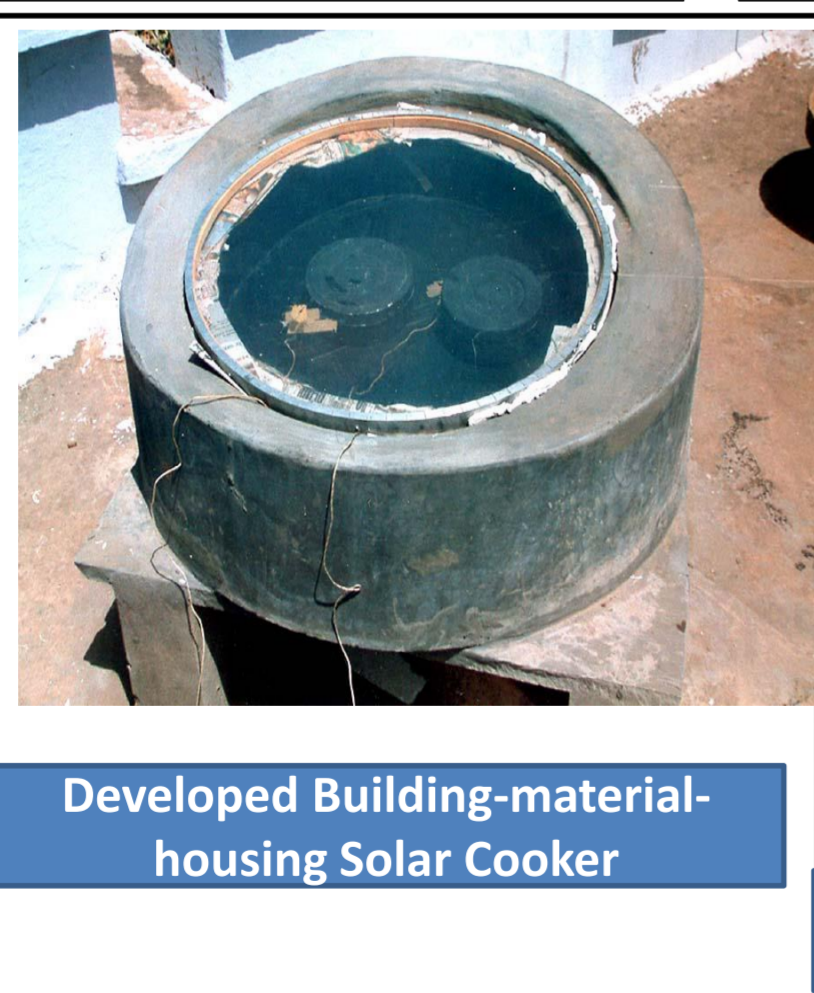
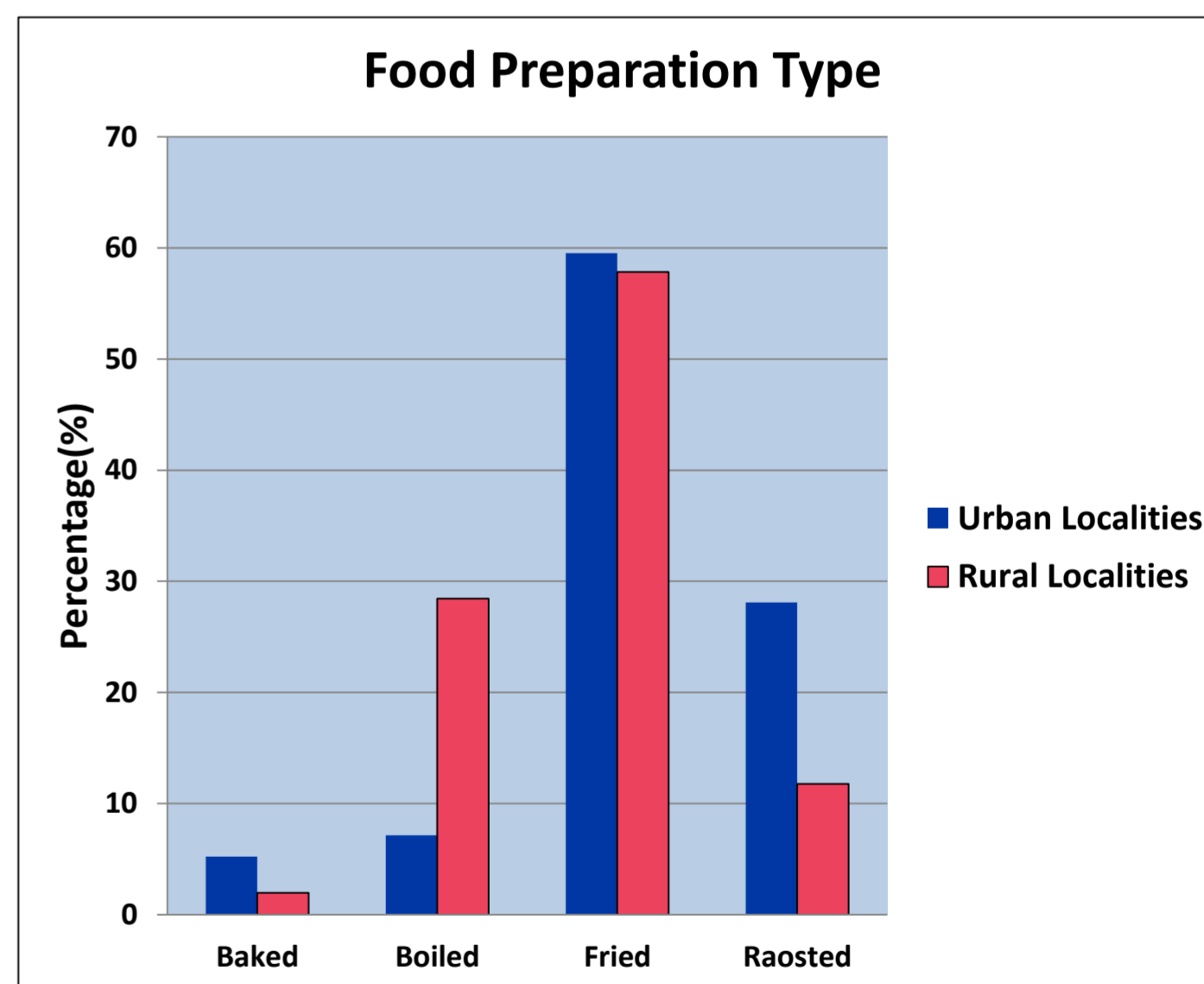
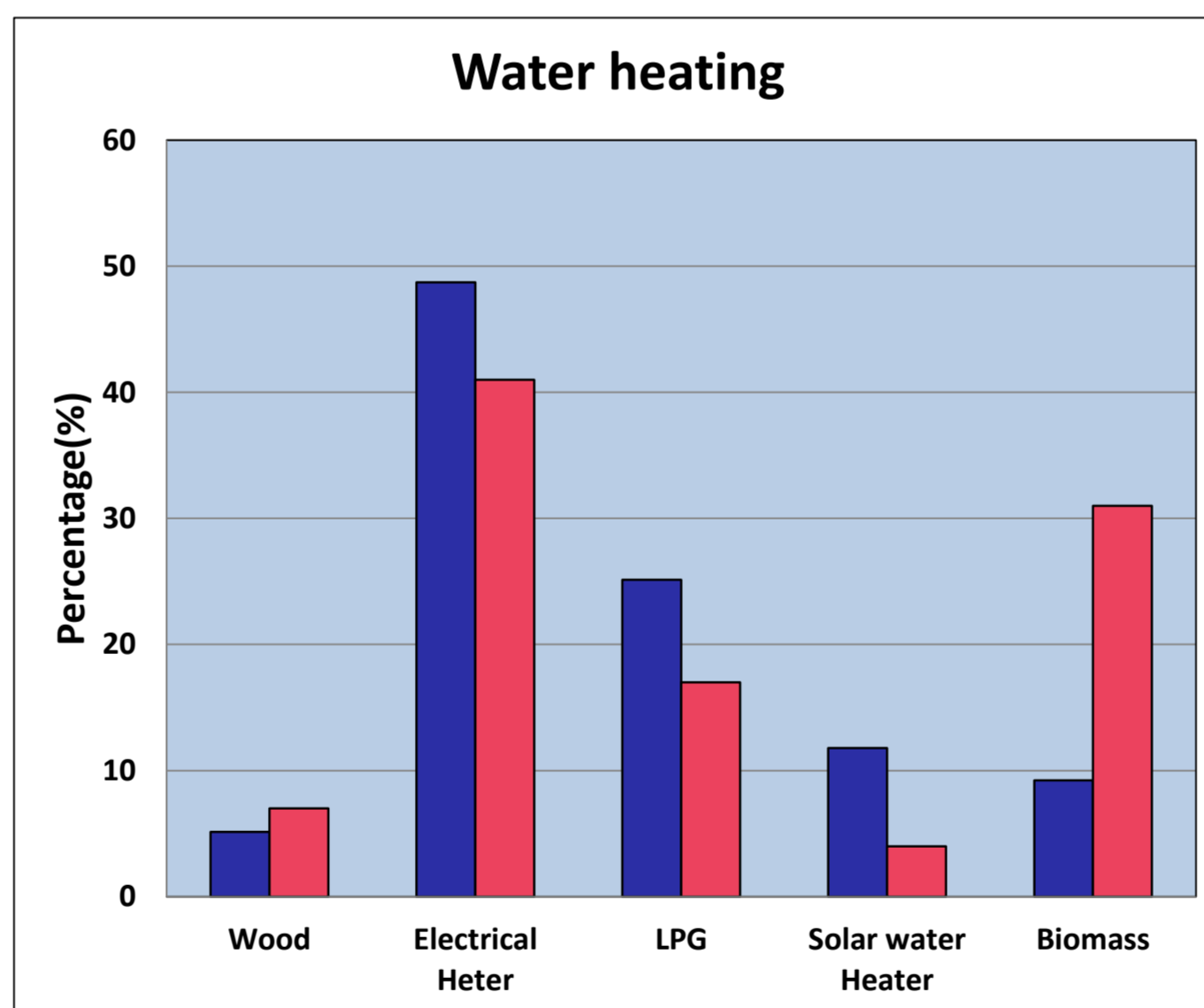
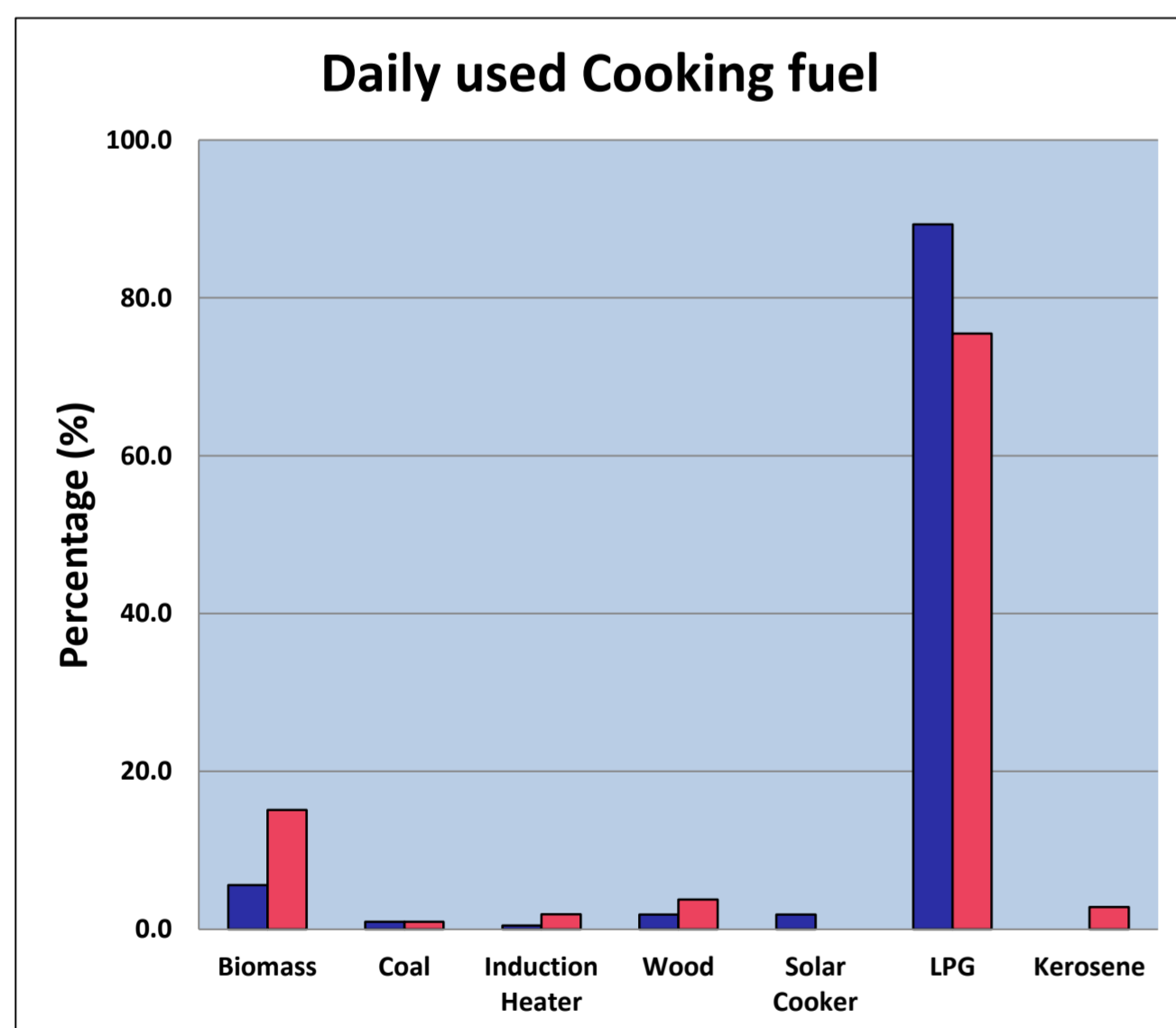
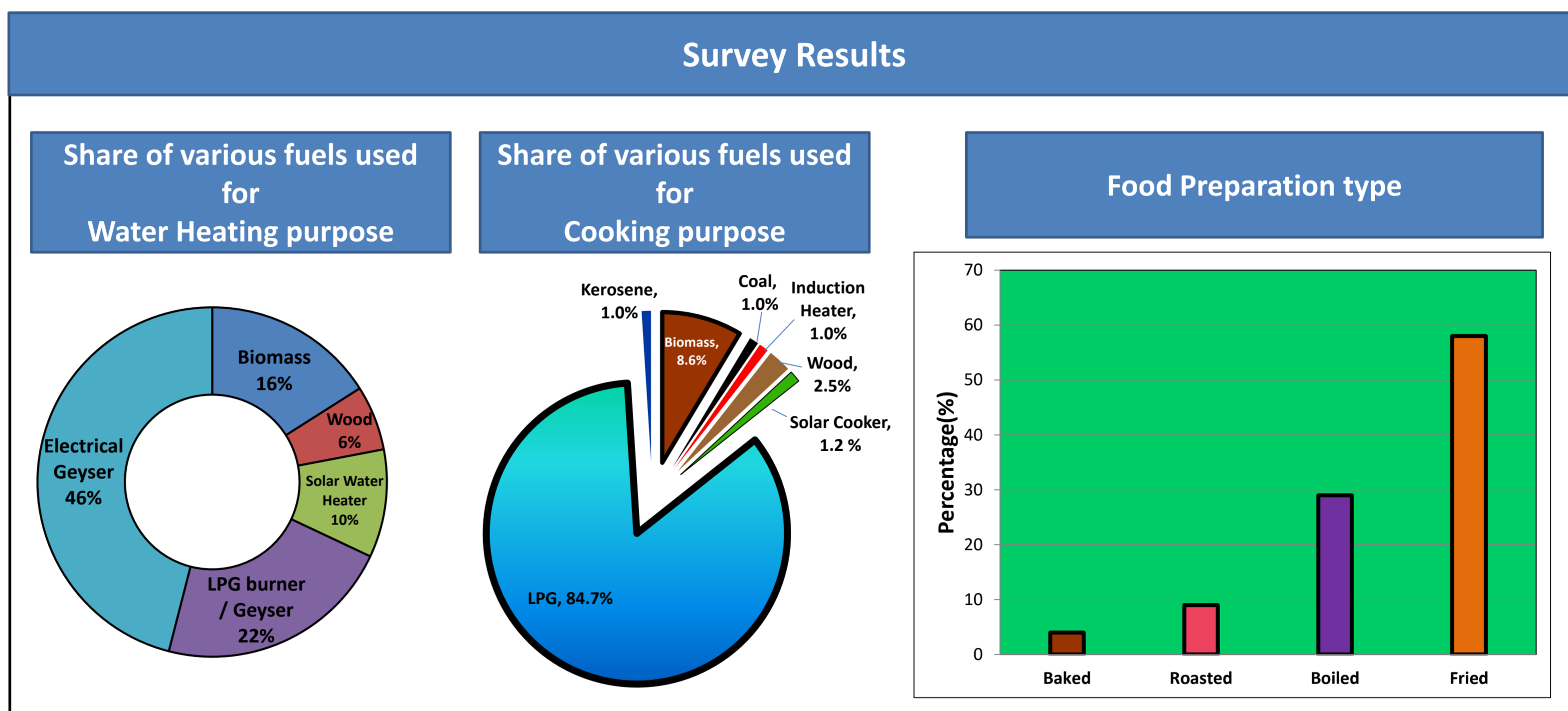
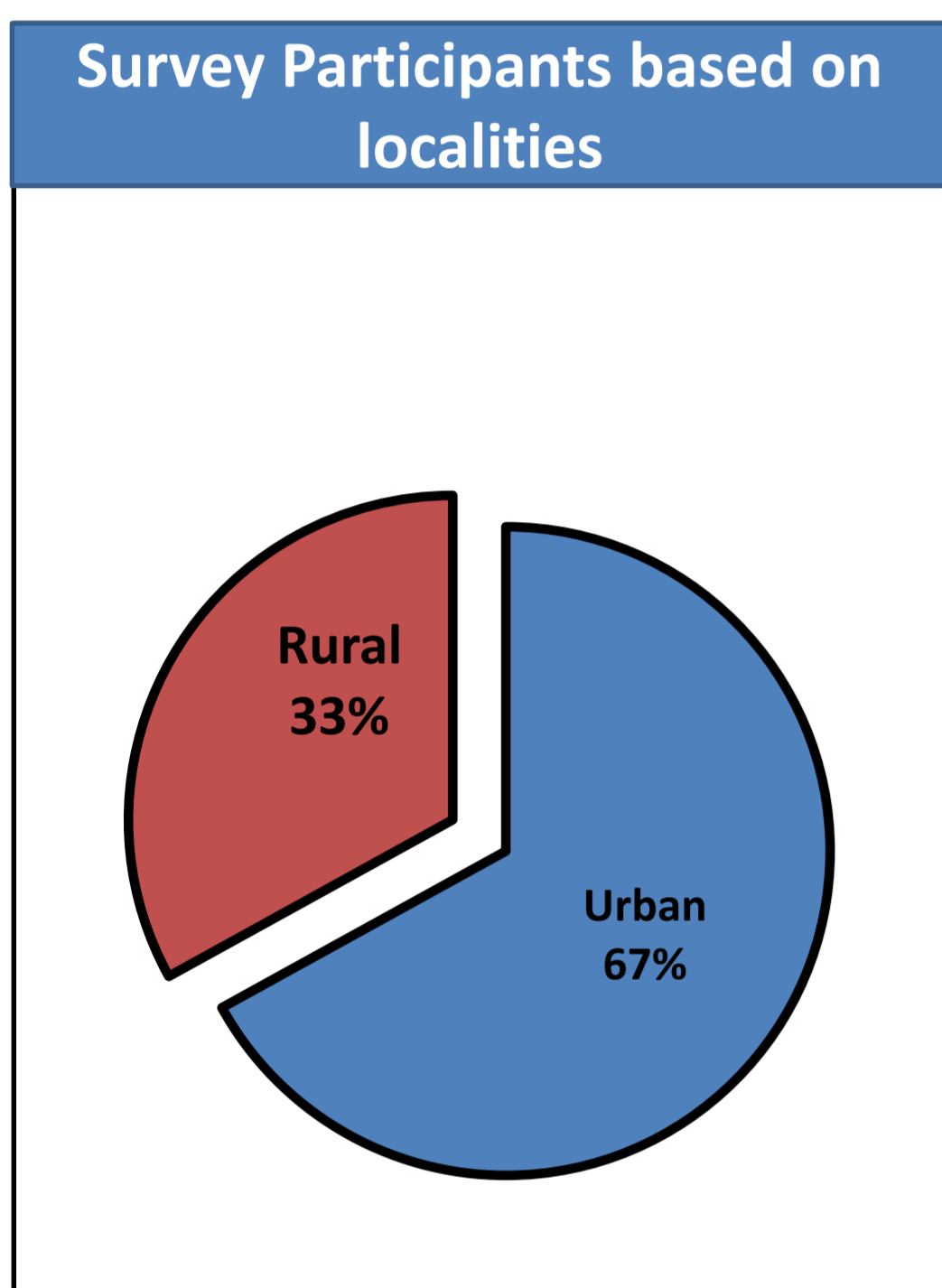
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Abstract

This poster presents a study to assess potential, deployment issues, challenges, awareness levels and solutions to promote solar cooking in India. India is blessed with ample amount of solar radiation (1), varies in range of 4 to 6 kW/m²/day. As per census 2011 India (2), with around 246 million households in India there is an enormous potential for solar cookers. Further there are hostels, schools, dhabas, canteens etc. which further adds to the potential. Even if solar cookers penetrate half of the households, then also there is potential of 123 million solar cookers. Out of the total of 1210.2 million populations in India, the size of rural population is 833.1 million (or 68.84% of the total population) and urban population is 377.1 million (or 37.7%). The main energy consumption for households is for **cooking and lighting purpose**, which is also an indicator of the living standards and lifestyles of population. In India, different types of fuels are used for cooking purpose such as **firewood, crop residue, cow dung cake, coal, charcoal, kerosene, LPG, PNG, electricity, biogas** etc. It has been reported in census 2011 India that use of firewood for cooking purpose by households is highest at 49.0% followed by LPG/PNG with a percentage share of 28.5%. Around 66% of the total households in India use firewood / cow dung cakes / crop residue for cooking applications, where 85% of rural households and 23% of urban households use these fuel combinations. The main factors that affect the promotion and penetration of solar cooker at household level is lack of awareness, acceptability, availability, convenience, efficiency, repair and maintenance chain etc. The poster presents an analysis of all these factors on the basis of survey (contained 67% of urban & 33% of rural views) conducted and tries to suggest some solutions to increase the penetration of solar cookers in current market. The increased penetration of solar cookers can positively affect the manufacturing, sales and service sectors, provide more employment opportunities and safeguard environment. Thus solar cookers can help in achieving target of sustainable development on social, economic and environment levels.

Key words: Solar Cooker Promotion, India Survey for solar cooker, Pros and Cons of present rate of fuel consumption.

Name (नाम):	METHOD OF WATER HEATING IN WINTERS (सर्दियों में पानी गर्म करने की विधि):	COOKING FUEL YOU DAILY USE (खाना पकाने का ईंधन):
STATE (राज्य):	HAVE YOU HEARD ABOUT SOLAR COOKERS BEFORE? (आपने कभी पहले सोलर कुकर के बारे में सुना है):	NO. OF FAMILY MEMBERS (परिवार में सदस्यों की संख्या):
ADDRESS (पता):	WHAT KIND OF FOOD YOU MOSTLY COOK/ PREFER (मुख्यतः कैसा खाना पकाते हो):	WOULD YOU LIKE TO LEARN ABOUT SOLAR COOKING? (क्या आप सोलर कुकिंग सीखना चाहेंगे)
DISTRICT (जिला):	MONTHLY COST OF FUEL FOR COOKING IN (₹) (मासिक कुकिंग का खर्च (₹))	HAVE YOU USED SOLAR COOKER BEFORE? IF YES ,PLEASE WRITE ITS TYPE & COOKING EXPERIENCE. (क्या आपने पहले सोलर कुकर उपयोग में लिया है?, यदि हाँ , तो कुकर का प्रकार एवं अपना अनुभव लिखें)



Conclusion:

The online survey form has been filled up by 318 people. They all belonged to the different corners of India. The average number of family members is five. Most of the data has been filled by the people who have never used solar cookers before. It is really encouraging and interesting to find that more than 80% of the people surveyed are keen in learning solar cooking. The percent of solar cooker users from among the surveyed group is just 1.2% thus there is considerably a large potential to tap. Most of the people surveyed are using LPG (more than 84%). With reduced availability of LPG and reductions in subsidies, people may come forward to use solar cookers. Further 33% people are interested in buying solar cookers and 46% are not clear, which shows that if properly guided and user friendly solar cookers are available, around 75% of the people may start using solar cookers along with other options. The solar cooker manufacturers need to make the designs more convenient, efficient and cost effective and various models of solar cookers should be made available to the masses according to their needs. Further proper trainings and awareness campaigns should be conducted. In addition to these fast and reliable repair and maintenance service chain should be developed for sustainable growth of solar cooker users. More and more people are becoming interested in solar cooking so it is favorable time to start with proper plan at level of policy makers, manufactures, entrepreneurs, academic institutions to participate in this move towards cleaner option of solar cooking.

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