

# A Manual of



People's Participation Towards  
Addressing Indoor Air Pollution In Bangladesh  
With Assistance from The World Bank



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**DEVELOPED AND COMPILED BY**

**Village Education Resource Center (VERC)**

B-30, Ekhlas Uddin Khan Road, Anandapur, Savar, Dhaka

## **Team Members**

**Md. Yakub Hossain**

Deputy Executive Director, VERC

**Md. Quamrul Islam**

Hygiene Promotion Manager, VERC

**Subash Chandra Saha**

Coordinator, VERC

**Samar Prasad Das**

Consultant, VERC

**Anowar Hossain Mollah**

Asstt. Coordinator, VERC

**Computer Compose**

**Umme Salma**

**Editorial support and guidance provided by:**

**Shaikh Abdul Halim**

Executive Director

VERC

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**Village Education Resource Center (VERC)**

B-30, Ekhlas Uddin Khan Road, Anandapur, Savar, Dhaka

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## LIST OF ACRONYMS

ARECOP	–	Asia Regional Cookstove Program
ADP	–	Annual Development Plan
BCSIR	–	Bangladesh Council for Scientific and Industrial Research
CAP	–	Community Action Plan
CBO	–	Community Based Organization
CLTS	–	Community Led Total Sanitation
CWAC	–	Community WatSan Action Committee
CEA	–	Country Environmental Analysis
GOB	–	Government of Bangladesh
GO	–	Government Organizations
ICS	–	Improved Cook Stove
IAP	–	Indoor Air Pollution
ICDDR,B	–	International Center for Diarrhoeal Disease Research, Bangladesh
IIED	–	International Institute for Environment and Development, London
KII	–	Key Informant Interview
KPT	–	Kitchen Performance Test
LGED	–	Local Government Engineering Department
LGI	–	Local Government Institutions
M&E	–	Monitoring and Evaluation
MDG	–	Millennium Development Goal
MPA	–	Methodology for Participatory Assessment
MYRADA	–	A Voluntary Organization
NGO	–	Non-Governmental Organization
PIME	–	Project Implementation, Monitoring and Evaluation
PNGO	–	Partner NGO
PLA	–	Participatory Learning and Action
PPA	–	Participatory Poverty Assessment
PRA	–	Participatory Rural Appraisal
PRRA	–	Participatory Rapid Rural Appraisal
RRA	–	Rapid Rural Appraisal
PRAXIS	–	Institute for Participatory Practices
VERC	–	Village Education Resource Center
TCS	–	Traditional Cook Stove
UNDP	–	United Nations Development Programme
WB	–	World Bank
WatSan	–	Water and Sanitation

## Foreword

It is encouraging to note that in recent times, the issue of air pollution and environmental degradation is becoming a growing concern in Bangladesh. VERC has been trying along with other stakeholders to address the issue since long with its limited resources. To this effect Improved Cook stove (ICS) Promotion Program is being implemented in selected areas of the country in a collaborative manner with communities. A substantial amount of learning has been drawn which is being shared with concerned sector actors.

The process of learning on promoting improved cook stove has gained a new dimension with the introduction of innovative Community Led Total Sanitation (CLTS) Approach formulated by VERC. VERC has incorporated the lessons of community mobilization in its ICS Promotion program in addition to the application of Methodology for Participatory Assessment (MPA). After successful piloting of the approach and methodologies, the lessons learnt are worth sharing with others interested in addressing the air pollution and prevention of environmental degradation.

In the mean time World Bank has come up with the intention of extending support to the Government of Bangladesh in promoting clean energy use towards prevention of air pollution and preventing environmental degradation. To this effect, a tri-partite agreement was signed by LGED, VERC and Winrock International with World Bank support. The joint team of experts has carried out a study on the initiatives undertaken by the actors in addressing the energy use and pollution issue in the country. On the basis of the findings, the pilot program is planned to be undertaken by LGED. This manual is especially meant for application in the implementation of a pilot project. I hope that the manual would be an effective means for innovating more and more for future interventions in the sector.

I would like to thank Ms. Priti Kumar, Senior Environmental Specialist, Dr. M. Khaliqzaman, Consultant and Jonathan Rouse, Consultant of the World Bank for supporting this timely initiative meaningfully. Thanks are especially due to Mr. Subash Chandra Saha, Coordinator, Mr. Quamrul Islam, Hygiene Promotion Manager, VERC and Mr. Samar Prasad Das, Consultant for developing this participatory manual. I appreciate the constant guidance provided by Mr. Md. Yakub Hossain, Deputy Executive Director, VERC in making the implementation of this crucial undertaking possible.

Shaikh Abdul Halim  
Executive Director  
VERC

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Savar, Dhaka  
Bangladesh

## 1. PREFACE

This manual is the outcome of the detailed review carried by VERC and Winrock International team members of the status of household energy technology use patterns in Bangladesh for designing a pilot project to address the indoor air pollution issues. To this end, a series of round tables were held involving all the stakeholders, viz. government organisations (GOs), local government institutions (LGIs), non-governmental organizations (NGOs), community based organizations (CBOs) and the civil societies at different locations across the country. The filed level sessions helped explore the effectiveness of initiatives taken to address the effects of pollution through the use of cleaner household energy technologies and motivation with the application of VERC innovated Community Led Total Sanitation (CLTS) approach. Community participation being the guiding principle and driving force in making total sanitation successful, this approach has been adopted in the proposed pilot project. To facilitate the choice and to provide a broad base for the choice, energy sector initiatives were studied to identify the potentials and limitations.

The study teams were supported by the World Bank, Local Government Engineering Department (LGED), and International Center for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) experts. The study findings were shared from time to time with the supporting and study team members. In addition, the reports/feed backs were shared with the stakeholders who contributed in the deliberations particularly, the CBOs and community people at large.

This manual has been developed to provide help in the planning and implementation of the proposed IAP reducing pilot initiative in respect of service delivery, capacity building of the operational staff, and empowering the user communities, local government institutions, entrepreneurs as well as the management. The manual will help presenting the participatory tools/techniques and methodologies which will be put into practice for initiation, implementation, monitoring and finally, evaluation of the pilot project. The manual is a handy package of participatory process facilitation tools/techniques that need to be conceived, understood and assimilated professionally by the users so that the actors yield the maximum output while in action.

The manual is expected to be further enriched, updated and attain desired versatility as the outcome of efficient practice, relevant knowledge culling and refinement achieved during the pilot phase are reviewed, incorporated appropriately and finally a 'Resource Book'<sup>1</sup> is produced following successful piloting of the project.

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<sup>1</sup> The Resource Book would be a combination of tools/techniques, curriculum, schedules, facilitation process based on field practices. Various data collection formats, scoring sheets would be included particularly for practice, monitoring and evaluation.

## 2. INTRODUCTION

Indoor air quality is well known to be a major health concern in many areas of the developing countries of the world today. Indoor air pollution occurs inside smaller homes in the developing world, which is a great risk to mothers and children who happen to be both consistently around the homes and whose immune systems are not as strong as their adult counterparts.

Recently, the World Bank in collaboration with the Government of Bangladesh (GOB) has completed a study titled Country Environment Analysis (CEA) on Bangladesh. A major finding of this study indicated that majority of the people in the country living in the rural areas are facing indoor air pollution unavoidably due to the prevalent traditional cooking practices. As women mostly are responsible for cooking, they along with their children are affected most by IAP and therefore, are more vulnerable to IAP induced respiratory diseases.

Indoor air pollution is mainly caused by domestic cooking using traditional stoves fed with biomass fuels, viz. fuel wood, charcoal, dry twigs and leaves, agricultural residues such as plant residues, paddy husk and bran, jute sticks and animal dung. This menace of IAP can be effectively alleviated to a great extent by replacing the traditional stoves by improved cook stoves with chimney and cooking using cleaner fuels. Some research findings<sup>3</sup> also suggest that simple variations effected in certain household characteristics viz. construction materials, space configurations, cooking locations and ventilation systems can reduce indoor air pollution considerably.

Bangladesh Council for Scientific and Industrial Research (BCSIR) has developed a series of different models of improved cooking stove (ICS) suitable for a wide range of activities from domestic cooking to industrial heating purposes and also biogas plants for domestic cooking purposes. The dissemination of both ICS and biogas plants in the country has been taken up by different organizations and organisers of professional training courses along with demonstrations and installation of these technologies in the users' premises by skilled technicians. The government organizations and different NGOs have undertaken a number of projects for dissemination of ICS and biogas plants but desired success was not achieved due to lack of proper strategies for implementation of those projects. While carrying out the detailed and in depth study on the subject, various bottlenecks and constraints in the dissemination of ICS and biogas have been identified and measures of addressing them have also been considered. For example, issues and debates concerning the appropriate measurements of the ICSs have been sorted out by the experts and study team members and the results have been incorporated in the application manual for use in the forthcoming IAP reduction programmes.

VERC innovated a dynamic and effective WatSan approach, which has come to be widely known as "**Community Led Total Sanitation (CLTS)**"<sup>2</sup> approach. The approach involves community participation at all stages of implementing the Water and Sanitation (WatSan) programme starting with situation analysis and continues the stages of planning for improvement of the situation, identification of required resources, assigning tasks, monitoring and evaluation. The process starts with community awareness raising and interest creation through the use of different participatory tools and techniques. The process thus ensures people's participation right from the inception stage and enables them to go ahead with the planned activities towards achieving total sanitation coverage in a sustainable manner. The tools and techniques that are used in the programme have proved effective in other community based development interventions under implementation in VERC programme areas including the ICS promotion and IAP reduction one.

The benefits of IAP reduction programme are somewhat similar to that of CLTS, where the financial cost is considered by a household as a barrier to adopting the same, the direct benefits and other social benefits being less apparent to the individual household, public health and the community people in general. This is because of the absence or lack of effective knowledge, awareness and social mobilization campaign initiatives. However, impressive progress has recently been achieved in Bangladesh in case application of the Community Led Total Sanitation (CLTS), where ownership by communities that build and maintain the latrines without heavy subsidies and involvement of the LGI and NGOs have come up as key facilitators in the process.

Some NGOs working in the rural areas on CLTS and health initiatives suggested that if clean cooking technologies viz. ICS, biogas and improved kitchen options are included in the interventions, considerable

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<sup>2</sup> VERC Process Documentation 2007 and Subsidy or Self Respect (IDS)

reduction of IAP is possible. This manual will be a guideline to those practitioners in implementing the piloting of IAP project in the country.

In the pilot stage of the programme, the practitioners will be oriented on the use of the manual on the ground so that participatory tools and techniques are well adopted and put into practice for producing effective outcome of project interventions. The outcomes will be further refined and an updated and more appropriate version will be produced incorporating the lessons learned on the ground from the practical applications, resulting in the development of a more dynamic project implementation process on IAP in the country.

### **3. OBJECTIVES OF THE MANUAL**

This manual is intended to serve the purpose of ensuring participation of people from all walks of life involved in the programme on addressing IAP through introducing cleaner household energy technologies in selected areas of the country. This is aimed at helping the community people conceive and understand the relevant issues including the definition of the problem of indoor air pollution, its causes and adverse effects on health, simultaneously drawing an analysis of overall livelihood situations and its correlation with poverty. Accordingly, this manual will help all the stakeholders concerned in the process in drawing a detailed plans of actions by CBOs along with resource identification support, implementation of the planned activities and importantly, monitoring and evaluation of the interventions launched over time.

The key objectives are as follows:

- i. To make an assessment of the status of IAP in the community in a participatory manner
- ii. To find ways of making IAP interventions gender sensitive
- iii. To assess the limitations of traditional cook stove technology and fuel use
- iv. To assess choice of alternate technology options suitable for meeting community needs
- v. To assess effects on health of users and other inmates in terms of disease
- vi. To identify losses in terms of income, leisure, additional income for the family
- vii. To identify the reasons of non-use of improved cook stove technology
- viii. To determine ways of meeting the cook stove technology needs
- ix. To develop and establish institutional arrangements required for promoting the process
- x. To help in identifying the capacity needs in facilitation staff
- xi. To help in identifying the stakeholders involved in the process and determining their roles/responsibilities (across the PIME process )
- xii. To provide strategic directions towards entrepreneurship development with special indication to financing
- xiii. To identify and determine the main activities at individual and institutional levels

It has also been kept in mind all along that the staff members assigned to extend support to the community people should be able to identify his/her tasks and ways of performing them easily and surely.

### **4. PARTICIPATORY APPROACH AND METHODOLOGY**

Participatory methodology is a process deploying which the project personnel work at ease while interacting with the local communities with a view to exploring and analysing situations and resolving them. It is a communication process that results in creative self-expression within groups of communities. The participatory process enables community participation on any issue; facilitates communities to view problems and issues in new perspectives; and finds possibilities for innovative solutions to their problems.

Participatory methods encourage the participation of individuals in a group process, no matter what their age, sex, social class or educational background may be. The methods are especially useful for encouraging the participation of women, who, by usual and common cultural practices prevalent in many of the developing countries happen to be shy and reluctant to express their views, many of them being unable to read and/or write. Participatory methods are designed to build and cultivate self-esteem and a sense of responsibility necessary for one's decision making, their empowerment and voice raising.

Participatory methods render the process of decision-making easy and fun for women. They are designed for making planning and implementation of interventions possible through local level resource mobilization. Participants learn from each other and develop respect for each other's knowledge and skills in the process.

To be sustainable, development interventions must aim at enhancing the capacity of individuals and the community, so that the participants will eventually be able to initiate actions to improve their own situation. By engaging women, poor, vulnerable/marginal groups in problem solving activities, a sense of ownership development is possible to effect, which is a necessity for rendering any community level intervention sustainable.

The manual refers to both Participatory Rural Appraisal (PRA) and Methodology for Participatory Assessment (MPA) for piloting of the IAP project considering the appropriateness of tools and techniques. The salient feature of the PRA method is that this has been deployed successfully in implementing the CLTS interventions by many NGOs in Bangladesh working in the WatSan sector while the MPA tools have been used by some NGOs implementing ICS programme interventions in the country. Select PRA and MPA tools are recommended for use in the pilot phase of interventions for addressing IAP. Both the tools are useful in initiation of project activities starting from entry into a community through conducting an analysis of existing situation, need identification and action planning. Even in the implementation phase, select tools of PRA/MPA will be applicable to the monitoring, periodical assessment, mid-term evaluation and course correction and/or re-planning activities.

## **5. POTENTIALITIES OF PARTICIPATORY APPROACH IN IAP – ICS PROMOTION**

### **Historical Roots**

Participatory methods and approaches showed a way out of myriad bottlenecks in community relevant interactions and sustainability attainment and therefore, they were received with a lot of enthusiasm from the development practitioners. It has been perceived by all concerned actors in development today that through application of the participatory tools, all stakeholders including the illiterate and the less articulate people are able to participate meaningfully in depicting their situations effectively by making maps and diagrams, by analyzing the same, and above all, by coming out with plans of action meant for changing their situations. The approach provided a space for many poor and marginalized communities to articulate their problems and to indicate what could be done to improve their conditions. This led to a popular adoption thrust in favour of the participatory methods.

A number of participatory approaches with varying terminologies have since been designed and put into practice over a period of time. Rapid Rural Appraisal (RRA) was the very first to appear in the scene. Initially, RRA meant Relaxed Rural Appraisal. It later evolved into PRA or Participatory Rural Appraisal, equally and effectively applicable to all urban and rural situations. Subsequently, instead of PRA, some started using the term Participatory Learning and Action or PLA. However, all these terms – RRA, PRA and PLA – are commonly used for related participatory approaches.

During the mid-1980s, with the credibility of RRA increasing, the term 'participatory' came to be associated with RRA. At the international conference on RRA at the University of Khon Kaen, a typology of RRA was developed. Participatory RRA was one of the packages viz. exploratory RRAs, topical RRAs and monitoring RRAs (McCracken et al. 1988).

In 1988, two parallel events, one in Kenya and the other in India marked the evolution of the PRA. In Kenya, the National Environment Secretariat (NES), in collaboration with Clark University conducted an RRA which led to the development of a village resource management plan (Kabutha and Ford, 1988). This was described as Participatory Rural Appraisal, that is, PRA. In the same year, the Aga Khan Rural

Support Program (AKRSP), India, with the support of International Institute for Environment and Development (IIED), London, carried out participatory RRA in two villages. These yielded valuable inputs in the overall development of the PRA (Chambers, 1997).

**Table-2: RRA and PRA Compared**

Category	RRA	PRA
Major development	Late 1970s, 1980s	Late 1980s, 1990s
Major innovation by	Universities	NGOs
Main users	Aid agencies, Universities	NGOs, Government field organizations
Key resource earlier overlooked	Local people's knowledge	Local people's capabilities
Main innovation	Methods	Behaviour
Outsider's mode	Eliciting	Facilitating
Objectives	Data collection	Empowerment
Main actors	Outsiders	Local people
Longer-term outcomes	Plans, projects, publications	Sustainable local action and institutions

*Source: Chambers (1997)*

### Typology of participation

As per review of literature on participation as well as the ways in which participation is practised and exercised in different development interventions, it has been provenly understood that participation is conceptualized and understood in different ways in different situations. The manner in which participation can be enlisted also varies. Various attempts have been made to develop a typology of participation. Ways of enlisting participation clearly demonstrate the different conceptions of participation that people have, which are given below:

#### Box- 1: Typology of Participation

**Passive Participation:** People participate by being told what is going to happen or has already happened. It is a unilateral announcement by an administration or project management without listening to people's responses. The information being shared belongs only to external professionals.

**Participation in Information Giving:** People participate by answering questions posted by extractive researchers using questionnaire survey or similar approaches. People do not have the opportunity to influence proceedings as the findings of the research are neither shared nor checked for accuracy.

**Participation by Consultation:** People participate by being consulted, and external people listen to views. The external professionals define both problems and solutions, and may modify these in the light of people's responses. Such a consultative process does not concede any share in decision making, and professionals are under no obligation to take on board people's views.

**Participation for material Incentives:** People participate by providing resources, for example labour, in return for food, cash, or other material incentives. Much of the on-farm research falls in this category, as farmers provide the fields but are not involved in the experimentation or the process of learning. It is very common to see this called participation, yet people have no stake in prolonging activities when the incentives end.

**Functional Participation:** People participate by forming groups to meet predetermined objectives related to the project, which can involve the development or promotion of externally initiated social organizations. Such involvement does not tend to occur at the early stages of project cycles or planning, but rather after major decisions have been made. These institutions tend to be dependent on external initiations and facilitators, but may become self-dependent.

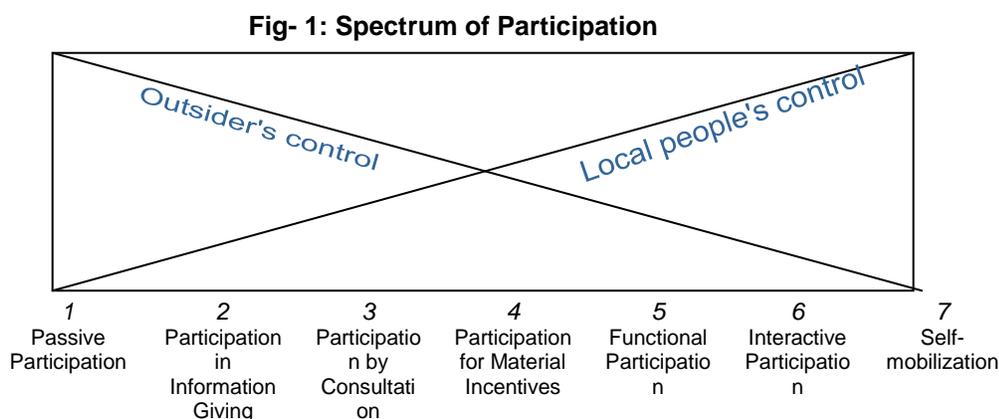
**Interactive Participation:** People participate in joint analysis, development of action plans, and formation or strengthening of local institutions. Participation is seen as a right, not just the means to achieve project goals.

**Self-mobilisation:** People participate by taking initiatives independent of external institutions to change systems. They develop contacts with external institutions for resources and the technical advice they need, but retain control over how resources are used. Such self-initiated mobilization and collective action may or may not challenge existing inequitable distributions of wealth and power.

*Source: Pretty et al. (1995)*

The operationalization of the particular type of participation depends on the type of project, its approaches and implementation methodologies, its resources and time-bound attributes, if any. Accordingly, application of the type of participation varies.

Considering the above mentioned types and their extent of operations, participation may be viewed along a spectrum with passive participation at one end and self-mobilization at the other end. Passive participation, as the term suggests, is where people are told what to do. On the other end is self-mobilization where the local people themselves are in total command. As one moves from passive participation to self-mobilization, the control of the local people and outsiders over the process varies.



*Source: Kumar, S (1996)*

The above spectrum shows that at one end, say in the case of passive participation, people's control is almost non-existent while at the other end, in case of self-mobilization, people have almost total control over the process while the role of outsiders is at best minimal. Participation by manipulation and passive participation can dis-empower the community, and both interactive and participation by self-mobilization can be highly empowering.

Participation is therefore being increasingly viewed as the process of empowering the local people. The main focus is on transfer of power, change in the power structure and transformation of the people. Thus, interactive participation and participation through self-mobilization are critical for participation to become a process of empowering the people so that they gain more control over their own resources and lives (Kumar, S. 2002).

### Major advantages of participation

**Efficiency:** Participation can ensure effective utilization of available resources. The people and other agents work in tandem towards achieving their objectives. The local people take responsibility for various activities. All this improve efficiency and make the project more cost effective.

**Effectiveness:** Lack of people's involvement has been seen as one of the major causes of the failure of most projects to be effective. People's participation can make the projects more effective by providing them a space in order to express their views and opinions in deciding the objectives and strategies, and by participating in implementation, thereby ensuring effective utilization of resources.

**Self-reliance:** Many development interventions have been found to be creating a kind of dependence syndrome. If the local resources, however – both human and material – are utilized on the basis of decisions taken by the people themselves, the realization grows that many problems faced by the people have local solutions at their levels. With active involvement of the local people, it is possible not only to get rid of the mentality of dependence but also to increase their awareness, self-confidence, and control of the development process. In fact, the involvement in decision-making, implementation, monitoring helps in developing local human resources, which ultimately leads towards attainment of self-reliance.

**Coverage:** Development interventions are directed towards the uplift of the weaker sections of society. People's participation can be a potent way of ensuring the flow of the benefits to the target groups. Furthermore, the cost-effective operations can ensure that resources are available for wider coverage of the weaker sections (hard-core poor) of society than would otherwise be possible.

**Sustainability:** Generally, development interventions are funded either by government or by donor agencies. Experience has shown that development interventions from the externally assisted projects fail to sustain the required level of development activity once support or inputs are diminished or withdrawn by the funding agencies. People's participation is regarded as an essential and inevitable driver for the continuity of the activities. The involvement of local people, local resource identification and its proper and effective utilization create a sense of ownership among the people over the development interventions. This sense of ownership is essential for the sustainability of the interventions even after external funds cease to flow. However, in this case, a follow up should be continued after the fund flow support is discontinued.

## **Attitudes and Behavior**

There are four pillars of PRA: methods and tools, process, sharing, and attitudes and behavior. In fact, attitude and behavior in PRA is considered by most experts as the most important factor. For most experienced practitioners, it is vital to PRA and many consider it even more important than methods. During the early 1990s as PRA appeared, the focus was more on methods. Soon the realization grew that proper and appropriate attitude and behavior on the part of the practitioners were virtually the keys to ensuring the success of PRA as well as all other participatory methodologies (Kumar, S. 1996). The attitudes and behavior which are essential for PRA include:

- Self critical awareness of one's behavior, biases and shortcomings;
- Commitment to the poor, weaker, and vulnerable;
- Respecting others;
- Not interrupting, not lecturing, but being a good, active listener;
- Not hiding, but embracing errors;
- 'Handing over the stick', i.e., passing the initiative and responsibility to others;
- 'They can do it', i.e., empowering others through confidence in their capabilities;
- Open ended flexibility to make space for the priorities of the poor

Attitude and behavior change is quite a difficult process. PRA facilitators have used a number of games and exercises – dominators, speaking circles, uppers and lowers—to initiate a process of attitudinal change. The realization has grown that these exercises during the PRA training can bring in an element

of awareness among the participants of the need to look at their own attitudes and behavior. They are likely to inculcate a process of self-reflection in the participants.

Generally experiential in nature, these exercises involve the group and are somewhat complicated. A number of approaches have been tried for bringing about the desired change in attitude and behavior of the group members. (Kumar, S. 1996. ABC of PRA – Attitude and Behavior Change. Patna, India).

**Box-2** enumerates a set of recommendations by a group of PRA practitioners on attitude and behavior change:

#### **Box-2 PRA – Attitudes and behavior : Recommendations**

A group of PRA facilitators from all over the world who reflected on the primacy of attitude and behaviour in a 10-day workshop held in Bangladesh in 1996, organized jointly by Action Aid, India and SPEECH, a Madurai based NGO, came up with a set of recommendations on attitudes and behaviour in PRA. These are:

**Endorse the primacy of personal behaviour and attitudes.** This applies in all organizations involved – donor, government, NGOs, CBOs, consultants – and at all levels. Staffmembers are to be encouraged to be participatory and non-dominating modes in their official and private lives. Change in personal behaviour and attitudes is necessary to be able to recognize and reward participatory behaviour and attitudes.

**Provide face-to-face learning experience for staff at all levels through interactions with local people, especially the poor and the marginalized.** PRA exposure for senior staff needs to be organized. Reward those who take them up. Make opportunities for poor people to present their realities to those in authority freely.

**Don't rush – take your time.** Much more time allocations should be there through the early stages of projects to allow space for the local community and group level institutional development. Time and commitment are essential for full participation, the identification of priorities, planning by the local people, especially women, the poor and the marginalized groups. This requires more funding for staff and training, and less for hardware.

**Be flexible.** Top-down logic to generate *participatory blueprints* should not be allowed which only masquerades as participatory. Instead, start and continue with open ended PRA process and flexible funding for empowerment, diversity and local control. Use PRA process to prioritize. Do not be alarmed but welcome a project change through participation.

**Stress process and qualitative change, not targets and products.** Local institution building for sustainability, empowerment of poor people, women and the marginalized and renewed confidence among the weak usually matter much more than physical outputs. See the process itself as a product.

**Engage PRA trainers who stress attitude and behaviour change and reject those who care only about the methods.**

**Assure continuity and sustain commitment to PRA and participation** at all levels in donor agencies, among political leaders, in one-off training without follow-up. PRA requires long-term commitment of staff and resources to take root and be effective. Take a long-term view of the changes in institutional culture that may require sustained efforts through a decade or more. Ensure that the donor staff, policy makers and field staff alike are allowed to work in the same post for at least three to five years before transfer.

**Work to change the culture, procedures, and interactions in donor and government organizations, and in NGOs.** Participation starts where the buck stops. Participatory management and interactions at all levels are needed to support and sustain participation in the field. Each one of us, wherever we are – in donor agencies, in governments or in NGOs – can form alliances with and support those seeking change in theirs

Source: Kumar, S. (1996).

## **Application of PRA**

A wide range of applications of PRA has evolved over the years and it is still developing. According to Chambers (1997), most applications of PRA are in three areas, viz. contemporary investigation and research, training and PRA as the appropriate tools for empowering processes of appraisal, analysis, planning, action, monitoring and evaluation. These applications may be possible in various sectors, viz. agriculture, poverty alleviation and livelihood, health and nutrition, urban slums and water supply, hygiene and sanitation. PRA has also been applied in various other fields like adult education, participatory monitoring and evaluation, and in disaster management. Though PRA has been more micro-oriented, but gradually through trial and error, it has also been applied at the macro-level for policy advocacy to influence policy formulation.

### ***Participatory Poverty Assessment (PPA): Linking Micro and Macro Levels***

PPAs have been promoted by the World Bank, particularly in the African countries, in order to influence the policies, which affect the poor. PPAs following the PRA approaches were first used in some African countries. A significant methodological attempt was made to use adapted PRA, referred to as PRRA – Participatory Rapid Rural Appraisal in Bangladesh by the UNDP while preparing a Report on Human Development in Bangladesh. Another landmark work in this field has been the ‘*Consultations with the Poor*’ conducted in 20 countries with the poorer communities, using the PRA method to develop World Bank’s *World Development Report 2000-01* (Praxis 1999). Over the years, PRA has become a more acceptable methodology to conduct large-scale participatory studies, particularly on policy issues related to the poor.

PPAs are, in effect, attempts to link the micro and the macro. PPAs done by the local people help them to identify the issues at the micro (field) level. A PPA attempts to establish a dialogue between the local people and policy makers around issues. It helps the policy makers to understand the real conditions of the local people and how the changes at macro levels can adversely affect the livelihood of the local people at large.

The PRA has made it clear that the realities and priorities of the poor are often different from those of the professionals and policy makers sitting in the headquarters, who are supposed to work for their uplift. One of the major challenges in conducting the PRAs has been to present the realities and priorities of the poor and the marginalized people in appropriate packages and communicate the same to the policy makers. This requires that the marginalized and poor people are enabled in the process to analyse their own conditions and identify their priorities in ways which allow them to freely express their realities and generate development proposals which appear to be feasible, credible and implementable to the policy makers. Participatory Poverty Assessments (PPA) following the PRA approach are a major innovation in this direction.

### ***PRA and participatory Monitoring and Evaluation***

PRA has contributed a series of methods which the local people including the non-literate can use efficiently to monitor and evaluate their own programmes. In addition to the specialized monitoring and evaluation, methods like impact diagram, trend analysis, ‘then and now’ or ‘before and after’ and social mapping methods, almost all the PRA methods can be used for monitoring and evaluation purposes. The simple way is to use the same method at regular intervals of time. In this way, time series data is made available for monitoring the progress of programmes. The data gathered during the inception phase can be used as baseline data for future comparison. The use of visuals, symbols and local indigenous materials allow the non-literate not only to participate in the practice, but also to record details in their own way, which provides them with ownership not only of the programmes, but also of the data as well as information they gathered. Moreover, certain principles of the PRA e.g. the major role of local people in

selecting and deciding the indicators, use of visuals and symbols for monitoring purposes, and the outsiders playing the role of facilitators make the PRA methods quite conducive to participatory monitoring and evaluation.

### **Methodology for Participatory Assessment (MPA) tools in IAP:**

In 2001, Asia Regional Cookstove Programme (ARECOP) Secretariat began to adopt the principles and approaches of Methodology for Participatory Assessment (MPA) for use in ICSP. MPA had been initially developed for water and sanitation projects by **The International Resource Center (IRC)** and the **World Bank's Water Supply and Sanitation Programme**. This Methodology has evolved from earlier participatory tools and methodologies used in water and sanitation programmes.

Initially, the *Guidelines and Tools for Participatory Assessment* was developed to improve the adoption rate of improved cook stove through the involvement of women and marginal sector in the community in the decision making process related to improved cook stove programme. Besides, it was also hoped that the participatory guidelines and tools could be an alternative assessment method for use by those working in stove programmes.

Methodology of Participatory Assessment (MPA) tools developed for water and sanitation programme, the MPA on improved cook stove programme suggests the importance of participatory and demand responsive approaches in sustainability. Experience in water and sanitation programmes points out that services are more likely to be sustained when both women and men, rich and poor, participate actively in establishing, managing and maintaining them.

The MPA builds on earlier works on participation, demand responsiveness, gender, poverty and sustainability.

Some features of the MPA tool use have been shown in Box – 3 below.

#### **Box- 3**

**Some key features of MPA**

- It is a *comprehensive method* for social assessment
- It recognizes the importance of *gender and poverty sensitive* approaches
- It monitors *key indicators* of a project's sustainability and demand responsiveness
- It is a *learning process* for all stakeholders
- It uses *participatory tools* at all levels
- It allows space for *holistic analyses*, relating institutional and organizational factors to outcome at the community level
- It is *global* and can be applied in different settings
- It can be used in *all phases* of a project cycle
- Although developed for water and sanitation sector, its core principles are applicable across sectors; thus the methodology can be adapted for use with other basic services.

In water and sanitation sector, the methodology has been used in rural and small urban communities in Africa, Asia and Latin America and has helped to identify key factors associated with sustained and used services.

Little experience has been gained in the implementation of MPA in the improved cook stove sector. Practical application of the methodology has been conducted in pilot scale planning and monitoring of

programmes in Cambodia, Indonesia and Vietnam, during 2001-2002. The limited pilot implementations have provided useful feedback in the process of the methodology development – in terms of increasing the accuracy and practicability in the application of the methodology and in the analyses of the results produced. It is to be noted here that this approach has been put into practice for ICS promotion interventions in Bangladesh by some organizations, who have found it effective in process facilitation.

## **6. PARTICIPATORY TOOLS AND METHODS IN ADDRESSING IAP**

We know that the PRA is a package of participatory process facilitation tools. The facilitators/ agencies can enjoy the maximum liberty in the process of its application.

### **Preparatory activities**

*Selection of community:* Considering the density of population, geo-physical conditions, professional homogeneity, culture and household settlement types, the facilitating agency first needs to identify the community to initiate mobilization activities. Selection of the community is thus the first activity.

- Materials collection and preparation
- Facilitation team formation
- Orientation
- Informing the Local Government Institution/s concerned

### **Application of Participatory Tools for ignition and community mobilization**

The process starts with the use of a set of participatory tools to collect information from the community on the existing situation, encourage the community to analyse the information and motivate them to take action to improve the situation. Effective exercise depends on field workers building a good rapport with the community. Only then the field workers are really able to develop their own understanding of the community making sure that they can perceive the situation and its effects. Once they understand the community as comprehensively as possible, they can work effectively with its members to mobilize them to take suitable actions for initiating a positive change.

Generally, a participatory session covers 70 to 100 households. The time involvement may vary depending on how many people participate but usually it takes minimum 3 days. This may, however, be accomplished over a period of weeks. Priority must be given to the availability of time on the part of the community members, and especially women.

To begin with, a team of four or five field workers (along with senior team members) agrees on what role each individual will have to play practically before going to the community. The workers designated for continuing the interventions in the area subsequently on a regular basis would ideally play the key role among the facilitation team members during the initiation phase, as the entry PRA exercise is also the way forward towards building a working relationship with the community. Detailed notes need to be taken during the process by more than one for future reference and use.

A range of PRA tools are used during the process, as the key purpose of the exercise is to enable the community develop capacities of identifying and analysing their prevalent situation. The following table shows the tools that are meticulously used during the entry PRA. It is very important that field workers fully understand the purpose of applying the tools and are familiar with their use in conducting the entry PRA in communities as essential part of their job. [*This requirement is usually met by NGOs by imparting training on Basic PRA*]

## Tools for community situation analysis and ignition

Tool	Purpose
Transect Walk	To observe the current situation and build rapport with the community To identify key informant and catalyst for future collaboration
Social Mapping	To identify the number of households, population, types of clean energy technologies in use, identify the types and sources of fuel (biomass) in use and kitchen environment.
Wealth Classification	To identify the economic status of the households based on socio-economic context
Community Seasonal Calendar	To analyse the cooking system, kitchen status and TCS used throughout the year with changing situations like using stove in living rooms
Mobility Trend Analysis	To identify the mobility of people to collect cooking fuel and the person engaged in collecting the same
Daily Activity Routine	Daily routine is used to identify daily labour patterns and other activities
Unhealthy kitchen environment visit	To observe the current situation of an unhygienic kitchen and observe the intensity of pollution in the kitchen
Stove Option	Analysis of different types of traditional stoves, advantages and disadvantages associated with the types and generate ideas of improved cook stoves.
Three Pile Sorting	Analysis of kitchen and cooking environment, practices of fuel collection and identification of ideal practices by using visual materials
Pocket Voting	Scoring and ranking of use pattern of different types of stoves considering its purpose of uses and make choice of cook stove option.
Stove web	Make analysis of livelihood centering around the cook stove and role of respective stakeholders within the family
Voice and Choice in decision making	Identification of main decision makers in the family level in respect of site selection of kitchen, its size and ventilation arrangement, choice of cook stove and fuel use pattern; ultimately the women internalize why the kitchen is always being ignored.
Venn Diagrams	To identify the key persons with philanthropic zeal in the community to form a CBO as the final outcome of the exercise

Whilst each tool helps to clarify a particular aspect of the IAP situation, the information gathered should be cross-checked and if necessary, information should be rechecked with the community. To do this, the team must take time consolidating the information soon after they have collected it, usually at the end of each day sessions or events. The important thing is that at the end of the process, the community and field workers have a clear understanding of the situation so that an effective Plan of Action can be drawn up by the CBO as per requirement of the community to address the situation.

Systematic use of different tools for entry into a community for situation analysis and ignition are discussed below.

### Transect walk

The first stage of entry into a community involves a Transect Walk and rapport building. This builds the most required bridge between the field workers and the community people. It is also very important to identify some community level catalysts during the process. These community level catalysts are people who are accepted in the community, are willing and able to support field workers while they are working with the community and who will take the initiative to get the process moving.

When the team enters into the community, a group of people will naturally gather around. Having introduced themselves, the team members can then ask this group if they will assist them in having an exploratory move around in the community. While walking around, the history of the community is discussed with the religious and various other occupational groups, making an approximate count of the number of households, population and main income sources, day to day life style etc. The patterns of housing, crops and indoor air pollution aspects are observed with questions being asked about particular issues as they arise.



## Social mapping in addressing IAP

The location of the locality inhabited by the community in question is marked on the map first with boundary and then the internal road/lanes are drawn. Then households are drawn using a symbol for each family so that the map shows the number of families in the community. The name of the head of each household is recorded in one corner of the map or an attached sheet of paper. The number of members in each household will be recorded, including their sex and age range (child/adult/elderly). In addition, the presence of any disabled member of the household will be discussed and recorded.



### Process:

The participants are asked to introduce the community by showing it on a map, featuring the roads and lanes within the community, common places and all households. The map is drawn on a large sheet of brown paper using marker pens of different colours. The participants are to decide as to who all will actually draw it and who should be guiding the drawing exercise.

Once this is completed, next the participants are to be asked to draw the types of households with types of cook stoves and kitchens they use. All perceived environmental pollution hazards are also to be indicated. Public places, institutions, tea stalls, market places, canals, water bodies, land use patterns etc. also have to be shown. When the drawing is complete, the participants are to check the map to see whether everything has been properly drawn or if there are any relevant bits missing. Once everyone accepts the map as a community document containing all the necessary information, compilation of other complementary information begins. During or at the end of the process, the map is accurately copied by one of the facilitation team members.



### Possible Questions can be asked on:

- Geographical boundary
- Distribution of households
- Roads, lane/bi-lanes,
- Housing pattern
- Kitchen types
- Sources of fuel for cooking in the community
- Public places, institutions, growth centers
- Land use pattern

Wealth Classification

Purpose

Classification of the village population has to be carried out based on economic categories (rich, poor and in between) using locality specific criteria and using locally acceptable terms. After the classification of the village population is done, it will be used to identify groups involving whom the focus group discussions will be held for mapping the access of different economic groups to various services, resources, functions and jobs related to the cook stoves; and also for identifying the different groups' differential rates of participation in the community decision making, management of services, benefits and so forth.

## Materials required

A4 paper  
Large sheets of paper (a few)  
Marker pens in 3 or four different colours  
100 seeds, small stones, etc (materials which can be easily counted)

## Process of Facilitation

1. Identifying the characteristics of the people of different economic categories existent in the community. This activity will be carried out using local language/ dialect and locally understood and accepted terms.

a) Identify a group to participate in this exercise which consists of project cadres (if in existence) and persons from population at large. The number of people participating should be around 20. They should be both women and men from rich as well as poor households. To get a good representation of the population, the assessment team may contact key informants of the village while selecting people to form groups. The important objective here is to get a mix of people – not just the influential or articulate members of the community. Use the know-how from the gender and poverty session to overcome the strategic and practical constraints to ensuring the participation of especially, the women and the poor.

b) Start the discussion with a group, about the differences among the community members coming from different households. The types of criteria are noted and when socio-economic criteria are mentioned (which typically happens soon), the facilitators are to provide the group members with some blank sheets of paper and ask the group to draw pictures of typical rich, poor and middle class people in the community. The drawings usually generate some laughs and serve as an effective icebreaker. The terminology used for rich/poor and so forth should come from the participants expressed in their everyday language, so as to be culturally acceptable to all. This activity challenges participants' creativity.

Sometimes, more than or less than three economic categories are identified by the community.

c) Using the drawings as a starting point, the group then begins to describe the characteristics of each economic category, one by one. It is usually helpful to start with the "rich", move on to the "poor", and end with the "middle" category. The activity continues until at least six or seven indicators have been identified for each category. When the characteristics identification has been completed and those characteristics have been transferred into the drawings, classify the drawings in a matrix form, according to rich, poor and middle categories.

Probe for the following indicators: food security; assets; access to services; type of work or employment; education and skills; social and psychological security; composition of households (marital status, female headed households).

Check for consistencies of the information given by the group. Clarify at once when there are inconsistent information given, so that as such information do not pose any problem at the later stage while the results will be analysed.

d) Facilitators may probe further to understand fully the rationale or community-specific reasons behind the stated characteristics. They may also ask questions about single-headed households. How common are they? Do they consist predominantly of single mothers? What is their socio-economic situation like? How well can generalization be made? Facilitators responsible for analysing the results subsequently should take down detailed notes on the above.

## 2. Estimating the proportions of the Rich, Average and Poor Categories in the community

a) Facilitators then need to distribute 100 small stones or seeds among the group members. The total number of seeds is supposed to represent the total number of households in the village (it is not necessary to let the community members know the exact number of the stones/seeds distributed). Participants will then be asked to divide the seeds/stones, according to the proportions of the Rich, Poor and middle household categories in the community, as perceived by them (in the process, at times, more than or less than the three broad economic categories are identified by the community). Usually, members of the group will debate among themselves regarding the proportions of different economic groups in their

community. They will have to be guided to reach a consensus before a final decision is made regarding the proportions of the different economic categories in their community.

b) The group then records the results on a newsprint sheet which will serve as a ready reference during subsequent assessment requiring differentiation between the rich and the poor.

### **Minimum information to emerge**

Agreed criteria for classifying the households into Rich, Poor and middle income groups within the community. Approximate proportions of households belonging to the above categories. Wealth classification provides a snapshot of the nature and extent of poverty in a community as perceived by the community members. This information is not relevant for analysis as such, but it should be used as a perspective against which to assess financial data on possible community contributions, the extent of subsidies and so on. This exercise would focus mainly on identification of rich and poor households so that their situations are clear to face the limitations in respect of fuel and technology use.

## **Community seasonal calendar**

### **PURPOSE**

- To know the patterns of the main activities in the community throughout the year, especially those related to the kitchen management (cook stove placement, cooking habits) and fuel use
- To assist the planning of schedule for Improved Cook Stove Programme

### **MATERIALS**

- A few sheets of large paper
- Marker pens in different colours

### **PROCESS**

#### **1. Identification of issues and events**

- a) Invite participants to discuss :
- What and when are the important community events throughout the year? (e.g. planting and harvesting time, festivals and ceremonies, etc)
  - Fuel use throughout the year (whether fuel is available all year round; whether there is a fuel shortage at certain time of the year?; whether there are changes in fuel types used, at certain time of the year, etc)
  - Cooking location (whether there are changes in cooking locations at different time of the year)
  - Natural events such as flooding, etc
- b) After the details have been described and discussed clearly, make common agreements with the participants on:
- Activities that will be put into the calendar, and that need to be discussed further
  - Symbols of the discussion subjects, which will be put into the diagram, i.e. in the form of simple illustrations

#### **2. Making a seasonal calendar**

- a) Ask the participants to make a calendar on a piece of large paper, containing columns for the twelve months and topics of information according to results of the discussions, which will be pasted on the wall. Participants may be more familiar with the traditional calendar and may prefer to use it.
- b) Put on one corner of the paper the symbols and their meanings, and other explanations, which will help people in understanding the calendar.

c) Facilitate a discussion on :

- What and when do the conditions that may or already pose problems with regard to household cooking and energy needs of the community?
- What are the possible causes of the above potential/existing problems?
- What are the solutions that have been undertaken by the people to overcome the existing problems?

**MINIMUM INFORMATION TO EMERGE**

- Changes in fuel types used in relation to times of the year/ changes in seasons (if there are several types of fuel used)
- What and when do the existing and potential problems occur?
- Times of the year, when the community could not spare time for other activities outside their routine/times of the year when the community has spare time
- Changes in cooking location/kitchen in relation to times of the year (if such a pattern exists)

1. Name of community :
2. Name of the District/State/Region/Province
3. Project :
4. Date :
5. Number of women participating :
6. Number of men participating :

**COMMUNITY SEASONAL CALENDER**

**Scoring & Coding Sheet**

**Seasonal events in the community**

		<b>MONTHS</b>											
<b>Seasonal events</b>													
	1	2	3	4	5	6	7	8	9	10	11	12	

## **Mobility Trend Analysis**

Contacts with the “outside world” and decision making power in a community are often closely linked. Spatial mobility in many societies can be used as an indicator for a person’s mobility in the outside world and his/her authority in the community. It may also indicate freedom, wealth, empowerment, education or consciousness. The mobility map allows us to record, compare, and analyze the mobility of different groups of people in the community e.g. old men, young men, women, children, educated or illiterate persons. Objectives can be narrated as follows: -

- To find out the movement of the community people
- To understand the nature of the needs regarding movement of the community
- To find out the means of communication/communication system
- To find out about the person/organization associated with the people
- To find out the trend of employment in the area
- To take decisions on matters related to the movement of person/persons (e.g. male, female, rich, poor persons belonging to different professions)
- To find out destinations of people to get things done
- To find out the transport mode, extent and related expenditure etc. .

### **PROCESS:**

- Select a suitable place for the exercise on Mobility Chart in consultation with the community people
- See that the place is centrally located, that is, it should better be in the centre of the locality and draw a boundary in the yard or on a big piece of paper and indicate directions
- Find out from where they go to what destinations on various occasions. Assist them in marking/ writing the names of those places on the yard/ paper.
- Indicate directions (east, west, north, south) on the yard/ paper
- Find out through discussion how they go, where they go, and how many times they go to a particular destination and mark them/ draw lines accordingly.
- The participants will indicate the direction of their movements to their various destinations by drawing lines.
- Assist them in recording other relevant information regarding mobility.
- Assist the community people to draw the mobility chart on paper, or draw on the ground.
- Thank all for assistance and co-operation

This analysis will help in identifying the scope of mobility to address the needs of households in respect of biomass fuel type and in choosing appropriate ICS technology according to well-being status.

### **Concept of Matrix Ranking:**

From Matrix Ranking, we can obtain from the community people information on the sources of different services of their choice and the criteria of their choices. This method can be used to identify their preferences and prioritization of their choices.

### **SCOPE OF USE:**

- To use a planning tool
- To identify their priorities
- To reflect relative preference for choices
- To find out the reasons for relative preferences
- To expose the people to analytical approaches
- For participatory monitoring and evaluation

## Sample Diagram of Ranking and Scoring:

### Stove technology and use patterns (Ranking):

Stove options Use pattern	One pot hole	Two pot holes	Three pot holes	Portable	Commercial	Griha Laxmi
Cooking daily meals						
Paddy boiling during harvest						
Preparation of tea/ other drinks						
Puffed rice making						
Local cake making						
Sweets and snacks making (at hotel/restaurants)						

### PROCESS OF FACILITATION:

- Encourage people of all ages to participate.
- Decide on the topic and find out the information sources relevant to that topic from the community people.
- Find out the basis of the selection of the stated sources.
- Score or rank each of the sources using sticks, stones, seeds, fruits, etc. according to characteristics identified by the participants.
- Control gatekeepers (those who tend to dominate discussion) with extreme care.
- Supply paper and pen, if required.
- Remember that when using the method in any village or locality, the opinions of the people of that village or locality only will be considered, as necessary. Do not include any information obtained from or volunteered by someone from outside that village or locality.
- Participants can draw the matrix on paper using a pen, or on the ground using leaves, sticks, seeds, fruits, etc.
- Identify the reasons for making a particular choice with the people and identify the best relevant information sources.
- Transfer the matrix on paper.
- Thank the participants for their cooperation.

The exercise will help identifying the stove options along with indicating the intensity of use so that technology promotion and related entrepreneurship development intervention can find ways towards production and promotion of the models of ICS in the community.

### KEY QUESTIONS:

- What are the cook stove options in use in this community?
- Types of use of cook stoves option-wise
- What are the reasons behind more/less use options?

### DAILY ACTIVITY ROUTINE

Daily routine is used to identify daily labour patterns and other activities. It is possible to discuss both work type and distribution of workloads throughout the day, and for comparative analysis between different individuals' daily routine especially of women in communities.

**SCOPE OF USE:**

- To document activities
- To document the timing of activities
- To note periods when more than one activity is carried out concurrently.
- For discussing activities and their implications for time used
- For discovering suitable time slots for attending meetings and training sessions.
- For comparison of difference between routines.
- Daily routines have also been used to illustrate mobility and time spent away from home.

**PROCESS OF FACILITATION:**

- Split participants into two groups according to gender, profession or age.
- Each participant group constructs a daily routine chart.
- Compare the groups' charts and identify common patterns. Prepare one representative daily routine if possible.
- Use flip chart paper and markers (make a draft on a small sheet)
- After finishing the chart, the group will present the diagrams/routine to the larger group and discuss the results.
- Daily routine may be prepared for special groups, as required.
- Thank the participants for their cooperation.

This exercise is meant for identification of work load of women and their stay in the kitchen along with their children. It is also meant for determining the time spent in collecting biomass fuel from different sources and then for calculating time needed for processing and drying of raw materials. Also, it helps in identifying priorities in respect of activities in general and cooking for the family.

**KEY QUESTIONS:**

What are the activities a housewife performs from dawn to dusk/seasonally?  
What so their male counterparts do from dawn to dusk/seasonally?  
How much time do the male/female members spend in the kitchen?  
What are the sources and types of fuel they use for cooking?  
Who collects the fuel for cook stoves?  
How much time does one have to spend daily for fuel collection?

Fuel and cook stove technology user affect calculation and causes:

**SCOPE OF USE:**

- To identify the effects of fuel and traditional cook stove technology primarily on women and children's health in addition to others of the family
- To calculate effect of Fuel & Cook stove technology on the user
- To find out causes of non-use of ICS technology

**PROCESS OF FACILITATION:**

- Ask people to select an undisturbed place for discussion and ensure cook stove user women's participation.
- Discuss the social map prepared already
- Ask people why they use traditional stove and write down their comments
- Ask people what type of fuel they use, how much fuel is used in a day, how much money they need to spend in a day for fuel and the fuel costs ( per day)
- Ask people what problems they are facing while cooking using traditional stoves
- Ask people from where they collect fuel, who are involved in the collection process, how long distances they need to cover daily and how much time they spend to collect fuel in a day/week.
- Record these findings on paper and assist the participants in reviewing them.
- Thank the participants and others for their cooperation.

[The same exercise can be held with the restaurant owners/cooks and institutional hostel managers/cooks to do similar calculations and record effects.]

## **Unhealthy kitchen environment visit**

Main purposes of this exercise would be the sharing the findings and analysis of the situation. The exercise will further be intensified through discussion/exercise on stove option and stove web.

### **PURPOSE**

- To cross check information on the map made by the participants
- To determine to what extent well built and well maintained cook stoves are present in the community
- To find out how services created by the programme are being maintained and what essential services are not present
- To assess the number of households which do not have access to improved cook stoves and reasons thereof
- For use in monitoring and evaluation, to evaluate equity and suitability of technology and training for expansion

### **MATERIALS REQUIRED**

- Scoring and coding sheets developed for the walk (one set for every house/institution)
- Three cards with smiling, plain and sad faces drawn on them.
- Plastic rope
- A stack of A4 paper
- Markers
- Social map

### **PROCESS**

- a) The Transect Walk team includes community facilitator/s who have been involved in the assessment and a technical personnel.
- b) During the walk, the group conducts a systemic observation and scoring on cook stoves in houses representing all economic categories, which have been pre-selected by the community members earlier (see 2.3. Planning for Transect Walk) and institutional cook stoves present in the community. The group members discuss their observations with community members, and record the findings in the Scoring and Coding Sheet<sup>3</sup>.
- c) Visual rating scales are conducted in order to assess users' satisfaction regarding aspects of the cook stoves that they are using. Conduct a rating scale for selected cook stove types present in the community.

#### **Conducting a Visual rating scale:**

- i. During the transect walk, invite men and women from several households to participate in the rating scale exercise. The rating scale is conducted with separate groups of men and women of the community; or, if not possible, the rating could also be conducted separately with women and men in individual households.
- ii. Find a clear and relatively flat ground, with enough space to conduct the rating scale. Mark points on the ground to indicate the 2 metre distance. At one end of the 2 metre scale, place a drawing of a happy face (100%, totally satisfied) and at the other end a sad face (0%, totally negative); the drawing of plain face is placed in the middle of the scale (satisfied). The scale sub-divisions are marked at tenths (10, 20, 30, etc).

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<sup>3</sup> Interviews should include those who operate the cook stove.

- iii. Explain to each group that they will rate their satisfaction about the existing stoves in the community. They can indicate their score by standing or pointing at either end of the scale or anywhere in between. Explain that every person may choose her/his own position or they can give a consensus score.

#### **d) Assessment of households without improved cook stoves**

Using the social map, gather several community members for a brief session to assess the number of households that do not have improved cook stoves. How many of these are better off, intermediate and poor households? Depending on the neighbourhood that you are assessing, you may/may not be able to gather all information on rich, poor, middle households – in which case you can complete the information as you proceed to assess different neighbourhoods.

Discuss possible reasons for not having improved cook stoves. Using the community map, try to assess how many in the three groups do not have improved cook stoves because of:

- technical reasons (with regard to design, e.g. unsuitable pot hole size, difficulties in operation, etc)
- financial reasons (households were unable to afford improved stoves);
- Social reasons (unaware of the ICS programme; access to the programme denied somehow; husband does not allow woman to get an improved cook stove)

### **FOCUS GROUP DISCUSSION**

For the focus group meetings, it is usually not possible to choose and invite women and men from sampled households. Participants to such meetings are to a large extent self selected.

When the better off and the poor live in different sections of the community, it may be possible to organize separate meetings in either area, or if there are several of such areas, to choose the two where the meetings will be held using the 'slip in the bag' sampling method. However, when better and worse off households live in a mixed neighbourhood, it may be difficult to meet with either group separately.

Holding open meetings make it more likely that certain biases are introduced, when people who attend do not represent all interest groups. Another risk is that important information might remain hidden, because it is not likely that everyone should feel free to speak, or speak openly, in a mixed group meeting, especially when members of more powerful groups happen to attend.

Determining the type of focus groups you need to organize depends on local conditions and relations. The MPA assumes that class and gender relations are the most influential factors there. This means that separate focus group discussions will be held for the poor and the rich women and the same for men. In complex societies, other or more divisions may be more appropriate, e.g. with women and men from tribal groups, marginalized castes, religious and ethnic groups.

### **Focus group meetings based on economic classification**

Adopting the following steps will help holding representative group meetings:

Using the social map, discuss with the community about the likely locations where especially the rich households will easily flock together and where else the poor families are more likely to come for a meeting. If there is no open discussion possible, ask several women and men from different groups to advise on the issue.

Agree on the best locations for both groups on suitable days and times when the meetings will be held. The place and time should be convenient both for women and men. The location should be large enough for women and men to sit in separate groups, if the local culture requires this, especially for women to attend and speak out.

With the help of the community team and the findings from the social map, inform the two groups (rich and poor) and invite them to their respective meetings. Encourage all so that a woman and a man participate from every household, enabling the participants express their views and experiences freely..

Facilitators should stay alert and check on the level and situation of participation to ensure that all (women and men) participate actively during a session. Especially at the meetings of the poor, enquire discreetly if there are any members of the elite present and observe for any action of the elite (male or female) to influence the reactions of the poor women or men, or if male leaders are prone to shutting up women, or steer their reactions, which may also happen when women keep sitting in their own corner. Use discreet action to remove such dominating people from the group; for example, by asking such persons to join in another activity. Facilitators could also give particular attention (providing extra encouragement to participate) to a particular group which does not actively participate in the session.

### **Focus group meetings based on sexes**

Separate meetings for men and women groups (for both rich and poor groups) could be conducted at the same place and at the same time (i.e. by making them sit in different corners). This will also dispel such doubts or misgivings which might prompt some to think that some special or hidden business is going on and makes it possible to encourage both groups to share their results with the other.

Sharing helps the two sexes to bring out the gender perspectives and gets especially the women to be used to explaining their points of view as a group to the men. Being with men from one's own class makes the process look less daunting for women, which is also important for building solidarity in case of the disadvantaged groups or classes.

Holding meetings in the same place and at the same time does require carefully thought out arrangements to ensure that the location and the time are convenient for both groups and both can sit separately and be undisturbed, and easily guarding against undue influence.

Following are some areas to make use of focus group discussion as tool for effective community mobilization towards indoor air pollution prevention and clean energy use practice promotion.

### **Stove Options**

#### **PURPOSE**

- To be aware of the participants' hopes and aspirations with regard to improved stove options
- To assist participants identify improved cook stove options
- To analyze advantages and disadvantages of the traditional cook stove

#### **MATERIALS**

- Cloth sprayed with adhesive or large sized paper to which drawings are attached
- Several sets of drawings (depending on the number of small groups present during the session)
  - Set 1: drawing of traditional cook stoves used in the community
  - Set 2: several drawings of improved cook stove options (done by a technical person based on assumed local needs and constraints)
- Marker pens
- Sticky tape

#### **PROCESS**

Before the facilitator begins a session, information on the following should be obtained:

- the design principles of different cook stove options
- the operation of different options
- the effectiveness of different options
- the maintenance required for different options (labour and financial requirements)
- the costs (time and money) of different options
- if subsidies/credit schemes apply to any of the options
- the durability of each system
- accessibility of each option (Where from to obtain? Is it easy or difficult to obtain?)

## Stove option (traditional stoves)

- a) Ask participants to form groups of 7-8 people
- b) Provide the groups with several sets of drawings of existing traditional stoves. Give the groups task to arrange the drawings of cook stoves in ladder form; starting from an option they considered the worst to constitute the bottom of the ladder and the option they considered best on top of the ladder. Ask the participants if there are other options that have not been included in the picture but which they want to include. Additional options can then be drawn/written and put on the option ladder. When the groups decide that two or more options are equally good, those two or more options could be placed side by side.
- c) Once the groups have finished their first task, give them a second task. Ask each group to discuss the advantages (likes) and disadvantages (dislikes) of different traditional cook stove options
- d) When the tasks have been completed, each group makes a presentation, explaining its cook stove option ladder to other participants
- e) After all the groups have made their presentations, encourage a discussion covering:
  - the similarities and differences in the way cook stove option ladders have been arranged
  - the similarities and differences in terms of different groups' stove ladders
  - how each group makes its decisions
  - what information participants think they need in order to compare options more effectively

Encourage the groups to agree on one cook stove option ladder.

- f) Discuss with the groups how they have known the advantages and disadvantages of existing stoves. Ask them to list the characteristics of the stoves that they wish to own (dream stove).

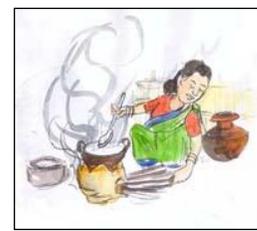
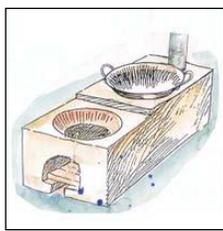
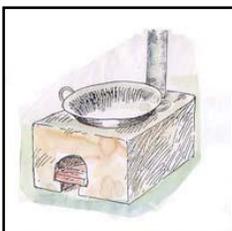
## Stove option (improved stoves)

The steps are similar as in Stove Option 1, but this time, sets of improved stove drawings are to be used. After the participants have discussed among themselves about the improved cookstove options, the facilitator asks the group members whether they need additional information on the above options. Technical information is best provided when it is based on community request. The technical personnel respond to the group queries on technical matters accordingly.

## HOW TO USE THIS INFORMATION

During this session, there are several types of information that would be useful for a programme when it wants to introduce a cook stove design/s;

- an aspect that needs to be fulfilled by a cook stove design to be introduced
- aspects of design that are liked by participants (hopes and aspirations)
- aspects of design that are disliked by participants
- Participants' perception on advantages (likes) and disadvantages (dislikes) of each cook stove option
- Participants' preference for the different cook stove options



## Three pile sorting

### PURPOSE

To exchange information and discuss common stove use and related practices according to their good and bad impacts.

### MATERIALS

- 3-4 sets of Three Pile Sorting Pictures:
  - a) “Good Practices” (e.g. cooking with an improved stove, a well ventilated kitchen, good cooking posture (sitting or standing), removing ash from the stove, fuelwood stored in a sheltered place, large pieces of wood cut into smaller blocks for convenient burning)
  - b) “Bad practices” pictures, if possible, should be based on undesirable local practices (e.g. a mother and her baby hovering over a smoking stove, cooking in bad postures, i.e. squatting or bowing, cooking with a flaring fire, a firing stove with empty pot holes, a stove which is full of ash and charcoal, a messy kitchen, an unventilated kitchen full of smoke, a pile of wood which gets exposed to rain)
- Blank cards or paper
- Marker pens

### PROCESS

#### 1. Classifying “Good” and “Bad” practices

- a) Ask participants to form groups of 5-8 people
- b) Provide each group with sets of Three Pile Sorting pictures, blank cards/paper and markers. Start by showing a number of pictures related to stove use and related practices
- c) Ask the participants to cluster the pictures into three groups as follows:
  - “Good Practices” : if the pictures show practices that are considered as good
  - “Bad Practices”: if the pictures show practices which are considered as bad
  - “In Between”: if the pictures show practices which are neither considered as good nor bad, or when participants are not sure about the group they belong to.
- d) After about 20-30 minutes, ask each group to explain its selection to other participants. Let each group respond to the queries raised by other participants.
- e) Facilitate a group discussion on the methods or ways used by different groups for grouping the pictures. The discussion should cover:
  - the differences in the selections made
  - the reasons for these

This discussion will provide another opportunity for the participants to share what they have learnt with the rest of the participants.

#### 2. Exploring practices in the community

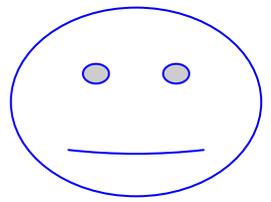
- a) Ask the participants to consider and discuss the common practices in their community; and, whether the practices are similar to those they have identified earlier
- b) Ask participants to identify the practices which are common in their community using the Three Pile Sorting pictures. If it so happens that their identified practices do not match any of the pictures included in the Three Pile Sorting pictures, then simply ask them whether those practices are good or bad or neither, to their estimation.

### MINIMUM INFORMATION TO EMERGE

- Community perception on “good” and “bad” practices related to stove use
- Common practice/s in the community and how community perceived them

### HOW TO USE THE INFORMATION

- The session aims to stimulate participants to start thinking about the consequences of stove use and the related practices occurring in their community. It is a process to guide the participants in a manner so as to enable them to start identifying the problems with current practices, be aware of the impacts of such practices and finally be excited and urged to find solutions.
- Some of the information gained from this session will serve as tips for the facilitators of a stove programme during an awareness raising campaign, enabling them to decide about what behaviour to discourage and what type of behaviour to be promoted

## Pocket Voting

### PURPOSE

For project monitoring and evaluation,

- To identify and analyze the changes towards improved cook stoves adoption
- To identify the scope of change
- To identify reasons why such changes have/have not occurred

For project planning and design, in identifying the current cook stove use practices and preferences.

### MATERIALS REQUIRED

- Cloth sprayed with adhesive or a board on which drawings can be stuck for display
- A set of drawings representing different types of cook stoves used in the community. For project monitoring and evaluation, drawing/s of cook stoves introduced by the project<sup>4</sup>
- A set of drawings showing cook stove functions, e.g. household cooking, heating, smoking, operating home industry, etc (according to local cook stove functions)
- Envelopes or paper bags, as many as there are cells in the matrix. Envelopes should preferably be of a dark colour and of thick material so that its contents cannot be seen from outside
- Voting slips of the required numbers for each participant, in different colours for women and men, girls, boys (depending on the degree of children involvement in the household tasks in the community).
- Blank cards for drawing additional options that may come up during the discussion.
- A few large sheets of paper for recording results
- Marker pens
- Adhesive tape (double sided) or pins needed to stick envelopes and drawing on the board

### PROCESS

#### 1. Pocket voting

- a) Drawings of existing cook stoves and cook stove functions<sup>2</sup> are shown to the group. Ask for group consensus on what the drawings represent. Ask the group whether there are other cook stove types or cook stove functions which are not represented by the available drawings. If there are additional information available, then ask someone to either draw or write down those cook stove types/ functions on blank cards.
- b) Drawings of existing cook stoves and drawings of cook stove functions are stuck on for display in matrix form. Cook stove drawing is placed along the top row of the matrix and those of cookstove functions on the first column of the matrix. Stick the envelopes on the remaining matrix cells.
- c) Explain to the group that they will be voting to identify the types of cook stoves typically used in their neighbourhood for different purposes.

For project monitoring and evaluation, tell the group that they will be voting to identify cook stove use patterns **before the intervention of the program.**

To ensure that the voting is done correctly, and that every participant casts her/his vote, the facilitator makes a name list of all participants, and calls out the names of the participants one by one, to cast her/his vote. When an individual is casting her/his vote, other group members should stay outside the voting area, to ensure that voting is performed maintaining confidentiality.

- d) When voting is completed, a volunteer takes out the slips from each envelope. Facilitators register the number of votes on a paper version of the matrix, using a different symbols for the votes of men, women—so that those having nil or low literacy can also analyze the results.

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2. Prepare drawings of cook stoves and cook stove functions based on observations in the community.

- e) For project monitoring and evaluation, the voting is repeated, but this time to assess cook stove use patterns **after programme intervention**. Add picture/s of cook stove/s introduced by the programme to the matrix.
- f) When the voting is completed, ask women and men volunteers to record the outcomes and assist them in copying the BEFORE and AFTER matrices on paper.
- g) Assist the group to do the scoring based on the outcomes of the voting.

## 2. Analyzing the results

Voting results are then presented. The facilitator draws participants' attention to the voting patterns:

- Are there variations between the way men and women voted? Why?
- For project monitoring and evaluation, discuss the underlying reasons for change or lack of change in cook stove use patterns.

## STOVE WEB

### PURPOSE:

To get an overview of the financial and labour inputs in a typical household energy situation in a community and how contributions of the inputs are divided among household members

### MATERIALS

- Newsprint or a piece of cloth sprayed with adhesive
- Blank cards
- 5-6 sets of drawings representing males and females (of different age categories : elderly, adult and children)
- Drawings of 2 or 3 most popular types (if applicable, include improved cook stove) of cook stoves used in the community
- Drawings of clay, sand, cash, fuel wood etc (depending on what goes into making and operating the cook stoves in the community)
- Drawings of persons transporting materials, constructing cook stoves, buying cook stoves, collecting fuel wood, etc
- Small and large sized markers
- Arrows made of cardboard (about 30 pieces)
- Marker pens

### PROCESS:

#### 1. Constructing a stove web

- a) Prepare a large sheet of paper, using several pieces of newsprint paper pasted together or using a piece of adhesive/ sticky cloth.
- b) Pictures of cook stove(s) typically used in the community are pasted at the centre of the newsprint sheet/sticky cloth.
- c) Facilitator to ask participants: **“Typically, how is a cook stove obtained?”** Attach the answer on the newsprint sheet. For example, if the answer is, **“a cook stove is built”**, branching questions will be like : **“what materials is the cook stove made of?”**; **“how much labour is needed to build a cook stove?”**; **“what is the frequency of getting a cook stove like?”**; **“who build the cook stoves?”** and so on. One or more of the answers to the above questions will lead to further branching out of questions. For example, if the answer to the question **“what is the cook stove made of?”** is **“cook stove is made of clay and sand”**, branching questions will be: **“where do you get the clay from?”**

The answer can be expressed in writing or in drawing, depending whether the group has literate or illiterate people. Then, paste an arrow mark, pointing to the picture of the cook stove (see Example of a

Stove Web). The answer to this question raises succeeding (branching) questions (see **Diagram 1 and 2**).

In the group with illiterate people, you can use easy to count materials such as matchstick to indicate hours of labour and the amount of money required.

d) Facilitator will next ask participants questions like: "What are the typical functions of a cook stove?" Follow the same procedure, as explained in **Part C** above. Ask, "what are the inputs required for the cook stove to function?" "who are involved to get those inputs?" "What is the frequency of obtaining those inputs?" "How much of an input is collected per day/week?", etc.

e) When the web is completed, ask the group to score the outcome of the exercise.

f) Discuss with participants about:

- Accessibility of various material inputs for the cook stove
- The amount of labour involved in various tasks analyzed
- Division of labour and/or amount of contribution by/between men and women

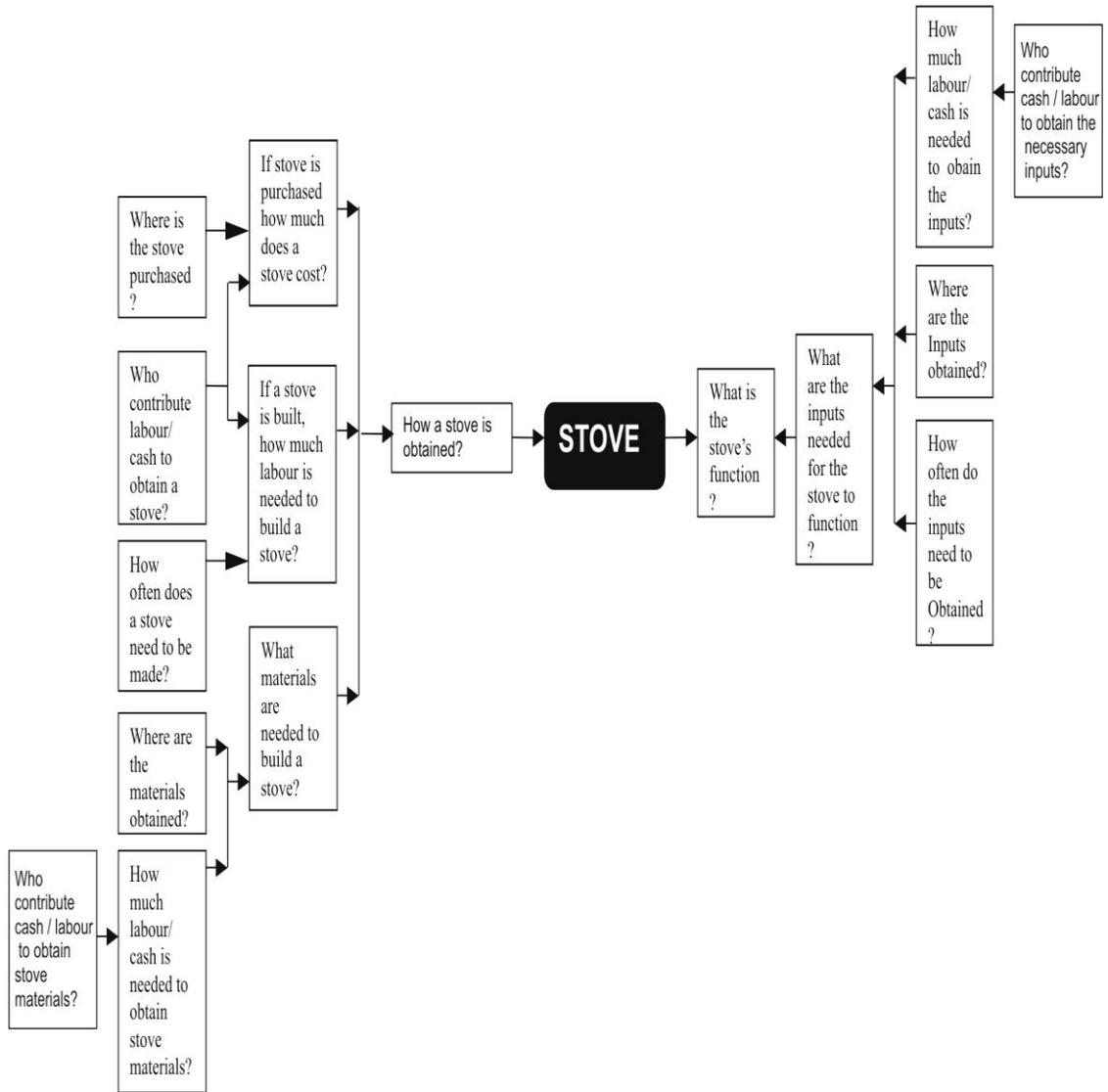
**For project monitoring and evaluation**

- Is the division of contribution and labour equitable?
- Has the project intervention impacted women's workload?
- Can the community improve the situation to make them more equitable?

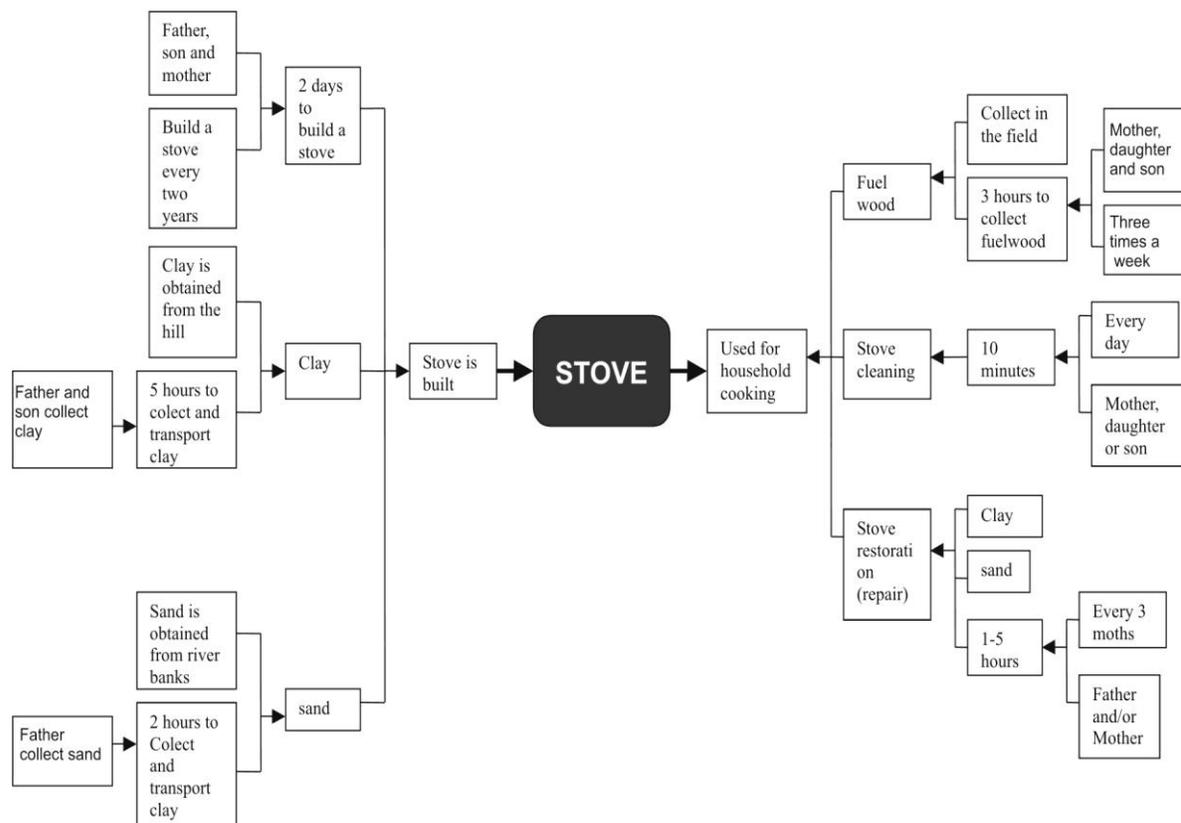
**MINIMUM INFORMATION TO EMERGE**

- Resources used (either those the people have already had, or those they still have to find in other places, or those they have to buy) in stove provision and stove operations
- Tasks in obtaining and operating a cook stove
- Who does what with regards to tasks analyzed

**Diagram-1. A schematic of branching questions in the construction of a stove web**



**Diagram 2. Example of a simplified stove web**



## Benefits, demands and costs

### PURPOSE

- To assess the extent to which an improved cook stove meets the demands of men and women users of different welfare groups
- To assess the extent of benefits<sup>5</sup> from an improved cook stove as perceived by men and women users of different welfare groups, against the costs in obtaining those perceived benefits.
- In monitoring and evaluation: assess differences in perceived impacts and value for costs for women and men of different welfare groups
- In planning and design: to identify the expectations of women and men from different user groups for the service-to-be and their willingness to pay for these benefits

### MATERIALS REQUIRED

- Cards with drawings showing benefits of ICS use (optional)
- Blank cards
- Marker pens

4. Benefits of improved cook stove use may include : fuel saving/ financial saving, reduced smoke exposure, reduced fuel collection time/effort, reduced cooking time, while some possible benefits from programme establishment may include: economic and social empowerment from being involved in constructing, selling and disseminating/ promoting improved cook stove.

- Large seeds/beans or berries
- A few large sheets of paper for recording results

## PROCESS

### 1. Identification of benefits and costs

- For programme planning and design : Initiate a discussion on what the group expects from the improved cook stove use and improved cook stove programme; if they do expect any benefits or have fears about possible negative impacts from improved cook stove use and ICP. For monitoring and evaluation purposes: Initiate a discussion about how improved cook stove has affected people's lives ; if there are any benefits or only negative effects they have experienced from improved cook stove use and the programme.
- If the group has literate members, invite the group to write down the benefits. Otherwise, use drawings and cross check with the groups if a particular drawing represents the benefits they mention. If a mentioned benefit is not shown in any of the drawings, ask a volunteer to make a simple drawing or have the message conveyed in writing.
- In case of monitoring and evaluation: Ask them if there are any expected benefits that are not being mentioned or discussed. Ask for these benefits to be listed on separate cards. In case of planning and design, skip this step and go directly to (e).
- Now move from group to group and ask them about the benefits to record them in two columns (ladders): (i) benefits that make life better for all household members (ii) benefits that are going to specifically affect the female members in the household. Groups may add more cards if additional benefits emerge at this stage.. Ask the groups to mark the benefits that represent improvements in the positions of women and girls in the household or community, compare them with those for boys and men.
- In the poor group: Ask the group to identify cards that show improvements in poor people's position in the community. Group members may add more cards if additional benefits emerge at this stage. Ask the group to mark these particular benefits with a marker.
- Invite the group to rate the degree of each benefit and to show the extent of each benefit, rate each benefit using seeds/beans (10=highest; 1= lowest). Record the outcomes.

### 2. Determining the value of benefits against the costs

- Now ask the group to consider the COSTS of the benefits:** all the contributions they have made (cash payments, labour and time in cook stove construction, time for cleaning, meetings, etc), any negative effects from improved cook stove/programme, and the unmet expectations.
- Ask the participants to do another scoring of the benefits relative to the costs.** If the value of a benefit exceeds the costs, a score of 10+1 is given; if the benefit equals to the costs, it gets a score of 10; if a benefit value is not at all worth the costs, it gets a score of 0. Anything in between shows the group's assessment of value of costs incurred for each benefit. Record the outcome.
- Discuss the outcomes and tools with the group to help them arrive at their conclusions.

### Focus group by gender and class

**In Poor and Rich Women focus groups:** Ask about benefits that would specifically affect the female members in the household – these are practical benefits that improve lives but without changing roles/positions. Ask the group to mark the benefits that represent improvements in the position of women and girls in the household or community.

**In the poor focus group:** Ask the group to identify cards that show improvements in poor people's position in the community. Ask the group to mark these particular benefits

## Gender Division of Task and Time

### PURPOSE

To assess and analyze how equitable workload, type of work and paid and unpaid work are divided between women and men and rich and poor

### TOOLS: Ladder

### MATERIALS

Drawings of tasks related to stove programme activities (or existing activities related to stove)

Marker pens

Blank cards for new drawings

Seeds (a few types)

A few large sheets of paper for making a matrix of tasks, frequencies and time

### PROCESS

#### 1. Who does what tasks?

- a) The groups you will work with are: (A) Improved cook stove user organization (if assessing a programme or if any programme has ever existed); (B) Male and female in the Rich and Poor Focus Groups. This means that you will carry out this exercise twice—once with the improved cook stove user organization (if applicable) and another with male and female in the Rich/Poor Focus Groups.
- b) Ask the group to list **activities related to a programme where women are usually involved** in (6-7 tasks are usually adequate). The tasks may include: administrative (e.g. co-ordinating stove programme activities; book keeping in stove credit scheme); improved cook stove promotion; stove building, distributing improved cook stove, etc. In groups with literate women and men, you can ask volunteers to write down the tasks. Make sure that women write.
- c) Ask the group to classify the drawings in the light of what people in the community see as tasks that require skills (high status) and tasks that do not require skills. Such a division of tasks carrying high and low labels may not be relevant in some communities, in which case this query should be skipped.

WOMEN'S TASKS	
High status	Low status
1.	1.
2.	2.
3.	3.

- d) Repeat the steps a,b and c but this time ask about men's tasks.
- e) **The group is now separated according to the sexes.** Find out from the group how many women are assigned to the tasks which they have identified earlier. Ask the women's group to identify if there are tasks that only poor women or rich women carry out exclusively. If there are, mark the tasks with symbols to indicate tasks of the rich and tasks of the poor.

Similar questions will also be presented before the men's group.

#### 2. Estimating division of time

- a) In the separate men/ women groups, ask men/ women groups to mark with seeds and other markings, how much time they spend on each task and record the findings. Be sure to ask for clarification about the unit they use to estimate workload and time, e.g. hours per month, days per year, etc. Help them with the use of different markers for indicating different time units.
- b) Ask the men to mark how much time they spend on each task. Again, check for time units and rich/poor division.

### 3. Paid and unpaid tasks

Ask the women and men to mark the tasks they carry out which are paid. Assist the group members to present findings to each other and discuss the outcomes.

### Voice and choice in decision making

#### PURPOSE

- To identify and analyze access to information (especially of the women and the poor)
- To assess the participation with regard to gender and poverty aspects in :
  - decision making and the scope of decision making process
  - access to information needed for participation in decision making
- For project monitoring and evaluation, to assess how participatory, demand responsive and gender and poverty sensitive the project is/was

#### MATERIALS

- Cloth sprayed with adhesive or board for fixing the drawings
- Drawings of persons or groups who generally make decisions in the community
- Blank cards to draw/write additional options
- Pins for fixing drawings on the board
- Envelopes
- Pieces of stiff paper in four different colours to be used as voting slips
- Copies of scoring options (see scoring and coding sheet below)

#### PROCESS

- a) Generate discussions about the types of decisions needed to set up improved cook stove dissemination programme in a community.
- b) Develop a list of key decisions needed (e.g. programme initiation, choice of technology, types and amount of contribution, community candidates for training in construction and promotion of cook stoves, type and member of cook stove user committee/organization, etc). Write down types of decisions that are not represented in the drawings, but are mentioned by the group.
- c) From the drawing sets, ask the group who in the community are involved in the decision making in the programme. As the group mentions persons/groups who took part in the decision making, show the drawings and ask them to select those that represent their ideas on who make the decisions. Crosscheck the drawings, one at a time, to ensure that everyone in the group agree on who are represented in the drawings. Draw or write down persons/groups who are mentioned but are not represented in the drawing.
- d) Lay out a matrix on the cloth or board: put the drawings of types of decisions on the first column on the left hand side; and drawings of persons/groups on the top row. A matrix on the ground works just as well. Place envelopes on the matrix cells.
- e) Explain to the group that they will be voting on who make what type of decisions concerning the establishment of improved cook stove dissemination in the community.
- f) Prepare the voting slips, and ask the group to choose the coloured voting slips according to sex.
- g) Ask the group to move away and not to crowd around the voting place, so that the voting process remains confidential. Using a list of the participants' names, call out the name of one person at a time and ask the individual to cast the vote. Guide participants during the voting.
- h) When the voting is completed, ask volunteers from the group to present the voting results. Facilitate a discussion on the voting results, posing questions like 'who all have been excluded from the decision making process?' 'why have they been excluded?' 'what could be done to include them in the future?' and like.

- i) Assist the group to use findings for agreeing on the level of scores for 'access to information and decision making.' Have an open discussion with women on the extent of their involvement in community decision making (women often get less information and are less involved than men).
- j) Share arrangement for the community review meetings where groups of the community will present all tools and their outcomes and where the people and the project staff members of the assessment team will discuss all findings and further actions. You will have to make arrangements for these presentations. Make sure that the place and time are known to all groups in the community and the results of the group work are readied and presented for display.

**Sample drawings**



## Training Assessment – Access and Use

### PURPOSE

- To assess and analyze who in the community received training, including the women and the poor
- To assess and analyze what skill fields were covered and not covered (training gaps)
- To assess and analyze how innovative the training was on gender (Were women and men both trained in new skills? Did women receive innovative training or was the training conducted according to the conventional gender pattern?)
- To find out whether skills obtained from training is used, if so, by whom? If not, why?
- For project monitoring and evaluation, review training on scope, adequacy, gender innovation and access.

### TOOLS

- Matrix voting
- Card sorting

### MATERIALS

- Cloth sprayed with adhesive (optional). Alternatively, the session could be conducted on the ground.
- Marker pens

#### ***For Matrix voting:***

- Drawings of rich women (RW), rich men (RM), poor women (PW), poor men (PM)
- Drawings of relevant training (cook stove construction, cook stove promotion; depending on what local programmes offer)
- Blank cards to draw/write additional training options
- Seeds
- Several small size cards as marking (if sticky cloth is used)

### PROCESS

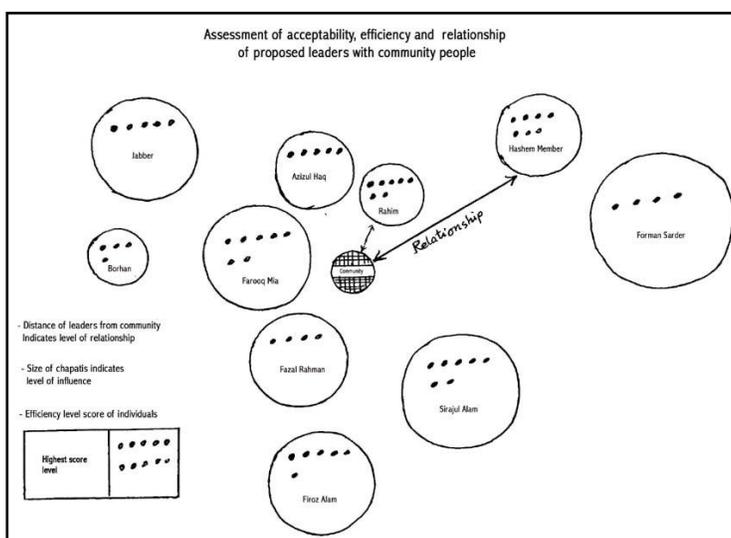
#### **1. Assessment on the history of participation in training (Matrix voting)**

- a) Assessing the history of participation in training is done with women and men who have been living in the community since the beginning of the project and know the history from experience.
- b) If drawings are used, show drawings depicting relevant training to the group or if drawings are not used, ask the group what training sessions related to improved stove programme have been conducted. Discuss how the group understands the drawings; clarify the drawings and get the group to reach a consensus on what each drawing represents. Take out the drawings which are not relevant there. Ask the group whether there is/are training sessions which have not been represented in the drawings presented. If there is/are training options mentioned which have not been represented, ask the group to draw the missing picture or simply write down the missing options. In case you are not using any drawings, then write down the training types mentioned by the group.
- c) Lay out a matrix with drawings of men and women arranged horizontally on the top row; drawings/writings representing training sessions are to be arranged vertically on the first column. Using seeds as the counter, ask the group to indicate how many women and men have been trained against each training option and how many of those trainees are from rich, middle and poor classes. Make sure that women and men are equally involved during the exercise. Ask the participants the year in which all the different types of training were conducted.
- d) Ask the group to split the piles of seeds in different cells, showing the number of those men and women trained who are still using their skills and those who are not separately. Find out the reasons of lacking practices for those who no longer practice their skills.

## Venn diagram

Venn diagrams are usually used to depict key institutions and organizations that are working in an area and their influence on and contribution to the local community. The attitude of the community towards these organizations can be ascertained and the effectiveness of these organizations can be evaluated. Through this method, the following perceptions of the community regarding two issues can be determined viz. firstly, the importance of these organizations or their services to the community, and secondly, the access of the community into these organizations and the availability of their services.

This exercise will lay more emphasis on the identification of pro-people leaders for appropriate CBO formation. Discussion will consider the essential qualities of the leadership.



## Scope of Use:

- To identify outside and local organizations and their services
- To find out the relationship of the community with these organizations
- To understand the role and significance of these organizations
- To find out the access of the community to these organizations and the availability of their services
- To evaluate the effectiveness of different organizations
- Help analyze the existing power structure
- Identify the characteristics of pro-people leadership
- Identify the appropriate leaders as per criteria to run the CBO

## Process of Facilitation:

- Decide in consultation with the people, the topic or the type of organizations on which Venn diagram will be drawn
- Assist the people to identify the relevant organizations/leaders
- Assist them in presenting the selected organizations/leaders with appropriate symbols
- Ask them to draw circles representing these organizations, the sizes of the circles tell us about the relevant perceived importance of these organizations—bigger circles for more important organizations and smaller circles for less important ones.
- Tell them to write down the names or to draw the symbols of these organizations on these selected circles
- Ask them to draw a circle (representing the area) in the centre of a sheet of brown paper.
- Ask them to place the circles representing the organizations around the area circle depending upon the relationship / importance/ influence of the organizations. The organization having more influence on the community will be placed closer to area circle and the organizations having less influence will be placed farther from the area circle.

- Ask the participants to identify the characteristics of pro-people leaders to run the CBO
- Identify the leaders based on the agreed criteria
- Encourage the people to participate in the discussion, assist them to relocate the circles if they want to do so.
- Write down the available information.
- Thank them for their effective participation.

Key Questions: (will be around the following)

Service delivery organizations

Linkage between service delivery organizations and LGI

Community access (especially women) to service delivery organizations

How to ensure the access of community people to services

What are the attributes of the pro-people leaders to be chosen to run the CBO?

How many individuals are there in the community who possess the agreed attributes?

### **Situation analysis and ignition**

Presentation of all the outputs of the exercises through analysis is necessary for ignition and initiation of community mobilization through formation of the CBO as the final outcome of application of the participatory tools for ignition and community mobilization. Using the map, participants are encouraged to compare the number of families/households with the number of households with healthy kitchen, clean energy technologies (solar device, biogas plant and cook stoves). [At this stage, the facilitator will encourage building a definition of healthy kitchen, clean energy technology with special attention to improved cook stoves] The missing link or gap between them will then become visible and people may start passing comments that the situation in the community is really bad, unhealthy and unacceptable. To encourage the participants, the facilitator then asks them to consider the effects of the gap by using calculations and analyses of health and economic implications. This helps ignite the conscience of the participants and reach an understanding that a change has to be introduced to the situation by taking an initiative to introduce the technology and health/economy related issues to all the households. This initiative, in fact, requires some institutional framework and detailed plan of action. The facilitator asks questions into the identification process before selecting the leaders by using Venn Diagram and offers help in determining the criteria or attributes of leaders. This is the final effort towards formation of the CBO. Once the leaders are identified, the participants ask them to draw a detailed plan of action setting a timeline. Accordingly, the newly formed CBO makes a commitment that they will prepare the plan and will share the same on the set date.

By using a piece of poster paper and markers, participants list the effects in terms of time, money and health. When focusing on the lack of technology, participants identify the practice of cooking with the existing technologies with the families with improved technologies as defined earlier. The facilitator then asks the participants to visit some kitchens (in several small groups) with traditional cook stove technologies and try staying inside the kitchen with the users and realize about the practical aspects of unhealthy smoke emissions caused by biomass fuel use and strains of cooking in a kitchen with poor cook stove technology. Often this happens to be the first time they have experienced the situation and reflecting upon its community wide effect, they can explain the immediate effects of smoke on the respiratory system and eyes and demonstrate keenness to overcome the situation. On return to the group exercise, the participants calculate the amount of health and economic losses suffered by the inmates of the household and the community as a whole. First, the number of households that are using traditional cook stoves with the use of biomass fuel is calculated. Then an estimate is made to quantify the amount of smokes/pollutants produced in each kitchen daily to affect a good number of women/adolescent girls, children, elderly and others. In the end, to figure out the losses in terms of diseases, loss in terms of fuel cost and medical treatment in households, the following calculation can be made. These figures will show the total amount of losses in each household, which, then multiplied by number of days of the week/month/year together to yield a total amount of loss in terms of money.

Amount of fuel wood used in a household daily (in mounds)	X	Number of traditional cook stove user families	=	Amount of fuel wood burnt daily
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This figure is then multiplied by 7 to produce a weekly figure and/or by 30 to give a monthly figure and by 365 to give an annual figure. Then the output multiplied by the rate of price per maund will result in the total amount of money required to keep the cook stoves burning. Participants describe this in terms of truckloads or the size of a hill to create a visual picture of smokes and related sufferings as outcome.

## 7. Institutional Framework with Operational Modalities in IAP- ICS

Community institutions will emerge as the outcomes of community level entry PRA session facilitation. These are the most important vehicles to carry forward the project interventions in the target areas. These CBOs will be named as per choice of the session participants. In health programme areas, community people might very well call it Community Health Watch Committee, in case of WatSan programme intervention; people may term it as Community WatSan Action Committee or Environmental Health Promotion Committee. Similarly, in this case, people might be terming it as Environmental Pollution Prevention Committee. Whatever the name may be, it is the choice of the community people that would be accepted by the facilitation team. The facilitator needs to see that women - the stove users are mostly selected for formation of the committee though interested male counterparts may also be included in the committee.

Once the CBO is formed, its guardians will prepare the action plan at the request of the participants/community people. Such plans would, in turn, be ratified by the community people in a meeting later. A list of activities will be prioritized for immediate implementation. This action planning meeting would be the first meeting of the committee and support of workers from the facilitation agency is needed at this stage for guiding the inceptional activities in the right direction. A frontline worker along with a technology staff will extend technical assistance to the committee while its members draw the plan of action. The plan should follow the minimum format that has been mentioned earlier as planning format in Chapter –

The committee members prepare the plan of action with the assistance of frontline staff. The facilitation team members assist the process as per the following frame –

SI No.	Activity	Objective	Resources needed	Sources	Responsibility	Required timeline	Remarks
1	Technology orientation						

The following community level sharing meeting would be organized by the CBO and the plan would be shared and ratified with suggestions for improvement. The meeting also prioritizes activities and assigns people to take part in the initiative. Usually, the orientation on ICS and pollution issues would get priority for initiating community awareness level raising. And, this is the inceptional intervention among the activities of the integrated program on IAP.

**Adoption of CBO Action plan and initiation of activities:** The first meeting that is organized by the CBO is all about sharing of the action plan that is prepared by the CBO itself. On top of the intervention needs, training in the basics of the concerned technology also comes up. This is very much associated with identification of interested women from within the community too. At this stage, the required resources also need to be identified within households, communities and with the local government bodies. It should be mentioned here that the local government has a standing committee to particularly look into the environmental aspects and conservation of local forest resources and the CBOs may be advised to build a working relationship with the said local government committee.

**Integrating Local Government Institutions:** The local government is important to be integrated in the process that will help the CBO in its march ahead with the action plans developed at the community level.

As mentioned above, the steering committee of the LGI would find here a new dimension to be activated in respect of environment and conservation of forest resources by building alliance with the CBOs coming out with commitment to address IAP – ICS issues.

The process in fact will be started following the orientation workshop with the LGIs at the outset of the project process simultaneously with the community level ignition session facilitation. The session will help the LGIs to identify the effects of cooking induced indoor air pollution on health, environment, local forest resources and ultimately aggravating poverty in the area. They will also be able to find out the factors responsible for exacerbating the pollution scene and point their fingers at the use of traditional cook stoves and poorly ventilated kitchens in the rural areas and the overall low level of awareness of the people in general as the key issues to be addressed. Their alliance with CBOs, NGOs, the private sector and other related government agencies in their plan of action will visualize the possible solutions to make visible where they will find scope of their involvement and role to play in addressing the issues and bringing about a sustainable change to the situation. The interventions they would like to undertake may include campaigns, rallies, film shows etc. to enable people visualize the effects and help raising awareness in this respect in the community people in general. In order for scaling up, social marketing and ensuring financial support, the LGIs are expected to be playing their role effectively. Moreover, they have the mandate to do policy advocacy in reducing the indoor air pollution through promoting household energy technologies. In this respect, the LGIs will demonstrate different household energy technology options at their premises. GO-LGI-NGO-Private Sector-Research Institution-CBO Network is essential for scaling up and sustainability of the programme.

## **8. CAPACITY BUILDING OF PROJECT STAFF, LGI, ENTREPRENEURS AND CATALYSTS**

Capacity building of the stakeholders, especially the staff of the implementing organization is a key concern in undertaking a sustainable project implementation. To this effect, professional orientation and formal training including TOT would be indispensable. The facilitators need to be cautious in using such tools and techniques as may be considered sensitive in the context of the local power structure and cultural norms.

The following means of capacity building have been considered :

### **Project Orientation Workshop**

#### **1. DISTRICT LEVEL**

##### **Contents:**

- Historical back ground and rationale of IAP reduction
- Background of the IAP reduction project
- Management project cycle
- Goal, objectives and strategy
- Major interventions
- Implementation strategy
- Stakeholders
- Financial management

##### **Participants:**

All district level stakeholders, staff of IO (Implementing Organization), LGI leaders and other actors (media, private sector, civil society, business community) who are major role players in implementing and facilitating an IAP Project.

**Methods and Approach:**

A participatory workshop will be organized by the IO. The workshop will be conducted using the following methods:

- Multi-media presentation
- Open discussion
- Questions and answers
- Brain storming
- FGD

**All required materials:**

Handouts on the project in brief (design, approach, implementation process, provision of physical facilities, important stakeholders and key players, cross-cutting issues and public disclosure system etc.).

**Facilitated by:**

Experienced facilitators in the related field and WB and LGED officials

Venue : As decided by the concerned authorities  
Duration : 2 Days.  
Time : 10:00 to 4:00pm  
Documentation : Implementing organization

## 2. UPAZILA LEVEL (UDCC)

### Contents:

- Historical background and rationale of IAP reduction
- Background of the IAP reduction project
- Management project cycle
- Goal, objectives and strategy
- Major intervention
- Implementation strategy
- Stakeholders
- Financial management

### Participants:

All upazila level, GOB officials, project staff, LGI leaders and other actors (media, civil society, business community) who are major role players in implementing and facilitating the IAP Project.

### Methods and Approach:

A participatory workshop will be organized by the implementing organization (IO). The workshop will be conducted using the following methods:

- Multi-media presentation
- Open discussion
- Questions and answers
- Brain storming
- FGD

### All required materials:

Handouts on the project in brief (design, approach, implementation process, provision of physical facilities, important stakeholders and key players, cross-cutting issues and public disclosure system etc.).

### Facilitated by:

Experienced facilitators in the related field and WB and LGED officials

Venue : As decided by the proper authorities  
Duration : 2 Days.  
Time : 10:00 to 4:00pm  
Documentation : Implementing organization

## 3. UNION LEVEL

### Contents:

- Historical background and rationale of IAP reduction
- Background of IAP reduction project
- Management project cycle
- Goal, objectives and strategy
- Major intervention
- Implementation strategy
- Stakeholders
- Financial management

### Participants:

All union level stakeholders, project staff, LGI leaders and other actors (media, civil society, business community) who are major role players in implementing and facilitating the IAP Project.

### **Methods and Approach:**

A participatory workshop will be organized by the implementing organization (IO). The workshop will be conducted using the following methods:

- Visual presentation
- Open discussion
- Questions and answers
- Brain storming
- FGD

### **All required materials:**

Handouts on the project in brief (design, approach, implementation process, provision of physical facilities, important stakeholders and key players, cross-cutting issues and public disclosure system etc.).

### **Facilitated by:**

Experienced facilitators in the related field and WB and LGED officials

Venue : As decided by the proper authorities  
Duration : 2 Days.  
Time : 10:00 to 4:00pm  
Documentation : Implementing organization

## **TRAINING**

### **Foundation Training on IAP Implementation**

#### **Contents:**

- Orientation on the project cycle
- Approach and methodology
- Major activities and implementation strategy
- Stakeholders analysis
- Motivation techniques and facilitation skills
- Role of field, mid and senior level staff of the implementing organization (IO) and other actors in the field.
- Coordination and liaison with different stakeholders
- Scaling up and phasing out strategy
- Sustainability

#### **Participants:**

Project staff, LGI leaders and other actors who are major role players in implementing and facilitating the IAP Project

### **Methods and Approach:**

Foundation Training on IAP Implementation will be organized by the implementing organisation. It will be conducted using the following methods:

- Open discussion
- Fish bowl
- Role play
- Questions and answers
- Brain storming
- Group discussion (Hum and Buzz Group)
- Class room exercise
- VIPP
- Field level exercise

**Required materials:**

VIPP card, brown paper, poster paper, masking tape, super glue, handouts, role play script

**Facilitated by:**

Experienced facilitators in the related field

Venue : As decided by the proper authorities  
Duration : 5 Days.  
Time : 9:00 to 5:00pm  
Documentation : Implementing organization

**Basic training on Participatory Tools and Methods for the project staff, LGI leaders and community catalyts****Contents:**

- Participation
- Historical background and importance of participation
- Typology of participation
- Participatory Rural Appraisal (PRA)
- Advantages and disadvantages of PRA
- Role of facilitator in PRA
- Tools and techniques
- Participatory monitoring
- PRA reporting

**Participants:**

Project staff trainers of IO, LGI leaders and other actors who are major role players in implementing and facilitating the IAP Project.

**Methods and Approach:**

Basic Training will be organized by the implementing organisation and will be conducted using the following methods:

- Open discussion
- Questions and answers
- Brain storming
- Group discussion (Hum and Buzz Group)
- Class room exercise
- VIPP
- Field level exercise

**Required materials:**

VIPP card, brown paper, poster paper, masking tape, super glue, seeds, locally available other materials and handouts

**Facilitated by:**

Experienced facilitators in the related field

Venue : As decided by the proper authorities  
Duration : 7 Days.  
Time : 9:00 to 5:00pm  
Documentation : Implementing organization

## **BASIC SKILLS DEVELOPMENT TRAINING ON IMPROVED COOK STOVES**

### **Contents:**

- Identifying characteristics of the traditional cook stove, its conveniences, inconveniences and identifying ways of addressing its limitations
- Listing the effects of stove emitted smoke on health caused by cooking using a traditional cook stove in a poorly ventilated kitchen
- Orientation on the basics of improved cook stove (ICS) technology and visit to a community where ICS technology is in use
- Practical session on ICS technology
- Diversity in designs of ICS technology matching various geo-physical conditional variations – practical session
- Identification of problems with ICS technology and modified technology models and solutions – practical session
- Practical exercise on efficiency testing of ICS technology

### **Participants:**

Project staff, LGI leaders and other actors who are major role players in implementing and facilitating the IAP Project

### **Methods and Approach:**

Foundation Training on IAP Implementation will be organized by the implementing organisation and it will be conducted using the following methods:

- VIPP
- Fish bowl
- Questions and answers
- Brain storming
- Group discussion (Hum and Buzz Group)
- Practical demonstration
- Field level exercise

### **Required materials:**

VIPP card, brown paper, poster paper, clay, spare parts of an ICS, masking tape, super glue, handouts

### **Facilitated by:**

Experienced facilitators in the related field

Venue : As decided by the proper authorities  
Duration : 5 Days.  
Time : 9:00 to 5:00pm  
Documentation : Implementing organization

## **9. SUSTAINABILITY**

Addressing the issue of indoor air pollution by popularizing the improved cook stove technology and use of clean energy fuels urgently is highly important and therefore, it deserves the attention of cross-sectoral stakeholders. This is very much related to a number of public health issues as well as the wellbeing of the grassroots and necessarily, the poverty alleviation issues too.

A number of initiatives in this field have been taken in the past by the NGOs as well as government institutions in the country. A substantial amount of relevant experience also has been gathered. Specially, the IFRD of BCSIR initiated activities have played a pioneering role in addressing the concerned issues and achieved remarkable success in introducing the improved cook stove technology across the country. A good number of NGOs were supported under the leadership of BCSIR to undertake local level initiatives, which have furnished us with a platform for undertaking further interventions in the sector of energy use and addressing pollution reduction and thereby improving the level of public health. Unfortunately, most of the initiatives were technology focused and therefore, failed to register visible successes in terms of sustainability. The main deficiency in the field lies in terms of strategic directions, the crucial lack of institutional arrangements and the degree of people's participation. It has been very well apparent to the development activists in the recent past that people's participation is a pre-requisite to rendering any interventions more effective and sustainable.

It is well known to all that at the grass roots level, the local government institutions (LGI) are the most sustainable institutions to spearhead all types of government and NGO supported development interventions. The foundation or the pilot initiative will provide a scope of looking for possibilities of the LGIs' involvement in all stages of household energy technology promotion activities. The orientation session will enable the LGIs to have an understanding of the issues and get them involved in the process effectively as a core institution to support all types of local level interventions. The LG office has a standing committee for overseeing all interventions launched for local environmental protection and conservation of local resources. Several other standing committees of the LGI are also involved in addressing the issues. If all the steering committees are activated and a comprehensive plan of action can be drawn targeting the issues, it will blaze a trail towards attainment of sustainability in the near future. Technical assistance from specialized NGOs in collaboration with the line agencies of the government will be more meaningful.

Critical analysis of traditional cook stove use in poorly ventilated kitchens and its health and wellbeing implications will be helpful in forming CBOs mainly by users to take the lead role. Consistent and comprehensive action planning would help implement activities by building professional networks and alliances with NGOs involved in technology promotion as well as the LGI representatives. Such networks and alliances will empower all stakeholders in promoting clean energy use technologies suitable for household and institutions, minimizing the hazards and vulnerability of indoor air pollution to a considerable extent. The tools and techniques will help monitor the effectiveness of institutions in an alliance and also the interventions that are being implemented.

The pilot intervention will hopefully strike upon more appropriate and efficient use of tools and techniques for further improvement while working practically and making the mobilization activities meaningful. The documented experiences after being finetuned would be helpful in replicating the interventions in extension areas in a more sustainable manner across the country.

## **10. CONCLUSION**

Efficient use of participatory tools and techniques at the community level and attaining a level of perfection depend on proper orientation and practice of all concerned. A professional facilitation team needs to be developed for effective and optimal use of this manual. Hands on exercise on the ground would be necessary in this regard. The capacity building training should ideally be imparted with intervals in between the various stages.

This manual will help identification of producers and distributors of required hardware and also streamlining the community members' improved access to the same. In this case, they will also require management training for smooth operation and functioning of enterprises for marketing of products and its scaling up. Display of clean energy technologies and all related spares would be necessary so that a meaningful market demand is created. Accordingly, people will know about the sources of supply with choice of design, efficiency level, price level etc. The producers might not be interested in the ICS technology production as a business to invest in at the initial stage. In that case, the use of Venn diagram

tool would be helpful in order to identify the sources of financial back-up in terms of credit. Similarly, this manual will help the practitioners to be innovative in multiple use of tools and techniques in diverse contexts. The community based participatory monitoring and evaluation mechanism will be introduced to monitor the use and effectiveness of all types of household energy technologies, promotion, social marketing and scaling-up and finally the sustainability of the mode.

During the pilot process, this preliminary manual would be updated and enriched through learning, modification and incorporation of relevant data obtained during practice and screened through refresher workshop of practitioners and other stakeholders held at intervals in between stages of implementation of the scheme. The manual is also a tool for effectively involving the stakeholders in IAP prevention through introduction of household energy use initiatives.

### **References:**

1. Archer, David and Sara Cottingham (1996). 'Action Research Report on REFLECT: The Experience of Three REFLECT Pilot Projects in Uganda, Bangladesh, El Salvador.' ODA Education Papers No. 17. ODA, London.
2. Chambers, Robert (1983). Rural Development: Putting the Last First. Longman, Harlow.
3. Chambers, Robert (1997). Whose reality Counts? Putting the First Last. Intermediate Technology Publication, London.
4. Freire, Paulo (1970). Pedagogy of the Oppressed. The Penguin Publication, New York.
5. Jennifer, R. and McCracken ed. (1996). Participation in Practice. The Experience of World Bank and other Stakeholders. Washington DC.
6. Kabutha, Charity and Richard Ford (1988). 'Using PRA to Formulate a Village Resources Management Plan', RRA Notes 2. IIED, London.
7. Kumar, Somesh ed. (1996). ABC of PRA – Attitude and Behaviour Change, A report of the Proceedings of South-South Workshop on Attitude and Behaviour in PRA. Action Aid, India and PRAXIS, Patna, India.
8. Kumar, Somesh (2002). Methods for Community Participation. Vistaar Publication. New Delhi.
9. Mascarenhas, James (1991). 'Participatory Rural appraisal and Participatory Learning Methods: Recent Experience from MYRADA and South India', RRA Notes 13, IIED, London.
10. McCracken, J. A., Jules N. Pretty and Gordon R. Conway (1988). An Introduction to Rapid Appraisal for Agricultural development. IIED, London.
11. Okley, Peter. et al. (1991). Projects with People – The Practice of Participation in Rural Development, ILO, Geneva.
12. Pretty, Jules N. et al. (1995). A Trainers' Guide for Participatory Learning and Action, IIED Participatory Methodology series. IIED, London.
13. Rekha Dayal, Christine V Wijk, Nilanjana, Mukherjee (2000). Methodology for Participatory Assessments: 'With Communities, Institutions and Policy Makers'. Linking Sustainability with Demand, Gender and Poverty. Water and Sanitation Program. IRC International Water and Sanitation Centre, World Bank, Washington DC.
14. Srinivasan, Lyra (1990). Tools for Community Participation: A manual for training trainers in participatory techniques. PROWWESS/ UNDP Technical Series, New York.
15. TRAINER MANUAL – Methodology for Participatory Assessment on Cookstove Programme, ARECOP, Indonesia.
16. Y.C. James Yen Centre. International Institute of Rural Reconstruction (1997). Participatory Monitoring and Evaluation: Experience and Lessons, Workshop Proceedings.