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Knowledge network on sustainable household energy
in Southern and Eastern Africa

Policy Dialogue

Health Issues

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Working draft

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1.0 Background

The following topics that have been discussed in the previous health briefing papers, and the Scenarios, are briefly re-emphasised as background issues.

1.1 Determinants of health

Throughout the Sparknet project, we have viewed health as being determined by a broad range of determinants, drawing on the 'socio-environmental' model of health. This is argued to be very relevant to the issue of household energy, because it impacts not only through clearly identifiable mechanisms such as indoor air pollution (IAP), burns, etc., but also less directly (but possibly no less important) through a wide range of impacts that include women's time, poverty and the environment.

1.2 Contribution of health services

Although reducing the impact of household energy and IAP on health can be expected to result mainly from preventive actions, responsibility for which lie mostly outside of the health sector, health services do have a role. This can be identified as:

- Ensuring adequate services for the management of children and adults suffering the consequences of IAP, burns, etc. This includes issue of access to services.
- Contributing to preventive action, which may be in the form of advice following attendance for illness that may be associated with household energy use, and the provision of information that can help promote and develop national and local action.

2.0 Policy goals (from health perspective)

The following health-related policy goals are proposed:

General goal:

- Household energy use among the rural and urban poor should be given appropriate attention in all national and local policy on health, environment and poverty reduction.

Specific goals:

- Reduction of IAP exposure, in order to achieve a reduction in the burden of disease associated with this exposure
- Reduction of risk of injury associated with collection of fuel, and in use (e.g. burns from stoves and house fires, ingestion of kerosene)
- Reduction in drudgery and loss of time associated with the inefficient supply (time to collect) and use of fuels (inefficient stoves, inadequate lighting, etc.), and the associated impacts on poverty and indirectly on health. Also included are related development and health consequences of environmental impacts.
- Reduction of pollution to improve the quality of the indoor environment, e.g. for children to study, etc.

3.0 Context of policy implementation

A number of contextual issues will be important for our discussion on policy. These are relevant to all areas, including health.

3.1 Scenarios

In the scenarios conference, we discussed the various options and possible consequences regarding (a) socio-economic development and (b) regional cooperation. From a health perspective, we identified socio-economic development as the over-riding concern. How will we bring this issue to bear in the current Policy e-conference? We can't influence economic circumstances in countries (at least not initially), but these circumstances will affect the priority given to our policy proposals. Do recent/current discussions on trade and debt have anything new to add?

3.2 Trends in fuel options

The expectation in both our discussions, and in views of organisations such as the International Energy Agency, is that biomass will continue as the main household fuel for poor people in sub-Saharan Africa. Projections to 2030 by the International Energy Agency show that while a reduction in residential biomass use is expected in most developing countries, for Africa and South Asia the decline will be small and the population relying on biomass will increase from 2.4 to 2.6 billion, with over 50% of residential energy consumption still derived from this source (International Energy Agency 2002). We have also reviewed the use of other fuels, including LPG and electricity, noting the latter unlikely to be used widely for main thermal tasks hence will not contribute greatly to reducing IAP. LPG use is still quite limited, tending to be restricted to better-off and particularly urban homes. A range of other cleaner fuel options have been considered, but uptake is not widespread, nor does it seem likely to expand much on current trends. Should we therefore accept that biomass will remain the principal fuel for the rural poor, or should we try to challenge this in policy development? The urban poor use a greater variety of fuels, and less unprocessed biomass: as the urban poor population is expected to increase, what should be promoted?

3.3 Governance

Positive change requires good governance. The policy ideas proposed here will be hard to achieve without government that is well organised and run, free of corruption, has a focus on poverty reduction and the importance of gender issues. These are themes that have been linked to initiatives such as debt reduction. It is important that the nature of governance feature in our discussion about policy proposals.

4.0 Policy options proposed

4.1 Specific policy proposals

Although a range of household energy interventions are available that can contribute to reducing IAP and other negative impacts on health and development, there are many barriers to adoption by poor households, and there is a need for enabling policy. This is a complex and evolving area of practice, often requiring solutions that are highly setting-specific.

Table A-1 summarises and discusses a range of policy instruments that can contribute to this process. Health impacts, and consequently the benefits of interventions, are inextricably linked to other areas of policy, and it would be artificial to attempt to separate these out. Table A-1 therefore takes a fairly broad view of relevant policy instruments, while maintaining a specific health perspective.

The role of the health system in implementing policy is considered further in Sections 5.0 and 6.0.

4.2 Other issues for implementation

Policy should have clear targets and timescales, and monitoring requires the use of effective indicators. The issue of cost of policy proposals has been raised by some of the country papers, and this is also briefly discussed below:

- **Indicators:** valuable in assessing need and monitoring progress, indicators should present critical information clearly to those responsible for developing and implementing policy. WHO has done work on developing indicators for environmental health, and it would be useful to review this. There would be value in the Sparknet group proposing a key set of indicators for consideration by countries.
- **Targets and timescales:** it would be very useful to identify a number of key targets, with respective timescales for achievement. These should be clear, easily assessed (see indicators), challenging yet realistic. Decisions about targets should be made nationally, but there would be value in the Sparknet group proposing targets for consideration by countries.
- **Cost of policy proposals:** It is probably not realistic to attempt to determine the costs of policy proposals as part of the Sparknet project, as this would take considerably more time

than is available, and would require active participation by key national interests. Sparknet could, however, discuss and try to agree a framework for assessing costs, identifying key components and the extent to which costs for each component could be met through the market, and the approximate level (proportion, not absolute amount) of government, private and donor funding that may be required.

5.0 Leadership and roles

Leadership in policy development and implementation is needed, and countries may already have identified lead agencies/ministries, etc., or be in the process of doing so. This would seem an important topic for discussion in the e-conference.

We have discussed in earlier papers the importance of collaborative action for health in respect of household energy, and considered the roles of these various sectors, including health. Here we consider further the role, including in leadership, of (a) public health action and (b) health services.

5.1 Public health action

Those responsible for public health are well-placed to contribute to leadership on this issue. They can provide information on populations at risk, health burden, effectiveness of interventions, etc., by carrying out and/or helping to co-ordinate research, and collating and interpreting information from a wide range of other sources. An appreciation of the importance of collaborative action also places public health leaders in a good position to encourage and facilitate co-operation. It will be useful to identify the public health institutions (ministry, or other state, NGO or private, where relevant) and individuals in partner countries that are already providing, or could develop, this function.

5.2 Health services

It will often not be possible for health care staff to state with certainty that an episode of illness such as ALRI has resulted from IAP, but the increased risk associated with exposure can be discussed. Specific episodes such as burns may well be attributable, and IAP exposure can reasonably be considered as contributing to conditions such as chronic obstructive lung disease, for example in older women who have not smoked cigarettes. However, it will not be easy for health care staff to give such advice to caregivers in isolation, and cooperation with local partners is needed so that advice from health care staff is not provided to parents who have no options or support to make changes. Health services therefore have a role in giving preventive advice to caregivers, but to do so effectively, need to work in collaboration with other (mainly local) agencies who would be more directly involved in developing, promoting, marketing, etc., of appropriate interventions. There may be formal mechanisms for expanding the contribution of health services to local, community-based environmental health promotion through (for example) Community IMCI (Integrated Management of Childhood Illness).

6.0 Ensuring policy is implemented

This may be the greatest challenge that we face, and in this section a number of issues and proposals that may help to ensure policy is implemented are discussed below.

6.1 What are the barriers?

Do we know what barriers are preventing, or might prevent, implementation in each country, and regionally? We are probably aware of some of the most important barriers, but we should consider assessing these further.

6.2 Champions

Champions, who can inspire and encourage decision-makers and communities to take action may be very helpful. These could be both international/regional and national. Can we identify any such champions? Figures from politics, media and entertainment may be suitable, and there may be particular value in women taking on this role.

6.3 Information and experience that can make a difference

Some information may be particularly effective in moving the policy agenda forward, including:

- Convincing evidence of health and poverty gain from action taken in specific communities and countries
- Information on the availability of feasible, affordable interventions, highlighting successes.
- Economic evaluation showing the overall macro-economic (national) consequences of current patterns of energy use, and costs/benefits for individual households.

[These are intended as suggestions and further ideas and comments welcomed]

6.4 Critical policy action

There may be specific areas of policy action that could overcome barriers, and 'unblock' action, developing and maintaining momentum. What might these be? Possibly:

- Specific parliamentary legislation that attributes responsibility and accountability for action on household energy in areas of public health, etc.
- Expanded access to credit for poorer households to make transition to cleaner energy options, with special regard to the role of women.
- Region-wide promotion of improved access to cleaner fuels, for example building on work of LP rural gas challenge and giving this greater attention.

7.0 Conclusions

Health impacts and policy are inextricably linked to other areas of policy on household energy. Specific policy actions have been proposed, with consideration of public health and health service roles. Leadership is required, and if not already apparent needs to be developed and agreed, with the health sector playing a part. A critical challenge is how to ensure policy proposals are implemented, and suggestions for achieving this have been made for further discussion.

Table A-1: Policy instruments for promoting implementation of interventions that can reduce the health impacts of household energy use

Policy instruments	Examples	Applications
1. Information, education and communication	Schools and University	Learning about household energy, health and development should be integrated in school curricula. This can be achieved through programs such as the WHO Global School Health Initiative, which is promoting environmental health education, including IAP. Education about environment and health (including IAP and household energy), and role of health system in addressing this should be strengthened in Medical training and other relevant programmes.
	Media	Local and national radio, television and newspapers can be used to raise awareness and disseminate information on technologies and opportunities to support implementation, such as promotions and micro-credit. These media could be directed at a range of audiences, including decision makers, professionals, and the public where radio is widely used.
	Community education	Opportunities such as adult literacy programmes can be used to raise awareness and share experience of interventions.
2. Taxes and subsidies	Tax on fuels and appliances	Reduced tax on fuels and appliances may promote development of distribution networks and uptake, and can be seen as (economically) efficient if there is evidence of health, education and economic benefits.
	Subsidy on fuels and appliances	General (e.g. national) subsidy on fuels such as kerosene have been used in an effort to promote use by poor households, although this has been directed mainly at kerosene as a fuel for lighting rather than cooking. In general however, this has been found to be an inefficient instrument, often benefiting the better-off rather than the poor, and such subsidies are tending to be reduced. Time-limited subsidy on specific products or components (e.g. clean fuel appliances, connection to grid) may be a useful method for promoting initial uptake, generating demand, and thereby providing market conditions for lower prices and more consistent quality.
3. Regulation and legislation	Air quality standards (AQS)	Although some developing countries have AQS for urban air, none do so for indoor air in settings where solid fuels are widely used. Routine monitoring and enforcement for domestic air quality is not a realistic option, but it may be useful to set standards and targets if these are linked to a specific programme of monitoring (for example in specific studies in selected populations) and policy review.
	Design standards for appliances	These can be applied to safety (prevention of burns, gas leaks, explosions), venting of emissions, to efficiency, and marketability (e.g. smaller LPG bottles which are more accessible to low-income households). Although such standards may be difficult to enforce with local production in an informal economy, these should be a valuable instrument with wider-scale production.
4. Direct expenditures	Public programme provision of appliances	In contrast to programmes such as vaccination, large-scale public provision of appliances such as improved stoves or clean fuel appliances has generally been found to be unsuitable. Some form of targeted provision or partial subsidy where households have made informed choices and can commit to cost sharing may be useful to stimulate demand and act in favour of equity.

Policy instruments	Examples	Applications
	Funding of finance schemes	Experience has shown that credit is most likely to be made available, and adopted, for energy applications that contribute directly to productive, income generating activities (such as food processing for sale). Meeting everyday cooking and space-heating needs is generally seen as a lower priority. Some recent experience from Sudan with community-managed credit schemes to promote uptake of LPG for cooking has shown the potential for cost saving and very low default rates ¹ . Opportunities such as this where fuel is currently purchased, and cost saving combines with other valued benefits such as increased prestige and cleaner kitchens, should be further developed and evaluated. Support for such schemes, mainly in the form of raising awareness, skills training in managing funds, and seed funding (the main source of funds being from users) may be very cost-effective.
5. Research and development ²	Surveys	Community assessment of fuel and appliance use, knowledge of risks to health, willingness to pay for interventions, knowledge of and confidence in credit schemes, etc., are important for planning interventions.
	Development and evaluation of interventions	Given the expected continuing high demand for biomass, there is an urgent need to improve efficiency and reduce emissions from stoves. Evaluation of interventions should be conducted in a range of settings, where possible using harmonised methods that allow local flexibility but permit comparison with other types of interventions and other locations. Economic evaluation should be included as part of the overall assessment of interventions.
	Studies of health and related impacts	Stronger and better-quantified evidence on health impacts of reducing IAP is required. Such studies are however technically demanding, not least due to the difficulties of carrying out valid case ascertainment of key outcomes such as childhood ALRI, and international collaboration and funding are required. It is not necessary to carry out such studies in every country, nor would it be possible to do so. Results from these studies can be combined with data from each country on biomass use (and exposure) to estimate the burden of disease. There is also a need to strengthen evidence on other health and development impacts of household energy use, combining the relative strengths of both quantitative and qualitative research methods.
	Research capacity development	Capacity for carrying out a wide range of research, from national and local surveys, monitoring and evaluation of interventions, through to (where judged appropriate) more complex health studies, requires strengthening in those countries where the problems associated with household energy and IAP are most pressing. International and regional cooperation has an important role in this.

References

International Energy Agency 2002, "Energy and Poverty," in *World Energy Outlook 2002*, International Energy Agency, Paris.

¹ For more information see ITDG/DFID Smoke, Health and Household Energy project [Managed by ITDG-UK, contact: Dr Liz Bates lizb@itdg.org.uk]

² Work on assessing national priority information and research needs for addressing the health consequences of indoor air pollution has recently been carried out in Kenya, for which a draft report is available. For more information, contact the author and Patrick Balla, ITDG East Africa (Nairobi) Patrick.balla@itdg.or.ke