

Towards Preliminary Assessment Framework
(for evaluating development/poverty alleviation impacts
of energy interventions)

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Structure of Presentation

1. Contents of WP5
 - Scope and Inputs
 - Activities
 - Outputs
2. “Indicators” of Indicators
3. Critical Issues for PAF Development
4. Example of methodological framework
5. Suggestions on Procedure and Variables
 - Procedures for PAF development
 - Broad Conceptual Framework
 - Definition of Variables/Indicators

Contents of PAF

- **Scope and Inputs:**
 - Classification of linkages (Input from Literature review, WP2)
 - Energy interventions under consideration (Input from Catalogue WP3)
 - Identification of indicators (Input from WP2)
 - Designing procedures for assessment and evaluation of impacts (input from WP2 & WP4)
 - Identification of indicators (Input from Consultations, WP4)

Contents of PAF cont...d

- WP5 Activities:
 1. Develop and document a PAF. Main elements: Classification of main linkages between energy and poverty according to type of intervention, leading to:
 - i. Selection and design of relevant assessment method
 - ii. Identification and development of indicators for evaluation of the impacts of the energy interventions on poverty
 - iii. Outline of how the evaluation can feed back into the design and implementation of future energy interventions
 2. Write draft report and send for comments
 3. Finalise PAF on basis of comments

Contents of PAF cont...d

- Outputs
 - Description of a PAF including an application manual
 - Recommendation for case studies in the 6 countries to test the methodology

“Indicators” of Indicators

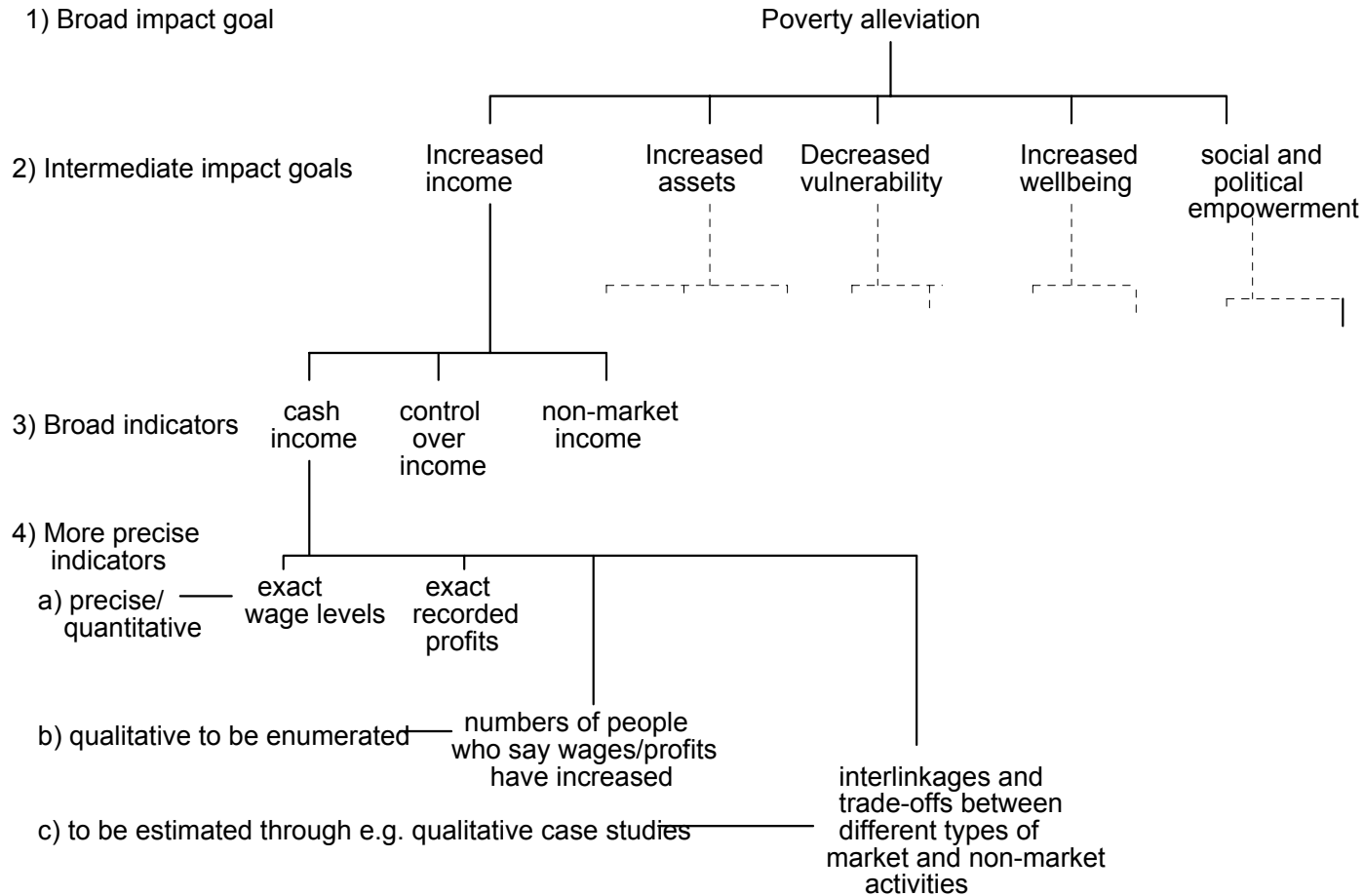
Key Issues:

- Impact assessment goal: What is it to be assessed?
- Indicators: How is it going to be assessed or measured?

“Indicators” of Indicators cont..d

- Income (increased?)
 - Increased economic activities and income, (irrigation for production of agricultural products)
- Well-being (improved/increased?)
 - Increased well-being from the provision of electricity for households
- Vulnerability (reduced?)
 - Better infrastructure, particularly road connection to markets, telecommunications & a village health centre.
- Food security (improved?)
 - Increased food security (undisputed top priority) via irrigation scheme
- More sustainable use of NR base
 - Decreased drudgery through spending less time sourcing kerosene and fuel wood, husking rice, milling and expelling oil.

“Indicators” of Indicators cont...d

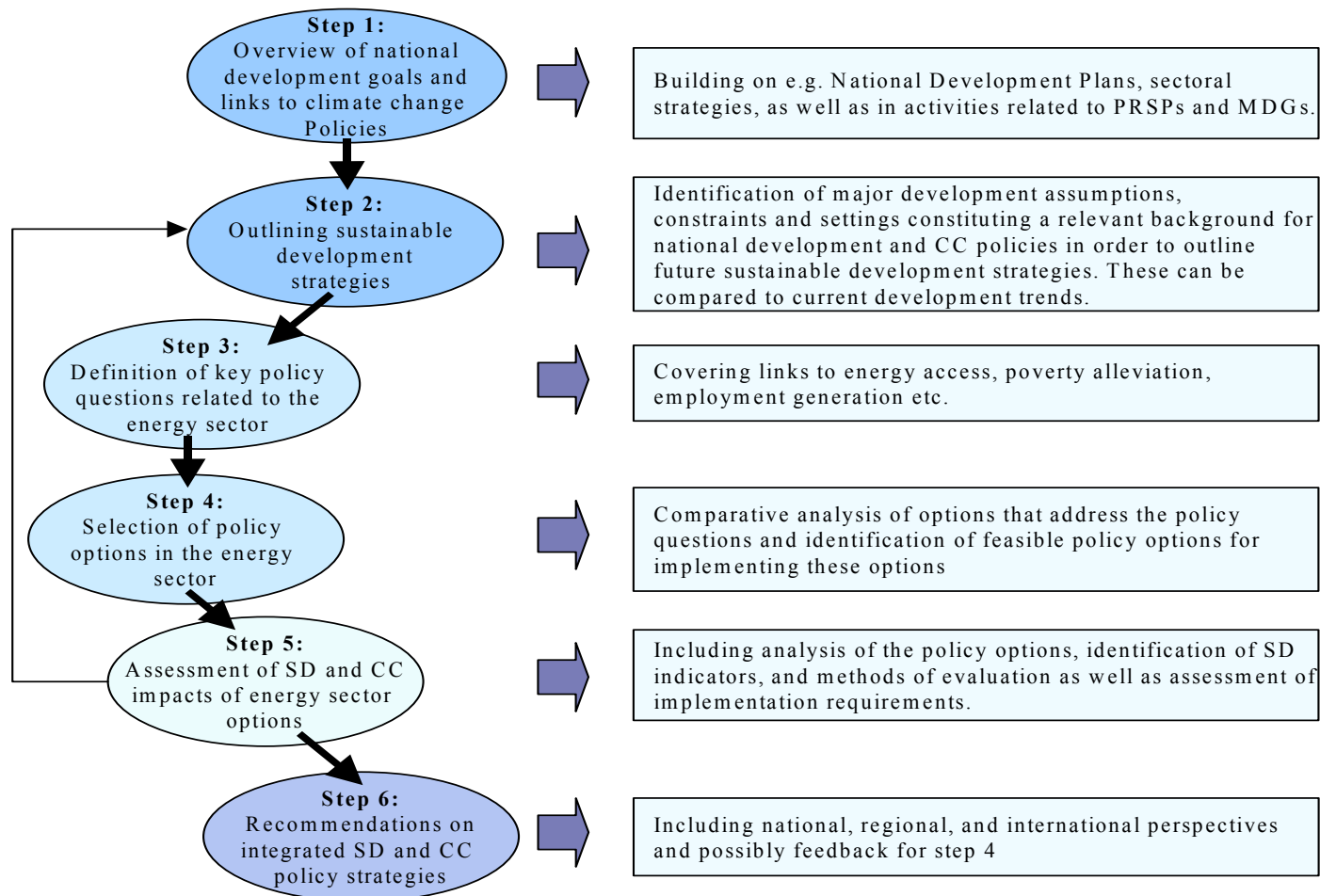


Critical Issues for the PAF Development

- What will be like to assess (costs, wellbeing dimensions, energy access etc).
- Analytical structure: Interplay between assumptions, data, models, and analytical concepts.
- Analytical tools:
 - Models.
 - Decision analysis approaches: CBA, cost effectiveness, multicriteria.
- Major assumptions:
 - Economic structure.
 - Population.
 - Energy efficiency, technologies, fuels etc..
 - Household income.
- Output format: e.g. cost curve.

Example of Methodological Framework

Steps in the analytical framework for integrated assessment of SD and CC policies related to the energy sector (from Halsnæs & Olhoff)



Procedures/Steps for PAF Development

- Procedures/Steps for PAF Development
 1. Knowledge Gap Analysis
 2. Definition of Variables/Indicators
 3. Identification of Cross-Cutting Issues
 4. Propositional Inventory
 5. Develop a sample of analytical approaches
 6. Propose a Draft PAF
 7. Refine the Assessment Framework
 8. Dissemination

Broad Conceptual Framework

- The focus of the methodological framework is to trace out the causal chain of effects that, in a given context, leads from an energy intervention to a poverty reduction outcome. Thus, particular attention will be paid to identifying the links in that chain and the situational factors likely to affect the strength of those linkages.
- Poverty reduction is an outcome of a complex of macro, sectoral, and situational factors all acting at the same time on a target population which itself is constantly changing.

Broad Conceptual Framework cont...d

- The central theme is the impact of energy interventions on poverty reduction. However, the following cross-cutting themes will be addressed in the development of the methodological framework and country case studies:
 - gender differences in poverty impacts,
 - environmental and social consequences of energy interventions/projects and their implications for the natural assets and social capital of the poor,
 - changing role of government in policy setting and regulation, and of the private sector in energy investment and service delivery, and
 - importance of institutional capacity, good governance, and public participation in determining whether the theoretical benefits of energy projects actually reach the poor for whom they are intended.

Broad Conceptual Framework cont...d

- Proposed framework: posits/takes energy investments as the independent variables, macroeconomic and sociocultural factors as contextual variables, sectoral policies and situational characteristics as intervening variables, and poverty reduction outcomes as dependent variables.
- Definition of Variables/Indicators
 - Independent variables
 - Dependent variables
 - Contextual variables
 - Situational variables

Definition of Variables/Indicators

Independent variables:

- The independent variable is the energy “project” (i.e., energy interventions under consideration).
- Countries to provide information on energy interventions.
- The project usually means an infrastructure and/or service improvements, but it may also consist of, or include, institutional capacity building, and/or policy interventions (e.g., pricing and smart subsidies, and regulatory and fiscal policy changes to improve the supply and reliability of services).
- Relevant policy issues in sectors other than energy are addressed under contextual variables.
- The variable to be used may be the number of new connections or villages served, or number of households (poor or non-poor) using intermediate fuels such as LPG or kerosene.

Definition of Variables/Indicators cont..d

Dependent variables:

- Few of the existing studies actually use an explicit measure of poverty.
- Those that do rely heavily on measures of “income poverty”. This is often done by “assumption”, or by using income distribution data to define higher and lower income groups, without necessarily relating these to poverty levels. Other studies take inequity, or the shape of the income distribution, as their dependent variable.
- Proposed: Looking beyond income effects, we propose to evaluate:
 - impacts on the welfare of poor people, generally through improved access to/quality of energy, health and education services.
 - Energy intervention impacts on other dimensions of poverty, such as insecurity, exposure to risk, and powerlessness.
 - Energy impacts on gender dimensions of poverty.

Definition of Variables/Indicators cont...d

Contextual variables

- The impact of energy interventions on poverty reduction is strongly conditioned by the context in which these interventions take place.
- Context can be seen as both constant (exogenous or real contextual factors) and situation (endogenous or situational factors). The values of contextual variables do vary across regions or countries and, with appropriately defined data, may be used to explain differences in cross-regional or cross-national comparisons of case studies.
- Constant or contextual factors are exogenous to each case study and are therefore treated as constants

Definition of Variables/Indicators cont...d

Contextual variables cont..d

- Major contextual variables include:
 - the income level, income distribution, and poverty level of the region or country concerned;
 - population size and density;
 - level of urbanization;
 - natural resource endowments;
 - macroeconomic policies, including trade, investment, and fiscal policies;
 - patterns of public expenditure;
 - role of the private sector;
 - sector policies in related sectors such as health, education, agriculture, industry, and finance; and
 - broad sociocultural characteristics of a region or country, such as caste- or gender-based norms of behavior, the quality of governance, and the degree of public participation in political processes.

Definition of Variables/Indicators cont...d

Situational variables:

- Situational factors are endogenous to the country case studies and may partially explain observed variations.
- Within a given context or case study, poverty reduction outcomes associated with an energy sector investment may vary depending on other factors present in the situation.

Definition of Variables/Indicators cont...d

Situational variables: cont..d

- A multitude of situational factors may be relevant in relation to the different types of anticipated impacts on the poor. The general categories of relevant situational factors include:
 - urban vs. rural setting;
 - land availability and quality;
 - available technologies for production (farm and nonfarm);
 - efficiency and effectiveness of service delivery for a variety of public services;
 - availability of information; and
 - local social and cultural factors such as land tenure or community organizations.
- It will be necessary to define the situational factors which seem relevant for poverty reduction in each case study setting.