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METHODS FOR ASSESSING AND EVALUATING SOCIAL IMPACTS OF PROGRAM-LEVEL REDD+

FOREST CARBON, MARKETS AND COMMUNITIES (FCMC)
PROGRAM



APRIL 2013

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The USAgency for International Development (USAID) has launched the Forest Carbon, Markets and Communities (FCMC) Program to provide its missions, partner governments, local and international stakeholders with assistance in developing and implementing REDD+ initiatives. FCMC services include analysis, evaluation, tools and guidance for program design support; training materials; and meeting and workshop development and facilitation that support US Government contributions to international REDD+ architecture.

COVER PHOTO: Evaluating different methods for social assessment for REDD+. LISA-REDD workshop, Nairobi, 8-10 May 2012.

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DISCLAIMER

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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ACRONYMS AND ABBREVIATIONS

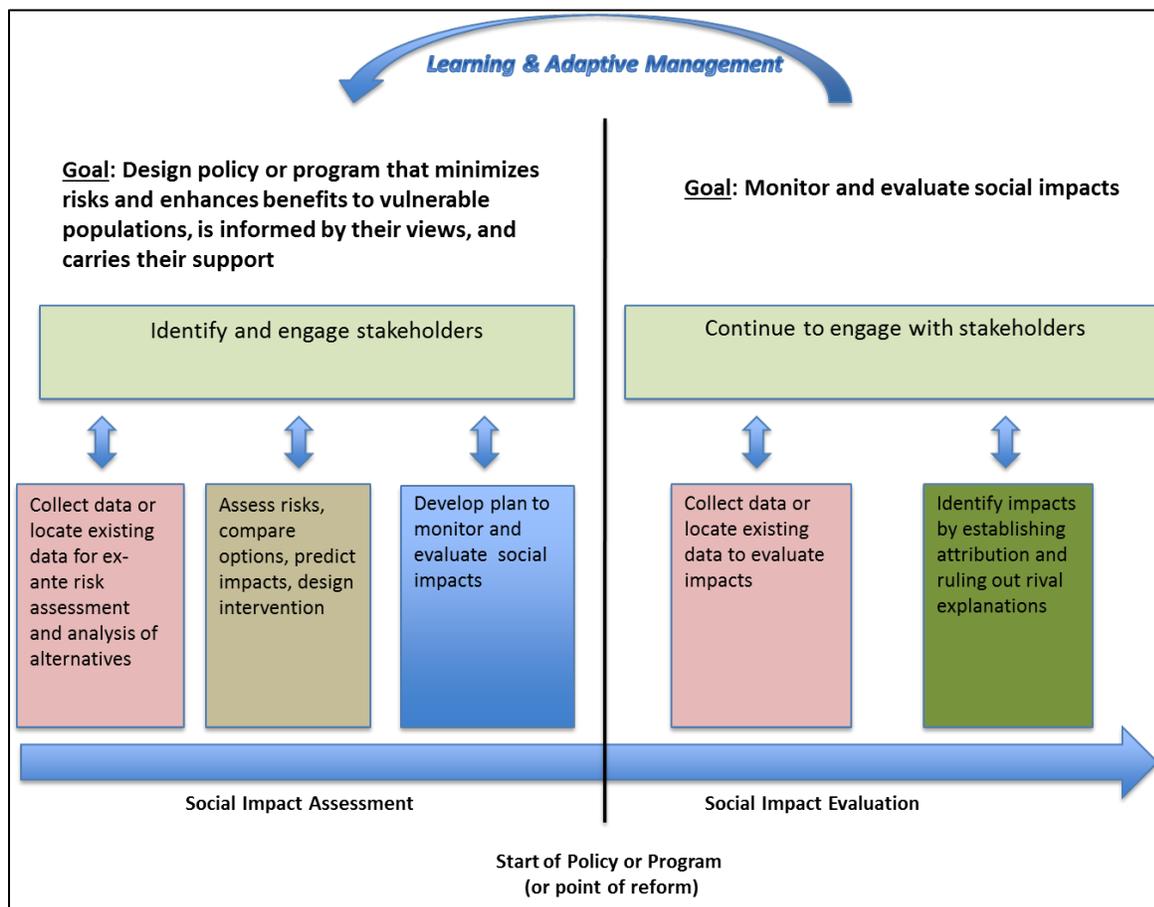
AI	Appreciative Inquiry
BNS	Basic Necessities Survey
CCB	Climate, Community and Biodiversity Standards
CCBA	Climate, Community, and Biodiversity Alliance
CIFOR	Center for International Forestry Research
DFID	The United Kingdom’s Department for International Development
DHS	Demographic and Health Surveys
GCS REDD	Global Comparative Study on REDD
ESMF	Environmental and Social Management Framework
FCMC	Forest Carbon, Markets and Communities Program
FCPF	Forest Carbon Partnership Facility
FPIC	Free, Prior, and Informed Consent
LISA-REDD	The Learning Initiative for Social Assessment of REDD+
LSMS	Living Standards and Measurement Surveys
OSIRIS	Open Source Impacts of REDD+ Incentives Spreadsheet
PES	Payments for Ecosystem Services
PSIA	Poverty and Social Impact Analysis (PSIA)
REDD+	Reducing emissions from deforestation and forest degradation in developing countries, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries
REDD+ SES	REDD+ Social and Environmental Standards
SESA	Strategic Environmental and Social Assessment
SLF	Sustainable Livelihoods Framework
UNFCCC	United Nations Framework Convention on Climate Change
UN-REDD	United Nations REDD+ Programme
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

Initiatives for reducing emissions from deforestation and degradation and enhancing forest carbon stocks (REDD+) are advancing across the developing world at project, sub-national, and national scales. REDD+ has the potential to significantly affect the livelihoods of those who depend on forests for their subsistence and income needs – presenting both risks and opportunities for these communities. REDD+ stakeholders at multiple scales of governance have demonstrated strong interest in making concerted efforts to minimize risks and maximize benefits for these communities.

To do this, REDD+ programs need to assess and predict impacts during the program design phase. This assessment can help programs compare various design and policy options and chart a course that avoids harm, enhances benefits, and carries the support of local populations. To ensure that REDD+ programs are achieving their stated goals, it is also necessary to monitor social conditions during the implementation phase and identify impacts. Evaluating impacts during implementation is important for verifying assumptions about how the program works, including the effectiveness of social safeguards, and for making any modifications to program design if necessary (i.e., adaptive management). The purpose and process of social assessment and evaluation is presented in Figure 1 below.

Figure 1: Assessing and evaluating social impacts in REDD+



This review provides information about specific tools, methods, and methodologies that can be used to i) assess the potential social impacts of REDD+ during the program design phase and ii) identify (evaluate) actual social impacts during the program implementation phase. It is designed to be useful for those commissioning or undertaking such social assessments or evaluations.

The review focuses on methodological options for assessing and evaluating the social impacts of government-led REDD+ policies, programs, and measures implemented at the national and sub-national levels – as opposed to the project-level. Options are provided to suit a range of resources (i.e., time, funds, capacity), preferences (i.e., discipline, scientific rigor), and situations (i.e., those in the program design phase as well as those in the program implementation phase). Both qualitative and quantitative methods are covered in this manual – and the advantages of using both method types are highlighted.

The overall process of assessing potential social impacts during the program design phase and identifying and monitoring actual social impacts during the program implementation phase encompasses multiple goals and objectives. Meeting each objective requires decisions regarding how many and which methods to use. To delineate these distinct objectives and decision points, this review develops a framework to classify the objectives of social impact assessment and evaluation and their respective components. This framework is further elaborated in the main text. The key elements of the framework are as follows:

Objective #1: Develop overall approach for assessing and evaluating the social impacts of policy reforms and programs

Objective #2: Engage stakeholders, assess risks, compare options, predict impacts, and design programs

Necessary component 2(a): Identify stakeholders

Necessary component 2(b): Engage stakeholders

Possible component 2(c): Political economy analysis

Possible component 2(d): Prediction based on stakeholders' views

Possible component 2(e): Prediction based on economic data

Objective #3: Select and monitor indicators of well-being

Possible component 3(a): Use existing data

Possible component 3(b): Collect own data

Objective #4: Identify impacts: establish attribution and rule out rival explanations

Possible component 4(a): Experimental and quasi-experimental techniques

Possible component 4(b): Participatory and non-experimental techniques

This report provides detailed methods summaries and reference information for about 20 methods. General guidance is also provided on how to select appropriate methods given a REDD+ program's resources (time, funds, capacity), availability of relevant data, and the magnitude of potential impacts (positive or negative).

This summary of key technical methods was commissioned by the Forest Carbon, Markets and Communities (FCMC) Program, on behalf of the Learning Initiative on Social Impacts of REDD+ (LISA-REDD), a consortium of international organizations interested in developing methodological guidance for understanding REDD+'s social dimensions. A forthcoming guide from LISA-REDD will build on the methods summaries contained in this review and will also include guidance on conducting country-level processes.

I.0 BACKGROUND

1.1 WHY ASSESS AND EVALUATE SOCIAL IMPACTS IN REDD+?

Initiatives for reducing emissions from deforestation and degradation and enhancing forest carbon stocks (REDD+) are advancing across the developing world at project, sub-national, and national scales. These initiatives seek to mitigate climate change through forest conservation. By creating new incentives for forest conservation, REDD+ aims to change land use patterns, and generate new revenue sources for countries and communities that conserve and sustainably manage their forests. REDD+ could also affect customary and official land tenure arrangements for a wide range of land uses, including property rights and rules regulating forest access and use.

REDD+ thus has the potential to significantly affect the livelihoods of those who depend on forests and other lands for their subsistence, cultural, and income needs – presenting both risks and opportunities for these communities. REDD+ stakeholders have demonstrated strong interest in minimizing risks and maximizing benefits for these communities. This is evidenced by: the design of many forest carbon projects, including their widespread and voluntary adoption of the Climate, Community, and Biodiversity (CCB) Standards; the commitment of numerous nations and sub-national entities to adhere to the voluntary REDD+ Social and Environmental Standards (REDD+ SES); the Forest Carbon Partnership Facility (FCPF) and the United Nations REDD+ Programme’s (UN-REDD) attention to social safeguard policies; and the adoption of social safeguards by parties to the United Nations Framework Convention on Climate Change (UNFCCC) at the 16th Conference of the Parties in Cancun.¹

There are many reasons to minimize risks and maximize benefits for populations potentially affected by REDD+. It is generally accepted that REDD+ not undermine human development goals. Efforts to reduce emissions from deforestation are increasingly being linked to countries’ broader economic development and adaptation initiatives. There may also be synergies between avoiding negative impacts, achieving positive impacts for local populations, successfully halting forest loss and reducing risks of reversal (i.e., ensuring “permanence” of forest carbon sequestration). Avoiding negative impacts will certainly be essential for maintaining broad-based political support for REDD+.

To minimize risks and maximize benefits for local populations, REDD+ program managers and donors need to assess and predict impacts during the program design phase. This assessment can help programs compare various program design or policy options and chart a course that avoids harm, enhances benefits, and carries the support of local populations. To ensure that REDD+ programs are achieving their stated goals, it is also necessary to monitor social conditions during the program implementation phase and identify impacts. Evaluating impacts during implementation is important for verifying assumptions about how the program works and for making any necessary modifications to the program design (i.e., adaptive management).

¹ For more information on these safeguards and standards, see the USAID Forest Carbon, Markets and Communities (FCMC) Program’s report: Mackenzie, C. (2012). REDD+ Social Safeguards and Standards Review. TetraTech: Burlington, VT, USA. Available at: http://www.fcglobal.org/documents/Safeguards_Paper.pdf

1.2 PURPOSE OF THIS REVIEW

This report aims to provide those working on the social dimensions of REDD+ with information about specific tools, methods, and methodologies that can be used for two distinct but related purposes:

- 1) Assessing risks and potential social impacts of REDD+ before programs are implemented and, based on this analysis, designing interventions that seek to do no harm and enhance benefits; and
- 2) Monitoring and evaluating (identifying) the initial and ongoing social impacts of REDD+ during the program implementation phase.

This document can be used in designing and implementing national, sub-national, or nested REDD+ programs. Program managers commissioning social impact assessments and evaluations may find the review helpful for familiarizing themselves with the numerous technical components and methodological options. This review may be useful for those specialists engaged to work on social impact assessment and evaluation. Those seeking to comply with UNFCCC safeguards and develop safeguard information systems and/or participate in REDD+ activities, such as those supported by the FCPF, UN-REDD or others, will find this report useful. Later sections of this document break down the overall process of social assessment and evaluation into specific objectives and components, and highlight where these objectives and components are relevant to the UNFCCC, FCPF, UN-REDD and other requirements.

The review focuses on methodological options for assessing and evaluating social impacts at the national and sub-national levels, as opposed to the project-level. Existing literature provides ample guidance on assessing and evaluating the social impacts of project-level REDD+.² At the national and sub-national program levels, REDD+ may take the form of sectoral or multi-sectoral programs, policy reforms, or landscape-level interventions (i.e., programs, policies, and measures). Assessing and evaluating social impacts at these scales often involves different methods than those applied at the project-level.

This document provides those assessing and evaluating the social impacts of REDD+ with a menu of methodological options. Options are provided to suit a range of resources (e.g., time, funds, capacity), preferences (i.e., discipline, scientific rigor), and situations (i.e., those in the program design phase as well as those in the program implementation phase). This review covers both ‘Social Impact Assessment,’ as defined by Vanclay (2003)³, which is focused on pre-program risk assessment and program design, as well as those methods concerned with identifying and monitoring realized impacts during the course of program implementation.

² See:

Jagger, P., Sills, E.O., Lawlor, K. and Sunderlin, W. (2010). *A Guide to Learning about Livelihood Impacts of REDD+ Projects*. CIFOR: Bogor, Indonesia.

Richards, M. and Panfil, S. (2011). *Social and Biodiversity Impact Assessment (SBIA) Manual for REDD+ Projects*. Climate, Community, and Biodiversity Alliance, Forest Trends, Rainforest Alliance, and Fauna & Flora International: Washington, DC, USA.

Schreckenberg, K., Camargo, I., Withnail, K., Corrigan, C., Franks, P., Roe, D., Scherl, L. and Richardson, V. (2010). *Social Assessment of Conservation Initiatives*. IIED: London, UK.

³ According to Vanclay (2003, p.1) “Social Impact Assessment [SIA] includes the processes of analyzing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions. Its primary purpose is to bring about a more sustainable and equitable biophysical and human environment.” SIA includes the collection of “baseline data to allow evaluation and audit of the impact assessment process and the planned intervention itself” (Vanclay, 2003, p. 8), though SIA does not provide guidance on how actual impacts can be identified. Vanclay, F. (2003). *International Principles for Social Impact Assessment. Impact Assessment and Project Appraisal (21)1*: 5-12.

Following Schreckenberg et al (2010)⁴ and DellaPorta and Keating (2010)⁵, tools, methods, and methodologies can be distinguished as follows:

- Tools: specific data gathering instruments and exercises (e.g., Participatory Mapping, Basic Necessities Survey)
- Methods: sets of tools or analytics of a certain type (e.g., Participatory Rural Appraisal, Quasi-experimental impact evaluation techniques)
- Methodologies: overall research approach, which reflects a particular philosophical perspective about how to best understand reality and/or conduct applied research (e.g., empirical and quantitative, opinion-based and qualitative, participatory action research)

However, for the purposes of brevity, this review uses the term “methods” to describe all three of the above. This document promotes mixed-methods approaches to assessing and evaluating social impacts (i.e., using both quantitative and qualitative methods). Using mixed-methods can improve the quality of the analysis, and enhance development and testing of clear theories of change, which is integral to the overall assessment and evaluation approach.

The methods reviewed focus on assessing and evaluating social impacts, using indicators of well-being (i.e., poverty and food security) as opposed to indicators that measure governance or process.

This report is not a step-by-step guide, but a technical document that reviews some of the key methods used in other sectors to assess and evaluate social impacts. It includes brief descriptions of these methods, key references, and guidebooks. It highlights each method’s respective advantages and disadvantages as well as time, cost, and capacity requirements so that readers may compare options. Many manuals provide step-by-step guidance on specific methods for assessing the potential impacts of national and sub-national policy reforms and evaluating realized impacts.⁶ However, these guides are not specific to REDD+ and focus either on methods for the pre-program assessment process or methods for the evaluation phase. Many manuals focus on just one specific method or tool. This report brings together information about methods applicable to both the design and implementation phases, and identifies the methodological options most relevant to REDD+.

⁴ Schreckenberg, K., Camargo, I., Withnall, K., Corrigan, C., Franks, P., Roe, D., Scherl, L.M. and Richardson V. (2010). Social Assessment of Conservation Initiatives: A Review of Rapid Methodologies. Natural Resource Issues No. 22. IIED: London, UK. (p. 10).

⁵ DellaPorta, D. and Keating, M. (2008). “How many approaches in the social sciences? An epistemological introduction.” Chp. 2 in Approaches and Methodologies in the Social Sciences. A Pluralist Perspective. Cambridge: Cambridge University Press.

⁶ For example, the World Bank’s Poverty and Social Impact Analysis (PSIA) “TIPS Sourcebook” provides exhaustive coverage of specific tools and methods for the pre-program assessment phase. Khandker et al (2010) provide detailed guidance on conducting impact evaluations, using both quasi-experimental and experimental techniques as well as economic modeling. And step-by-step guidebooks exist for such useful methods as the Household Economy Approach and Participatory Monitoring and Impact Assessment. All of these resources and methods are covered in this review.

See:

World Bank. (2007). Tools for Institutional, Political and Social Analysis of Policy Reform. A Sourcebook for Development Practitioners. The World Bank: Washington, DC, USA.

Khandker, S.R., Koolwal, G.B. and Samad, H.A. (2010). “Randomization,” Chp. 3 in Handbook on Impact Evaluation: Quantitative Methods and Practices. The World Bank: Washington, DC, USA.

Catley, A., Burns, J., Adebé, D. and Suji, O. (2007). Participatory impact assessment: A guide for practitioners. Feinstein International Center, Tufts University: Medford, MA, USA. Available at: <http://sites.tufts.edu/feinstein/2008/participatory-impact-assessment>

Save the Children. (2008). The Practitioners’ Guide to the Household Economy Approach. Save the Children, Regional Hunger and Vulnerability Programme, and FEG Consulting: London, UK. Available at: <http://www.savethechildren.org.uk/resources/online-library/practitioners-guide-household-economy-approac>

1.3 MOTIVATION AND METHODS OF THIS REVIEW

This review was commissioned by the United States Agency for International Development (USAID)'s Forest Carbon, Markets, and Communities (FCMC) Program. This work is being done on behalf of the Learning Initiative on Social Impacts of REDD+ (LISA-REDD), a consortium of international organizations⁷ interested in developing methodological guidance for understanding REDD+'s social dimensions.

This report is an interim product of the LISA-REDD initiative to develop a resource guide for practitioners on assessing and evaluating social impacts in national and sub-national REDD+. The forthcoming resource guide will incorporate the technical methods summaries provided in this review and also include guidance on conducting country-level processes, including strategies for integrating REDD+ social assessment and evaluation with a country's existing systems and institutions.

LISA-REDD has held two experts meetings to discuss these issues. An initial meeting was held in London in March 2011. At a second meeting⁸, held in Nairobi, May 8-10, 2012, participants presented a range of different methodological approaches. The Nairobi workshop served as a starting point for this review and effort was made to ensure that the methods covered in this report reflect the diversity of methodological and disciplinary perspectives considered at this meeting.

This review began with a comprehensive desk survey of methods used in other sectors to assess and evaluate social impacts. Given the diversity as well as the wide scope of methodological needs, the comprehensive desk review initially generated a very long list of methods for possible inclusion in the report. To make the review manageable, only a subset of methods from this initial list are summarized in detail. This subset of methods was selected based on the following criteria:

- (1) relevance to REDD+;
- (2) degree of development (i.e., a long history of use, numerous examples, detailed guidance); and
- (3) overall balance of methods presented (i.e., ensuring coverage of all objectives and possible methodological components while minimizing redundancy).

⁷ LISA-REDD members include: USAID, FCMC, Center for International Forestry Research, Conservation International, CARE, Overseas Development Institute, International Institute for Environment and Development, Forest Trends, and the Climate, Community, and Biodiversity Alliance.

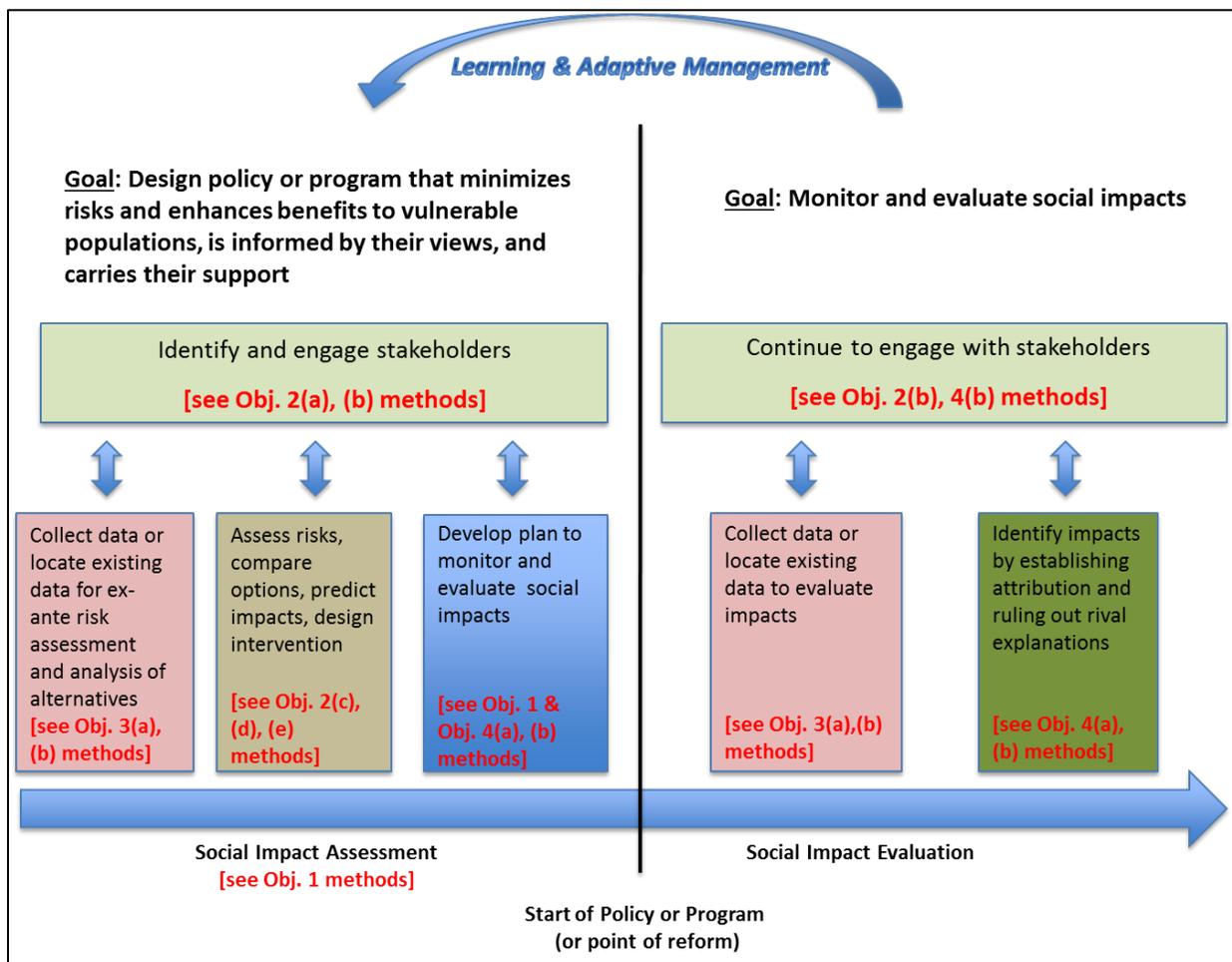
⁸ Learning Initiative on Social Impact of REDD+ (LISA-REDD). (2012). Workshop Report: Experts' Meeting on Social Impact Assessment Methodologies for National or Sub-National REDD+. May 8-10, 2012, World Agroforestry Center (ICRAF), Nairobi, Kenya. Forest Carbon, Markets and Communities (FCMC) Program. Report available at: http://www.fcmglobal.org/documents/LISA_REDD_Report.pdf

2.0 SCOPE AND USE OF THIS REVIEW

2.1 HOW TO USE THIS REVIEW

As the REDD+ social safeguards and standards adopted by various entities indicate, it is widely agreed that REDD+ programs must promote high levels of engagement and information-sharing with stakeholders – particularly vulnerable populations – regarding program design and impacts at all stages of the policy process. This involves not just informing stakeholders about the REDD+ program, but incorporating their views into program design as well. Such processes can improve program design, ensure programs carry populations’ support, and promote adaptive management. This iterative nature of program design, information sharing, and learning is depicted in Figure 2 below, which illustrates the multiple goals and objectives of social impact assessment and evaluation throughout the program lifecycle.

Figure 2: Assessing and evaluating social impacts in REDD+



This review classifies methods according to the specific objectives of the overall assessment or evaluation process. Meeting these objectives might involve one or more components (method sub-type). The text in red in Figure 2 refers the reader to the relevant methods classes (objectives and components).

Objective #1: Develop overall approach for assessing and evaluating the social impacts of policy reforms and programs

Objective #2: Engage stakeholders, assess risks, compare options, predict impacts, and design programs

Necessary components:

Identify stakeholders

Engage stakeholders

Possible components:

Political economy analysis

Prediction based on stakeholders' views

Prediction based on economic data

Objective #3: Select and monitor indicators of well-being

Possible components:

Use existing data

Collect own data

Objective #4: Identify impacts: establish attribution and rule out rival explanations

Possible components:

Experimental and quasi-experimental techniques

Participatory and non-experimental techniques

Objectives 2, 3, and 4 are embedded in Objective 1, which is the overall system for managing, integrating, and learning from the information obtained about program-level REDD+. REDD+ programs may include national-level policy reforms or programs as well as site-specific projects and landscape-level interventions. Objectives 2-4 are also used to assess and evaluate REDD+ projects and landscape-level interventions – and information about these site-specific initiatives can be embedded in the national-level system for tracking and understanding the social dimensions of REDD+.

This review covers methods that can be applied at any stage of a REDD+ program. For example, countries that are already implementing programs and did not develop a plan for monitoring and evaluation of impacts during the design phase can still use this report to identify appropriate methods for evaluation. The relevant methods types indicated on the right side of Figure 2 cover evaluation methods for a range of situations (i.e., those with the ability to collect baseline data, and those without; those with access to baseline data, and those without).

Key Terms: “Assessment” vs. “Evaluation”

This review uses the terms “assessment” and “impact assessment” to refer to the process that occurs during the *program design phase* of establishing baseline conditions, assessing potential risks, and predicting potential impacts of various policy options.

The terms “evaluation” and “evaluation of impacts” are used to describe the process of identifying actual impacts during the *program implementation phase*. This evaluation can be done at short-term, medium-term, or long-term intervals. The terms as used here encompass both experimental and quasi-experimental techniques (commonly known as the field of “program evaluation” or “impact evaluation”) as well as non-experimental and participatory techniques that attempt to establish attribution and rule out rival explanations.

The objectives and components of social impact assessment and evaluation identified in this review overlap with the requirements of the UNFCCC safeguards and other REDD+ initiatives, including those supported by the FCPF, UN-REDD, and others. For example, the tools and methods covered under Objectives 1, 2, and 3 could potentially be used for the diagnostic analysis required for conducting a Strategic Environmental and Social Assessment (SESA) and developing an Environmental and Social Management Framework (ESMF)⁹ required for FCPF.¹⁰ Application of Objectives 3 and 4’s methods could potentially be used to meet the monitoring requirements of the FCPF and the goals of the UNFCCC safeguards information systems.^{11, 12}

⁹ The current version of the FCPF Readiness Preparation Proposal (R-PP) maps out how the necessary SESA activities fit in with the overall R-PP timeline and components (see pages 10-11). Component 1 (“Organize and Consult”) requires that development of the R-PP begin with stakeholder analysis and consultations to integrate appropriate environmental and social considerations into formulation of the proposed REDD+ strategy. Component 1 further requires development of a “Consultation and Participation Plan,” which describes how the consultations to identify potential social and environmental issues, risks and impacts will be executed throughout the R-PP process. Component 2 requires analysis of linkages between deforestation and degradation drivers and social and environmental issues and that participatory methods be used to identify social and environmental priorities. The formulation of the final REDD+ strategy must be informed by an assessment of potential social and environmental risks and impacts.

Component 2d (“Social and Environmental Impacts during Readiness Preparation and REDD-plus Implementation”) states that “An ESMF is a product of SESA that provides a framework to examine the issues and impacts associated with projects, activities, or policies/regulations that may occur in the future but are uncertain or not known at the present time. The ESMF sets out the principles, rules, guidelines, and procedures to assess potential environmental and social impacts and risks, and contains measures to reduce, mitigate, and/or offset adverse environmental and social impacts and enhance positive impacts and opportunities of said projects, activities, or policies/regulations” (p.44).

See FCPF Readiness Preparation Proposal (R-PP), Template Version 6, dated April 20, 2012. Available at www.forestcarbonpartnership.org

¹⁰ UN-REDD also makes use of the SESA for its partner countries, that are also supported by FCPF.

¹¹ Component 4b (“Designing an Information System for Multiple Benefits, Other Impacts, Governance, and Safeguards”) of the current version of the FCPF R-PP states that “This component should include early ideas on how to include whatever non-carbon aspects a country defines as its priorities in its monitoring system. These priority aspects could include key quantitative or qualitative variables representing rural livelihoods enhancement, conservation of biodiversity, key governance factors directly pertinent to REDD-plus implementation in the country, and the impacts of the REDD-plus strategy on the forest sector. In addition the system should be capable of monitoring how safeguards are being addressed and respected during the implementation of REDD-plus activities” (p. 61).

See the FCPF Readiness Preparation Proposal (R-PP), Template Version 6, dated April 20, 2012. Available at www.forestcarbonpartnership.org

¹² At present, the ESMF is a framework for monitoring mitigation actions that have been identified as either necessary to avoid or requiring special attention so that potential negative impacts may be mitigated. It is thus not, at this point, a framework for actually monitoring impacts. However, FCPF guidance for both the SESA and ESMF are currently being revised and the scope of the ESMF might broaden. As the current version of the R-PP states: “The assessment of risks and potential impacts during preparation of the REDD-plus strategy will be integrated into the preparation of the REDD-plus strategy itself, and an ESMF will be prepared to manage these risks and impacts during implementation of the REDD-plus strategy” (p. 5). See: R-PP Template Version 6 (dated April 20, 2012), available at www.forestcarbonpartnership.org

2.2 A FRAMEWORK FOR CLASSIFYING METHODS

The objectives and components of social impact assessment and evaluation identified above are used in this review as a framework for classifying methods. The following section describes each of these objectives and components in further detail and provides a list of applicable methods that are included in this review. Detailed summaries are provided for only a subset of methods. In general, the summarized methods are those judged to be the most relevant, developed (i.e., have a long history of use, numerous examples, detailed guidance), and non-redundant. These summaries are found in Section 4. Reference information for those methods not summarized in detail is provided in Appendix I.

The methods characterization framework used in this review seeks to identify what is necessary and what is optional in the overall package of social assessment and evaluation. All four objectives identified here are necessary for conducting either social impact assessment (Objectives #1, #2, and #3), social impact evaluation (Objectives #3 and #4), or both (Objective #3) and indicate a decision point. At least one tool, method, or approach needs to be applied to meet each objective.

The methods framework distinguishes between necessary and optional components for meeting each objective. For example, the UNFCCC, FCPF, UN-REDD and others require that REDD+ program design is informed by the views of those potentially affected. Thus, stakeholder engagement is a necessary component of Objective #2. The process of further assessing risks, analyzing policy options, predicting impacts, and designing programs may then involve predictions based on both stakeholders' views and statistical analysis of data – or it may involve just one of these methods. The choice will depend on availability of data, time, and resources (human and financial capital). The process for meeting Objective #2 may also involve analyzing potential political impediments to various policy options (“political economy analysis”). Similarly, for Objective #3, attribution may be established by conducting a quantitative impact evaluation or by using participatory, qualitative methods that rely on the perceptions of key stakeholders. The strongest approach will involve both qualitative and quantitative methods. Objective #4 may be met by using existing data, collecting new data, or both. The decision will again depend on data availability, time, and resources.

Some methods may be applicable to more than one objective and/or component. For example, assessing risks to vulnerable populations and designing REDD+ programs, country program managers may use methods to predict the social impacts of three scenarios: i) a business-as-usual scenario (i.e., no REDD+), ii) the REDD+ program with risks to vulnerable populations left unchecked, and iii) the REDD+ program designed so that such risks are minimized and potential benefits enhanced. Therefore, many methods suitable for Objective #2 (assessing risks and predicting impacts) may also be suitable for meeting a critical challenge of identifying impacts (Objective #3), i.e., establishing a counterfactual scenario so that observed changes in social conditions can be attributed to REDD+ by ruling out rival explanations.

2.2.1 Objective #1: Develop overall approach for assessing and evaluating the social impacts of policy reforms and programs

To manage, integrate, and learn from the information collected during the process of preparing and implementing a REDD+ strategy and program, and identifying impacts, countries need to develop overall systems for assessing and evaluating the social impacts of REDD+. Establishing a system that recognizes synergies among pre-program assessment and monitoring and evaluation (i.e., baseline data can be used in both the assessment and evaluation) can aid the execution of both and increase the chances for evidence-based learning and adaptive management. Developing plans for evaluating impacts at the outset facilitates the development of stronger evaluation designs. For example, it could lead some REDD+ programs to collect social data from a sample of potentially vulnerable populations before programs begin to establish a baseline against which data collected during the program implementation phase can be compared. Upfront planning for evaluation may also lead some countries to purposively scale up a pilot program and use those individuals

or regions not initially affected by the pilot to establish a “without REDD+” scenario against which the changes in the pilot’s social conditions can be compared.

Few examples exist of systematic approaches to implementing and managing the information from both the pre-program assessment phase and program implementation evaluation phase. Instead, policies and processes for pre-program assessment tend to be given much more attention than the monitoring and evaluation of actual impacts. Those institutions that do engage in ongoing monitoring or impact evaluation often do not implement these exercises routinely, evaluating instead the impacts of selected programs.

This guide identifies two methodologies or approaches relevant to meeting Objective #1: Poverty and Social Impact Analysis (PSIA) and the Participatory Theory of Change approach. A wealth of guidance exists on the PSIA methodology and the tools and methods that can be embedded therein. While PSIA has traditionally been used for pre-program impact assessment, recent efforts are focused on embedding impact evaluation in PSIA. The Participatory Theory of Change approach has been developed more recently and is geared towards pre-program assessment and the development of plans for monitoring and evaluation of impacts during program implementation.

Methodologies or Approaches:

- [Poverty and Social Impact Analysis \(PSIA\)](#)
- [Participatory Theory of Change](#)

2.2.2 Objective #2: Engage stakeholders, assess risks, compare options, predict impacts, and design programs

For REDD+, program design needs to be informed by an analysis of policy options that considers risks to stakeholders, especially vulnerable populations – and that these analyses and choices are informed by the views of stakeholders and vulnerable populations themselves. Stakeholder engagement is thus a necessary component of Objective #2. Predicting the impacts of various policy options involves either prediction based on statistical data analysis, prediction based on stakeholders’ views, or both. Program design can also be influenced by an analysis of how successful a particular course of action is likely to be given political realities and the interests of powerful groups (political economy analysis).

Necessary components: Identify stakeholders [2(a)] and Engage stakeholders [2(b)]

Stakeholder consultations, a common form of stakeholder engagement, involve an iterative exchange of information: policymakers relate program plans and options to potentially affected groups and these stakeholders provide feedback on potential risks and unintended consequences and may propose additional policy options. Policymakers are then expected to use this information to modify their program design and relay this information back to stakeholders. Other forms of stakeholder engagement, such as participatory action research, involve greater levels of stakeholder participation in the social impact assessment and evaluation processes. All of these processes can improve program design, enhance program support, and help institutions obtain Free, Prior, and Informed Consultation or Consent for REDD+ programs.

Methods [2(a)]

- [Participatory Theory of Change](#)
- [Stakeholder Analysis](#)

Methods [2(b)]

- [Participatory Theory of Change](#)
- [Appreciative Inquiry \(AI\)](#)

- [Guidelines on Free, Prior, and Informed Consent](#)

Possible component 2(c): Political economy analysis

Political economy analysis explores how politics (processes that generate and distribute power among stakeholders and institutions) interact with economic processes that generate and distribute wealth. In the context of policy reform, political economy analysis can help identify risks of implementing a given policy as designed by examining stakeholders' interests and incentives, power relations amongst stakeholders, and the role of both formal institutions (e.g., rules) and informal institutions (e.g., norms) in shaping actors' interests, incentives, and power.

Methods

- [Drivers of Change Analysis](#)
- [Stakeholder Analysis](#)
- [Power Mapping](#)

Possible component 2(d): Prediction based on stakeholders' views

The projected impacts of policy options (including the “no REDD+” scenario) can be estimated using information obtained with participatory techniques. These methods often yield qualitative information, but may also produce quantitative information. Information and analysis based on stakeholders' views may be used by itself to predict impacts or to enhance interpretation of predictions based on statistics. Information obtained from literature reviews can also be used as a basis for predictions or to complement predictions based on stakeholders' views or data analysis.

Methods

- [Poverty and Social Impact Analysis \(PSIA\)](#)
- [Participatory Theory of Change](#)
- [Participatory Rural Appraisal](#)
- [Participatory Mapping](#)
- [Household Economy Approach](#)
- [Diversity and Livelihoods Assessment](#)
- [Livelihood Security Assessment](#)
- [UN-REDD Social and Environmental Principles and Criteria Benefits and Risks Tool](#)
- [Expert Interviews](#)
- [Participatory Action Research](#)

Possible component 2(e): Prediction based on economic data

Policy options are often assessed by projecting their impacts quantitatively using modeling. These models typically use traditional economic data (i.e., information on consumption and prices). Modeling assumptions may be based on information obtained from literature reviews or participatory exercises.

Methods

- [Poverty and Social Impact Analysis \(PSIA\)](#)
- [Household Economy Approach](#)
- [Economic Modeling](#)

2.2.3 Objective #3: Select and monitor indicators of well-being

Choosing indicators to measure well-being is done during both the pre-program assessment phase and the impact evaluation phase (and ideally the latter decision conforms to the former, so that changes can be tracked). This review focuses on indicators of well-being, such as those that measure poverty, food security, or happiness, as opposed to those that measure governance or process. REDD+ programs may harness existing data for their assessments and evaluations or collect their own data. Programs may also choose to do both. For example, programs could use nationally-representative data to estimate general well-being across the country and then collect additional data in a targeted sub-sample that contains information more specific to the REDD+ context (such as information on consumption and income from forest products and tenure regimes).

Possible Component 3(a): Use existing data

Data sources

- [Living Standards and Measurement Surveys \(LSMS\)](#)
- [Demographic and Health Surveys \(DHS\)](#)
- [Household Budget Surveys](#)
- Additional country-specific sources (e.g., REPEAT in Uganda; Indonesia Family Life Survey (IFLS) in Indonesia)

Possible Component 3(b): Collect own data

Methods

- [Participatory Impact Assessment, Monitoring and Evaluation](#)
- [Participatory Rural Appraisal](#)
- [Participatory Mapping](#)
- [Household Economy Approach](#)
- [Center for International Forest Research's Global Comparative Study on REDD+ \(CIFOR-GCS REDD\) Survey Instruments](#)
- [Basic Necessities Survey \(BNS\)](#)

- [Stages of Progress](#)
- [Most Significant Change](#)
- [Sustainable Livelihoods Framework](#)
- [CIFOR Poverty and Environment Network Survey Instruments](#)
- [Wildlife Conservation Society Guidance on Household Surveys](#)
- [Nested Spheres of Poverty \(NESP\)](#)
- [Women’s Empowerment in Agriculture Index \(WEIA\)](#)
- [The “BAG” – Basic Assessment for Human Well-being](#)

2.2.4 Objective #4: Identify impacts: establish attribution and rule out rival explanations

Producing credible evidence of REDD+’s social impacts requires that any observed changes (or the lack of change) in well-being can be convincingly attributed to the REDD+ program. This requires constructing a counterfactual (an estimate of what would have happened in the absence of the intervention) to rule out rival explanations for any observed changes. This is akin to estimating a deforestation reference scenario; then monitoring, reporting, and verifying actual deforestation levels; and comparing the two to estimate the actual amount of deforestation that has been avoided and/or reduced due to REDD+. Estimating what social conditions would have been like in the absence of REDD+ can be accomplished by using experimental or quasi-experimental techniques (commonly known as “impact evaluation”), or by using participatory and non-experimental techniques that rely on stakeholders’ or experts’ perceptions regarding the underlying causes of any observed changes. Both methods are complementary and using them in tandem can strengthen the ability to identify impacts and causal mechanisms (i.e., understand why a program did or did not enhance well-being).

Possible Component 4(a): Experimental and quasi-experimental techniques (“Impact Evaluation”)

When national programs enroll only certain households or localities in a specific intervention, program effects may be identified by using the same range of quasi-experimental techniques used to evaluate project-level REDD+.¹³ Such techniques include differences-in-differences, matching, and regression discontinuity (these methods are described in Section 4).¹⁴ In the case of national REDD+, such strategies could be payments for ecosystem services (PES) or decentralization reforms. However, when a program is national in scope such that it affects every locality and household equally and simultaneously (e.g., a policy that eliminates an agricultural subsidy or imposes a charcoal tax), economic modeling is the most appropriate way to establish a counterfactual.¹⁵ In these cases, using nationally representative datasets to both construct the counterfactual and measure well-being during program implementation can also most effectively capture spillovers (leakage)

¹³ Ravallion, M. (2008). “Evaluating Anti-Poverty Programs.” Chp. 59 in *Handbook of Development Economics*, Vol. 4, Schultz, T.P. and Strauss, J. (Eds.). p. 3788-3846.

¹⁴ It is worth noting that when these quasi-experimental impact evaluation techniques are used to identify the impacts of a national-level program, they may have the weakness of not capturing the full impacts of the program because they assume that the “control” or comparison groups are not affected by the intervention – and this may be an unrealistic assumption. For example, in the context of forest decentralization reforms, one might compare harvesting levels in community-controlled areas to those managed by the state. However, the fact that the government has decentralized forest management to communities may allow them to focus more of their enforcement efforts on state-managed forests.

¹⁵ Ravallion, M. and van de Walle, D. (2008). *Land in Transition: Reform and Poverty in Rural Vietnam*.

and the general and partial equilibrium effects of policy reform.¹⁶ These are the indirect effects of policy reforms, sometimes called “knock-on effects.” For example, a change in the supply, demand, or price of good A can lead to change in the supply, demand, or price of good B, which in turn further effects the supply, demand, or price of good A.

Nevertheless, even if a reform is national in scope it may not affect all households or localities at the same time due to funding or capacity constraints on implementation. Such variation may then be harnessed to design a pilot program and employ the same class of impact evaluation techniques used for projects. National programs can be phased in purposively to identify impacts and lessons in the pilot stage before scaling up.¹⁷

The models used to project the “without REDD+” scenario during the assessment phase may also be used to establish a counterfactual and compare it with data collected after the REDD+ intervention has begun. These models may be generated using the Household Economy Approach or a range of other economic models. However, more work is currently needed by the research community to generate accessible models that integrate projections of land use change (e.g., REDD+ “reference scenarios”) with projections of attendant changes in social conditions. This is especially important for identifying social impacts in REDD+, since the social counterfactual (i.e., the projected “without REDD+” social scenario) can be informed by the land-use counterfactual (i.e., the projected “without REDD+” forest scenario, typically called a REDD+ “reference scenario”).

All impact evaluations need to be guided by a clear theory of change.¹⁸ A “theory of change” is essentially composed of specific hypotheses about how an intervention, such as a REDD+ program, may result in changes that in turn have potential to cause changes in well-being. Clearly specifying the theory of change upfront can help determine what data can be collected or used along the hypothesized chain of events to test assumptions and identify program impacts.

Methods

- [Participatory Impact Assessment, Monitoring and Evaluation](#)
- [Economic Modeling](#)
- [Household Economy Approach](#) (by comparing post-program data to HEA’s baseline and counterfactual)
- [Impact Evaluation Technique: Randomization](#)
- [Impact Evaluation Technique: Repeated Time Series](#)
- [Impact Evaluation Technique: Regression Discontinuity Design](#)
- [Impact Evaluation Technique: Matching](#)

Possible component (4b): Participatory and non-experimental techniques

Many tools and methods used with stakeholders during the program design phase can also be used to solicit their opinions on what has changed in their community and why. This information can be used to help establish attribution. Additional methods that are specifically retrospective, can be used to establish an

¹⁶ Ravallion, M. and van de Walle, D. (2008). Land in Transition: Reform and Poverty in Rural Vietnam.

¹⁷ Ravallion, M. (2009). Evaluating three stylised interventions. *Journal of Development Effectiveness* 1 (3): 227-236.

¹⁸ White, H. No Date. Theory-based Impact Evaluation: Principles and Practice. 3ie Working Paper No. 3.

implicit baseline (e.g., Most Significant Change) or explicit baseline (e.g., Stages of Progress) and to understand changes over time. The case study approach is another non-experimental technique to explain changes in social conditions; this approach often makes use of expert interviews and literature reviews.

Methods

- [Participatory Impact Assessment, Monitoring and Evaluation](#)
- [Participatory Rural Appraisal](#)
- [Participatory Mapping](#)
- [Most Significant Change](#)
- [Stages of Progress](#)
- [Consultative Impact Monitoring of Policy – CoIMPact](#)
- [Case study approach](#)
- [Participatory Action Research](#)

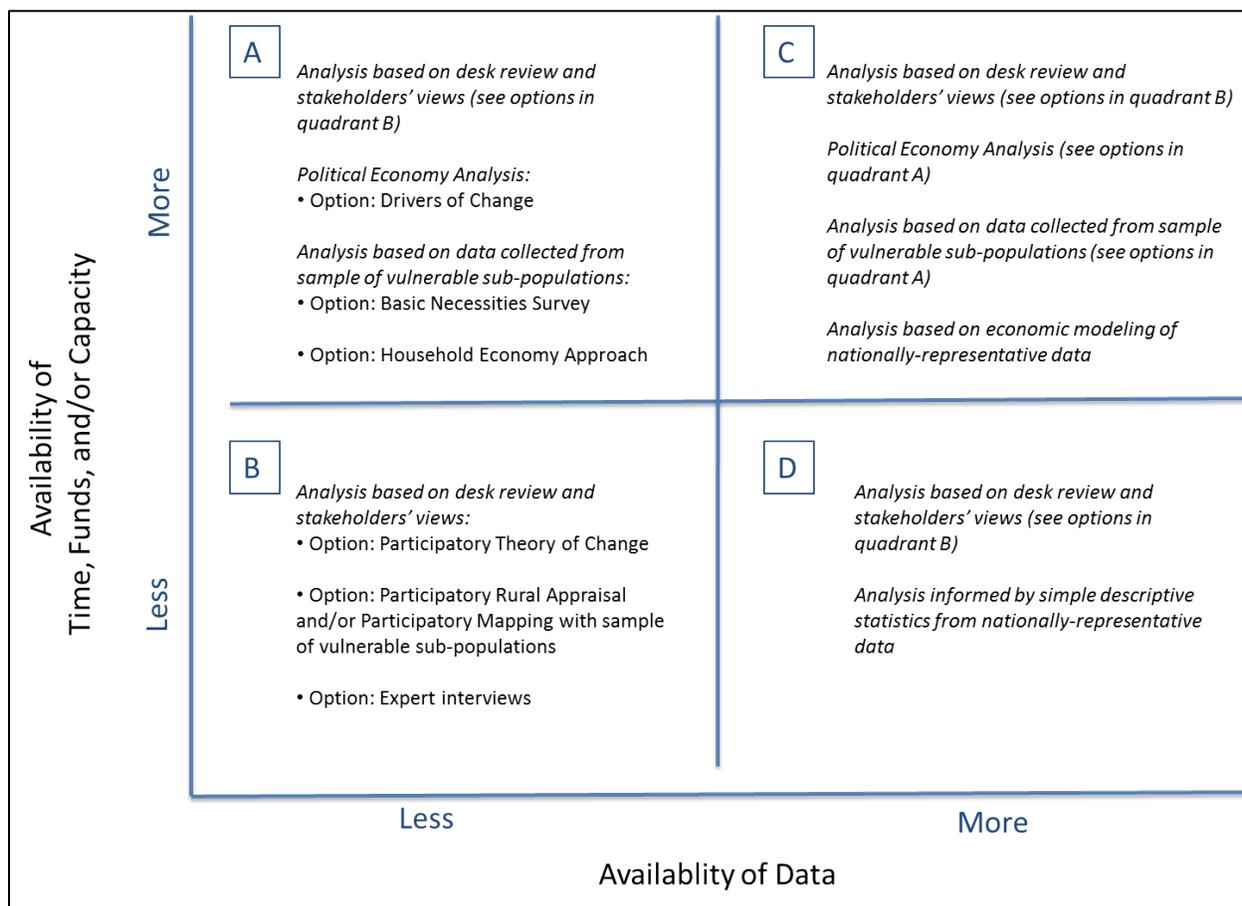
2.3 SELECTING METHODS

This review covers a wide array of methods – suitable for different levels of resources (i.e., time, funds, capacity), situations (i.e., data availability), and preferences (i.e., scientific rigor, disciplinary perspective) – and distinguishes between those methods components that are necessary (e.g., stakeholder engagement) and those that are optional (e.g., political economy analysis). How can REDD+ programs decide which methods components and which combination of methods to use? This review suggests considering the following key factors when selecting methods:

- Time
- Funds
- Technical capacity
- Availability and relevance of data
- Potentially affected populations' degree of vulnerability
- Magnitude of expected risks/benefits
- Size of population(s) potentially affected

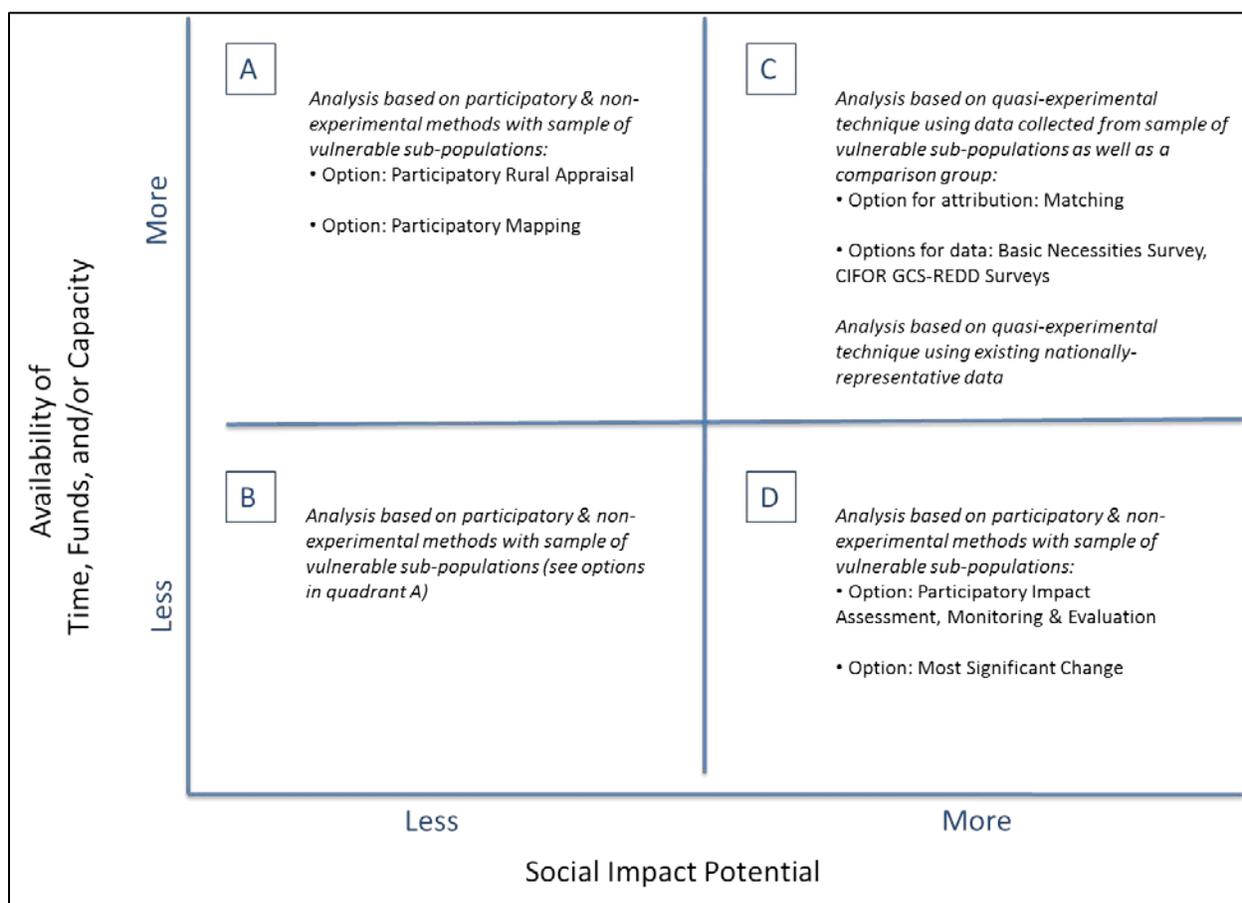
For example, during the program design phase, the starting point will be internal assessment of the time, funds, and capacity available to the REDD+ program for conducting the social impact assessment. The second step is to investigate what relevant data (e.g., household survey data, literature, etc.) already exist and whether this information could be harnessed for the REDD+ assessment. As Figure 3 shows, an assessment of where a program stands along these two dimensions will place them in one of four quadrants. Each quadrant provides a suggestion for a possible methods combination that could be used to conduct the assessment. Note that while the specific methods listed below are suggested, the lists are also meant to indicate relevant method types (components) and do not provide an exhaustive list of all possible methods for a given quadrant.

Figure 3: Methods selection for the social impact assessment phase



Similarly, Figure 4 suggests that when selecting methods for the monitoring and evaluation phase, REDD+ program staff members internally assess their own resources and consider the potential for significant impacts (positive or negative), which depends on both the magnitude of the risks or benefits and the size of the population affected. This latter information may be part of the output of the assessment process.

Figure 4: Methods selection for the social impact evaluation phase



This desk review identified two important gaps in existing methods guidance. First, there is a general lack of guidance on how to select communities and other key stakeholders¹⁹ for in-depth engagement and consultation exercises during the design phase of national-level programs and policy reforms. For example, the obligation to consult and engage local stakeholders and potentially affected communities is arguably more straightforward and feasible for project-level activities than national-level activities. Given the size of populations that could be affected by many national-level reforms, in many cases it will not be feasible to hold consultations, collect baseline data, and conduct participatory assessments with every community. Therefore, national-level REDD+ initiatives will need to decide which communities will be selected for in-depth assessment activities. More guidance is needed regarding how to select these communities.

A second gap identified relates to the same issue, but on the program implementation side of the REDD+ lifecycle. When evaluating social impacts of national-level REDD+, trying to identify impacts for every social group potentially affected will likely not be feasible. In many cases, relevant data (i.e., data being collected for

¹⁹ The issues of stakeholder engagement in REDD+ are examined in further depth in a forthcoming FCMC report: Diamond, N. (2013). Readiness to Engage: Stakeholder Experiences for REDD+. When finalized, this report will be available at: <http://www.fcglobal.org/resources.html>

other purposes) that measures well-being after program start (and during the pre-program phase as well) might not exist. Even where nationally-representative data exist for the time periods in question, these datasets might not track all stakeholder groups of interest (e.g., nomadic populations) or capture indicators of changes in livelihoods and well-being most relevant to REDD+ (e.g., forest access, consumption and income from non-timber forest products). These data realities imply that many REDD+ programs may wish to collect their own data (possibly before and after program start) and conduct evaluations that identify the impacts of the program on a sample of potentially affected communities. Again, the existing literature lacks guidance on which and how many communities and/or households to be included in this sample.

More detailed guidance on how to select communities for in-depth assessment and evaluation when implementing national-level REDD+ may be forthcoming. In the interim, during the program design phase, programs can use the criteria of vulnerability to identify which communities will be targeted for in-depth assessment exercises and use their best judgment along with analysis of any relevant literature and data to identify vulnerable communities. However, it is recognized that understanding this vulnerability will be an outcome of the assessment process itself. Therefore, during the pre-program assessment phase, Figure 3 suggests that methods choices be principally guided by a program's own resource constraints and data availability. During the evaluation phase, however, most programs will have a clearer idea of which populations face the highest risks and/or expect to receive the most benefits from REDD+. Figure 4 suggests that this information, along with resource constraints, can be used to determine which combination of methods would be most appropriate for identifying impacts during program implementation. Note that ideally a monitoring plan and evaluation strategy will be developed during the pre-program assessment phase so that appropriate actions can be taken (i.e., collect baseline data, roll out a program purposively to conduct a pilot study). However, this framework and Figure 4 are still relevant for those programs already in the implementation phase that did not devise a monitoring and evaluation plan prior to program start -- methodological options are available for situations with baseline data and those without.

3.0 METHODS SUMMARIES

3.1 METHODS BY OBJECTIVE AND COMPONENT

This section provides detailed summaries for methods judged to be the most relevant, developed, and non-redundant. Reference information for additional useful methods not summarized in detail here is provided in Appendix I.

Many of the methods summarized in this guide can be used to meet multiple objectives or components. Table 1 shows each objective and component that each method could be used to meet. This table also illustrates how specific tools and methods can be used to meet specific objectives or components within the overall approach of Objective #1 (i.e., specific methods can be embedded within either the Participatory Theory of Change Approach or Poverty and Social Impact Analysis [PSIA]).

METHODS	Objective #1: Develop overall approach for assessing and evaluating the socioeconomic impacts of national-level REDD+									
	Objective #2: Consult stakeholders, assess risks, compare options, predict impacts, and design programs					Objective #3: Select indicators of well-being		Objective #4: Establish attribution and rule out rival explanations		
	Necessary component 2(a): Identify stakeholders	Necessary component 2(b): Consult stakeholders	Possible component 2(c): Political economy analysis	Possible component 2(d): Prediction based on stakeholders' views	Possible component 2(e): Prediction based on economic data	Possible component 3(a): Use existing data	Possible component 3(b): Collect own data	Possible component 4(a): Experimental & quasi-experimental techniques	Possible component 4(b): Participatory & non-experimental techniques	
Poverty and Social Impact Analysis (PSIA)	✓			✓	✓					
Participatory Theory of Change	✓	✓	✓	✓						
Stakeholder Analysis		✓	✓							
Appreciative Inquiry		✓								
Drivers of Change Analysis			✓							
Participatory Rural Appraisal				✓			✓		✓	
Participatory Mapping				✓			✓		✓	
Household Economy Approach				✓	✓		✓	✓		
Economic Modeling					✓			✓		
Participatory Impact Assessment, Monitoring and Evaluation							✓	✓	✓	
Randomization								✓		
Repeated Time Series								✓		
Regression Discontinuity Design								✓		
Matching								✓		
Most Significant Change							✓		✓	
Stages of Progress							✓		✓	
Living Standards and Measurement Surveys						✓				
Demographic and Health Surveys						✓				
CIFOR-GCS REDD Survey Instruments							✓			
Basic Necessities Survey							✓			
Sustainable Livelihoods Framework							✓			

3.2 SUMMARIES AND REFERENCES

3.2.1 Poverty and Social Impact Analysis (PSIA)

What objectives and components can it address?

Objective 1: Overall approach for assessing and evaluating social impacts

Objective 2(d): Prediction based on stakeholders' views

Objective 2(d): Prediction based on economic data

What is it and what is assessed? (costs, benefits, dimensions of well-being, etc.)

PSIA is a flexible but systematic approach developed at the World Bank for assessing the social impacts of policy options on different groups, with a particular emphasis on the poor and other vulnerable groups. It is primarily used during the policy design phase to assess risks and potential impacts to analyze options and may examine a range of well-being outcomes. However, recent PSIAs seek to embed impact evaluations within the overall approach, so the PSIA process may continue after the policy reform or program has begun, to understand actual impacts. In the REDD+ context, the general goals of a Strategic Environmental and Social Assessment (SESA) overlap with those of a PSIA.

How is it used and what are the mechanics of implementation?

Various methods and tools can be used to assess potential risks and predict impacts of policy reforms, including literature reviews, quantitative analysis of household surveys, focus groups, and economic modeling. Most PSIAs involve multi-disciplinary teams and take a mixed-methods approach. Existing data is often harnessed for the quantitative analysis. PSIAs may also include political economy analysis (i.e., assessment of stakeholders' interests and incentives to predict the implications for how policy options will actually be implemented).

How is attribution established? How well can it rule out rival explanations?

While it has traditionally been used for assessment of risks and potential impacts, increasingly there is emphasis on building impact evaluation into the PSIA at an early stage so the actual effects of policy reforms can be understood. The baseline data used for the pre-program assessment phase of the PSIA can be harnessed for the impact evaluation, with follow-up data collected later. The counterfactual may be estimated by using the baseline data to predict the 'without REDD+' scenario, reflexively predicting what would have happened without REDD+, or measuring well-being in a control group.

Key assumptions and/or degree to which it provides statistically valid, robust answers

The internal and external validity of any impact evaluation embedded within the PSIA will depend on the specific analytical techniques used and the sample size.

Ability to capture both intended and unintended impacts

PSIA explicitly seeks to understand both intended and unintended impacts by considering five transmission pathways through which policies can affect stakeholders: i) employment; ii) prices (production, consumption, wages, food); iii) access to goods and services; iv) assets (financial, natural, human, financial, and social capital); and v) transfers and taxes. Effects on tenure and property rights may be considered under access or assets; effects on ecosystem services themselves may fall under natural capital (assets). This 'transmission pathways' approach is a useful framework for developing theories of change.

Ability to capture both short-term and long-term impacts

Depending on how frequently the pre-program assessment is followed up on, PSIA can capture both short and long-term impacts.

How much stakeholder participation is involved? In particular, that of vulnerable or affected groups?

Most PSIAs involve numerous stakeholder consultations in the form of focus groups and expert interviews, with a particular emphasis on reaching samples of all vulnerable sub-populations.

Potential scales of assessment (individual, household, community, national, or global level)

All scales of assessment are possible.

Level of differentiation possible (by gender, age, wealth, ethnic group, etc.)

PSIA explicitly seeks to understand the distribution of impacts across various sub-populations.

Feasibility issues (time, cost, complexity, skills)

PSIAs are flexible and can be adapted to a range of data, time, capacity, and funding situations.

Example(s) – who has used it, when, and where?

Since the establishment of PSIAs in 2002, the World Bank has conducted over 150 PSIAs in more than 75 countries across various sectors, including agriculture, natural resources management, land policy, energy, and climate change mitigation and adaptation. For example, PSIA has been used to assess the risks and expected impacts of land reform in Cambodia, a voluntary departure (retrenchment) program from the parastatal mining company in DRC, reforms to the charcoal sector in Tanzania, forest carbon programs in Mexico, and REDD+ in Indonesia. Three of these examples are discussed in detail below (the PSIAs for Indonesia and Mexico are currently unavailable).

For the Cambodia case, the PSIA used a mixed-methods approach to conduct a pre-program assessment of how the reforms might affect the poor and landless to make recommendations about making the program more pro-poor. The PSIA drew on a literature review, a survey of 1200 randomly selected households, and participatory rural appraisal and focus group discussions with 120 randomly selected, nationally representative villages. The PSIA recommended revisions to the program, including its implementation in phases. By conducting an impact evaluation of the initial pilots, the winners and losers of the land reforms could be better identified.

In DRC, the PSIA team was able to collaborate with a local academic institution to conduct a survey of 600 households, of both miners and non-miners, just before the start of the voluntary departure program and conduct over 10,000 exit interviews with those taking the voluntary buy-out. Information was collected on consumption levels, assets, social capital, financial capital, and human capital. The PSIA also conducted focus group discussions with sub-populations of vulnerable groups (e.g., ex-miners, wives, children) and other stakeholders at the mining centers. All of this information was used to project what the poverty and social impacts would be if the voluntary departure program was not enacted (i.e., a business-as-usual scenario of wages, meals per day, enrollment of children in school), predict the potential risks and impacts of the program, and take actions to guard against risks. The following transmission channels for potential impacts were considered: production, consumption, wages, employment, access to goods and services, financial capital, social capital, human capital, and transfers and taxes. The local University plans to follow up on their baseline survey of program and control households to evaluate the impacts of the mining reform.

The PSIA for the Tanzanian charcoal sector incorporated political economy analysis and sought to shed light on three questions: i) what are policy options for reducing forest degradation and the loss of government revenue due to the unregulated charcoal sector?; ii) considering the interests and incentives of various actors in the charcoal sector, which policy options might actually be successfully implemented?; and iii) what would be the potential poverty and social impacts of such policies? To answer question #2, the PSIA team used Net-Map, a tool that combines social network analysis with participatory power mapping. Information for the

Net-Map exercise was obtained through focus group discussions and key informant interviews with about 200 stakeholders. This qualitative research was concentrated in Dar es Salaam, the area most heavily affected by the reforms, due to the large quantity of charcoal consumed. To answer the third question, the PSIA used basic quantitative methods to estimate how various reforms, such as taxes, would change the income and expenditures of consumers and producers. Data regularly collected by the government (i.e., the Household Budget Survey, available in most countries) was harnessed for this purpose. It was supplemented with charcoal price data available in the literature and obtained through quick surveys of charcoal sellers in Dar es Salaam.

How has the information generated by this methodology been used to influence policy or practice, or what potential does it have to do this?

PSIAs have been used extensively to evaluate different policy options and design and modify policy reforms.

Main advantages and strengths

- Systematic yet flexible mixed-methods approach that provides an organizing framework for employing multiple tools and methods for understanding risks, designing programs, and evaluating impacts; and
- Wealth of guidance on the many tools and methods that can be embedded within a PSIA.

Main disadvantages and weaknesses

- PSIAs are most useful when they are assessing specific policy reforms that may actually be implemented – when the goals of the PSIA are not well-defined and they are used to assess a sector very generally they may produce information of limited value. For REDD+, the PSIA approach would likely be most useful after deforestation drivers and a range of possible strategies have been identified; and
- When used to assess a reform that is about to take place or has already begun, there will be tension between building in-country capacity and conducting the PSIA in a timely manner.

Sources

The following sources and many others are available at the World Bank PSIA website and library (<http://go.worldbank.org/OSPTUYMV60>):

World Bank. (2012). Poverty and Social Impact Analysis for Climate Change Development Policy Operations. The World Bank: Washington, DC, USA.

World Bank. (2003). A User's Guide to Poverty and Social Impact Analysis. The World Bank: Washington, DC, USA.

World Bank. (2007). Tools for Institutional, Political and Social Analysis of Policy Reform. A Sourcebook for Development Practitioners. The World Bank: Washington, DC, USA.

World Bank Independent Evaluation Group (IEG). (2010). Analyzing the Effects of Policy Reforms on the Poor: An Evaluation of the Effectiveness of World Bank Support to Poverty and Social Impact Analyses. World Bank: Washington, DC, USA.

Examples from the World Bank's PSIA case study database, available at <http://go.worldbank.org/W9JQVCV1B0>:

- Cambodia: Assessment of Potential Impacts of 'Social Land Concessions' (2004)
- DRC: Poverty and Social Impact Analysis Mine Sector Reform (2007)
- Enabling Reforms: A Stakeholder-Based Analysis of the Political Economy of Tanzania's Charcoal Sector and the Poverty and Social Impacts of Proposed Reforms (2010)
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3.2.2 Participatory Theory of Change Approach

What objectives and components can it address?

Objective 1: Overall approach for assessing and evaluating socioeconomic impacts

Objective 2(a): Identify stakeholders

Objective 2(b): Engage stakeholders

Objective 2(d): Prediction based on stakeholders' views

What is it and what is assessed? (costs, benefits, dimensions of well-being, etc.)

Participatory Theory of Change is a recently developed methodology that complements PSIA. It differs from PSIA in two important respects: i) it is strongly participatory and requires that stakeholders develop theories of change about the program (i.e., predict program impacts and the causal mechanisms behind them) and help select the indicators that will be used to monitor well-being; and ii) it is explicitly focused on linking the pre-program risk assessment to evaluation of impacts by developing a monitoring plan.

How is it used and what are the mechanics of implementation?

Participatory Theory of Change analysis involves holding a stakeholders' workshop to collaboratively develop theories of change about the program (potential positive and negative effects it might have on affected populations and *how* these effects might occur) and select indicators and develop a plan for future monitoring. The goal is to select indicators that will capture potential changes at each point along the causal chain. For example, a theory of change about a negative social impact of a REDD+ program might hypothesize that it could change rural population's access to forests, and therefore income from logging, or use of other lands, resulting in decreased food security. The monitoring plan would therefore need to include indicators that measure forest access, logging income, and food security.

How is attribution established? How well can it rule out rival explanations?

The approach attempts to establish attribution and rule out rival explanations by monitoring indicators for multiple theories of change. Each theory of change (or results chain) about how the program might positively or negatively affect livelihoods has its own set of indicators derived from the causal chains between outputs, outcomes, and impacts. The approach could also potentially facilitate development of plans for design-based impact evaluation that involves use of control groups.

Key assumptions and/or degree to which it provides statistically valid, robust answers

The robustness of the monitoring and any evaluation of impacts will depend on identifying the appropriate indicators, how the indicators are measured (i.e., whether a large sample of household-level data is used or another approach), and how the data is analyzed. Identifying appropriate indicators will hinge on ensuring that there is complete representation of affected groups in stakeholder workshops and subsequent validations. It will also require the input of experts to complement stakeholder perceptions.

Ability to capture both intended and unintended impacts

The approach seeks to capture both intended and unintended impacts.

Ability to capture both short-term and long-term impacts

The approach captures both short and long-term impacts.

How much stakeholder participation is involved? In particular, that of vulnerable or affected groups?

The approach necessitates stakeholder participation at the national level and assumes that representatives of potentially affected groups are effectively representing their views. Given that the number of stakeholders or their representatives who can sensibly participate in intensive workshops, the results of the Participatory Theory of Change analysis need to be shared and validated with the wider stakeholder population.

Potential scales of assessment (individual, household, community, national, or global level)

All scales of assessment are possible; it will depend on how the indicators are measured.

Level of differentiation possible (by gender, age, wealth, ethnic group, etc.)

All levels of differentiation are possible; it will depend on how the indicators are measured.

Feasibility issues (time, cost, complexity, skills)

The Participatory Theory of Change approach does not require specialized qualifications, but requires facilitators with experience using the methodology, or who have been trained in it, and have strong facilitation skills (for example, working with stakeholders who have conflicting objectives, and ability to effectively incorporate less educated or local stakeholders into the process). The cost of undertaking a series of participatory workshops, and with the addition of the PSIA transmissions pathways analysis (see PSIA summary above), is likely to be between \$100,000-\$150,000. The combined PSIA and Participatory Theory of Change process can be completed in 3-6 months. Time, costs, and complexity of monitoring and evaluation of impacts will depend on the details of the monitoring plan.

Example(s) – who has used it, when, and where?

Participatory Theory of Change and PSIA have been combined in analyses of the livelihood or poverty impacts of the Voluntary Partnership Agreements of Indonesia and Vietnam, under the European Union's Forest Law Enforcement, Governance, and Trade initiative.

How has the information generated by this methodology been used to influence policy or practice, or what potential does it have to do this?

The participatory nature of the methodology gives it strong potential to influence policy.

Main advantages and strengths

- Stakeholder participation can enhance program design and legitimacy/support;
- Relatively low cost;
- Transparency (relatively easy for stakeholders to understand); and
- Feeds directly into strategic design and adaptive management.

Main disadvantages and weaknesses

- Stakeholders' representatives may not accurately reflect the diversity of affected populations' interests and knowledge – while appropriate representation is essential for the approach to work successfully, it may be difficult to determine how "appropriate" any representative actually is;
- Does not provide guidance on how to measure the indicators, implement the monitoring plan, and evaluate impacts (i.e., not clear what data is used or how it is analyzed).

Sources

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3.2.3 Stakeholder Analysis

What objectives and components can it address?

Objective 2(a): Identify stakeholders

Objective 2(c): Political economy analysis

What is it and what is assessed? (costs, benefits, dimensions of well-being, etc.)

Stakeholder Analysis is used to identify those who might be affected by or have a vested interest in a proposed policy reform and to understand their concerns about and interests in the proposed reforms. It is also used to understand the relative influence of stakeholder groups and how they interact.

How is it used and what are the mechanics of implementation?

A variety of tools, including focus groups and workshops, can be used to analyze stakeholders' interests and interactions. Implementing the first step – identification of relevant stakeholders – requires detailed knowledge of the country context and the process may be iterative once initial consultations are held.

How is attribution established? How well can it rule out rival explanations?

Not applicable

Key assumptions and/or degree to which it provides statistically valid, robust answers

Not applicable

Ability to capture both intended and unintended impacts

Can be potentially very useful for identifying potential risks of proposed reforms.

Ability to capture both short-term and long-term impacts

Not applicable

How much stakeholder participation is involved? In particular, that of vulnerable or affected groups?

Requires a high level of stakeholder participation.

Potential scales of assessment (individual, household, community, national, or global level)

Focused on assessing actors' interests and influences at the community, regional, and national scales.

Level of differentiation possible (by gender, age, wealth, ethnic group, etc.)

Requires differentiation amongst groups of stakeholders.

Feasibility issues (time, cost, complexity, skills)

An initial list of possible stakeholders will be based on existing knowledge (as may an initial analysis of interests and influence), but stakeholder consultations are required to conduct the full analysis. An experienced facilitator with detailed country knowledge is likely needed.

Example(s) – who has used it, when, and where?

Used extensively in various public policy sectors across the world.

How has the information generated by this methodology been used to influence policy or practice, or what potential does it have to do this?

If the government agency is required to publicly articulate how they have modified their proposed reforms in response to stakeholders' concerns, there may be strong potential for the information obtained in stakeholder consultations to influence policy.

Main advantages and strengths

- Can minimize risks of reforms to vulnerable groups by identifying potential unintended impacts; and
- Can increase legitimacy and support for policy reforms.

Main disadvantages and weaknesses

- Identifying all relevant stakeholders will always be challenging; and
- Representatives of stakeholder groups may not be legitimate or effective representatives of members' interests.

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3.2.4 Appreciative Inquiry (AI)

What objectives and components can it address?

Objective 2(b): Engage stakeholders

What is it and what is assessed? (costs, benefits, dimensions of well-being, etc.)

AI is a participatory planning tool that involves the collection and aggregation of stories. In the context of REDD+, it could be used during consultations to understand what stakeholders hopes and dreams are – what they hope REDD+ will accomplish and/or their hopes about development, land use, and forests in general. As such, the AI tool is specifically focused on the positive, on people's strengths and assets – why something works or might work in the future. It does not focus on problems, i.e., what has not worked in the

past, or fears about the future.

How is it used and what are the mechanics of implementation?

The AI method is typically used with a group over a 1-5 day period. It can also be used on a more regular basis over a longer period of time (i.e., once per week over a few months). Five steps (“The Five Ds”) are followed:

- 1) *Define the topic, the participants, and the process* – this might be done with a facilitator plus a steering committee, or by training interviewers and soliciting household and/or individual level feedback and then using this information to define the topic, the participants, and the process
- 2) *Discover what individuals/communities believe are their strengths, best assets, and reasons for past and ongoing successes* – this might be done in small groups or by having pairs interview each other; the group as a whole then analyzes all these stories to identify dominant factors and themes
- 3) *Dream about the future* – participants then share stories about hopes for the future
- 4) *Design the future* – the group then tries to give more specific shape to dreams by articulating ideals and their vision of the future, and identifies specific processes to take to realize these dreams
- 5) *Deliver* – the group (or a delegated sub-group) then draws up more specific plans for realizing the dreams

How is attribution established? How well can it rule out rival explanations?

Not applicable

Key assumptions and/or degree to which it provides statistically valid, robust answers

Not applicable

Ability to capture both intended and unintended impacts

Not applicable

Ability to capture both short-term and long-term impacts

Not applicable

How much stakeholder participation is involved? In particular, that of vulnerable or affected groups?

Requires a high level of stakeholder participation.

Potential scales of assessment (individual, household, community, national, or global level)

Intended for assessment at the community level.

Level of differentiation possible (by gender, age, wealth, ethnic group, etc.)

All levels of differentiation are possible if an effort is made to do so at the beginning of the process.

Feasibility issues (time, cost, complexity, skills)

Requires a skilled facilitator and some time investment.

Example(s) – who has used it, when and where?

Has been used in numerous settings all over the world – developing countries and developed countries and in many sectors, including natural resources. It has been used in the forest sector in Liberia.

How has the information generated by this method been used to influence policy or practice, or what potential does it have to do this?

If stakeholders' information is considered seriously by policymakers, this method has strong potential to influence program design.

Main advantages and strengths

- Facilitates community ownership of development initiatives;
- Argued that because AI focuses on the positive and the aspirational it can be empowering and promote interventions' sustainability; and
- Program plans generated by this method are grounded in reality.

Main disadvantages and weaknesses

- In-depth nature of consultation exercise makes it difficult to implement at the national scale – would likely need to be used with only a sample of vulnerable communities.

Sources

Judy, S. and Hammond, S.. (2006). An introduction to Appreciative Inquiry. Silva Forest Foundation. Available at: <http://silvafor.org/assets/silva/PDF/AppreciativeInquiryIntro03-09.pdf>

A wealth of guidance and case studies are available at The Appreciative Inquiry Commons: <http://appreciativeinquiry.case.edu>

3.2.5 Participatory Impact Assessment, Monitoring and Evaluation

What objectives and components can it address?

Objective 3(b): Collect own data

Objective 4(a): Experimental and quasi-experimental techniques

Objective 4(b): Participatory and non-experimental techniques

What is it and what is assessed? (costs, benefits, dimensions of well-being, etc.)

Participatory Impact Assessment builds off participatory rural appraisal to present a collection of tools that can be used to identify the actual impacts of an intervention on rural livelihoods. The method is flexible and can be used to measure various dimensions of well-being, including both quantitative (e.g., consumption) and qualitative (e.g., social cohesion) measures. Participatory tools used in this method include participatory mapping, ranking, matrix scoring, impact calendars, radar diagrams, and proportional piling.

How is it used and what are the mechanics of implementation?

All of the tools used in this method involve semi-structured interviews and/or focus group discussions. This data collection may be done with a *convenience sample* (most accessible villages), a *purposive sample* (villages most representative of the population of interest), or a *random sample* (villages selected blindly at random from a list of all villages of interest). The sampling technique will depend on the time and resources available. The sample may also be stratified by gender, livelihood strategy, ethnicity, etc. Samples may be stratified to ensure that the diversity of the sample represents the population of interest or when the evaluation seeks to identify heterogeneous impacts of the intervention on different sub-groups.

How is attribution established? How well can it rule out rival explanations?

This method embraces two general approaches to establishing attribution: i) the traditional scientific approach that uses control groups to rule out rival explanations; and ii) subjective assessment of the relative importance of program factors (e.g., change in forest access) and non-program factors (e.g., change in rainfall) in causing

changes to well-being. Both approaches might involve comparing well-being after the intervention has begun to well-being prior by using baseline data, which may be constructed retrospectively using recall.

The second approach involves using participatory methods to create a list of all possible factors that might affect livelihoods and well-being and then scoring or ranking their perceived importance in affecting change. For example, Figure 5 shows the results from an exercise that asks participants to rate their level of food security before and after an intervention and then list all possible reasons for the perceived change (which can later be identified as project and non-project factors).

Figure 5: Hypothetical Example of Results from an Impact Scoring Exercise



Source: Catley et al. (2007), p. 50

Next, participants are asked to rank and score the relative importance of each reason. Table 2 shows that participants believe improved rainfall and security are the primary reasons for improved food security – factors not attributable to the agricultural project. Nevertheless, the results still show that the participants believe the project did play some role – this contribution might be quantitatively expressed by converting the scores in blue into a percentage (i.e., “participants believe 29 percent of the increase in food security was due to factors related to the project”).

Table 2: Attribution by Simply Ranking/Scoring

Factor	Rank	Score
Improved Rainfall	1 st	33
Improved Security	2 nd	26
Improved Seeds	3 rd	19
Government Extension Services	4 th	12
Provision of Fertilizer	5 th	8
Provision of Tools	6 th	2

Source: Catley et al. (2007), p. 50

Key assumptions and/or degree to which it provides statistically valid, robust answers

A key assumption of participatory methods is that people are able to identify and measure indicators that capture changes in their well-being. When a comparison of the relative importance of program and non-program factors in affecting well-being is used to establish attribution, it is assumed that people can identify what caused increases or decreases in their well-being. When control groups are used to establish attribution, it is assumed that the control and intervention populations are nearly identical along all dimensions that might affect well-being. Where these assumptions are met, indicators are measured quantitatively, and the sample is selected randomly and is large enough to be representative of the population of interest at the 90 percent

confidence level, this method may provide statistically valid information about program impacts. Of course, the assumption that people have complete understanding of whether and why their well-being has changed is largely untestable. Since this method generally relies on collecting data at the community-level, rather than the household or individual level, it may often be hard to obtain enough data points to reach statistically robust conclusions.

Ability to capture both intended and unintended impacts

This method aims to go beyond just measuring process indicators (i.e., that the program is being implemented as designed) to measuring indicators of well-being (e.g., food security, consumption, nutrition, assets) to capture both intended and unintended impacts.

Ability to capture both short-term and long-term impacts

Whether short and long-term impacts can be identified depends on the selected indicators and frequency of data collection.

How much stakeholder participation is involved? In particular, that of vulnerable or affected groups?

Participation of affected groups is high. Ensuring that vulnerable groups within affected populations (e.g., ethnic minorities, women) effectively participate might necessitate purposive and stratified sampling of these sub-groups with separate focus groups/well-being measurement exercises.

Potential scales of assessment (individual, household, community, national, or global level)

This method tends to use tools that assess well-being at the community level.

Level of differentiation possible (by gender, age, wealth, ethnic group, etc.)

Differentiation of impacts by sub-group may be possible if purposive or stratified sampling is used.

Feasibility issues (time, cost, complexity, skills)

While the participatory tools used in this method are relatively simple, employing them successfully may require an experienced facilitator with local knowledge and pre-testing. Given the aggregate nature of the data collection (community level), this method can require less time and costs than household surveys.

Example(s) – who has used it, when, and where?

This method has been used by humanitarian agencies to measure the impact of disaster relief interventions and by the Food and Agricultural Organization to understand the impact of community forestry projects in a wide range of developing countries.

How has the information generated by this methodology been used to influence policy or practice, or what potential does it have to do this?

Evaluations employing these methods have the potential to encourage adaptive management and inform policy.

Main advantages and strengths

- Can be conducted in tandem with stakeholder consultations at baseline and follow-up, enhancing both the consultations and the evaluation;
- Involvement of affected populations in identifying indicators provides opportunity to voice hopes and concerns about the intervention, possibly providing a route to participation in modifying program design;
- Participatory methods may enhance the legitimacy of an evaluation;
- Subjective assessments of program effects might uncover unintended impacts and novel causal pathways; and
- Detailed qualitative information obtained with this method can be triangulated with quantitative impact

evaluation findings to better understand causal pathways and interpret results.

Main disadvantages and weaknesses

- Method is developed for projects rather than national-level programs – while the tools could be used in a large number of villages to obtain nationally-representative data, this may require more time and costs than an analysis of existing household-level data; alternatively, the tools could be used to understand the impacts of national programs by applying them in targeted villages – but the method does not provide guidance on how to select communities; and
- Assumed accuracy of the subjective assessment of whether and how a program affected them may be incorrect.

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3.2.6 Participatory Rural Appraisal

What objectives and components can it address?

Objective 2(d): Prediction based on stakeholders' views

Objective 3(b): Collect own data

Objective 4(b): Participatory and non-experimental techniques

Principal Sources

Adebo, S. (2000). Training Manual on Participatory Rural Appraisal. Available at: <http://www.myfirecommunity.net/discussionimages/NPost8220Attach1.pdf>

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3.2.7 Participatory Mapping

What objectives and components can it address?

Objective 2(d): Prediction based on stakeholders' views

Objective 3(b): Collect own data

Objective 4(b): Participatory and non-experimental techniques

Sources

Participatory Mapping (International Centre for Development-oriented Research in Agriculture)
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Corbett, J. (2009). Good practices in participatory mapping: A review prepared for the International Fund for Agricultural Development (IFAD). IFAD: Rome, Italy. Available at:
http://www.ifad.org/pub/map/pm_web.pdf

Integrated Approaches to Participatory Development (IAPAD) Mapping Toolbox:
<http://www.iapad.org/toolbox.htm>

3.2.8 Household Economy Approach

What objectives and components can it address?

Objective 2(d): Prediction based on stakeholders' views

Objective 2(e): Prediction based on economic data

Objective 3(b): Collect own data

Objective 4(a): Experimental and quasi-experimental techniques

What is it and what is assessed? (costs, benefits, dimensions of well-being, etc.)

The Household Economy Approach is a methodology developed by disaster relief/humanitarian organizations to predict how people's food security and livelihoods might be affected by shocks, such as drought or land tenure reforms. The methodology uses an array of tools and methods to develop a nuanced understanding of how people *gain access* to food and income, with specific attention to interactions between home production and multiple levels of market activity, from local to national scales. The methodology can be used to quantitatively predict how policy reforms might affect food security, income, and well-being and develop alternative policy options that minimize risks and enhance benefits.

How is it used and what are the mechanics of implementation?

The methodology combines data collected from focus group discussions and other participatory methods with secondary data from censuses or other nationally representative datasets and targeted household survey data to develop a quantitative baseline of well-being and predict the effects of a given policy/shock. As

shown in Table 3, the methodology uses a framework with six specific steps to establish the baseline and predictions: i) Livelihood Zoning, ii) Wealth Breakdowns, iii) Analysis of Livelihood Strategies, iv) Problem Specification, v) Analysis of Coping Capacity, and vi) Projected Outcomes.

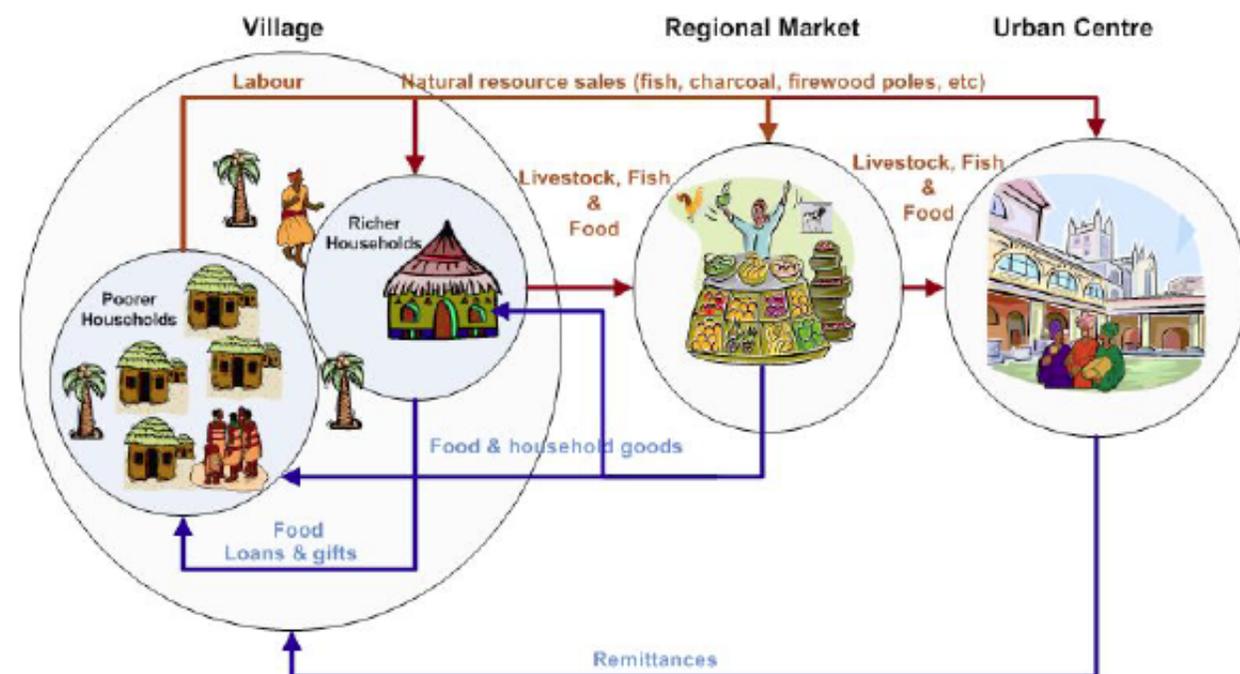
Table 3: Typical methods used to gather information for the HEA Framework

	<i>Steps in the Framework</i>	<i>Information collection methods used (to date)</i>
Baseline	Livelihood Zoning	Semi-structured interviews; participatory workshops; secondary data review
	Wealth Breakdowns	Semi-structured interviews; proportional piling; census data review (to cross-check household composition)
	Analysis of Livelihood Strategies	Semi-structured interviews; review of secondary data (to cross-check yields, production, livestock numbers, etc.); proportional piling, participatory seasonal calendars and community mapping
Outcome Analysis	Problem Specification	Household surveys (to gather monitoring data such as crop production and prices); Semi-structured interviews; review of secondary information, especially time series data
	Analysis of Coping Capacity	Semi-structured interviews; review of secondary data (on labor markets, herd composition, viable off-take rates, etc.)
	Projected Outcomes	No additional information goes into this step; this step comprises an analysis and processing of the data and information gathered in the previous steps

From Save the Children (2008), p. 3

The methodology explicitly considers interactions between the poor and non-poor and village, regional, and urban markets in all six steps of analysis. An example of typical linkages between these populations and markets is illustrated in Figure 6 below. The methodology uses historical market data and/or existing analyses of price trends and provides survey instruments for supplementing this data with merchant interviews.

Figure 6: The Critical Links between Households and Markets



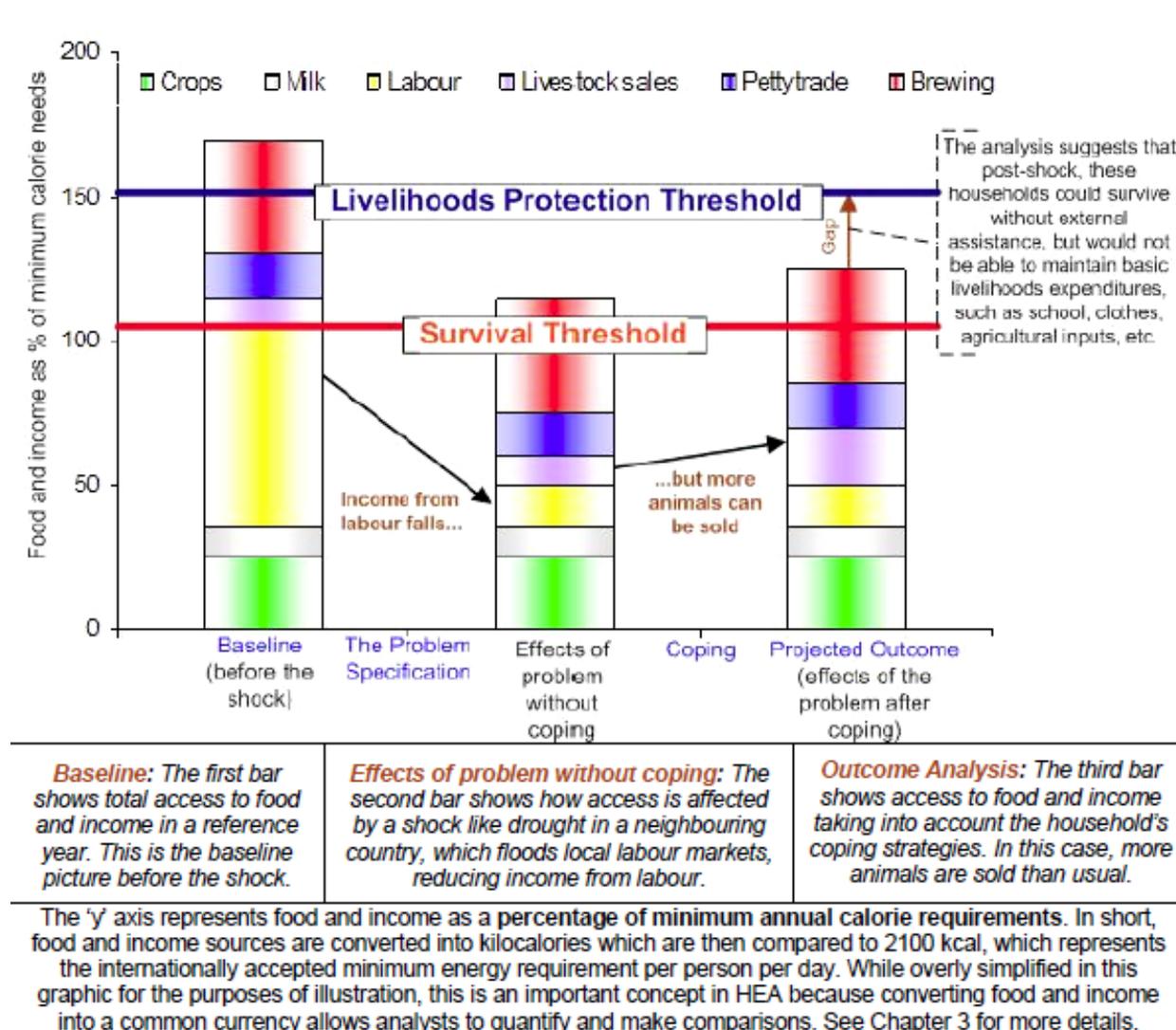
Source: *Save the Children* (2008), p. 19

How is attribution established? How well can it rule out rival explanations?

While this methodology was developed for pre-program assessment of risks and policy or intervention options, the modeled predictions of a ‘no intervention’ scenario could be used to establish attribution in an impact evaluation by comparing this estimate with data collected from communities affected by REDD+ after the program has begun.

Figure 7 illustrates how application of the Household Economy Approach can yield quantitative estimates of well-being by modeling the effects according to a specific theory of change. The framework presented below could be applied to REDD+ and the tasks of risk assessment, policy design, and attribution by running three iterations of the model: First, a ‘without REDD+’ scenario where “The Problem Specification” might be deforestation. Then second, a ‘with REDD+’ scenario where “The Problem Specification” is a proposed policy reform. And third, a ‘with REDD+’ scenario with the same policy modified to enhance household coping with any adverse effects. The modeling exercise serves as risk assessment and policy design informed by information obtained from stakeholder consultations. The “without REDD+” model could serve as a counterfactual for an impact evaluation.

Figure 7: The Household Economy Analytical Framework: A Simplified Illustration



Source: Save the Children (2008), p. 4

Key assumptions and/or degree to which it provides statistically valid, robust answers

This methodology has strong potential to provide statistically robust answers. Validity will depend on the assumptions used in the models (i.e., the accuracy of the theory of change). Given that model assumptions will be informed by data collected from vulnerable populations and analysis of secondary data, it will be possible to develop nuanced theories of change.

Ability to capture both intended and unintended impacts

By focusing on final indicators of well-being, such as food consumption or income, and providing a framework for developing specific theories of change, this methodology captures unintended impacts of policy reforms.

Ability to capture both short-term and long-term impacts

By attempting to understand how policies affect livelihoods, and measuring food security and ability to satisfy basic needs, this methodology has the potential to identify short and long-term impacts.

How much stakeholder participation is involved? In particular, that of vulnerable or affected groups?

The methodology takes as its starting point information gleaned from focus group discussions and other participatory rural appraisal tools and thus facilitates a high level of participation among vulnerable groups.

Potential scales of assessment (individual, household, community, national, or global level)

The methodology could make use of household and individual level surveys to assess impacts at this fine scale. However, in practice, this methodology has used community-level and market data (from focus groups and censuses) to construct livelihood maps and the remaining five steps of analysis. The methodology is tailored to assessment at the national scale.

Level of differentiation possible (by gender, age, wealth, ethnic group, etc.)

The methodology is best suited to differentiation by livelihood strategy and wealth group, but differentiation by additional sub-groups may be possible if this goal is specified at the participatory rural appraisal phase.

Feasibility issues (time, cost, complexity, skills)

The methodology uses both new and existing data. While facilitation of community meetings and collecting and analyzing do require specific skills, the 400-page guide to using the Household Economy Approach provides very detailed guidance and ready-to-use survey instruments and simple equations for calculating baselines and estimating potential outcomes. On average, collecting the baseline data for the methodology involves conducting participatory rural appraisal in 8 villages per livelihood zone, which requires 2-person teams working 2 days per village. Analysis and modeling of this data requires additional time, but may be done relatively quickly provided that secondary data and reports are obtained and analyzed smoothly.

More rapid versions of the methodology have been conducted in a number of countries (often in the wake of natural disasters) by reducing the number of participatory rural appraisals and increasing the reliance on secondary data.

Example(s) – who has used it, when, and where?

Save The Children and other humanitarian organizations have used this methodology in wide range of countries suffering from droughts, earthquakes, and other natural disasters. It has also been used to predict how land reform and macroeconomic shocks in Zimbabwe might affect vulnerable groups and design interventions to protect their food security.

How has the information generated by this methodology been used to influence policy or practice, or what potential does it have to do this?

The methodology is geared towards understanding baseline conditions and analyzing policy options. In Zimbabwe, for example, analysis of how land reform might affect the poor led organizations to conclude that food aid would be a better social protection intervention than cash transfers given the context of rapid inflation and rising food prices.

Main advantages and strengths

- Specifically suited to modeling ‘with’ and ‘without’ scenarios of rural well-being in the context of national-level changes (shocks or policies);
- Provides clear framework for linking participatory and qualitative methods with quantitative analysis
- Estimation of baseline and potential outcomes explicitly builds off information obtained in stakeholder consultations – and thus well-suited to the unique requirements of REDD+ safeguards that program design be informed by the views of affected communities; and
- Guide provides step-by-step advice, ready-to-use tools and methods, and case studies.

Main disadvantages and weaknesses

- Focused on understanding how livelihoods and well-being might change in response to a given shock or policy, but not what policy options or modifications affected communities may themselves wish to

see enacted (i.e., not explicitly geared towards obtaining free, prior, and informed consent for a policy).

Sources

Save the Children. (2008). The Practitioners' Guide to the Household Economy Approach. Save the Children, Regional Hunger and Vulnerability Programme, and FEG Consulting: London, UK. Available at: <http://www.savethechildren.org.uk/resources/online-library/practitioners-guide-household-economy-approach>

Holzmann, P., Boudreau, T., Holt, J., Lawrence M. and O'Donnell, M. (2008). The Household Economy Approach: A guide for programme planners and policy-makers. Save the Children and FEG Consulting: London, UK. Available at: <http://www.savethechildren.org.uk/resources/online-library/household-economy-approach-guide-programme-planners-and-policy-makers>

3.2.9 Drivers of Change Analysis

What objectives and components can it address?

Objective 2(c): Political economy analysis

What is it and what is assessed? (costs, benefits, dimensions of well-being, etc.)

The Drivers of Change Method was developed by the United Kingdom's Department for International Development (DFID) to understand how and why national-level policy reforms intended to benefit the poor might not be implemented as designed (or how and why such reforms might otherwise succeed). Specifically, it considers the interaction of three sets of factors (structures, institutions, and agents) to identify those factors leading to or blocking change over the short, medium, and long-term. It seeks to unpack general beliefs – 'lack of political will' and 'weak governance' – about why some aid interventions are deemed to fail by examining the potential for elite capture and lack of ownership prior to program start to design policy reforms that might be able to deliver their intended results while facing these challenges.

How is it used and what are the mechanics of implementation?

The method makes use of expert interviews, focus group discussions, and literature reviews to understand the interaction of agents, structural features (e.g., natural resources, demography), and both formal (rules, laws) and informal institutions (norms, ideas). Particular attention is given to institutions and how they shape the interests and incentives of powerful agents.

How is attribution established? How well can it rule out rival explanations?

Not applicable

Key assumptions and/or degree to which it provides statistically valid, robust answers

Not applicable

Ability to capture both intended and unintended impacts

The method is focused on predicting the unintended impacts of proposed policy reforms.

Ability to capture both short-term and long-term impacts

It is intended to capture short, medium, and long-term impacts.

How much stakeholder participation is involved? In particular, that of vulnerable or affected groups?

The method may or may not involve stakeholder participation.

Potential scales of assessment (individual, household, community, national, or global level)

The focus is on assessing dynamics at the national scale.

Level of differentiation possible (by gender, age, wealth, ethnic group, etc.)

The method could be used to predict why a proposed reform might not deliver its intended impacts for certain groups.

Feasibility issues (time, cost, complexity, skills)

The time and costs of the analysis can vary according to needs and funding. Some Drivers of Change analyses have involved numerous personnel, consultations and produced dozens of reports while others may rely exclusively on analysis of existing literature and laws to produce a single report.

Example(s) – who has used it, when, and where?

DFID has used the method in over 20 countries since developing it in the early 2000s.

How has the information generated by this methodology been used to influence policy or practice, or what potential does it have to do this?

The method has led DFID to alter the design of many aid programs.

Main advantages and strengths

- Potential to confront the complicated institutional issues that often challenge policy implementation but have traditionally been ignored during risk assessment and policy design phases.

Main disadvantages and weaknesses

- Lack of systematic guidance on specific tools or modes of analysis.

Sources

Warrener, D. (2004). The Drivers of Change Approach. ODI Synthesis Paper 3. ODI: London, UK.

Available at: <http://www.odi.org.uk/sites/odi.org.uk/files/odi-assets/publications-opinion-files/3721.pdf>

The following sources are available at the Government and Social Development Resource Centre (<http://www.gsdrc.org/go/topic-guides/political-economy-analysis>):

DFID. (2005). Using Drivers of Change to improve aid effectiveness. DFID Briefing Note.

DFID. (2005). Lessons learned – planning and undertaking a Drivers of Change study. DFID How To Note.

3.2.10 Economic Modeling

What objectives and components can it address?

Objective 2(e): Prediction based on economic data

Objective 4(a): Experimental and quasi-experimental techniques

What is it and what is assessed? (costs, benefits, dimensions of well-being, etc.)

Economic modeling can be used to predict the impacts of policy reforms on a range of well-being indicators. The term “economic modeling” is used here quite generally to describe a wide array of models. Most frequently these models are used to consider how reforms affect prices to predict impacts on consumption, income, and the distribution of poverty. Models linking economics and land-use change can also be used to establish REDD+ reference scenarios and estimate impacts of policy alternatives on ecosystem services important for human well-being.

How is it used and what are the mechanics of implementation?

These models are based on economic theory and use parameterized models to predict changes in well-being.

How is attribution established? How well can it rule out rival explanations?

Modeled predictions of poverty or well-being in a ‘without REDD+’ scenario can be used to construct a counterfactual, which is compared with data collected from communities affected by REDD+ to establish attribution. How well such an approach can rule out rival explanations depends on the assumptions of each specific model. Estimation of the counterfactual can be improved by updating the ‘without REDD+’ prediction to take account of shocks that have occurred since the baseline, such as drought. When national reforms affect all households or communities in an economy equally and simultaneously, economic modeling is likely to be a more feasible way of establishing a counterfactual than trying to identify control groups. Moreover, for national-level reforms, economic modeling is more effective than traditional impact evaluation techniques in capturing spillovers (leakage) and general and partial equilibrium effects.

Key assumptions and/or degree to which it provides statistically valid, robust answers

Where the assumptions of models are accurate, they may provide statistically valid and robust predictions. Some models might assume that markets for food and other basic needs are complete, which is likely an invalid assumption in many regions. Many models might not be able to effectively capture the role of non-timber forest products in the rural economy. More work is needed to develop models that link predictions of land-use change to changes in economic well-being.

Ability to capture both intended and unintended impacts

The models intend to capture the full effects of policy reforms.

Ability to capture both short-term and long-term impacts

Strong potential to predict both the short-term and long-term effects of policy reforms.

How much stakeholder participation is involved? In particular, that of vulnerable or affected groups?

Does not typically require stakeholder participation, as data on prices and consumption may be used. However, it is possible to use new household survey data and develop modeling assumptions based on information obtained from focus groups and market interviews.

Potential scales of assessment (individual, household, community, national, or global level)

All scales of assessment are possible, depending on the granularity of the data used to develop parameters for the model.

Level of differentiation possible (by gender, age, wealth, ethnic group, etc.)

All levels of differentiation are possible, depending on the heterogeneity of the data used to develop the model parameters .

Feasibility issues (time, cost, complexity, skills)

Economic modeling is complex and requires a high level of skill. However, the time for this task may be less than that required for collecting survey data from a large number of villages. Nevertheless, the costs of hiring such highly skilled labor can be quite high.

Example(s) – who has used it, when, and where?

Economic modeling is used in a range of sectors and settings to predict and compare policy options. In the context of climate policy, it is often used to model the possible impacts of cap-and-trade or carbon tax policies on household income, gross domestic product, and other economic indicators. In the context of developing countries, economic modeling is frequently used by the World Bank to predict the impact of policy reforms in a range of sectors, including agriculture, land tenure, and infrastructure (see references below). Modeling that links economics to land-use change is used to establish REDD+ reference scenarios

and compare REDD+ policy options. For example, the Open Source Impacts of REDD+ Incentives Spreadsheet (OSIRIS) initiative has developed models (see references below) that can be used to compare potential REDD+ carbon revenues against potential agriculture and timber revenues. Another suite of accessible models linking land-use change to human well-being is provided The Natural Capital's InVEST project (see references below), which can be used to estimate how interventions might affect ecosystem services and their value to humans. Toolkits and models currently exist for valuing 15 ecosystem services, including the value of crop pollination for agriculture and the value of avoided land-use conversion for water purification and sediment retention.

How has the information generated by this methodology been used to influence policy or practice, or what potential does it have to do this?

These models have strong potential to influence the design of policy and facilitate impact evaluation at the national level when reforms are expected to have a clear impact on prices (e.g., elimination of an agricultural subsidy or imposition of a charcoal tax).

Main advantages and strengths

- Able to quantitatively predict impacts using existing data; and
- Able to capture spillovers (leakage) and general equilibrium effects of national-level policy reforms.

Main disadvantages and weaknesses

- Requires high level of skill; and
- While accessible and tested models linking changes in land-use to changes in economic well-being do exist (such as OSIRIS), these models are geared towards comparing possible carbon revenues with possible revenues from agriculture and timber at the regional and district scale. To understand social impacts in REDD+, it will often be necessary to also understand how revenues accrued at the regional and district levels affect households, and other dynamics regarding land access and property rights.

Sources

Wealth of information on behavioral models, partial and general equilibrium models, and models that link distribution of poverty at the micro-level to the macro-level available at:

<http://go.worldbank.org/1MAZD1DHA0>

Khandker, S.R., Koolwal, G.B. and Samad, H.A. (2010). "Using Economic Models to Evaluate Policies," Chp. 9 in Handbook on Impact Evaluation: Quantitative Methods and Practices. The World Bank: Washington, DC, USA.

Examples:

The Open Source Impacts of REDD+ Incentives Spreadsheet (OSIRIS) models:

<http://www.conservation.org/osiris/Pages/overview.aspx>

The Natural Capital Project's Invest models:

<http://www.naturalcapitalproject.org/InVEST.html>

Model linking micro and macro levels (Poverty Analysis Macroeconomic Simulators (PAMS) model):

Essama-Nssah, B., Samake, I. and Walliser, J. (2006). Burkina Faso: A Macroeconomic Approach to Analyze Cotton Sector Reform, Chp. 3 in Poverty and social impact analysis of reforms: lessons and examples from implementation, Coudouel, A., Dani, A.A. and Paternostro, S. (Eds.). World Bank: Washington, DC, USA. Available at: <http://go.worldbank.org/WE738GBUA0>

Behavioral economic models:

Ravallion, M. and van de Walle, D. (2008). Land in Transition: Reform and Poverty in Rural Vietnam. Available at: http://works.bepress.com/martin_ravallion/23/

Jalan, J. and Ravallion, M. (2002). Geographic poverty traps? A micro model of consumption growth in rural China. *Journal of Applied Econometrics* 17(4): 329-346.

Cross-country regressions:

Calderon, C. and Serven, L. (2010). Infrastructure and economic development in sub-Saharan Africa. *Journal of African Economies* 19(AERC Supplement) : i13-i87.

Migot-Adholla, S., Blarel, B. and Place, F. (1991). Indigenous Land Rights Systems in Sub-Saharan Africa: A Constraint on Productivity? *World Bank Economic Review* 5(1): 155-175.

3.2.11 Most Significant Change

What objectives and components can it address?

Objective 3(b): Collect own data

Objective 4(b): Participatory and non-experimental techniques

What is it and what is assessed? (costs, benefits, dimensions of well-being, etc.)

This is a simple qualitative and participatory method that seeks to understand program impacts by soliciting stories from affected populations on the most significant changes they have experienced during the program implementation period. The method seeks to learn about changes in general quality of life and changes in peoples' participation in development, social capital, and any other issues that might be raised during the open-ended conversation.

How is it used and what are the mechanics of implementation?

Most significant change stories are collected from affected populations in either one-on-one interviews or group discussions. After respondents tell stories about changes they or their community have experienced, they are asked to select which changes (and perhaps sources of change) they think are the most significant. These stories are then read by local program staff, who in turn narrow down the pool of stories to those they identify as most important. Aggregation and selective narrowing of the story pool may then continue at higher levels of geography or administration.

How is attribution established? How well can it rule out rival explanations?

The method is not designed to replace impact evaluation, but instead to complement it by bringing to light unintended impacts and novel causal pathways. It can therefore strengthen the ability of an impact evaluation to rule out rival explanations and establish attribution. The method appears to rely on those analyzing the stories rather than those telling them to make determinations about attribution (i.e., explain *why* a reported change occurred, decide which changes are due to the project and which are not).

Key assumptions and/or degree to which it provides statistically valid, robust answers

The method is not intended to provide statistically robust information, though it is possible to express the qualitative information collected quantitatively by counting and coding stories. A key assumption of this method is that participants will speak honestly and freely about changes in their lives and communities. When stories are collected at community meetings it is assumed that people reveal the same stories in a group setting that they would if they were interviewed alone. While the method does not necessarily assume that people are able to explain *why* a significant change occurred, it does assume that they are able to *detect* significant changes.

Ability to capture both intended and unintended impacts

The method is largely designed for the purpose of uncovering information about unintended impacts.

Ability to capture both short-term and long-term impacts

The method may be better suited to detecting short-term or large changes since it relies on peoples' recall ability.

How much stakeholder participation is involved? In particular, that of vulnerable or affected groups?

A high level of stakeholder participation is required.

Potential scales of assessment (individual, household, community, national, or global level)

This method is most suitable for assessing changes at the community and regional levels.

Level of differentiation possible (by gender, age, wealth, ethnic group, etc.)

Most Significant Change does not appear well-suited to identifying heterogeneous program impacts, though it could be used for such a purpose if this was identified as a goal at the outset and story collection and selection is differentiated by sub-group.

Feasibility issues (time, cost, complexity, skills)

While implementation of the method does not require any particular skills, the data collection effort might be quite time-intensive if done as a stand-alone exercise over a large geographic area. Implementation of the method with communities in Laos required between 86 and 116 person days per community.

Example(s) – who has used it, when and where?

Davies and Dart developed the method in the early 1990s and it has been used in numerous countries across the world ever since to assess a wide range of program.

How has the information generated by this methodology been used to influence policy or practice, or what potential does it have to do this?

This method could be very useful for program monitoring and adaptive management.

Main advantages and strengths

- Participatory nature of this method could enhance vulnerable populations' voice in program design and program's legitimacy with stakeholders; and
- Can uncover unintended impacts and novel causal pathways.

Main disadvantages and weaknesses

- Time-intensive method developed to understand very local level changes of small-scale interventions -- to use at national scale would require selecting targeted communities for application.

Sources

Davies, R. and Dart, J. (2005). Most Significant Change (MSC) Technique: A guide to its use.

Available at: <http://mande.co.uk/special-issues/most-significant-change-msc/>

UNICEF India's Most Significant Change website: <http://www.mostsignificantchange.org/>

3.2.12 Impact Evaluation Technique: Randomization

What objectives and components can it address?

Objective 4(a): Experimental and quasi-experimental techniques

What is it and what is assessed? (costs, benefits, dimensions of well-being, etc.)

Randomization is a method commonly used in natural science experiments to test hypotheses. It is increasingly being used in the social sciences to quantify the causal effects of public policies and programs. Identification of impacts is routinely a challenge in public policy due to *selection bias*—individuals, communities, regions, or countries that are enrolled in or adopt a program or policy are often systematically different from those that do not select the program or policy. This makes it difficult to identify suitable control groups and construct a counterfactual scenario. Randomization solves this problem of selection bias by blindly assigning the program/policy to only some within the larger population that might receive it. Those who do not initially receive the program/policy come from the same general population and serve as the control group. It is expected that, in large enough samples, that the control group will have the same distribution of characteristics (including those that might affect response to the program) as those that receive the program.

How is it used and what are the mechanics of implementation?

Randomization may be an appropriate technique for estimating the socioeconomic impacts of national-level REDD+ programs/policy when financial constraints or administrative realities make it difficult to implement the program/policy in all intended areas immediately. If the initial allocation of the program/policy is randomized, then the gaps in initial program coverage can be harnessed as control groups for pilot studies that identify impacts of the initial program phase. Once initial impacts of the program are identified, the program can be modified to reduce risks and enhance benefits for local populations and then rolled out to the control groups.

How is attribution established? How well can it rule out rival explanations?

Attribution is established through the use of control groups. Data is analyzed statistically and may involve just a simple comparison of means or regression-adjusted means post program (i.e., after the program has started). If pre-program data are also available from both the control and program sites, then data may be analyzed using the differences-in-differences approach, which compares the change in the intervention group to the change in the control group – effectively netting out time trends common to both groups. In theory, randomization does the best job of all the impact evaluation techniques in ruling out rival explanations. However, this is predicated on the assumption that the control group remains completely unaffected by the program (and is not differentially targeted for other programs that might affect the results) during the course of the study.

Key assumptions and/or degree to which it provides statistically valid, robust answers

Randomization has strong potential to provide statistically robust answers. However, a key assumption of conducting a randomized experiment with a *pilot* to identify the impacts of a *national* program is that there are no general equilibrium effects. The size of the impacts identified in the pilot will be the same once the program scales up to cover more people and markets. In the context of reduced deforestation programs that have strong effects on prices and high potential for spillovers (leakage), this may be a strong assumption. Other key assumptions of randomization are that the control and program populations are, on average, very similar pre-program (this can be tested with baseline data) and that the program or other unexpected interventions do not affect the control group during the study – this is more difficult to address.

Ability to capture both intended and unintended impacts

Provided that a range of well-being indicators are used, randomization can detect both intended and unintended impacts. The ability to capture unintended impacts can be strengthened by including open-ended questions in survey instruments or complementing the impact evaluation with a qualitative, participatory method.

Ability to capture both short-term and long-term impacts

Both short and long-term impacts can be detected depending on frequency of data collection and indicators

used.

How much stakeholder participation is involved? In particular, that of vulnerable or affected groups?

This method does not necessarily require stakeholder participation, aside from participating in household surveys.

Potential scales of assessment (individual, household, community, national, or global level)

Individual, household, and community levels of assessment are possible with this method.

Level of differentiation possible (e.g. by gender, age, wealth, ethnic group, etc.)

All levels of differentiation are possible.

Feasibility issues (time, cost, complexity, skills)

The early attention to research design allows randomization, so the statistical analysis is simpler than for other impact evaluation methods. However, in many cases it will not be politically feasible or practical to use a randomized research design. Like all impact evaluation techniques, this method requires the involvement of skilled evaluators.

Example(s) – who has used it, when, and where?

Randomization is increasingly being used in international development to understand the effects of programs on poverty. Notable examples include Mexico's cash transfer program, the land tenure reform and agricultural programs supported by the Millennium Challenge Corporation, deworming programs in Kenya, and the large body of experimental impact evaluations produced by the Poverty Action Lab at MIT (see references below).

How has the information generated by this methodology been used to influence policy or practice, or what potential does it have to do this?

In Mexico, for example, the strong evidence of success generated by impact evaluations helped make the case for continuing the cash transfer program and expanding it to other countries.

Main advantages and strengths

- Of all the impact evaluation estimators, randomization has the strongest ability to establish attribution and rule out rival explanations – provided its assumptions are met; and
- Strength of research design replaces need for complicated statistical procedures.

Main disadvantages and weaknesses

- May be politically infeasible or not practical to randomize;
- Requires that programs or policies not implemented simultaneously across the country; and
- Impacts identified in pilot phase may differ from impacts once program is scaled up across country.

Sources

Khandker, S.R., Koolwal G.B. and Samad, H.A. (2010a). "Randomization," Chp. 3 in Handbook on Impact Evaluation: Quantitative Methods and Practices. The World Bank: Washington, DC, USA.

Khandker, S.R., Koolwal G.B. and Samad, H.A. (2010b). "Double Difference," Chp. 5 in Handbook on Impact Evaluation: Quantitative Methods and Practices. The World Bank: Washington, DC, USA.

Ravallion, M. (2009). Should the Randomistas Rule? *The Economists' Voice* 6(2): 1553-3832.

Examples:

Miguel, E. and Kremer, M. (2004). Worms: Identifying impacts on education and health in the presence of treatment externalities. *Econometrica* 72(1): 159-217.

Olken, B. (2007). Monitoring Corruption: Evidence from a Field Experiment in Indonesia. *Journal of Political Economy* 115(2): 200-249.

Parker, S.W. (2005). Randomization and Social Program Evaluation: The case of Progresa. *The Annals of the American Academy of Political and Social Science* 599(1): 199-219.

Recent evaluations by the Millennium Challenge Corporation available at <http://www.mcc.gov>:

- Impact Evaluation for Benin's Access to Land Project
- Measuring Results of the Armenia Farmer Training Investments
- Measuring Results of the Ghana Commercial Training Activity
- Measuring Results of the Honduras Farmer Training and Development Activity
- Measuring Results of the Nicaragua Rural Business Development Services and Technical and Financial Assistance Activities

Numerous evaluations done by The Abdul Latif Jameel Poverty Action Lab at MIT available at <http://www.povertyactionlab.org>

3.2.13 Impact Evaluation Technique: Repeated Time Series

What objectives and components can it address?

Objective 4(a): Experimental and quasi-experimental techniques

What is it and what is assessed? (costs, benefits, dimensions of well-being, etc.)

This technique uses a series of repeated observations collected before and after the intervention to measure the impact of a program. The pre-program observations essentially serve as the control group. By using a repeated series of data rather than just one measure each for pre and post-program characteristics, this estimator does a better job of controlling for time trends and idiosyncratic shocks than a simple before-after comparison. Application of the repeated time series method can be strengthened by including a variable that measures the intensity or degree of exposure to the program in each area (e.g., district). For example, for a national-level program that seeks to reduce deforestation, this might be the deforestation rate in each district prior to the program.

How is it used and what are the mechanics of implementation?

This research design may be used in those cases where it is not possible to phase in a program over time and conduct a pilot study before scaling up. With this research, design data can be analyzed using fixed effects regression models and strengthened by including interaction variables to control for district-specific time trends and district-specific program intensity/exposure.

How is attribution established? How well can it rule out rival explanations?

Attribution is established by comparing post-program conditions to pre-program conditions and using as many pre and post-program observations as possible to control for time trends and unrelated shocks. The longer the time series of data, the better this estimator can rule out rival explanations. However, the absence of a control group for comparison still makes it difficult for this estimator to guarantee that any observed changes are in fact due to the program and not to other events. Being able to identify variation in program exposure/intensity across districts and include this variable in the estimator can greatly increase the strength of this estimator.

Key assumptions and/or degree to which it provides statistically valid, robust answers

A key assumption of this method is that the time series of data is able to control for the effect of time trends before and after the program and that there are no other significant events/shocks affecting well-being at the same time as the program.

Ability to capture both intended and unintended impacts

Provided a range of well-being indicators are used this method can detect both intended and unintended impacts. The ability to capture unintended impacts can be strengthened by including open-ended questions in the post-program surveys or complementing the impact evaluation with a retrospective participatory method.

Ability to capture both short-term and long-term impacts

Theoretically, both short and long-term impacts can be detected, depending on the length of the time series on either side of program implementation and the indicators used.

How much stakeholder participation is involved? In particular, that of vulnerable or affected groups?

Stakeholder participation with this method is low. The weakness of the research design in establishing attribution increases the need for using complementary participatory methods.

Potential scales of assessment (individual, household, community, national, or global levels)

All levels of assessment are possible.

Level of differentiation possible (by gender, age, wealth, ethnic group, etc.)

All levels of differentiation are possible.

Feasibility issues (time, cost, complexity, skills)

This method requires existing pre-program data. A time series of before conditions might be ideal, but estimation is still possible with only one round of pre-program data. Ideally, this method would harness both pre- and post-program nationally representative data that is already being collected for general purposes (e.g., LSMS, DHS, or census data). Like all impact evaluation techniques, this method requires the involvement of those skilled in evaluation and econometrics.

Example(s) – who has used it, when, and where?

A recent study uses the program intensity/exposure version of this model to identify the impacts of national reforms to education costs in Kenya.

How has the information generated by this methodology been used to influence policy or practice, or what potential does it have to do this?

This method has strong potential to generate credible evidence and influence policy.

Main advantages and strengths

- Suitable method for evaluating impacts of national-level policies that affect the entire country simultaneously (i.e., where pilot study and phased approach are not possible); and
- May not require a separate data collection effort.

Main disadvantages and weaknesses

- Requires pre-program data and these nationally-representative household surveys may not include adequate information about household reliance on forest products, forest access, or tenure security.

Example

Lucas, A.M. and Mbiti, I.M. (2012). Does Free Primary Education Narrow Gender Differences in Schooling?

3.2.14 Impact Evaluation Technique: Regression Discontinuity Design

What objectives and components can it address?

Objective 4(a): Experimental and quasi-experimental techniques

What is it and what is assessed? (costs, benefits, dimensions of well-being, etc.)

Regression discontinuity design estimates the impact of a program by harnessing the variation induced by a quantitatively measured cutoff point that determines whether or not one receives/enrolls in the program. By comparing those with and without the program that are on either side of the cutoff, the method can identify program impact because these two populations are expected to be very similar (and thus problems of selection bias are minimized).

How is it used and what are the mechanics of implementation?

Like randomization, regression discontinuity design can be used to identify impacts of national-level REDD+ programs or policy when financial constraints or administrative realities make implementation difficult to in all intended areas immediately, and these initial gaps in program coverage can be harnessed to conduct a pilot study. It can also be used in those cases where no pilot study is possible and the policy is rolled out across the country at once, but some areas turn out to be less affected than others and can thus serve as control groups. The regression discontinuity method requires that program participation be determined by an exogenously fixed 'quantitative assignment variable' – e.g., birth date, income, or distance to an administrative border. In the case of REDD+, distance to district border is likely the most relevant assignment variable. With this research, design impacts are estimated using a regression model that compares those that receive the program with those that don't and factors in how far each observation is from the cutoff.

How is attribution established? How well can it rule out rival explanations?

Regression discontinuity is one of the strongest impact evaluation estimators – only randomization is stronger. The method is able to establish attribution and rule out rival explanations by comparing only those on either side of the cutoff. Because the cutoff is fixed exogenously, it works almost like blind randomization to split the population into 'treatment' and control groups.

Key assumptions and/or degree to which it provides statistically valid, robust answers

This method assumes that the control and 'treatment' populations are similar along all non-program characteristics that might affect well-being. Another key assumption of this method is that the impacts identified using the populations just around the cutoff are the same for the general population. It also assumes that those just on the other side of the cutoff in the control group are not affected by the program effects in the treatment group. In the REDD+ context, where distance to district border is used as the cutoff variable and spillovers, including market leakage and migration, might be program effects, this may be a particularly strong assumption.

Ability to capture both intended and unintended impacts

Provided a range of well-being indicators are used, this method can detect both intended and unintended impacts.

Ability to capture both short-term and long-term impacts

Both short and long-term impacts can be detected, depending on frequency of data collection and/or analysis and the indicators used.

How much stakeholder participation is involved? In particular, that of vulnerable or affected groups?

This method does not require stakeholder participation.

Potential scales of assessment (individual, household, community, national, or global level)

All levels of assessment are possible.

Level of differentiation possible (by gender, age, wealth, ethnic group, etc.)

All levels of differentiation are possible.

Feasibility issues (time, cost, complexity, skills)

This method will most often use data that is being collected for another purpose and it does not require pre-program data. Data collection costs and time therefore may be very low. Like all impact evaluation techniques, this method requires the involvement of those skilled in evaluation and econometrics.

Example(s) – who has used it, when, and where?

This method has been used to evaluate the impacts of a range of public policies and shocks. Notable examples include studies on educational programs and the impacts of the Great Depression and military service on income. In the environmental context, studies have used distance to administrative border to examine the impacts of water conservation policies on household water use in the United States and the impacts of cash transfer programs on deforestation in Mexico.

How has the information generated by this methodology been used to influence policy or practice, or what potential does it have to do this?

This method has potential to produce credible evidence that can be used to influence policy.

Main advantages and strengths

- Does not require pre-program data; and
- Second only to randomization in its ability to establish attribution and rule out rival explanations – provided assumptions are met.

Main disadvantages and weaknesses

- Requires that program/policy not be implemented simultaneously across the country or that some areas are more affected than others;
- Impacts identified in pilot phase may differ from impacts once program is scaled up across country;
- Requires large number of observations because only those just around the cutoff will be used to estimate impacts; and
- Assumes no spillover effects, such as leakage or migration.

Sources

Khandker, S.R., Koolwal, G.B. and Samad, H.A. (2010). Regression Discontinuity and Pipeline Methods, Chp. 7 in Handbook on Impact Evaluation: Quantitative Methods and Practices. The World Bank: Washington, DC, USA.

Example:

Alix-Garcia, J., McIntosh, C., Sims, K.R.E. and Welch, J.R. (2011). The Ecological Footprint of Poverty Alleviation: Evidence from Mexico's Oportunidades Program. *Review of Economics and Statistics*.

3.2.15 Impact Evaluation Technique: Matching

What objectives/components can it address?

Objective 4(a): Experimental and quasi-experimental techniques

What is it and what is assessed? (costs, benefits, dimensions of well-being, etc.)

Matching is a common impact evaluation technique that addresses the problem of selection bias by using an estimate of how likely one is to receive the program to construct control and ‘treatment’ groups. The most common method calculates propensity scores, which estimate the probability that one would receive the program based on observable characteristics. Propensity score matching essentially seeks to mimic the selection process and thereby control for it. The method therefore works best when the rules determining program assignment are clearly documented.

How is it used and what are the mechanics of implementation?

Like randomization and regression discontinuity design, matching can be used to identify impacts of national-level REDD+ programs and/or policy when financial constraints or administrative realities make implementation difficult in all intended areas immediately, and these initial gaps in program coverage can be harnessed to conduct a pilot study. It can also be used in those cases where no pilot study is possible and the policy is rolled out across the country at once, but some areas turn out to be less affected than others and can thus serve as control groups. Once propensity scores are calculated, the area of ‘common support’ is identified, which is where the propensity scores for those that received the program and those that did not overlap. This breaks the sample into a control and ‘treatment’ group and the data is then analyzed in a regression framework. The propensity scores themselves might be included in the regression to weight the observations. If pre-program data is available as well, the data may be analyzed in a difference-in-differences framework, where the change in the ‘treatment’ group is compared to the change in the control group.

How is attribution established? How well can it rule out rival explanations?

Attribution is established by constructing a control group that looks very similar to the ‘treatment’ group along the observable characteristics that determine program assignment. When the program assignment is based on clear criteria and determined exogenously (i.e., there is no self-selection), this method works best to rule out rival explanations. When individuals or communities voluntarily self-select into the program, this method may not work well, since this source of selection bias will remain.

Key assumptions and/or degree to which it provides statistically valid, robust answers

The key assumption of this method is that there are no ‘unobservable’ (not measured) systematic differences between the matched control and ‘treatment’ populations. For example, in evaluating the impacts of a voluntary PES or community forest program, it would assume that those who sign up for the program are not more motivated or have greater collective action ability than those who do not. This assumption may be invalid for many voluntary programs. If only post-program data is used, a key assumption is that the matched control and treatment groups were similar pre-program and would experience the same time trend in the absence of the program. If pre-program data is available and a difference-in-difference estimator is used, this helps to net out the effects of any general time trend. However, this still relies on the assumption that the control and treatment groups are experiencing the same time trend and the factors affecting their trajectories are observable and considered in the matching exercise.

Ability to capture both intended and unintended impacts

Provided a range of well-being indicators are used, this method can detect both intended and unintended impacts.

Ability to capture both short-term and long-term impacts

Both short and long-term impacts can be detected depending on frequency of data collection and/or analysis and the indicators used.

How much stakeholder participation is involved? In particular, that of vulnerable or affected groups?

This method does not require stakeholder participation.

Potential scales of assessment (individual, household, community, national, or global level)

All levels of assessment are possible.

Level of differentiation possible (by gender, age, wealth, ethnic group, etc.)

All levels of differentiation are possible.

Feasibility issues (time, cost, complexity, skills)

This method can use data that is being collected for another purpose and it does not necessarily require pre-program data. Like all impact evaluation techniques, this method requires the involvement of those skilled in evaluation and econometrics.

Example(s) – who has used it, when and where?

In conservation policy, this method has been used more than other impact evaluation techniques. For example, it has been used to examine the poverty impacts of protected areas in Costa Rica, Thailand, and Uganda. CIFOR is currently combining matching with difference-in-differences to study the impacts of REDD+ projects in Brazil, Cameroon, Indonesia, Peru, Tanzania, and Vietnam.

How has the information generated by this methodology been used to influence policy or practice, or what potential does it have to do this?

This method has strong potential to produce credible evidence that can influence policy.

Main advantages and strengths

- Does not necessarily require pre-program data; and
- Can be used when national-level policies affect some areas more than others (e.g., decentralization reforms or logging bans).

Main disadvantages and weaknesses

- Requires that programs or policies are not implemented simultaneously across the country or that some areas are more affected than others;
- Impacts identified in pilot phase may differ from impacts once program is scaled up across country; and
- Requires large number of observations because only those that are matched will be used to estimate impacts.

Sources

Diaz, J.J. and Handa, S. (2006). An assessment of propensity score matching as a nonexperimental impact estimator: Evidence from Mexico's PROGRESA Program. *Journal of Human Resources* XLI(2): 319-345.

Pattanayak, S.K. (2009). Rough Guide to Impact Evaluation of Environmental and Development Programs. South Asian Network for Development and Environmental Economists (SANDEE) Working Paper No. 40-09. SANDEE: Kahtmandu, Nepal.

Khandker, S.R., Koolwal, G.B. and Samad, H.A. (2010). Propensity Score Matching, Chp. 4 in Handbook on Impact Evaluation: Quantitative Methods and Practices. The World Bank: Washington, DC, USA.

Khandker, S.R., Koolwal, G.B. and Samad, H.A. (2010). Double Difference, Chp. 5 in Handbook on Impact Evaluation: Quantitative Methods and Practices. The World Bank: Washington, DC, USA.

Examples:

Jalan, J. and Ravallion, M. (2003). Estimating the Benefit Incidence of an Antipoverty Program by Propensity-Score Matching. *Journal of Business and Economic Statistics* 21(1): 19-30.

- Andam, K.S., Ferraro, P.J., Sims, K.R.E., Healy, A. and Holland, M. (2010). Protected areas reduced poverty in Costa Rica and Thailand. *Proceedings of the National Academy of Sciences* 107(22): 9996-10001.
- Bandyopadhyaya, S. and Tembo, G. (2010). Household consumption and natural resource management around National Parks in Zambia. *Journal of Natural Resources Policy Research* 2(1): 39-55.
- Nelson A. and Chomitz, K.M. (2011). Effectiveness of Strict vs. Multiple Use Protected Areas in Reducing Tropical Forest Fires: A Global Analysis Using Matching Methods. *PLoS ONE* 6(8).
- Ferraro, P.J., Hanauer, M.M. and Sims, K.R.E. (2011). Conditions associated with protected area success in conservation and poverty reduction. *PNAS. Biodiversity Conservation and Poverty Traps Special Feature* doi:10.1073/pnas.1011529108

Examples of differences-and-differences with matching:

(CIFOR GCS-REDD):

<http://www.forestsclimatechange.org/global-comparative-study-on-redd/redd-project-sites.html>

Methods described in:

Sunderlin, W.D., Larson, A.M., Duchelle, A., Sills, E.O., Luttrell, C., Jagger, P., Pattanayak, S., Cronkleton, P. and Ekaputri A.D. (2010). Technical Guidelines for research on REDD+ project sites with survey instruments and code book. CIFOR: Bogor, Indonesia.

and

Jagger, P., Sills, E.O., Lawlor, K. and Sunderlin, W.D. (2010). A guide to learning about livelihood impacts of REDD+ projects. Occasional Paper 56. CIFOR: Bogor, Indonesia.

Chen, S., Mu, R. and Ravallion M. (2008). Are there lasting impacts of aid to poor areas? Evidence for Rural China. World Bank Policy Research Working Paper 4084.

Recent evaluations by the Millennium Challenge Corporation available at <http://www.mcc.gov>:

- Impact Evaluation for Community Services Water Activity in Ghana
- Impact Evaluation for Road Improvements in Nicaragua

van de Walle, D. and Cratty. (2005). Do donors get what they paid for? Micro evidence on the fungibility of development project aid. World Bank Policy Research Working Paper 3542.

Available at:

http://www.wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2005/03/21/000012009_20050321153125/Rendered/PDF/wps3542.pdf

Lokshin, M. and Yemstov, R. (2003). Evaluating the impact of infrastructure rehabilitation projects on household welfare in rural Georgia. World Bank Policy Research Working Paper 3155. Available at: http://www.wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2003/11/19/000012009_20031119114606/Rendered/PDF/WPS3155.pdf

3.2.16 CIFOR-GCS REDD Survey Instruments

What objectives and components can it address?

Objective 3(b): Collect own data

What is it and what is assessed? (costs, benefits, dimensions of well-being, etc.)

The Center for International Forest Research's Global Comparative Study on REDD (CIFOR GCS-REDD) is conducting impact evaluations of REDD+ projects in six countries. The survey instruments include both

household and community-level questionnaires and are publicly available for use by other researchers. There is also a woman's questionnaire that can be used to collect group-level data. The household-level surveys are collecting data on income, including information on both cash and subsistence 'income' from forests.

Ability to capture both intended and unintended impacts

By collecting information on final indicators of well-being, such as income, these surveys captures both intended and unintended impacts – including impacts on forest access and use.

Ability to capture both short-term and long-term impacts

Income measures are able to capture both short and long-term impacts.

How much stakeholder participation is involved? In particular, that of vulnerable or affected groups?

The community-level questionnaires can be used to guide focus group discussions.

Potential scales of assessment (individual, household, community, national, or global levels)

Assessment from the household scale and up is possible.

Level of differentiation possible (by gender, age, wealth, ethnic group, etc.)

All levels of differentiation are possible with these instruments.

Feasibility issues (time, cost, complexity, skills)

Conducting detailed household surveys in remote locations can involve considerable costs and time.

Example(s) – who has used it, when, and where?

The CIFOR GCS-REDD impact evaluations are being conducted in Brazil, Cameroon, Indonesia, Peru, Tanzania, and Vietnam.

How has the information generated by this methodology been used to influence policy or practice, or what potential does it have to do this?

Strong potential.

Main advantages and strengths

- Collecting detailed information on forest income, these instruments have the potential to capture valuable information on unintended impacts.

Main disadvantages and weaknesses

- Some survey questions may need to be modified to suit local contexts.

Sources:

Sunderlin, W.D., Larson, A.M., Duchelle, A., Sills, E.O., Luttrell, C., Jagger, P., Pattanayak, S., Cronkleton, P. and Ekaputri, A.D. (2010). Technical Guidelines for research on REDD+ project sites with survey instruments and code book. CIFOR: Bogor, Indonesia. Available at:

<http://www.cifor.org/online-library/browse/view-publication/publication/3286.html>

3.2.17 Living Standards and Measurement Surveys

What objectives and components can it address?

Objective 3(a): Use existing data

What is it and what is assessed? (costs, benefits, dimensions of well-being, etc.)

Living Standards and Measurement Surveys (LSMS) are household surveys conducted in numerous developing countries through a partnership between the World Bank and countries' statistical agencies. This data is nationally representative, publicly available and the survey instruments use similar questions across countries and over time. The surveys are designed to measure changes in poverty and economies over time. LSMS datasets contain information on income, consumption, assets, prices, and a wealth of other demographic and economic variables. In several African countries LSMS are currently being conducted that contain modules on agricultural production and tenure (LSMS Integrated Surveys on Agriculture).

How is it used and what are the mechanics of implementation?

Data collection intervals vary across countries.

Ability to capture both intended and unintended impacts

LSMS measure final indicators of well-being, such as consumption, income, and assets and captures both intended and unintended impacts. Some datasets track anthropometrics and self-assessed happiness and food security.

Ability to capture both short-term and long-term impacts

Consumption is typically used to measure poverty and this measure is able to detect short-term changes in well-being better than asset measures. Measures of food security, income, and anthropometry (such as children's weight for height) can also capture short-term changes.

How much stakeholder participation is involved? In particular, that of vulnerable or affected groups?

Populations participate by responding to household surveys.

Potential scales of assessment (individual, household, community, national, or global levels)

In general, the smallest scale of assessment possible is the household. Where datasets include anthropometrics or track individuals over time, individual scale assessment is possible.

Level of differentiation possible (by gender, age, wealth, ethnic group, etc.)

All levels of differentiation are generally possible. Gender differences can be assessed at the household level (i.e., male- vs. female-headed households).

Feasibility issues (time, cost, complexity, skills)

LSMS datasets are extremely large and detailed and require considerable time and skill to assemble and analyze.

Example(s) – who has used it, when, and where?

These datasets have been used by numerous researchers across the world to understand poverty dynamics and program impacts in numerous sectors.

How has the information generated by this methodology been used to influence policy or practice, or what potential does it have to do this?

LSMS datasets are of high quality and widely respected.

Main advantages and strengths

- Very detailed data on traditional poverty measures; and
- Exists for numerous countries and time periods.

Main disadvantages and weaknesses

- Do not contain information on household income and consumption of forest products, aside from fuelwood (and sometimes bushmeat);
- Most datasets do not contain information on tenure security; and
- Not available for all countries and time periods.

Sources:

<http://go.worldbank.org/IFS9WG7EO0>

3.2.18 Demographic and Health Surveys

What objectives and components can it address?

Objective 3(a): Use existing data

What is it and what is assessed? (costs, benefits, dimensions of well-being, etc.)

Funded by USAID, Demographic and Health Surveys (DHS) are implemented in over 90 countries to track changes in population, health, and nutrition. The standard surveys collect nationally representative data covering anywhere from 5,000 to 30,000 households. In addition to a wide range of health and demographic information, these datasets contain information on household wealth and assets. They also contain information on indicators of environmental health, such as water source and cooking fuel.

How is it used and what are the mechanics of implementation?

Surveys are typically repeated in countries every five years.

Ability to capture both intended and unintended impacts

By using final indicators of well-being such as health and assets these datasets may be able to detect both intended and unintended impacts.

Ability to capture both short-term and long-term impacts

These datasets do not contain information on household income and consumption and use assets to measure poverty. Asset measures of well-being are often better able to track long-term rather than short-term impacts, since households will often first decrease their consumption rather than sell off assets in response to negative economic shocks. The anthropometric measures of child health contained in the datasets, however, may be suitable for capturing acute and short-term changes in food security.

How much stakeholder participation is involved? In particular, that of vulnerable or affected groups?

Populations participate by responding to household surveys.

Potential scales of assessment (individual, household, community, national, or global level)

All scales of assessment are possible.

Level of differentiation possible (by gender, age, wealth, ethnic group, etc.)

All levels of differentiation are possible. DHS surveys include modules on women's decision-making power and employment.

Feasibility issues (time, cost, complexity, skills)

DHS datasets are extremely large and detailed and require considerable time and skill to assemble and analyze.

Example(s) – who has used it, when, and where?

These datasets have been used by numerous researchers across the world to understand health and the well-

being impacts of programs in numerous sectors.

How has the information generated by this methodology been used to influence policy or practice, or what potential does it have to do this?

DHS datasets are of high quality and widely respected.

Main advantages and strengths

- Data exists for numerous countries and is collected at regular intervals.

Main disadvantages and weaknesses

- Does not contain information on consumption and income or tenure.

Sources:

<http://www.measuredhs.com>

3.2.19 Basic Necessities Survey

What objectives and components can it address?

Objective 3(b): Collect own data

What is it and what is assessed? (costs, benefits, dimensions of well-being, etc.)

This method takes a democratic, subjective approach to defining poverty and well-being. It measures poverty and wealth by considering household's possession and/or access to assets, activities, or services that are locally defined as essential to well-being.

How is it used and what are the mechanics of implementation?

The Basic Necessities Survey (BNS) asks the local population, via expert interviews and focus groups, to develop a list of 20-30 basic necessities – assets, activities, or services that “everyone should have, and no one should go without.” Then, during household surveys, respondents are asked which item on the list is indeed a basic necessity and whether or not they have it. If an item is not ranked as essential by at least 50% of the population, it is dropped from the list. Households' well-being is then measured by noting whether or not they possess each 'basic necessity' and weighting this score by the percentage of respondents that identified it as essential.

Ability to capture both intended and unintended impacts

The index generated by this method generates a final indicator of well-being and thus captures both intended and unintended impacts.

Ability to capture both short-term and long-term impacts

Asset measures are generally better suited to track long-term rather than short-term changes in well-being. However, indices developed with this method may rank access to forests, other types of land use, and other services as key elements of well-being – in these cases, this method may be able to track short-term changes in well-being (though care is needed to ensure these details are not lost when responses are aggregated to an index score).

How much stakeholder participation is involved? In particular, that of vulnerable or affected groups?

This method involves a high level of stakeholder participation.

Potential scales of assessment (individual, household, community, national, or global level)

Assessment from the household to larger scales is possible. A modified version could track individual well-

being as well.

Level of differentiation possible (by gender, age, wealth, ethnic group, etc.)

All levels of differentiation are possible, though a modified version would need to be implemented to identify intra-household differences.

Feasibility issues (time, cost, complexity, skills)

The method is straightforward and does not require specialized skills to implement.

Example(s) – who has used it, when, and where?

The BNS was developed by Rick Davies in 1997, and it has been used by organizations in such countries as Vietnam, Uganda, and Mali. David Wilkie and the Wildlife Conservation Society have developed a ‘Modified BNS’ method and are currently using it to track how populations in Gabon, Guatemala, and Cambodia are being affected by protected areas.

How has the information generated by this methodology been used to influence policy or practice, or what potential does it have to do this?

This method has strong potential to aid organizations and communities track impacts.

Main advantages and strengths

- Uses a locally relevant definition of poverty/well-being.

Main disadvantages and weaknesses

- Respondents’ conceptions of basic necessities may change in response to the program – complicating attempts to attribute of changes in perceived well-being to the intervention.

Sources:

Rick Davies’ Basic Necessities Survey website:

<http://mande.co.uk/special-issues/the-basic-necessities-survey/>

Davies, R. (1997). Beyond Wealth Ranking: The Democratic Definition and Measurement of Poverty. Briefing Note, prepared for the ODI Workshop ‘Indicators of Poverty: Operational Significance,’ held 8 Oct, London. Available at: www.mande.co.uk/docs/democrat.htm

Pro Poor Centre and Davies, R. (2006). The 2006 Basic Necessities Survey (BNS) in Can Loc District, Ha Tinh Province, Vietnam. Available at: <http://mande.co.uk/special-issues/the-basic-necessities-survey/>

Wildlife Conservation Society (WCS). No Date. Assessing the impact of conservation and development on rural livelihoods: Using a modified Basic Necessities Survey (BNS) in experimental and control communities. Wildlife Conservation Society (WCS) Living Landscapes Program: Bronx, NY.

WCS. (2006). Household Surveys – a tool for conservation design, action and monitoring. Technical Manual 4. Wildlife Conservation Society (WCS) Living Landscapes Program: Bronx, NY. Available at: <http://wclivinglandscapes.com/landscapes/90119/bulletins/manuals.html>

3.2.20 Stages of Progress

What objectives and components can it address?

Objective 3(b): Collect own data

Objective 4(b): Participatory and non-experimental techniques

What is it and what is assessed? (costs, benefits, dimensions of well-being, etc.)

This method uses a collective, subjective approach to measuring well-being that employs community-defined definitions of poverty. It is used to understand both whether there are movements in and out of poverty over time and, if so, *why*.

How is it used and what are the mechanics of implementation?

Step one involves holding a community meeting to develop consensus about what constitutes ‘being poor’ in that community and what distinguishes the poor from non-poor – i.e., what are the stages that a household goes through as they move out of poverty. These are measured as attributes such as ‘has enough to eat’, ‘able to send children to school’, ‘able to buy a motorcycle’, etc. The second step is to ask the community to rank each households’ status and whether they have moved in or out of poverty over a given period of time. Households are then categorized by the group as i) remained poor, ii) escaped poverty, iii) became poor, or iv) remained not poor. Additional focus groups and individual interviews are then held to understand the reasons behind changes/no changes in household’s economic conditions.

How is attribution established? How well can it rule out rival explanations?

When Stages of Progress is conducted only in those communities affected by an intervention, attribution is established by relying on the local population’s subjective opinion regarding why they or their neighbors have moved in or out of poverty. It is only able to investigate the *causes of an effect* rather than *the effects of a cause/intervention*, which weakens its ability to rule out rival explanations and establish attribution. The method may also be used to test hypotheses/identify an intervention’s impacts by using it retrospectively to construct a pre-program scenario (as well as a post-program scenario). These scenarios could then be constructed in both control and intervention communities. Comparing changes in these communities could help establish attribution where pre-program data is not available. This method also helps attribution by explicitly investigating *why* a perceived change did or didn’t occur.

Key assumptions and/or degree to which it provides statistically valid, robust answers

If used to establish attribution, in addition to measuring well-being, a key assumption of this method is that local populations are able to accurately identify the sources of change in their economic conditions.

Ability to capture both intended and unintended impacts

In general, this method captures both intended and unintended impacts. However, impacts may need to be fairly severe to be identified using this method.

Ability to capture both short-term and long-term impacts

This method may be better suited to capturing long-term impacts.

How much stakeholder participation is involved? In particular, that of vulnerable or affected groups?

Stakeholder participation is generally high. However, this assumes that all feel free to speak up at community-level meetings – effective participation of marginalized individuals/households within households/communities may not be fully realized in this setting.

Potential scales of assessment (individual, household, community, national, or global level)

Assessment is possible from the household level on up.

Level of differentiation possible (by gender, age, wealth, ethnic group, etc.)

Differentiation is possible for those attributes that correspond to the household level.

Feasibility issues (time, cost, complexity, skills)

Implementation of the method does not require particular skills, but does require considerable time – though

less time than detailed income and consumption surveys and collecting baseline data.

Example(s) – who has used it, when and where?

The Stages of Progress method was developed by Dr. Anirudh Krishna at Duke University, who has used it with communities in India, Kenya, Peru, Uganda, and the United States.

How has the information generated by this methodology been used to influence policy or practice, or what potential does it have to do this?

Strong potential.

Main advantages and strengths

- Uses locally defined measures of poverty;
- Can be used to retrospectively construct pre-program conditions; and
- Can be used to simultaneously measure changes in well-being and investigate the causal mechanisms behind observed changes.

Main disadvantages and weaknesses

- May not be able to capture short-term or minor/less than severe changes in well-being; and
- Local populations may not be able to accurately identify the sources of perceived change in their well-being.

Sources

Stages of Progress: Disaggregating Poverty for Better Policy Impact Website:

<http://sanford.duke.edu/krishna/index.html>

Krishna, A. (2005). Stages of Progress Field Manual: A community-based methodology for defining and understanding poverty. Version 2.0. Available at: <http://sanford.duke.edu/krishna/SoP.pdf>

Krishna, A. (2004). Escaping Poverty and Becoming Poor: Who Gains, Who Loses, and Why? *World Development* 32(1).

3.2.21 Sustainable Livelihoods Framework

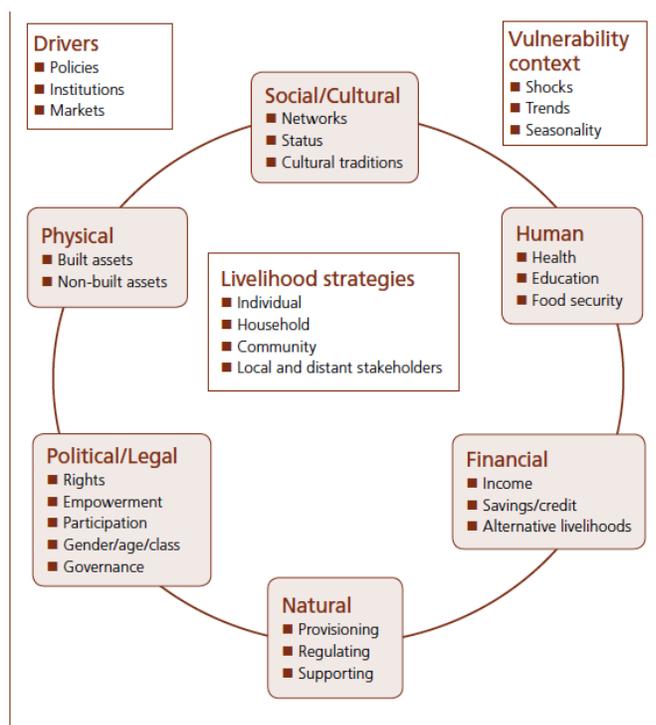
What objectives and components can it address?

Objective 3(b): Collect own data

What is it and what is assessed? (costs, benefits, dimensions of well-being, etc.)

The Sustainable Livelihoods Framework (SLF) measures household well-being by considering five types of capital: i) human capital (health, education); ii) social capital (networks, institutions); iii) physical capital (infrastructure, property); iv) financial capital (income, credit); and v) natural capital (forests, water). Schreckenberg et al (2010) recently developed a modified version of the SLF (see Figure 8), which adds political/legal capital (human rights, participation) and incorporates the Millennium Ecosystem Assessment's characterization of ecosystem services into the measurement of natural capital and social capital.

Figure 8: Modified Sustainable Livelihoods Framework



Source: Schreckenberg et al. (2010), p. 28

How is it used and what are the mechanics of implementation?

A variety of indicators can be used to measure each type of capital. The scores along each of the five dimensions are typically represented on a pentagon. However, it could be used to quantitatively measure household or individual level data by converting scores into an index measure of well-being or analyzing each capital separately.

Ability to capture both intended and unintended impacts

This framework captures both intended and unintended impacts.

Ability to capture both short-term and long-term impacts

This method captures both short and long-term impacts.

How much stakeholder participation is involved? In particular, that of vulnerable or affected groups?

Detailed information needs to be collected from affected populations to score livelihood conditions against the framework.

Potential scales of assessment (individual, household, community, national, or global level)

All scales of assessment are possible.

Level of differentiation possible (by gender, age, wealth, ethnic group, etc.)

All levels of differentiation are possible.

Feasibility issues (time, cost, complexity, skills)

Because it provides a very detailed and comprehensive picture of well-being, collecting data on all six capitals may be time-intensive.

Example(s) – who has used it, when and where?

The SLF was first developed in the 1990s and has undergone many iterations since. WWF's Landscape Outcomes Assessment Methodology is based on the SLF and the Social Carbon Standard uses a version of the SLF to measure well-being. The Social Carbon Standard appears to use the framework at the project-level, with an auditor/certifier using their judgment to score the project along six dimensions (natural, financial, human, social, carbon and biodiversity).

How has the information generated by this methodology been used to influence policy or practice, or what potential does it have to do this?

Potential to influence policy.

Main advantages and strengths

- Provides a comprehensive portrait of well-being;
- Seeks to capture impacts on often ignored dimensions of well-being, such as participation and ecosystems' cultural services; and
- Suited to programs affecting land use and ecosystem services.

Main disadvantages and weaknesses

- Requires a lot of information to score all six dimensions.

Sources:

Aldrich, M. and Sayer, J. (2007). In Practice - Landscape Outcomes Assessment Methodology 'LOAM'. WWF Forests for Life Programme. Available at:
<http://assets.panda.org/downloads/loaminpracticemay07.pdf>

Chambers, R., and Conway, G. (1992). Sustainable Rural Livelihoods: Practical concepts for the 21st century. Institute of Development Studies: Brighton, UK.

Carney, D. (Ed.) 1998. Sustainable Rural Livelihoods: What contribution can we make? DFID: London, UK.

Social Carbon Methodology website: www.socialcarbon.org

IFAD's (International Fund for Agricultural Development) Sustainable Livelihoods Approach website:
<http://www.ifad.org/sla/index.htm>

Sayer, J., Campbell, B., Petheram, L., Aldrich, M., Ruiz Perez, M., Endamana, D., Nzooch Dongmo, Z.L., Defo, L., Mariki, S., Doggart, N. and Burgess, N. (2007). Assessing environment and development outcomes in conservation landscapes. *Biodiversity Conservation* 16(9): 2677-2694.

Schreckenberg, K., Camargo, I., Withnall, K., Corrigan, C., Franks, P., Roe, D., and Scherl L.M. (2010). Social Assessment of Protected Areas: a review of rapid methodologies. A report for the Social Assessment of Protected Areas (SAPA) Initiative. IIED: London, UK.

APPENDIX I: ADDITIONAL TOOLS AND METHODS

This section provides reference information for many other useful tools, methods, and guidance not covered in the detailed methods summaries of Section 4.

Guidelines on Free, Prior, And Informed Consent

What objectives and components can it address?

Objective 2(b): Engage stakeholders

Sources:

UN-REDD. (2013). Guidelines on Free, Prior, and Informed Consent. UN-REDD. Available at: www.un-redd.org

Anderson, P. (2011). Free, Prior, and Informed Consent in REDD+: Principles and Approaches for Policy and Project Development. RECOFTC (The Center for People and Forests) and GIZ Sector Network: Bangkok, Thailand. Available at: www.recoftc.org

Stakeholder Participation in Program Design

What objectives and components can it address?

Objective 2(a): Identify stakeholders

Sources:

O'Hara, P. (2010). Enhancing stakeholder participation in national forest programmes: A training manual. FAO: Rome, Italy. Available at: <http://www.fao.org/docrep/014/i1858e/i1858e00.pdf>

General Political Economy Analysis

What objectives and components can it address?

Objective 2(c): Political economy analysis

Sources:

Haider, H. and Rao, S. (2010). Political and Social Analysis for Development Policy and Practice: An Overview of Five Approaches. International Development Department, University of Birmingham. Available at the Governance and Social Development Resource Centre: <http://www.gsdrc.org/go/topic-guides/political-economy-analysis/tools-for-political-economy-analysis>

World Bank. (2008). The Political Economy of Policy Reform: Issues and Implications for Policy Dialogue and Development Operations. World Bank: Washington, DC, USA. Available at: http://siteresources.worldbank.org/EXTSOCIALDEV/Resources/The_Political_Economy_of_Policy_Reform_Issues_and_Implications_for_Policy_Dialogue_and_Development_Operations.pdf

Poole, A. (2011). Political Economy Assessments at Sector and Project Levels. Dealing With Governance and Corruption Risks in Project Lending: How-To Notes. Political Economy Community of Practice and World Bank. Available at: <http://politiceconomy>

DFID. (2009). Political Economy Analysis How To Note. DFID Practice Paper. Available at: <http://www.odi.org.uk/publications/4797-political-economy>

Transaction Cost Analysis

What objectives and components can it address?

Objective 2(c): Political economy analysis

Sources:

World Bank. (2007). “Macro-Level Analysis: Understanding the Country and Reform Context” (Chp. 7) in Tools for Institutional, Political and Social Analysis of Policy Reform. A Sourcebook for Development Practitioners. The World Bank: Washington, DC, USA. p. 146-149.

Example:

Verardo, B. and Ezemenari, K. (2003). Poverty and Social Impact Analysis: Chad Cotton Sector Reform. World Bank: Washington, DC, USA.

Power Mapping (Power Analysis)

What objectives and components can it address?

Objective 2(c): Political economy analysis

Sources:

Bjuremalm, H. (2006). Power Analysis – Experiences and Challenges. SIDA Concept Note. Available at: www.sida.se/publications

Haider, H. and Rao, (2010). Political and Social Analysis for Development Policy and Practice: An Overview of Five Approaches. Governance and Social Development Resource Centre. Available at: <http://www.gsdr.org/docs/open/EIRS10.pdf>

Examples:

Hyden, G. (2005). Why Do Things Happen the Way They Do? A Power Analysis of Tanzania. SIDA.

Network Analysis

What objectives and components can it address?

Objective 2(c): Political economy analysis

Sources:

Davies, R. (2003). Network Perspectives in the Evaluation of Development Interventions: More than a Metaphor. Available at: <http://mande.co.uk/docs/nape.pdf>

Net-Map:

Schiffer, E. and Waalem D. (2008). Tracing power and influence in networks: Net-Map as a tool for research

and strategic network planning. IFPRI discussion papers 772, International Food Policy Research Institute (IFPRI).

Net-Map software available at: <http://visone.info>

Example:

World Bank. (2010). Enabling Reforms: A Stakeholder-Based Analysis of the Political Economy of Tanzania's Charcoal Sector and the Poverty and Social Impacts of Proposed Reforms. World Bank: Washington, DC, USA.

Diversity and Livelihoods Assessment

What objectives and components can it address?

Objective 2(d): Prediction based on stakeholders' views

Objective 4(b): Participatory and non-experimental techniques

Sources:

Chars Livelihoods Programme Design, Diversity and Livelihoods Assessment: Fieldwork Guide. 2002. Chars Livelihoods Programme. DRAFT. Available at: http://siteresources.worldbank.org/INTTOPPSISOU/Resources/Sec4_Draft_DVLA_field_guide.pdf

UN-REDD Social and Environmental Principles and Criteria Benefits and Risks Tool

What objectives and components can it address?

Objective 2(d): Prediction based on stakeholders' views

Sources:

Available at: www.un-redd.org

Livelihood Security Assessment

What objectives and components can it address?

Objective 2(a): Identify stakeholders

Objective 2(d): Prediction based on stakeholders' views

Objective 3(b): Collect own data

Sources:

CARE. (2002). Household livelihood security assessments: A toolkit for practitioners. Available at: <http://www.chs.ubc.ca/archives/?q=node/669>

Expert Interviews

What objectives and components can it address?

Objective 2(d): Prediction based on stakeholders' views

Sources:

Bernard, R. (2006). *Research Methods in Anthropology: Qualitative and Quantitative Approaches*. AltaMira Press: Oxford. (Chps. 9-11)

Participatory Action Research

What objectives and components can it address?

Objective 2(d): Prediction based on stakeholders' views

Objective 4(b): Participatory and non-experimental techniques

Sources:

Chevalier, J.M. and Buckles, D.J. (2013). *Participatory Action Research: Theory and Methods for Engaged Inquiry*. Routledge.

German, L.A., Tiani, A.M., Daoudi, A., Maravanyika, T.M., Chuma, E., Jum, C., Nemarundwe, N., Ontita, E., and Yitamben, G. (2012). *The Application of Participatory Action Research to Climate Change Adaptation in Africa: A Reference Guide*. IDRC and CIFOR. Available at: <http://idl-bnc.idrc.ca/dspace/bitstream/10625/48890/1/IDL-48890.pdf>

Examples:

Buckles, D. and Khedkar, R. (2013). *Tribal Land Rights and Research-in-Action*. Cambridge University Press.

Compliance Advisor Ombudsman. (2008). *Participatory Water Monitoring: A Guide for Preventing and Managing Conflict*. Compliance Advisor Ombudsman (CAO), The World Bank: Washington, DC, USA. Available at: <http://www.cao-ombudsman.org/howwework/advisor/documents/watermoneng.pdf>

Participatory Reference Scenarios for Forest Carbon Projects

What objectives and components can it address?

Objective 2(d): Prediction based on stakeholders' views

Sources:

Potvin, C., Tschakert, P., Lebel, F., Kirby, K., Barrios, H., Bocariza, J., Caisamo, J., Caisamo, L., Cansari, C., Casama, J., Casama, M., Chamorra, L., Dumasa, N., Goldenberg, S., Guainora, V., Hayes, P., Moore, T. and Ruiz, J. (2007). A participatory approach to the establishment of a baseline scenario for a reforestation Clean Development Mechanism project. *Mitigation, Adaptation Strategy and Global Change* 12: 1341-1362.

Country-Specific Datasets (Including Household Budget Surveys)

What objectives and components can it address?

Objective 3(a): Use existing data

Sources:

A vast amount of household-level datasets ("microdata") is available at the World Bank Group's Microdata Library, which is searchable by country and year: <http://microdata.worldbank.org/index.php/home>

The ‘BAG’ – Basic Assessment for Human Well-Being

What objectives and components can it address?

Objective 3(b): Collect own data

Sources:

The following sources are available at: <http://www.cifor.cgiar.org/acm/methods/toolbox.html>:

Colfer, C.J.P., Brocklesby, M.A., Diaw, C., Etuge, P., Günter, M., Harwell, E., McDougall, C., Porro, N.M., Porro, R., Prabhu, R., Salim, A., Sardjono, M.A., Tchikangwa, B., Tiani, A.M., Wadley, R.L., Woelfel, J. and Wollenberg, E. (1999). The BAG (Basic Assessment Guide for Human Well-Being). Criteria and Indicators Toolkit No. 5. CIFOR: Jakarta, Indonesia.

Colfer, C.J.P., Brocklesby, M.A., Diaw, C., Etuge, P., Günter, M., Harwell, E., McDougall, C., Porro, N.M., Porro, R., Prabhu, R., Salim, A., Sardjono, M.A., Tchikangwa, B., Tiani, A.M., Wadley, R.L., Woelfel, J. and Wollenberg, E. (1999). The Grab Bag: Supplementary Methods for Assessing Human Well-Being. Criteria and Indicators Toolkit No. 6. CIFOR: Jakarta, Indonesia.

Salim, A. and Colfer, C.J.P. with McDougall, C. (1999). The Scoring and Analysis Guide for Assessing Human Well-Being. Criteria and Indicators Toolkit No. 7. CIFOR: Jakarta, Indonesia.

Women’s Empowerment in Agriculture Index

What objectives and components can it address?

Objective 3(b): Collect own data

Sources:

The following tools and case studies are available at:

<http://feedthefuture.gov/article/release-womens-empowerment-agriculture-index>:

USAID Feed the Future, International Food Policy Research Institute (IFPRI), and Oxford Poverty and Human Development Initiative (OPHI). Women’s Empowerment in Agriculture Index Brochure.

Survey Instruments

Examples:

Bangladesh Case Study, Uganda Case Study, Guatemala Case Study

Wildlife Conservation Society Guidance on Household Surveys

What objectives and components can it address?

Objective 3(b): Collect own data

Sources:

Wildlife Conservation Society. (2006). Household Surveys – a tool for conservation design, action and monitoring. Technical Manual 4. Wildlife Conservation Society (WCS) Living Landscapes Program: Bronx, NY. Available at: <http://wclivinglandscapes.com/landscapes/90119/bulletins/manuals.html>

Nested Spheres of Poverty

What objectives and components can it address?

Objective 3(b): Collect own data

Sources:

Gonner, C., Haug, M., Cahyat, A., Wollenberg, E., de Jong, W., Limberg, G., Cronkleton, P., Moeliono, M. and Becker M. (No Date) Capturing Nested Spheres of Poverty: A Model for Multidimensional Poverty Analysis and Monitoring. CIFOR Occasional Paper No. 46. CIFOR: Bogor, Indonesia.

CIFOR Poverty and Environment Network Survey Instruments

What objectives and components can it address?

Objective 3(b): Collect own data

Sources:

Available at: <http://www.cifor.org/pen/>

Consultative Impact Monitoring of Policy – CoIMPact

What objectives and components can it address?

Objective 4(b): Participatory and non-experimental techniques

Sources:

MethodFinder. (No Date) Practitioner's Guide: Consultative Impact Monitoring of Policy (CoIMPact). GTZ, Government of Malawi, Government of Kenya. Available at: <http://www.methodfinder.net/method41.html>

Case Study Approach

What objectives/components can it address?

Objective 4(b): Participatory and non-experimental techniques

Example:

International Fund for Agricultural Development (IFAD). (2009). Evaluation Manual: Methodology and Processes. IFAD Office of Evaluation. IFAD) Rome, Italy. Available at: http://www.ifad.org/evaluation/process_methodology/index.htm

APPENDIX II: REDD+ SOCIAL STANDARDS AND GUIDELINES

This section provides reference information for the major national-level REDD+ initiatives' social guidelines.

REDD+ Social and Environmental Standards (REDD+ SES)

REDD+ Social and Environmental Standards (Version 2, Sept 2012).

Available at www.redd-standards.org

Guidelines for the use of REDD+ Social and Environmental Standards at country level (Version 2, Nov 2012). Available at www.redd-standards.org

Strategic Environment and Social Assessment (SESA) for World Bank Forest Carbon Partnership Facility (FCPF)

The following sources are available at: www.forestcarbonpartnership.org/fcp/:

FCPF. (2010). Incorporating Environmental and Social Considerations into the Process of Getting Ready for REDD+. 23 June.

FCPF. (2011). Common Approach to Environmental and Social Safeguards for Multiple Delivery Partners: Frequently Asked Questions.

FCPF and UN-REDD. (2010). Guidelines on Stakeholder Engagement in REDD+ Readiness With a Focus on the Participation of Indigenous Peoples and Other Forest-Dependent Communities. Nov 17 (DRAFT).

Further reading:

Independent Evaluation Group (IEG). (2011). "The Forest Carbon Partnership Facility." *Global Program Review* Vol. 6, Issue 3.

World Bank. Strategic Environmental Assessment Toolkit. Available at: <http://go.worldbank.org/XIVZ1WF880>

Loayza, F. (Ed.). (2012). Strategic Environmental Assessment in the World Bank: Learning from Recent Experiences and Challenges. World Bank: Washington, D.C. Available at: <http://go.worldbank.org/YJXJNFECL0>

OECD. (2012). Strategic Environmental Assessment in Development Practice: A Review of Recent Experience. Available at: www.oecd-ilibrary.org

APPENDIX III: THEORY-BASED AND MIXED-METHODS IMPACT EVALUATION – SOURCES

This section provides reference information for important guidance on how to identify impacts using theory-based and mixed-methods approaches.

White, H. (No Date). Theory-based Impact Evaluation: Principles and Practice. 3ie Working Paper No.3. Available at: <http://www.3ieimpact.org/evaluation/working-papers/working-paper-3/>

Rogers, P.J. (2009). Matching impact evaluation design to the nature of the intervention and the purpose of the evaluation. *Journal of Development Effectiveness* 1(3): 217-226.

Rao, V. and Woolcock, M. (2003). Integrating Qualitative and Quantitative Approaches in Program Evaluation, Chp. 8 in *The impact of economic policies on poverty and income distribution: evaluation techniques and tools*, Bourguignon, F. and L.A. Pereira da Silva (Eds.) The World Bank: Washington, DC, USA.

Bamberger, M., Rao, V. and Woolcock, M. (2010). Using Mixed Methods in Monitoring and Evaluation: Experiences from International Development. World Bank Policy Research Working Paper No. 5245. Available at: <http://ssrn.com.libproxy.lib.unc.edu/abstract=1578113>

Bamberger, M., Rugh, J., Church, M. and Fort, L. (2004). Shoestring Evaluation: Designing Impact Evaluations under Budget, Time and Data Constraints. *American Journal of Evaluation* 25(1): 5-37.

Leeuw, F. and Vaessen, J. (2009). Impact Evaluations and Development: NONIE Guidance on Impact Evaluation. The Network of Networks on Impact Evaluation (NONIE) for the Independent Evaluation Group, World Bank Group: Washington, DC, USA. Available at: http://siteresources.worldbank.org/EXTOED/Resources/nonie_guidance.pdf

Weiss, C. (2001). Theory-based evaluation: theories of change for poverty reduction programs. In *Evaluation and poverty reduction*, Feinstein, O. and Piccioto, R. (Eds.). Transaction: New Brunswick, NJ, USA.

Examples:

Handa, S., Halpern, C., Pettifor, A., and Thirumurthy, H. (2012). Impact of the Kenya Cash Transfer for Orphans and Vulnerable Children Program on HIV Risk Behavior. Cash Transfer Project presentation. Available at: <http://www.cpc.unc.edu/projects/transfer/countries/kenya>

Olken, B. (2006). Corruption and the costs of redistribution: Micro evidence from Indonesia. *Journal of Public Economics* 90: 853-870.

White, H. (2009). Achieving high-quality impact evaluation design through mixed methods: the case of infrastructure. *Journal of Development Effectiveness* 3(1): 131-144.

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