LIVELIHOOD ASSET STATUS TRACKING: AN IMPACT MONITORING TOOL?

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Abstract: This paper raises the issue of what kind of monitoring system can serve the learning needs of livelihood improvement projects which follow a process approach. It is concerned, in particular, with monitoring not only achievement of planned project outputs, but also with higher level project impacts normally needed to achieve project purpose or goal. A simple and rapid method to track the livelihood asset status at the household level is introduced. It is based on local perceptions and converts qualitative judgement to quantitative analytical data. Some initial field results are discussed along with problems, possible solutions, points for best practice and further research possibilities. Copyright © 2002 John Wiley & Sons, Ltd.

1 INTRODUCTION

Monitoring ‘process’ projects presents serious challenges to conventional monitoring and evaluation. In particular, for monitoring to serve ‘process’ projects it must internally monitor emerging impact to enhance the effectiveness of project implementation, rather than just externally assessing sub-optimum impact to inform policy evolution.

This paper introduces a Livelihood Asset Status Tracking (LAST) method for rapidly assessing emerging impacts in livelihood improvement projects that follow a process approach. It proposes that the method could form the impact monitoring component of a formative (process) evaluation system in a process project. The method converts qualitative assessments of household capital assets to quantitative scores that can be aggregated for different levels of analysis within an area and over time. The paper reports early experience of using the method in monitoring a number of projects in India. The approach has also proved useful in research in East and Southern Africa (Howlett et al., 2000). The paper also suggests that further research is necessary to understand the behaviour and reliability of data from an approach that trades off in-depth analysis against speed of assessment for managerial relevance.

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1.1 Learning Needs of Livelihoods Process Projects

A process approach to a project is commonly associated with participatory approaches but is more than that (Bond and Hulme, 1999). The concept also includes high levels of managerial flexibility and longer intervention periods (Rondinelli, 1993); it includes involvement of local institutions and ‘capacity building’, local autonomy of action and the fostering of innovation within organizational cultures of ‘new professionalism’ (Chambers, 1993). Finally, and above all for our purposes, a process approach depends on a capacity for continual learning so that problems can be identified and efficiently dealt with on an expanding scale of operation (Korten, 1980). The LAST method has been developed as part of an integrated Process (Formative) Evaluation Management Information System to support the ongoing learning within the UK Department for International Development (DFID) supported (Western and Eastern) Indian Rainfed Farming Projects (Bond and Mukherjee, 2000; Bond and Kumar, 2001; GVT/DFID, 2000).

Within such projects there is an increasingly high demand, particularly from donors, for ‘impact monitoring’. Conventional assessment of impacts relies on ex-post evaluation as only some time after outputs are delivered (in the implementation phase) do impacts usually emerge. This raises a number of important organizational difficulties for the concept of ‘impact monitoring’. Firstly, although outputs (by definition) are the final responsibility of implementation management, where a project follows a process approach some planning (and therefore decisions on project purpose) becomes conflated with implementation, and therefore falls within project management’s responsibility. Secondly, particularly where many small, diverse interventions are made within a scattered population over a long period (e.g. livelihood improvement projects), it may be possible to detect changes in impact during the implementation period. This also then becomes a project management responsibility as they may have opportunity to respond to unexpected failure and success within the lifetime of the project.

Thirdly, the attribution of impact is notoriously difficult to establish, requiring very thorough and careful assessment. This is not the usual function of monitoring, which is concerned with timely detection of changes within the area of project management responsibility.

A solution to these difficulties, illustrated below, may be to combine these monitoring and evaluative functions in a cost-effective way. This would require monitoring for any changes in livelihoods within the areas of intervention and selectively investigating unexpected changes, or those of interest to management, with ‘ad hoc learning exercises’ (ALEX1) in order to understand causes and effects of the changes (Figure 1). A variety of both formal and participatory methods exist for the ALEX part (e.g. Nichols, 1991), the remaining problem is to find a suitable method for rapid identification of change in livelihoods over wide areas which is logistically feasible and managerially relevant.

Such a system was developed between April and September 2000 by the Indian Farm Forestry Development Co-operative (IFFDC) in Pratapgarh, Rajasthan, and has been used

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1ALEX is defined as; ‘Studies and reviews which are initiated by management for a variety of process support purposes. Such purposes include investigation of unexpected results from monitoring; lessons from formal assessments of failure and success; distilling broad lessons from experience for new phases of interventions; impact assessment studies, process monitoring etc. They are concise exercises carried out by small mixed teams of internal and external personnel led by an experienced reviewer employing mixed methods. The findings are rapidly communicated to secondary stakeholders through brief reports, presentations and workshops’ (Bond and Mukherjee, 2000).
for retrospective impact assessment by the Gramin Vikas Trust of the Eastern India Rainfed Farming Project in Ranchi, Jharkand.

2 THE LAST METHOD

2.1 Origins

There are a number of sources and antecedents for this method, both conceptually and practically.

1. Wealth Ranking, a Participatory Rural Appraisal (PRA) technique that encourages rural people to classify households in terms of relative wealth or well-being according to their own criteria and judgement. This contributes the use of local perceptions and indicators (Mukherjee, 1993).

2. Quality of Life Indices attempt to identify a range of locally meaningful descriptions of household situation from worst known to best known, scaling and scoring these descriptions. In effect this is an extension of wealth ranking converting qualitative judgement to quantitative scores (Bond with Hulme, 1992).

3. The Sustainable Livelihoods (SL) framework (DFID, 2000), provides the analytical basis for the asset endowment of the rural poor, in form of the livelihood platform of five capitals (usually natural, physical, human, financial and Social).

4. Sustainable development concept, goes beyond the economic perspective of development (production of goods and services for general utility), to incorporate both the social perspective (access, inclusion and intra-generational equity) and the environmental perspective (conservation of natural capital\(^2\) and inter-generational equity).

The above elements were initially combined in the context of a research project into the effects of policy on natural resource management and poverty reduction in Uganda and South Africa (Howlett et al., 2000). In this initial application, the approach was used to

\(^2\)Although inter-generational equity usually concerns the conservation of natural capital; conservation of all five capitals is just as necessary to future generations.
generate local criteria of farming success from meetings with farmers and other primary stakeholders in framing systems. It has since been developed as an impact monitoring tool for livelihood development process projects.

2.2 Overview

The LAST method is defined as:

A rapid impact monitoring system designed along with primary stakeholders and based on the Sustainable Rural Livelihoods conceptual framework. It is intended to track the ongoing dynamics of five capital assets essential to household livelihoods as a proxy for impact (Bond and Mukherjee, 2000).

Within the Sustainable Livelihoods framework, the method’s starting point is to assess the assets to which rural people have access in order to devise their livelihood strategies. This is also the end point of the model as those strategies impact not only on their livelihoods in terms of outcomes (a more traditional source of indicators) but also back on the assets themselves. Therefore, the changing asset base, measured for the five types of capital to which a household has access, can be a useful proxy for impact on livelihoods. The elements of participation and rapidity are also important. If indicators are derived in a participatory way, they will be locally relevant within relatively homogeneous areas (in terms of ethnicity and agro-climatic criteria). Also, if the system is to be used over many households with a reasonable frequency the method needs to be quick and simple enough for rapid enumeration with reasonable accuracy. For managerial purposes in a process project, the tracking of asset status will give useful measures of change towards project purpose and will contribute to longer-term evaluations.

The main vehicles for evolving LAST are participatory workshops conducted with the project team and project beneficiaries. The process involves small group discussions, brainstorming and clustering of criteria, field testing and validation. The main objective is to evolve ‘word pictures’, for constructing verbal descriptions of asset status. Such word pictures depict ‘worst off’ and ‘better off’ households and also intermediate positions. These form the basis for the initial development of a LAST assessment sheet, which can then be used for rapid, repeat panel household enumeration.

2.3 Process of LAST Development

At least two workshops are required, one for developing the system and field testing and the other for refining or fine tuning it following the field tests. Both workshops are based on active participation of project team and beneficiaries where group-work, fieldwork and shared learning are encouraged.

The first workshop starts by introducing the SL conceptual framework and its different components to key informants at local level and the project team. SL analytical categories usually include five types of capital assets for livelihoods and the processes, structures, strategies, outcome and vulnerability context. Once the livelihood framework has been explained and discussed, small groups ‘brainstorm’ to identify appropriate local words and descriptions which they present back to the plenary in order to generate a checklist of local people’s livelihood activities and resources associated with them.
Subsequently, three aspects of sustainable development (productivity, equity and sustainability) are similarly introduced and ‘indigenised’ with the help of local words. Small group ‘brainstorming’ sessions then consider the five types of capital assets for livelihoods in terms of ‘productivity’, ‘equity’ and ‘sustainability’ and identify relevant local criteria for each of these aspects (see matrix in Figure 2). This serves not only as a ‘warm-up’ to the concepts employed but also provides a range of criteria from which to generate practical local indicators with which to construct ‘word pictures’ in the LAST assessment sheet.

Based on the criteria for each capital in the matrix above, a range of ‘word pictures’ is constructed for the Livelihood Asset Status Matrix. Criteria which appear to be locally assessable in practical and meaningful ways are combined into a sequence of word pictures representing a number of realistic stages of asset status for each of the five types of capital available to a household, from worst known livelihood situation to best within the area. These may be concise descriptions or a collection of indicators typical of each stage. The number of stages is not important (typically 3–6) but their reality and recognizability is. The descriptions will have to maintain a balance between aspects related to production, equity and sustainability to avoid distortion of the development perspective used in the matrix. For example, a high score under natural capital for fertile farmland (productivity) would be misleading if that land is on a steep slope and will soon erode (sustainability).

A hypothetical illustration, which was used during the initial workshop held at IFFDC project is given in Table 1 below. The illustration only covers two word pictures of worst off and better off households.

<table>
<thead>
<tr>
<th>Worst Picture</th>
<th>Best Picture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Little or no land; one or two month’s food available from own land; quality of land is poor, having red soil with low fertility; land is located on a slope in such a position that rain water washes away the seed sown and the top soil and hence reduces its fertility; use of traditional seeds; some have given away land as collateral; no source of irrigation; no land for growing fodder for livestock; owns one or two livestock; no milk produced; low access to forest produce;</td>
<td>More of black fertile soil; more land; grows one’s own fodder on one’s own land; fertile land with more moisture retention power; more produce from land; grows and sells cash crops; grows vegetables; grows high yielding variety seeds; lends seeds to others; irrigation facilities available round the year; land is near the forest; access to forest produce; some have government permit to grow opium; has many fruit trees; availability of home grown food throughout the year; many livestock, high returns from livestock;</td>
</tr>
</tbody>
</table>

Note: Only two ‘word pictures’ have been described here.
When such word pictures are based on the worldview of local communities, they are practical and realistic and also help in community ownership of the method. Word pictures evolved separately by women and men groups help in focusing on gender issues.

Once the LAST assessment sheet is constructed it can be used to generate quantitative data for asset status of individual households. This is achieved by allocating ‘scores’ to word pictures usually by establishing range limits of zero for the worst and 100 for the best (see below). Tests on the scoring with a newly developed LAST sheet can be conducted under field conditions using three enumerators present simultaneously during assessment but scoring independently, with one asking the questions. The results of the three independent LAST enumerations are then reflected upon by the enumerators and also reviewed by peer group/s comparing scores to gauge reliability of the method in terms of precision.

3 USE OF LAST

In use, the LAST assessment sheet is compared with the reality of the particular household and a rapid assessment is made to find which description or collection of indicators fits closest. Individual questions do not have to be asked for every indicator, rather judgement is used on the relevant part of the scale combining direct observation and semi-structured questioning till the enumerator is confident to identify the closest ‘stage’ for that household. This can be scored proportionally against a centile scale, or just scored for centres or edges of cells where a household is judged to fall between two stages. Scores for the five capitals are made separately but the five can be combined (straight or weighted) to give a LAST index for the household.

This quantitative data can then be tracked over time at different levels of aggregation in tabular or graphical format. Ideally a high-level aggregation of the LAST index, for say the project, would be plotted alongside the plots for the five aggregate capitals. This would be in turn plotted at key lower scales of aggregation, perhaps by managerial zones and then by village, alternatively by original socio-economic grouping of respondents. At each lower scale of aggregation an ‘amplification’ (and disaggregation) of the project aggregate trend would be seen and changes of interest to management could be ‘isolated’ for further study.

LAST enumeration for a single household will typically take around 20 minutes for all five capitals, although initially this might be 30 minutes for inexperienced enumerators. The LAST sheet is used only as a checklist and for recording the closest situation to the household and so need not be intrusive on the interview. Enumeration can be done on a ‘repeat panel’ sample which can be initially selected randomly and stratified by wealth ranking (or any existing socio-economic data) to ensure a broad spread of initial condition. Detectable changes are unlikely to occur in the short-term but a reasonably frequent period of assessment is needed to inform management. The ideal assessment frequency is likely to be between three months and a year.

3.1 Some Technical Points

- **Scale range:** the avoidance of absolute values by scaling from 0 per cent worst to 100 per cent best is an already established technique in, for example, the UNDP Human Development Index (UNDP, 1990). If the centile scale is ‘pegged’ to the current ‘worst’ and ‘best’ situations, how relevant will this scale be at the end of the project? It is unlikely that the top end will need adjustment in poverty alleviation projects.
particularly in areas of existing inequality as the situation of the few acknowledged ‘well-off’ is unlikely to be improved. Rather, there would probably be a change in the skew of the scores from the lower to the higher part of the range of scores, without requiring a re-definition of the top category.

• **Scoring:** this is partly an issue of matching score intervals to the precision of judgement possible with this method, but also one of enumerators’ preference.

Solutions seem to be:

(i) Marking the nearest cell (steps of about 10–15 per cent, probably too coarse).
(ii) Marking the nearest cell or edge between cells (steps of about 5–7 per cent a good fit with precision tests).
(iii) Marking the best judgement against a centile scale along the top of the matrix (steps about 5 per cent, good fit with precision test and not tied to central/edge values of cells).

• **Range of word picture:** word pictures need not be discrete and can be over-lapping to some extent. This is because they are qualitative, composite pictures graded in degrees.

## 4 RESULTS

In the IFFDC, the LAST system was developed during 4 days of workshops and field testing for precision. There followed a more substantial field trial at a later date and a further one day workshop to reflect and refine the method. Project staff are comfortable and confident with the method and consider that project Jankars will be able to carry out future periodic assessments after the experience of working jointly with project Community Organisers. The project has carried out several enumerations and doubled the sample from 100 households to 200. The Eastern India Rainfed Farming Project has done a current enumeration of 186 households including control, with retrospective enumerations of five years previously. There follows an edited translation from one of the five capitals used in the IFFDC Pratapgarh LAST matrix:

### 4.1 Key Points for Best Practice

(i) Ensure the project is of the kind where impact is likely to emerge during the period of implementation; has objectives focused on livelihood improvement; is of a process nature where management can respond to unexpected changes; has a learning oriented culture; has a capacity to carry out ALEX; and is able to elicit the participation of beneficiaries in LAST development. Otherwise this is the wrong method.

(ii) LAST systems need to be developed separately for ‘areas’ of reasonable homogeneity in terms of cultural, economic and agro-ecological practice.

(iii) The SRL framework should be thoroughly understood by all staff and participating beneficiaries before the LAST is developed.

(iv) A LAST system development workshop should include a balance of beneficiaries, field-level staff and technical specialists with good gender balance. Special efforts are required to hear the voices of beneficiaries and women, for example, by requesting beneficiary representatives and women to present group findings in plenary sessions.
Bringing local words into the conceptual framework of sustainable rural livelihoods helps in localising LAST.

Field test a newly developed LAST sheet with precision test and discuss the results.

Conduct enumerations in either neutral seasons or both seasons of plenty and scarcity to eliminate any possible seasonal variation.

Have clearly established norms for enumeration backed by training and periodic ‘calibration’ tests.

Validate a sample of the panel surveyed at inception and perhaps during mid-term and ex-post evaluations of the project with an in-depth household poverty assessment.

Plot the results over time as graphs at different scales of aggregation and disaggregated by capitals for effective analysis.

4.2 Problems and Possible Solutions

Perhaps the most fundamental problem would be the possible scenario whereby the aggregate positive change in project-wide livelihood scores for a ‘successful project’, fell within the margin of assessment error. It appears that precision ranges from 5–10 per cent with the lower value being more typical of a good LAST assessment sheet and trained figures.
enumerators. The behaviour of LAST scores over time are as yet unknown giving potential problems in interpretation until a database of experience is built-up.

While precision can be easily assessed, accuracy is a different issue. A plethora of criteria can emerge for constructing LAST and this can lead to difficulties in prioritizing them and maintaining clarity of word pictures. However, a combination of the analytical framework of SRL with a variety of participatory local indicators forms a powerful basis for investigation. A further degree of confidence might be gained by following a LAST assessment with a smaller sub-sample of in-depth poverty studies by experienced researchers. While results of the two assessments would not be directly comparable, a high degree of concurrence might be expected. The detail of the poverty study might also illuminate gaps in the LAST method.

Much poverty is of an intra-household nature and so the inter-household LAST method will possibly miss out important information. This has already been observed by the author during field testing where visible deficits in the human capital of children (malnourishment, chronic sickness and non-attendance at school) were not reflected in some household scores where household aggregate human capital were adequate. The complex dynamics of households and logistical limitations of monitoring at sub-household level suggest the method is unsuitable for extension below the household. However, as indicated above, LAST used in combination with some in-depth studies may suggest ways of adapting the indicators to more fully reflect such intra-household issues. IFFDC attempted this with a revision to strengthen gender equity within the indicators used. Gender issues can be integrated into the framework with ease.

Different responses may be obtained from different members of the same household since perspectives within households tend to differ. It is therefore not always easy to arrive at a single picture of livelihood asset status. In such cases more probing is required for cross-checking and validating responses to arrive at a reliable picture.

The occurrence of some disparity of scores during precision tests seemed to have several causes. These included lack of clarity in norms of operation; being misled by only one or two indicators (e.g. impressive house); recording scores from memory the following day. Ways round these difficulties include training based on well-considered norms and periodic ‘calibration’ exercises similar to the precision test, followed by discussion of the difference in results.

In common with other approaches to fieldwork data collection, LAST suffers from a number of potential sources of bias. There is the possibility of some seasonal bias in results although the nature of indicators used in the ‘word pictures’ should be of a more resilient nature. This can be detected and compensated by timing enumeration to match seasonal peaks and troughs. Alternatively, an annual enumeration could be timed during a ‘neutral’ season. When people become busy for example in the harvesting season they have little time to respond to questions put by enumerators. They may also respond in a hurry and miss vital points. Hence, it is important to avoid busy seasons for enumeration. Informants may be reluctant to share private information on land and debt and this can pose a constraint to assessing asset status. This may have to do with many factors such as apprehensions regarding income tax authority, debt repayment etc. Such questions need to be handled with care. However, repeat assessments with the same panel will build confidence in the system.

In a comparative framework, enumeration of those households within and without the Project is important but often difficult since information from those not covered by the project may be withheld. In such cases mutual rapport building by the enumerator and
establishing a relationship based on mutual trust through openness in dealings with those not covered by the project is required.

It is not always easy to separate the different sources of impacts on households and attribute impact to the project under consideration. Results of LAST are at best indicative not representative. But in combination with ALEX reasonable understanding may be gained.

5 CONCLUSIONS

5.1 Difference from conventional M & E

Conventional monitoring systems tend to be concerned with periodic quantitative assessments of the conversion of inputs to outputs and with the administrative functions of the project, predominantly for purposes of accountability (project to recipient) or corrective internal action. Evaluations tend to be concerned with ex-post judgements on whether objectives have been achieved for accountability (recipient to donor) and possible learning for future projects. As a monitoring tool, LAST helps in impact assessment more as a learning activity rather than as a policing tool. It provides project management with a simple means of detecting change at the purpose or goal levels of a livelihood enhancement project. Trends over time can be analysed at various levels of aggregation in terms of spatial distribution, capitals, and socio-economic group or combinations of these. This is information owned and used at field-level for the purpose of ongoing managerial learning so if outcomes of the intervention do not begin to emerge as envisaged, early reflection and re-allocation or re-planning can be done. It thus provides the ‘review’ part of an action learning cycle (plan, act, review, reflect, plan again... etc. Lewin, 1946).

It is a monitoring system, which is process-oriented, strengthening ‘ownership’ and motivation of primary stakeholders through their involvement in its development. Apart from being locally-specific it helps in de-mystifying monitoring concepts and tools, especially for primary stakeholders, as analysis is made available through field-level staff and unexpected changes are investigated with ALEX. This is in stark contrast to conventional M & E systems, which are relatively ‘top-down’, expert-dominated and product-oriented without necessarily solving management’s problems.

5.2 Further Research

Much of the credibility of a tool of this kind will depend on the extent to which reliability has been maintained following the trade-off against time cuts for operational convenience. It is an issue of ‘appropriate imprecision’ (Chambers, 1983), if this method cannot cover a significant proportion of project households plus some non-project control at a management-relevant frequency, then it is of no use. Having achieved good and regular coverage, the question then remains, ‘Is this method reliable?’ The answer will depend on concurrence with a sub-sample of a more conventional, in-depth household study; but may also be indicated by the behaviour of the data, its stability and ability to be comprehensible to well-informed field operatives and concurrent with the experience of primary stakeholders undergoing the changes. If these questions can be answered positively, we may have a new tool that not only enables management to reflect on the emerging impacts of their actions but also contributes to credible evidence of the impact of a project strategy.
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