On Trying to be Q-Squared: Merging methods for a Technical Minded Client

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Q-Squared Working Paper No. 51
Spring 2008

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Introduction

This paper describes the experience of mixing quantitative and qualitative methods in monitoring resettlement activities under the Southern Transport Development Project (STDP) in Sri Lanka. One of the main objectives of the monitoring exercise, which is ongoing, is to influence policy makers and the Q-squared monitoring methodology was developed to meet this objective. This paper provides a reflection on issues in implementing the monitoring methodology, how successful the methodology has been in influencing policy makers and challenges faced in using the Q-squared approach in a client-driven context to influence policy.

The monitoring activity is being carried out by the Centre for Poverty Analysis (CEPA)[1], an independent, Sri Lankan professional institute, for its clients - the Road Development Authority (RDA) of Sri Lanka and the Asian Development Bank (ADB). While the monitoring activity is not an analysis of poverty *per se*, it is closely linked to poverty analysis mainly because development induced resettlement adversely affects living standards and livelihoods and may have an impoverishing effect on affected households. In addition, it is estimated that one third of households affected by the project were below the national poverty line before the project commenced.

The paper is organised in five sections; section 1 provides a brief overview of STDP. Section 2 provides an introduction to the external resettlement monitoring, including the circumstances leading to the choice of a Q-squared approach, and the degree to which the monitoring methodology is 'mixed' or Q-squared. Section 3 discusses some findings generated by the mixed methodology. The main emphasis of this note is the practical challenges faced in going the Q-squared way, which are discussed in section 4. The final section concludes by drawing the lessons learnt from this case study.

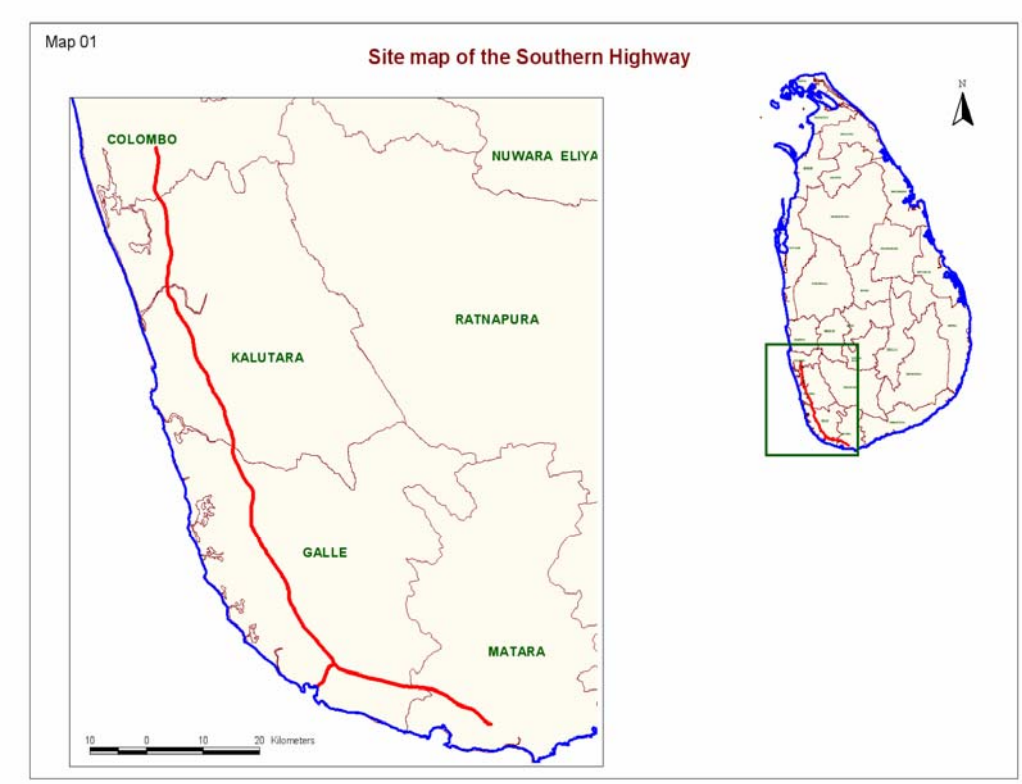
Section 1: Background to STDP

As the very first limited-access expressway in Sri Lanka, the STDP is a flagship project of both the Government of Sri Lanka (GoSL) and the financiers[2] - Japan Bank for International Cooperation (JBIC) and the ADB. The STDP involves the construction of a 128 km expressway between the capital city, Colombo with Matara in the south, as well as a 6 km link to the southern port city of Galle (Figure 1). By linking the under-developed south of the country with Colombo, the project is expected to reduce poverty within the immediate project area, where over 30 percent of the population is classified as poor, and within the south of the country in general.

[1] For more about CEPA, please refer to www.cepa.lk

[2] While the construction is jointly financed by JBIC and ADB, the cost of compensation and resettlement activities is borne by the GoSL.

Figure 1: Location of the Southern Transport Development Project



Source: CEPA, GIS mapping

Approximately 10,271 land lots have been acquired for the project, which is estimated to have affected about 3,000 families, of whom 1,338 were physically displaced (STDP, 2007). Resettlement activities (including payment of compensation and other entitlements, relocation of affected persons to the specially designated sites, the income restoration programme, assistance with re-establishment of social networks and social capital; and monitoring and evaluation of the resettlement process) were carried out in terms of a Resettlement Implementation Plan (RIP) jointly agreed between the GOSL and the financiers and implemented by the Road Development Authority (RDA), under the Ministry of Highways.

The RIP is a radical departure from the current Sri Lankan laws on land acquisition, compensation and resettlement. As such, the impacts of resettlement due to the STDP have many implications for future policy, particularly because STDP is expected to be followed by many expressway projects; four more expressway/highway projects already in different stages of planning[3]. Further, the three primary institutions involved in the STDP are also key players in influencing Sri Lankan policy on transport and roads. The RDA is the primary state agency mandated with road development and planning, while ADB and JBIC are the main financiers of infrastructure development in Sri Lanka.

[3] www.rda.gov.lk

Section 2: External Monitoring of Resettlement Activities under STDP

Implementation of resettlement activities under STDP has been difficult, contentious and slow. The Compliance Review mechanism of the ADB, which became activated because of complaints and representations made by a group of affected persons, recommended that the resettlement activities under the project be monitored by an independent external monitor. Accordingly, one of the main aims of the independent monitoring is to enable the RDA to respond more effectively and equitably to the concerns of affected persons with regard to their resettlement as well any changes to their income and livelihood, and address any shortcomings in resettlement implementation.

Following an open bidding process, the financiers, particularly the ADB, and the GOSL contracted CEPA in March 2006 to carry out a systematic independent external monitoring of the resettlement process over a two year period from April 2006 to March 2008.

The terms of reference (TOR) for the TA for independent external monitoring of resettlement activities under the STDP was conceptualised by the ADB with a strong quantitative focus. The only potentially qualitative elements were in the form of case studies. It required the selected consultant firm to monitor indicators, targets and measures to reflect timeliness and completeness of the compensation payments, the quality of infrastructure and services at resettlement sites, activities of the housing societies, changes in income levels, etc. These identified indicators all lent themselves well to quantitative data collection and analysis. The TOR also required the findings to be shared via workshops, and envisaged that the consultant team should comprise (i) Team Leader / Social Development specialist; (ii) Statistician; and (iii) workshop facilitator/moderator. The request for a full time statistician, rather than for example an economist, also reflected the quantitative focus of this TOR.

The quantitative approach has strong support among Sri Lankan policy makers, in the RDA and in the Ministry of Highways as well. The representatives that met with the CEPA team were particularly interested in generalisable impacts and lessons. Any disputed compensation payments and attempts to seek legal address were routinely portrayed as the concerns of a small group - non representative of the population of affected persons. This quantitative orientation is reflected, for example, when at early negotiation meetings to finalise the work plan, there was a high degree of interest among the client organisations (i.e. ADB, JBIC and the RDA) on a numerical figure of how many affected persons are satisfied with the resettlement process and outcome. They were less interested as to what constitutes satisfaction or why some persons are more satisfied than others. Much of this could be the result of the history of the independent external monitoring, arising as it did from the ADB Compliance Review. So, quantitative data based on a substantial sample of affected households was clearly necessary to influence policy makers in the RDA, GOSL and the financing institutions.

On the other hand, the CEPA team felt that the number-focused, passive feedback from affected persons would not sufficiently capture the complexity of the “real” issues. Assessing implementation against targets set at project design would assume that the values and

concerns of the RIP are the same as values and concerns of the affected persons. That this is not always the case became very clear in the early reconnaissance work undertaken by CEPA during preparation of the inception report (Box 1).

Box 1: Extracts from field notes made during the reconnaissance site visits by monitoring team, April 2006.

‘ …. has built a high quality house with a verandah all round the front. ..has bought lots of furniture, TV etc. He said he was a wage labourer and his wife does rubber tapping. Currently he does not go to work but his wife was out, working in the estate when we visited… he had no clear idea how they plan to maintain the standards they have acquired by using all the compensation for building the house…There seems to be a deeper story than simply replacement with better housing. For example x said, ‘*gedera hondai thamai, bimate tile alluwa – habai kanthare wage, kisi hewanak nea*’ (yes, the house is much better, we tiled the floor. But this is like a desert, not a tree in sight)...’

‘There seems to be a lot of bitterness with what was told to them initially ‘*surangana lokayak mauwa*’ (they painted a fairytale world) and what happened later. But, the fact is the compensation paid has been very high compared to other instances of land acquisition. Need to work out the disjunct’…’

It was clear to the monitoring team that understanding the concerns of affected people was a first step in meeting the objective of responding to their concerns. CEPA proposed that the objectives of the monitoring should be brought in line with the orientation of the RIP, and therefore be broadened beyond income and livelihoods to include the more holistic definition of resettlement and quality of life. Taking the re-orientation further, CEPA sought to provide space for affected people to define what these concepts mean to them and to include these definitions in the monitoring.

CEPA also felt that to have broader and long term impact on national policy relating to development induced resettlement and highway connectivity planning, we needed findings that were generalisable and, as importantly, an understanding of *why* particular changes are generated, and how they link to project planning and implementation. It was felt that a combined approach would enable the team to explore the validity of the assumptions on which the plan itself was built and generalise it to development induced national level resettlement policy.

Given all these concerns, the CEPA team proposed a methodology which deviated considerably from the original orientation of the TOR for the independent external monitoring assignment (Box 2). We proposed a mixed quantitative and qualitative methodology and changed the composition of the consultant team. The ‘statistician’ called for in the TOR was dropped and in place an ‘economist’ comprising two researchers who combined qualitative and quantitative skills was proposed. The scope of work for the moderator/workshop facilitator was expanded considerably to include a more interactive orientation in data collection and interpretation of findings.

Box 2: Extracts from CEPA proposal, January 2006, p.4

"E. Methodological Approach

Combining qualitative and quantitative methodology: The combined approach will build on the strengths of each method with regards to sampling, data collection, analysis of data/information etc. Combined methods will increase the probability of accuracy and provide an integrated, holistic view which will be reflected in the recommendations…

Box 1: Monitoring the impact of compensation using combined methodology

Quantitative methodology would assess: To what extent has compensation payment been received by APs, what is the geographical, type breakdown? What percentage is satisfied with the process?

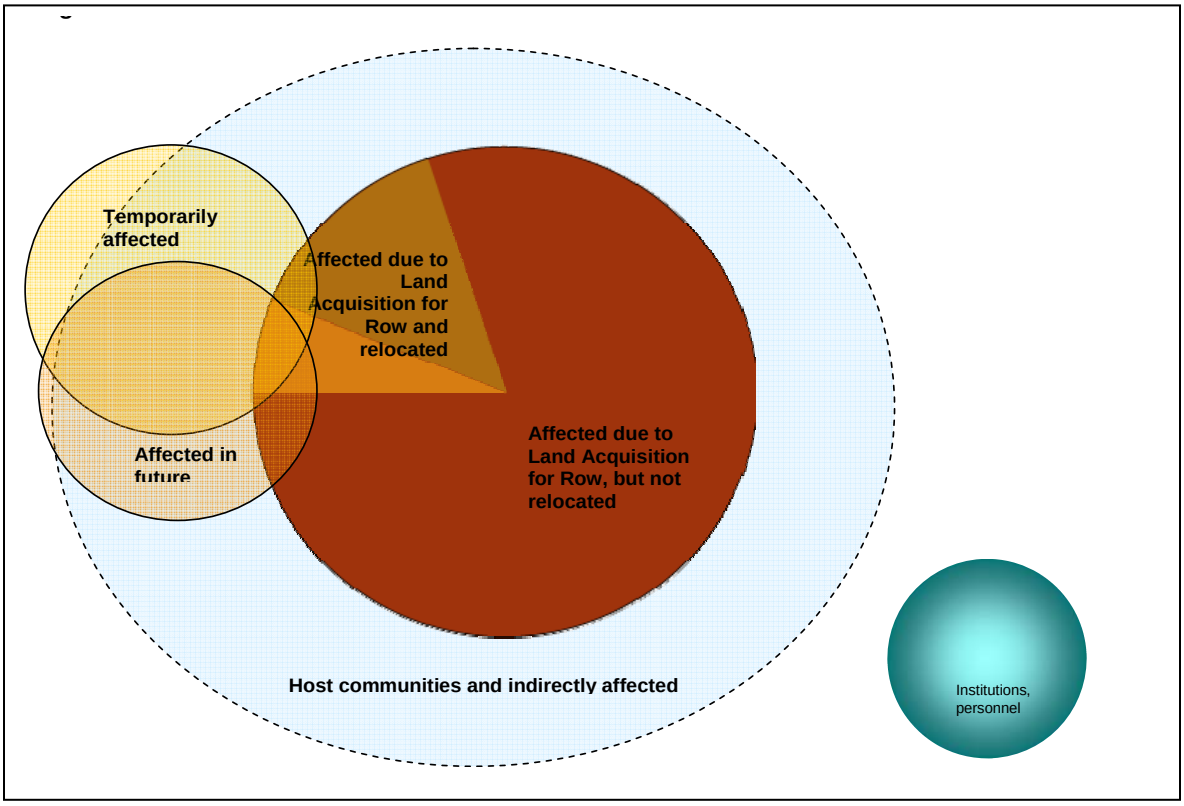
Qualitative would assess: In what way has the compensation helped households to rebuild their lives? What other contributory factors have influenced the process? How has the compensation been used and why? Why have some fared better than others? Which factors are considered priority by the APs and why? What other methods of rebuilding are being suggested?

Combined analysis would enable: Accurate measurement of current position of compensation payment while simultaneously assessing whether compensation has had the desired effect on the APs. Recommendations can be made on how the APs could benefit from a different compensation process, as well alternatives to monetary compensation.

Once the contract was awarded, the first task of the monitoring exercise was to develop a monitoring framework. This was carried out over a 2 month period with participation of key stakeholders such as the implementing agency – the RDA, the financiers – ADB and JBIC, other involved government agencies such as the Urban Development Authority, and representatives of affected households. The resulting monitoring framework identifies *who* and *what* will be monitored, as well as *how* data is proposed to be collected.

The framework recognises four main types of affectedness (Figure 2). The main group of households are those that are affected directly due to the acquisition of land to construct the Expressway, known as the Right of Way (RoW). This group is sub-divided into (1) those who are affected but who have not relocated; (2) Those who have relocated, who are again subdivided into (i) those who have relocated into resettlement sites or (ii) those who have self-relocated. Secondly, there are two other groups whose lands were also acquired: (2.1) those who are temporarily affected, that is mainly through construction activity; and (2.2) those who will be affected in the future through the functioning of the expressway and potential land acquisition for, and construction of, the interchanges. The third group is shown together as the host community (i.e. communities originally living in areas into which the project displaced relocated to) and other indirectly affected persons. Finally, the framework assumes a considerable degree of institutional affectedness that needs to be monitored especially to understand the 'implementation deficit' that could arise in translating the RIP into practice.

Figure 2: Universe of Affected Persons



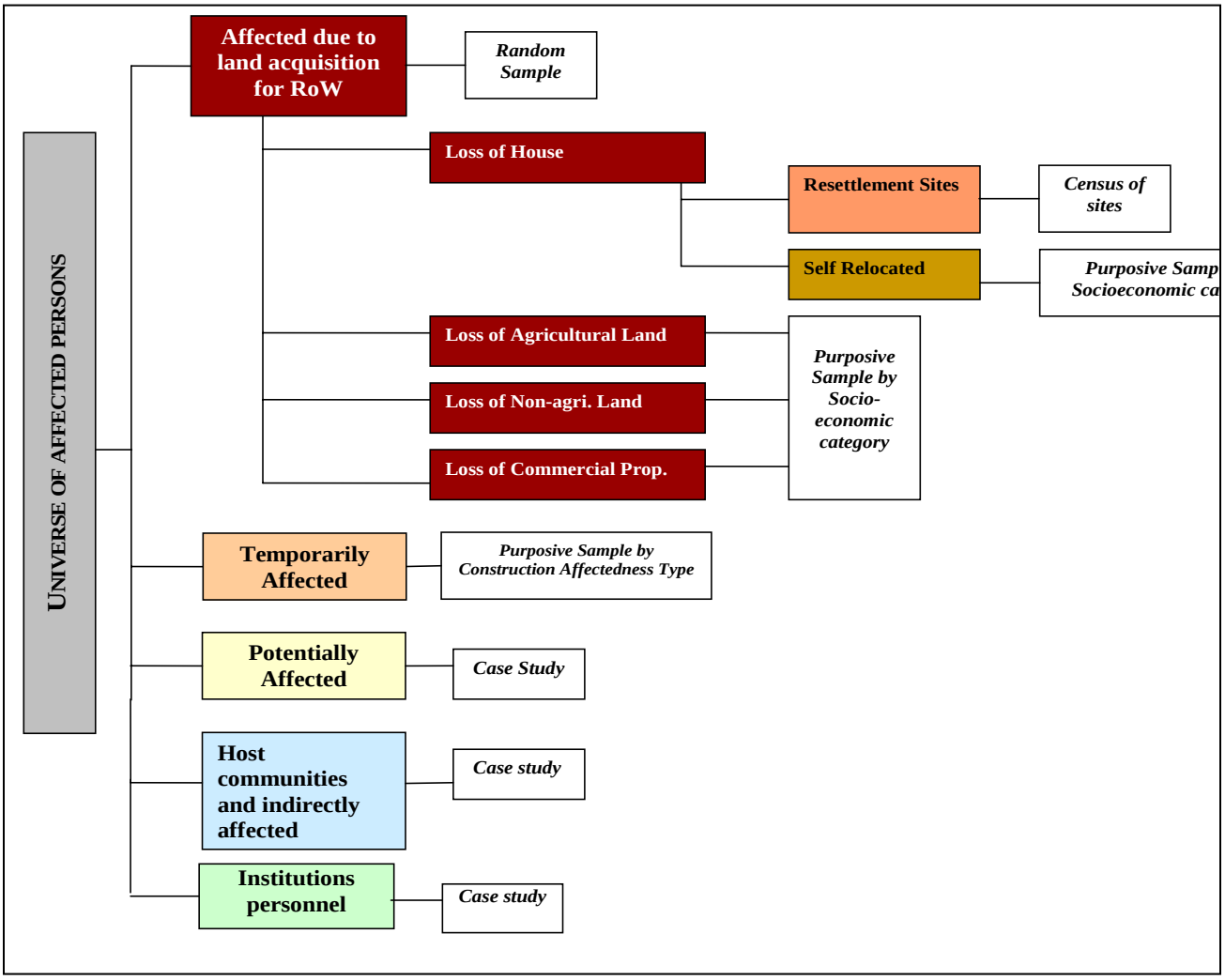
Source: CEPA, 2006b

In terms of what will be monitored, six themes were identified as follows:

1. **Verification** - of the outputs and processes of the RIP implementation in relation to the affected people and the institutions involved in the implementation; of other policy commitments such as the implementation of the recommendations of the EIA and SIA.
2. **Restoration of living standards** - deals with the adequacy of the resettlement outputs and processes to restore living standards, particularly access to services, and the social and cultural networks and utilities deemed important by the APs
3. **Restoration of livelihoods –** focuses on the changes in income levels and sources of employment and income among the different sub-groups of APs
4. **Levels of AP satisfaction** - aims to understand how APs formulate perspectives about the changes in their living standards, on the implementation of the RIP and the STDP related development in general
5. **Effectiveness of resettlement planning** - identifies the strengths and weaknesses of the RIP in terms of achieving equitable resettlement outcomes, and benefit to the APs
6. **Social and Environmental impacts –** includes impacts on the APs natural environment, on public utilities and on institutions and staff particularly of government organisations

Based on the identification of *who* and *what*, *how* the data will be collected was developed as a multi method, multi sample and multi source methodology (Figure 3).

Figure 3: Methods: How the framework is operationalised



Source: CEPA, 2006b

At the time of finalising this note in July 2007, activities upto the end of third phase (out of a total four phases[4]) have been completed. The framework for monitoring has been discussed with stakeholders, such as the RDA, the financiers and representatives of affected persons, and finalised, data collection for the intense period of impact monitoring has been completed, analysed, preliminary/draft findings have been discussed with stakeholders, and the final report has also been issued.

[4] The four phases are (i) Planning and Design: April-May '06; (ii) Field Testing: June-October '06; (iii) Intensive Monitoring; Nov. '06– June '07 and (iv) Periodic Monitoring; July '07 – September '08.

Section 3: Q2 in the External Monitoring of STDP

In a rare period of methodology reflection leading up to the preparation of this note, the team realised that we had followed quite closely all three ways of combining qualitative and quantitative approaches, suggested by Caravalho and White (1997): *integrating* the approaches, *examining, explaining, confirming or enriching* the information from one approach with that from the other, and *merging the findings* into one set of policy recommendations.

Data collection integrated the approaches very closely. One of the main data collection tools, the household survey, was used to collect both quantitative and qualitative data. The survey used a structured format which allowed for both closed and open-ended questions. For example, it asks the open ended question "*Is there a change in household composition now compared to pre-displacement (Yes/No), and if yes, explain the change (who moved in/out, when) and what caused it.*" This question is linked to the follow-up closed question "*is the change linked to the project?"* which has coded responses "*Yes/No*". In this way, both quantitative and qualitative data were drawn from the same source – the households of affected persons.

Recognising that in relation to the *why* question the two approaches provide two different perspectives, we decided to attempt a direct combination on certain issues. For example, using a Likert scale, the respondents were asked to rate their satisfaction on pre-identified elements of the process of land acquisition and compensation payment, such as information provided by officials, equitable treatment, amount of compensation received and so on. In addition, the respondents were also asked in an open ended question about what made them dis/satisfied about the process:

> *"Compensation in money is all very well. But there has to be a way of treating people. To reduce everything to money is not good. Compensation means giving, making up for something that has happened. The way officers and others treat the people has to be a formal part of the compensation system. Not rely on the possibility of finding good – manushya – officers."*
>
> - Lost house and property, Female, 50

The focus group discussions, which were the main source of information from the housing schemes in resettlement sites, also followed a similar approach where the verification of the minimum standard of utilities and infrastructure required by the RIP was done through coded data collection. This was complimented by a simultaneous discussion on the quality, usage and equity issues involved in the provision of these very same utilities and infrastructure.

While data from the two approaches was collected simultaneously, it was analysed using two different software packages[5] by researchers with different skills. In the analysis, some issues were more suited to be answered using data from one or other method. For example, quantitative analysis was the primary contributor to the verification of outputs against the

[5] Software packages we are using are MS Access, MS Excel and SPSS for quantitative and N6 for qualitative analysis.

RIP. Here, generalising findings to the larger population was key to the findings being acceptable as well as useful to the clients.

Given the project steering and policy orientation of the monitoring exercise, it was particularly important to explore reasons behind the trends. While quantitative methods could have been used to identify cause and effect relationship as well as estimate contributors, the team felt that the qualitative methodology was more suited for this purpose, especially because of the highly contentious nature of the project. Once the trends and outputs (eg. variation in the size of land lots allocated to landless households) was quantitatively established, the qualitative analysis was used to establish the different perspectives of different stakeholders regarding the same issue. The complexity of the process, the contrasting 'realities' of affected persons, the field technical staff, the central level officials, had to be analysed in detail to obtain at least a basic level of understanding of the combined reality.

Box 4: Presenting merged findings to clients / policy makers:

' A significant improvement can be observed in the physical structure of replacement housing accessed by APs. Approximately 80% of the displaced households in the sample have moved into a new house, by either self-relocating or moving into sites. The quantitative data show a statistically significant improvement in the size of the houses, along with an improvement in housing related facilities such as access to toilets (moving up from water sealed to flush toilets), water (moving from non-piped to piped) and energy (moving from kerosene to electricity usage). This physical improvement is reflected in the qualitative discussion on satisfaction, as very few APs who had moved into permanent housing expressed dissatisfaction with the physical structure. Contrastingly, very few were happy with the new living environment. The primary source of dissatisfaction is the drastic reduction in access to land and the green environment space. This is articulated in terms of loss of a quiet rural environment, the loss of shade and coolness, access to fruit and other produce bearing trees, drop in water levels. In addition, problems of water drainage, loss of space for garbage disposal, family burials, etc arise from the same source.

However, the very poor and landless in the sample expressed a high level of satisfaction and articulated along the very same sources;

"In our previous place, we had no place even to spit, as we did not have any space there. (kelagahannawath thenak ne). We have spent Rs.50,000 to buy this land which is twenty perches as against five perches we were on previously. We got the land cheap as it was bought from a relative. Now we have more space and have grown some mango plants as well".

- Lost House and Property, Male, 72

Extracted from CEPA, 2006c, p. 20.

The findings from the qualitative and quantitative are merged and presented to policymakers as one set of recommendations. In the sharing of preliminary findings following the pilot phase, as well as the recently concluded Phase 3, the CEPA team made a concentrated effort

to present the data in a way that was acceptable as 'scientific', i.e. generablisable numbers of physical changes, targeting the technically oriented project professionals, while strongly emphasising the 'human' element of the experience of the affected persons and communities (Box 4).

The use of Q2 methodology in the monitoring was driven as much by the methodological terms of reference of the client, as the expertise and methodological bias of the CEPA team. While the objectives of the monitoring and the issue to be researched clearly called for a mixed method approach, in practice the Q2 approach presented a number of challenging issues, both from a methodological as well as a policy influence perspective.

In summary, the monitoring methodology placed similar, if not equal, emphasis on quantitative methodology characterised by a generalisable sample, numerical data, and deductive reasoning, and qualitative methodology, as characterised by purposive sample selection, non numerical data, active population involvement and inductive reasoning. This being said, we feel a key factor in the approach being truly mixed is that a single team is working on the data collection, analysis and presentation of findings. While certain team members have more skills in one area and focus more on them, the 'quant team' and 'qual team' does not exist as separate persons working independently of each other, but are part of one team often working on both types of data at the same time.

Section 4: Some Findings Generated by the Mixed Methodology

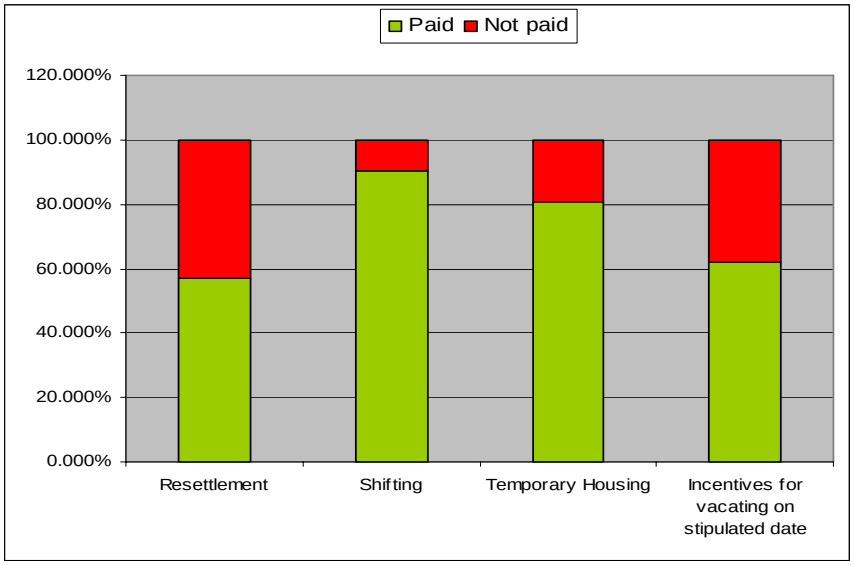
The mixed method analysis was used to increase the rigour and credibility of the monitoring findings. Where the quantitative analysis gave controversial findings the qualitative data was analysed to confirm the findings or to provide new hypothesis to test. We also felt that the bias of qualitative methods towards exploration and analysis of non-measurable aspects was critical to understanding and arriving at feasible recommendations for action.

As the following examples indicate, the Q-squared methodology generated findings that were both more rigorous and had more explanatory power, than would have been possible using either a quantitative or qualitative methodology.

Verification of payment of allowances

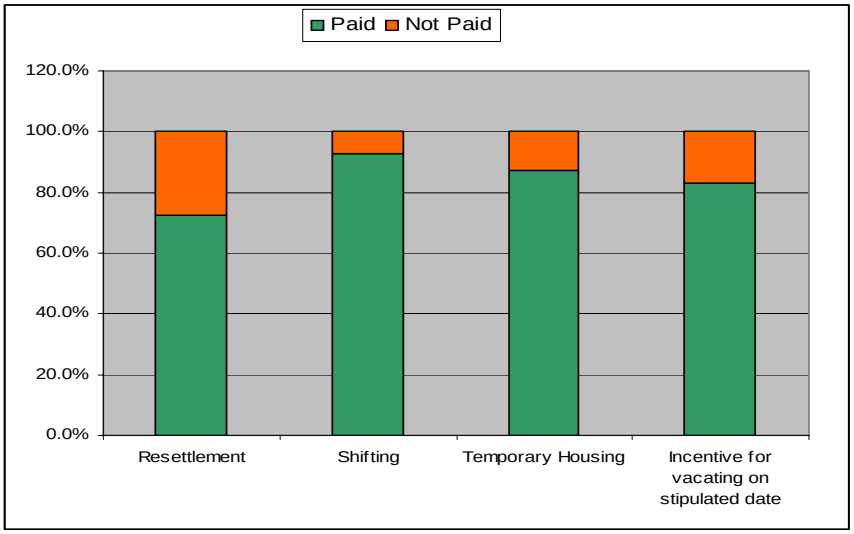
One of the primary questions the monitoring activity set out to answer was "have all affected persons been paid the compensation they are entitled to?". In addition to the compensation for land and structures lost, the RIP sets out allowances to which different groups of affected persons are entitled to. For example, displaced households are entitled to a resettlement allowance, a shifting allowance, a temporary rent allowance and an incentive allowance for vacating on the stipulated date. These allowances were an important part of the compensation package (often totalling close to US$1,000/-), one of the key tasks of the monitoring team was to verify whether those eligible have been paid. Based on the quantitative data the monitoring team generated the finding that 40% of the eligible households had not been paid the resettlement allowance, 10% had not been paid the shifting allowance, 20% not paid the temporary allowance and 40% not paid the incentive payment (Figure 4A).

Figure 4A: Verification of payment of displacement allowances - uncalibrated



Source: HH survey, CEPA

Figure 4B: Verification of payment of displacement allowances - calibrated



Source: HH survey, CEPA

However, analysis of the qualitative data regarding the household revealed that while most households are unaware of their eligibility for various allowances, project staff determine eligibility on a case-by-case basis. For example, if the household has defective title, they may be categorised as “encroacher”, but unlike squatters, they may be deemed entitled to allowances paid to titleholders. Similarly the household may opt to have the payments made to a third party. For example, allowances are often shared among the extended family, with households opting to have some payments made to adult children living elsewhere. Calibrating the data using the qualitative ‘story’ of that household, the monitoring team generated the final finding that 27% of those eligible for the resettlement allowance, 7% of those eligible for the shifting allowance, 13% of those eligible for the temporary allowance

and 17% of those eligible for the incentive payment, have not been paid their due allowances (Figure 4B). The availability of the qualitative data increased the rigour of the finding, which is then able to withstand being challenged by the implementing agencies.

2. Loss and replacement of agricultural land

More than 80% of the land lots acquired for the STDP are agricultural land. Within this category, paddy lands form a distinctive group; they can only be used for paddy cultivation and filling paddy lands, even in the wet zone areas of the STDP where it is often not a profitable activity, is prohibited under Sri Lankan law. Quantitative data generated by the monitoring activity revealed that compensation payment for paddy lands under the STDP is extremely low in comparison to other types of land, which reflects the widely held view among project implementers that paddy cultivation is not profitable in this area and consequently that the market value of paddy lands is very low. These views were further supported by the monitoring finding that there is almost no replacement of paddy lands lost to land acquisition for the STDP by the household.

While the quantitative data supported the widely held perceptions regarding loss and replacement of paddy lands, the qualitative data provided a somewhat different view. Far from being happy that they received a means of exiting the paddy sector through the land acquisition, households expressed a great deal of dissatisfaction with the loss of their paddy lands. In most cases the lands have been with these households for generations and they had used the harvest for their own consumption. Now that they had to buy their rice from the market, they felt it – both monetarily in terms of increased household expenditure on food, and in terms of a reduction in their wellbeing.

> "We did not eat rice from the shop. The kind of rice *[kekulu heen eta]* that we ate is not in shops. The compensation we got for the paddy field is spent on buying rice from shops. Prior to land acquisition we shared the harvest with our sisters. The remaining 80 perches of paddy land cannot be cultivated because of the construction of the road. They put rocks there and [hiri] plants grow when we are not cultivating.
>
> - Lost agricultural property, Male, 74

The data also indicated that limited replacement of paddy lands is due as much to lack of paddy lands available for sale in the market, as reluctance on the part of land owners to replace their lost lands. A market price for paddy lands is difficult to assess because there are so few sales of paddy lands. Households tend to hold on to their paddy lands because they place a high value on what has been in their families for generations and which represents an important aspect of their lifestyle.

These findings point to the need to approach the payment of compensation for paddy lands in a way that captures these underlying dynamics. Unlike commercial or housing lands, paddy lands cannot be fairly priced with reference to "market prices" and the consumption value of these lands to the households, at the very least, needs to be taken into account.

3. Understanding the social reality

The RIP is geared towards loss and replacement of individual property. It recognises the legal rights of individuals and compensation payments are made to the individual/household. This loss and replacement was tracked in the monitoring activity using both quantitative and qualitative methodology.

However, using the combined analysis generated a more complete picture of the social reality in the villages affected by the land acquisition for STDP than what formed the basis of the RIP. Shared ownership of lands among families, the informal social networks where housework such child care is often shared, and open access to assets within the extended family, are characteristics of these villages which the STDP has caused to be suddenly severed. These issues came up in the qualitative discussion that accompanied the quantitative data collection, as well as in the purely qualitative discussions (Box 3).

Box 3: Understanding Loss and Replacement

"Data from full household survey sample confirms the pilot findings that, despite the significant level of satisfaction with regard to the *physical* improvements in new permanent housing, very few APs were happy with the new *living environment*. The primary source of dissatisfaction is the reduction in access to land and green environment space. This is articulated in terms of loss of a quiet rural environment, the loss of shade and coolness, access to fruit and other produce bearing trees, drop in water levels. Problems with water drainage, loss of space for garbage disposal, family burials, etc arise from the same source. In most cases, the APs are not necessarily articulating dissatisfaction with loss of owned land. It is the cumulative impact of losing shared private land and commonly held land that is being articulated."

- Extracted from CEPA, 2007, p40-41

Section 4: Challenges of being Q2

Based on the work carried out so far, the team believes that the mixed qual-quant approach is the appropriate methodology for this project steering and policy oriented monitoring exercise. However, many challenges were – and are being - faced in applying this mixed approach. To a large extent the issues we faced in combining approaches in data collection have been resolved but combined analysis and presenting the merged findings to policymakers still present unresolved challenges. The main challenge has been quite practical in nature: how can a team of consultants who believe in a mixed methodology work within the budget and deadline requirements of a client who essentially thinks in quantitative terms. This becomes particularly crucial because influencing the client in terms of operations and policy is a key objective of the monitoring exercise.

Sample selection and data collection

A number of practical difficulties were faced in trying to be Q2 at the sample selection and data collection stages which were resolved mainly by putting in more time/effort and at greater monetary cost to CEPA than initially envisaged.

In order to meet the project steering and policy influence objectives, the external monitoring team needed information on sources of loss, replacement and impact on quality of life; changes in livelihoods and economic status; process of land acquisition; compensation entitlements and payments; sources of change, concerns of affected households, etc. During the pre-pilot phase, two questionnaires were prepared, the coded quantitative questionnaire which focused on the verification elements was to be administered to the 400 sample first, the data brought back, analysed and a sub-sample purposively selected and the qualitative questionnaire was then to be administered only to this sub-sample.

However, during the initial testing of the data collection tools, it became very clear that obtaining accurate quantitative information on compensation, processes, loss and replacement, change in economic status, etc. required very detailed and 'qualitative' discussions to happen between the interviewer and respondent. The story behind the numbers was being told in any case, whether we wrote it down or not. Hence, it was decided that to avoid respondent abuse where a household would be interviewed twice, a single combined questionnaire would be designed and administered. This has proved to be the best option from the respondents' point of view, especially since the STDP had seen many cycles of data collection since the project began in 1999. From the researchers' point of view, this approach has ensured a high level of data accuracy in very complex situations, as well as ensured that the narrative retained its freshness.

The design of the questionnaire had to balance out the needs of quantitative coding along with open ended space for qualitative discussions while maintaining a logical flow and feasible interview time. Achieving this balance was helped by the fact that the two 'economists' who designed the questionnaire also administered it in the field, and cleaned and entered, as well as analysed the data during the pilot phase.

Collecting good quality quantitative and qualitative data require different field skills, and a combined questionnaire called for a high level of combined skills. A 400 sample also meant a much larger field team was needed than is usual for a qualitative study. The external monitoring team used a two track approach to ensure the quality of data collected; (i) each interview was carried out by a team of two, specifically trained in combined skills, the rationale and background to the monitoring method; and (ii) rigorous qualitative note taking in a separate book and quantitative coding on the questionnaire was followed up by immediate post-interview cleaning of hard copy and post coding of some elements of the qualitative data.

While this approach succeeded to a level that the team hardly dared to hope, there were significant problems to overcome. A very large team of committed and competent personnel were needed. The very long field and data entry hours and high level of concentration called for in this method meant only few were able and willing to carry on till the end. A considerable effort had to be put in by supervisors to ensure the coded data was accurate and

in line with the qualitative 'story'. The narrative form of qualitative field notes and data entry had to be strictly enforced and supervised.

We are confident that the challenges arising from administering a combined questionnaire to the full sample were successfully met by the team. However, it generated a sampling problem that has not been easy to resolve.

The selection of the 400 sample was driven by the quantitative methodology. It followed a straightforward stratified, weighted, random sampling method. The RDA-STDP Project MIS database, which was the only available data set which covered the entire population of persons whose land was acquired, enabled stratification by location and type of loss[6]. The representativeness of the sample was checked against population characteristics and found to have achieved a high degree of representativeness.

As per study design, the qualitative sample was to be drawn as a purposive sub-sample from the 400 household survey. However, as the team had made the decision to amalgamate the qualitative and quantitative data collection, qualitative data was collected for all households that fell within the quantitative sample. Hence, the decision regarding method of qualitative sampling had to be taken, not prior to data collection, but post data collection. The sample had to be selected parallel to the analysis.

After much deliberation the team followed a number of purposive sampling methods (Patton 1990): criterion based where all cases which met a particular criteria was selected (eg. all displaced households that had also lost agricultural land), confirming or disconfirming a quantitative findings by elaborating and deepening the initial analysis, seeking exceptions, testing variations (eg. explaining the low rate of replacing agricultural land), opportunistic method where leads during field work were followed up (eg. discontent with the loss of traditional green environment).

This range of sampling methods was made possible due to two reasons: one, qualitative data had been collected and cleaned by the team for all households in the 'full' sample. Hence, not only was the data available to the team, the narratives were literally crying out to be analysed! Secondly, the use of the qualitative analysis software package – N6 – enabled sub-samples to be drawn, discarded and redrawn, very quickly. In effect, each qualitative sample differed from the other, but were all drawn as sub-samples from a unique 400 'full' sample.

Balancing the analysis

One of the challenges of merging methods that seems to be rarely discussed is the pressures that a quantitative oriented client brings in terms of deadlines and costs. The manner in which the data was analysed for this monitoring exercise was initially driven, and constrained, by the client's emphasis on quick analysis. For example, despite knowing that the field data collection was ending in December 2006, the monitoring team was requested to give

[6] Losses are classified under 4 types in the RDA MIS: Agricultural land, house and property, commercial property, and non-agricultural land.

preliminary findings by end January 2007 to meet ADB's internal deadline, a Board of Directors meeting.

As a result the initial analysis was heavily quantitative because once the intensive effort to clean the database was completed, quantitative data could be easily and quickly analysed. It was not so for the qualitative data, which took about as long to be translated, entered and checked but could not be analysed without careful reading of large tracts of text. The analysis of qualitative data was further constrained by our struggle with finding a suitable sampling technique for the qualitative sub sample. Due to the size of the dataset most sampling techniques attempted threw up large amounts of qualitative data that could not be analysed at a speed matching the quantitative analysis. Because of these practical problems, the January 2007 dead line was met via a predominately quantitative analysis.

Box 5: Synergy from qual-quant analysis: The transition period in housing

'The clear trend of improved physical quality of housing pre- and post- displacement hides a very severe downturn during the period of transition.' (*CEPA, 2007, p. 43)***.**

The issue of the transition period was identified very strongly in the qualitative analysis where the narratives spoke of the severity of disruption and drastic falls in quality of life.

> *"We had to live in a temporary shack in this plot and we lived in it for 08 months. My mother was living with us and she was paralysed, I couldn't look after her here so my brothers had to take over caring for her. We had to pay extra to get electricity to that structure since it was temporary. The roof was done with tin sheets and it used to get really hot during the day as there were no trees. We made this well as soon as we came there."*
>
> *- Lost house and Property, Female, 38*

While it was clear that the issue was of great importance to those articulating it, the team decided to check prevalence of disruptions in terms of time and spread across the population. For this the quantitative data on period in temporary housing was used; temporary housing was used by 76% of the households, who on average spent 1.16 years in temporary housing. This confirmed the prevalence of the disruption across the population. However, in contrast to personal narratives, the quantitative data on physical quality of housing and access to basic utilities showed that most households managed to retain an acceptable housing quality during this period - over 88% of those in have had access to water seal latrines and 68% have had access to private water source.

Going back to the qualitative analysis, it was revealed that often the families have had the ability to maintain high standard in utilities such as private sources of water and water seal latrines by leaving the demolition of the facility till the last in the old location and by building the facility as the first step in construction at the new location. The more relevant indicators for the quality of housing were the changes in house space and wall type. This was confirmed by the quantitative data: the average number of enclosed spaces dropped from 5.2 to 3.3 during transition, and non-brick housing increased from 21% to 50%.

Once the one month deadline for the preliminary findings was achieved, the team went back to the data. A portfolio of sampling techniques for the qualitative data were developed, and qualitative analysis was used to add depth, confirm or refute issues uncovered by the quantitative analysis as well as explore, both quantitatively and qualitatively, issues which originated in the qualitative data.

Clearly, the analysis was substantially strengthened by having both qualitative and quantitative data available. In particular several hypotheses identified in qualitative analysis could be checked for generalisability via the quantitative data. For example, the qualitative analysis raised the issue of extreme hardship faced by displaced persons during the period they lived in temporary housing, which was not apparent from the quantitative analysis (Box 5).

The availability of qualitative data to improve the accuracy of the quantitative data has also helped to strengthen quantitative findings. For example, the quantitative analysis found that allowances to meet the transaction costs of displacement were not received by about 30% of the affected households. Looking at the qualitative narrative of their experience, about 10% were found to be ineligible, because for example they had not yet relocated or as was the case with some elderly persons, they had nominated another (shared) owner of the property such as a son/daughter living separately as the designated person to receive the allowances. Where the findings arrived at via a 'pure' quantitative analysis met with a high level of scepticism by officials, the quantitative findings, adjusted for eligibility imputed from qualitative data, persuaded the RDA/STDP officials to re-visit the payment of allowances and even to admit that some households may have been overlooked.

In summary, the analysis suffered initially from need for quick findings, when the team was forced to fall back on the quantitative data and the combined methodology could not be fully utilised. But in the subsequent analysis, the team has been able to obtain synergistic benefits from using a combined methodology to analyse the effects of development induced resettlement activities.

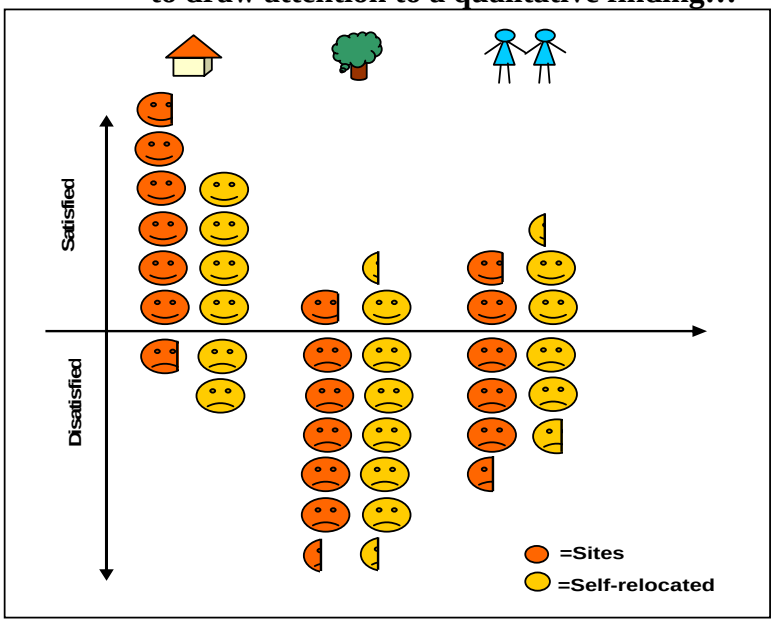
Practical issues in presenting merged findings

The monitoring exercise spans a two year period until March 2008. During the past year, the monitoring team has carried out three rounds of presenting and sharing findings from the monitoring exercise with the clients and other stakeholders through series of workshops and reports. The strengths of the Q2 approach were clearly highlighted for us at these times. Using a mixed methodology has given us a portfolio of methods to present our findings. When one presentation method failed or was not well received, the team was able to revert to other ways to carry the point across. For example, one of the clear findings from the qualitative analysis is the discontent people feel about the loss of their green environment and village lifestyle due to the project. The use of quotations in draft reports and discussion workshops, though very well articulating the issues, did not resonate with the clients. They tended to disregard this as a minor and 'sentimental' issue. The team decided to use the parallel quantitative data which – thought not sufficiently rigorous to have provided the

finding itself - reflected the qualitative findings. The essentially qualitative findings were presented in a 'pseudo chart' format – purposely not providing the units of measure in the axis - to emphasise the qualitative nature of this finding (Figure 5). This presentation tactic has elicited a much better response from institutional stakeholders who seem more open to allowing this issue to be included as a 'serious' topic for policy discussion.

The monitoring findings are shared in an interactive workshop format where they are discussed with different stakeholders, which may be seen as coming from the participatory school. When the interactive workshop was first introduced to the institutional stakeholders this format itself seemed to aggravate the view of the 'quantitatively minded' that a combined methodology gave non-rigorous findings. The external monitoring team found itself being questioned more often on methodological issues such as representativeness of the sample, the 'reliability of perceptions', the rigour of 'soft issues' such as concerns regarding dignity and respect, than on the findings themselves. Once the quantitative sample was accepted as generalisable and rigorous, these same stakeholders began to question the findings, providing anecdotes as counter evidence! Having both qualitative and quantitative data and analysis to back our findings increased the credibility of the monitoring exercise as rigorous as well as comprehensive.

Figure 5: Using quantitative presentation technique to draw attention to a qualitative finding…



Extracted from CEPA, 2007, p. 46.

The process of getting our clients, who were initially somewhat uncooperative, as well as other stakeholders to buy-in to the monitoring exercise, the methodology we opted to use, and the findings we are highlighting, has been a long, iterative and hard process. One year down the line, we see a degree of progress on all aspects - and to a large extent this is because of the methodology we chose to use. At the recently concluded findings discussion with institutional stakeholders, a number of senior officers put forward the idea that the methodology enabled the monitoring exercise to reveal the comprehensive picture which

reflects, both the generalisable macro picture and the outliers which underline the complexity of the issues. Based on the interactions with the institutional stakeholders the team feels that there is greater acceptance – less direct confrontation on grounds of inaccurate or incomplete findings – of the monitoring findings and recommendations. Hopefully this will lead to policy changes – if not at the sectoral or national level – at least at the level of the intuitions which are key players in the sector.

Section 5: Conclusions

We decided to follow a mixed method because our previous experience - as well as training – led us to believe that it was the optimal method of achieving the objectives of verification, learning and suggesting in a contentious resettlement programme with a range of highly engaged but diverse stakeholders. The progress we have made with initially reluctant clients, some of whom have gone from flat out rejection to engaging with our findings, is to a large extent a result of the mixed method's ability to provide a more complete picture. The validation of the methodology is its ability to show the *generalisable* picture as well as that of outliers. The recommendations resulting from the mixed method are more rounded, which in turn has lead to credibility and policy influence.

This reflection on how we mixed the methods and the challenges it brought up has highlighted a number of points: team that consists of persons with 'mixed' training and experience – and accepted neither method as the Gospel! - has helped in moving away from too-strict adherence to either method with minimum tension and resistance. Instead, constant need to troubleshoot, has forced the team to constantly think of the conceptual issues involved in the contrasting methods and try out solutions that may not rigidly fit either. The many nights we struggled over designing the qualitative sample, the literature on both qualitative and quantitative sampling we went back to before arriving at a solution is a good example.

The fact that qualitative and quantitative data can, albeit with difficulties, be collected – and, collected rigorously - using a single tool at the same time with the same team is some thing we have tried out with success. Despite the time pressure which initially forced us to focus on the quantitative analysis, the mixed method is very clearly yielding synergistic results in data analysis. Presenting our findings in a way that is 'acceptable' and usable to the stakeholders is something we are working on. The continuous nature of the external monitoring, interacting with the clients, other policy makers and the affected persons over a period of time has provided us with the opportunity to build their confidence in the rigour of our methodology and our findings.

Pursuing a Q2 methodology in the face of deadlines and budgets set for a quantitative study placed a great deal of pressure on the monitoring team, and to some extent on CEPA as an institution. However, we still believe the combined methodology ultimately allowed for higher quality and more relevant analysis and policy influence. The level of acceptance and influence we have achieved would not have been possible had we followed a purely quantitative methodology as requested by the clients.

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