



## Colombia, Peru & Mexico Cost & Benefit Analysis 3/4

Allan Lavell

**REDUCING  
RELOCATION  
RISK**  
IN URBAN AREAS



**FLACSO**



**Credits** This report was elaborated by Allan Lavell based on the research of Omar-Dario Cardona, Angel Chavez, Elizabeth Mansilla, and Maria-Pilar Perez.

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## Introduction

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In earlier stages of our research on urban resettlement under conditions of climate variability and change, a diagnosis of existing risk conditions and institutional approaches to decision making and implementation and a study of decision making and implementation in cases of resettlement in three Latin American countries has been completed (see English language regional reports for stages 1 and 2 and individual national reports, presented in Spanish).

The third substantive stage of research in LAC, Asia and Africa has been undertaken under the notion of “risk analysis” or analysis of the “costs and benefits” associated with resettlement. The present summary report provides an overview of the results of the LAC research in the three Project countries: Mexico, Colombia and Peru. The basic research was undertaken by Elizabeth Mansilla, Omar Dario Cardona and Pilar Perez, and Angel Chavez and Belen Demaison respectively and advised on during the stage of formulation of key questions and concepts by Project advisor, Tony Oliver-Smith.

This report is a summary report that does not intend to reproduce the wealth of data and conclusions which can be obtained by a thorough reading of each of the country reports. The intention here is to highlight the more important theoretical, conceptual and policy making and implementation issues that can be drawn from a cross-country comparison.

Research at the present project resettlement sites, as well as elsewhere, has consistently revealed similar problems and virtues of resettlement. This is so even when we acknowledge the sui generis nature of different resettlement projects and the variation experienced with implementation processes depending on the type of resettlement and differences in city or town size or the size of the resettlement process. Given this, it is important to identify the principle generic and specific contexts that condition outcomes and results. The basic hypothesis of this Project is that these are very much related to the diverse implementation and decision making processes enacted in different places, modified or influenced by contextual and conjunctural conditions and over time.

The summary comprises 5 substantive sections. The first deals with the case studies and the method used to generate research results and conclusions. A following section deals with the why and what of research. The third section examines some fundamental conceptual and definition issues and the fourth provides a summary of the conclusions on costs and benefits across country studies, highlighting the more substantive issues. The final section projects results into the field of policy and implementation in the search for increased benefits and decreased costs. These comprise potential inputs to the regional policy guidelines to be produced by the project.



## 1. Case studies and basic research method

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In previous regional Project reports it has been pointed out that a varied approach was employed in the selection of resettlement sites for analysis in each country.

In the case of Mexico five sites were analysed in the State of Yucatan, including two nearby rural communities affected by the same hazard event and resettled contemporaneously. In Colombia seven sites were considered, with varied implementation dates, all in the same city of Manizales. And, in Peru, one principle site was studied in the city of Iquitos with subsidiary information gleaned from a second site in Cuzco. This varied number of sites and locations was intentional and led to different depth and spread of research questions and methods.

Time available for research was critical in determining the depth of analysis that was possible. In the case of the present cost benefit analysis research 20 days per country was available for designing and implementing the research method, analysing results and writing reports. Clearly this only allows for an indicative approach and results. This does not however make the results invalid. The value of results from the LAC region may be found in the diversity of sites studied and the comparative issues that arise. It is also due to the different approaches used to gather information and conclusions on the cost and benefit issue.

In the case of Mexico conclusions on costs and benefits and their differences, site to site, are based on the results gained through WP 2 at the two rural sites of El Escondido and Tigre Grande, as well as Campestre Flamboyanes in Progreso and the Celestun-FONDEN and Celestun-Charcas sites. This was complemented with an interview survey on costs and benefits carried out specifically during WP 3 in Campestre Flamboyanes (see annex in the Mexico national report) and informal interviews with fishermen and other informants in the Charcas Project in Celestun. Results contrast

the different ways project implementers and those analyzing the implementation process conclude as to costs and benefits as compared to the opinions of beneficiary populations as such. The themes considered – both causal and cost-benefit – are: justification of resettlement; type of implementation process and level of social participation; location and general characteristics of the resettlement site; character and functionality of the new housing; security in land ownership; level of fulfilment of original resettlement objectives and the use given to vacated land; consideration of other options for problem solving; long term results.

In Colombia, WP 2 results on decision making and implementation are reprocessed for the seven sites studied in the city of Manizales (Barrio Holandes, Yarumales, Barrio Paraiso, La Playita, Samaria, San Jose). Conclusions as to costs and benefits and their relationship to implementation processes were derived. This information is complemented with interviews with key housing authorities in the city and the reprocessing of a comparative study undertaken on costs and benefits at nine different resettlement sites in the city between 1987 and 2008, undertaken by Anne Catharine Chardon from the National University. This latter study was based on some 574 questionnaires administered to project beneficiaries. The major themes considered in the Colombia research as a whole, on an outcome and causal level included: insitutional factors and relations; participation and social organization; legal and normative aspects; perceptions; economy; socio-cultural practice; mental and physical health concerns; territory; environment; social confrontation and strategy.

In the case of Peru, the New Belen resettlement scheme is used for research. As has been made explicit elsewhere, this scheme is large scale and will, when completed, have involved the movement of some 2600 families or 16000 persons. The size of the Project as well as the large number of interest groups involved

means that costs and benefits can only be approached through the comparison of the evaluations made by such diverse groups. Moreover, only some 100 families have been resettled at the new site to date as the Project advances and infrastructure and services are completed. This means that the analysis of costs and benefits is hypothetical, based on the perceptions and notions of those to be relocated or on the more informed ideas of the few that have been relocated to date. Such information has been complemented by a questionnaire study of population in the Calipso and Villa Olimpica resettlements set up in response to different flooding incidents in the Lower Belen area over the last 7 years. Calipso residents will not be relocated to the New Belen scheme once this is finished but those from Villa

Olimpica will. Persons from these sites have been used as a surrogate for persons relocated to the New Belen scheme. As they come from the same Lower Belen area but are not as yet located in New Belen, they can however provide opinion on costs and benefits that take into account preexisting Lower Belen conditions and their new conditions in their present location, which are similar to those that will be experienced in New Belen.

The questionnaire used for both beneficiaries and stakeholder groups can be seen in the annexes of the Peru national report. Application of the questionnaire was difficult due to the weather experienced during the flooding season in Iquitos.

## 2. The why and how of possible research

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The major purpose of the research was to provide a series of results that can contribute to decision makers and implementers, population and civil society, NGOs and others, changing the dominant mind sets and practices with regard to resettlement. This is critical when we are often faced with resettlement and relocation schemes that fail miserably, when judged against development criteria and principles. Field research to date on decision and implementation in our project geographies has allowed a preliminary identification of both positive and negative outcomes. Research during WP 3 works within the frame of these results. It more clearly specifies outcomes and searches to move from an understanding of the immediate causes of success or failure to a more profound understanding of underlying causes. Here, the why of inadequate process and unsatisfactory outcomes is examined from more than a simple or straightforward reduction of hazard exposure perspective.

The complexity of the overall research question demanded a clear identification of the sub-components of the outcome problem that may be adequately examined and researched in a short time framework and with limited financial resources. These sought to be complementary and accumulative amongst and between our regions and countries, both in terms of results and methods. And, they sought to clearly offer an input into future decision making and implementation processes. In this sense the research on outcomes was consequent with and a constituted a continuation of prior research undertaken on decision and implementation, thus guaranteeing a holistic and integral approach to, and results from the research. Under no circumstance could we pretend that the research would be all-inclusive and conclusive. It could however be indicative and suggestive and lead to the identification of a series of critical aspects to take into account in future resettlement decisions and processes. It could even lead to questioning as to the convenience or not and under

what circumstances, resettlement can be seen as a solution for existing disaster risk.

A summary of the types of research discussed include (these are not mutually exclusive):

- Comparison between costs and benefits as perceived by as yet non resettled population and those perceived by populations resettled in areas similar to those considered for new resettlement (see case of Calipso and Villa Olimpica in Peru) or in the real new resettlement site. Research into the ways anticipated costs and benefits are affected by contextual and circumstantial conditions.
- Longitudinal study of how costs and benefits change over time (e.g. from early on after resettlement to up to ten years later). Study of the intervening variables that may explain improvement or downgrading.
- In a situation where costs and benefits, advantage and disadvantage, exist and are contrasting, what are the conditions that have primacy in the final decision to resettle?
- Study of contrasting qualitative and quantitative aspects of decision-making associated with costs and benefits and the ascendancy or not of one or the other.
- Back tracking from particular costs and benefits, gains or losses identified in phase 2 and 3 work to identify particular causes and effects that relate to particular decision making and implementation processes or historical and conjunctural factors. Whereas phase 2 work allowed a correlation between immediate causes and different advantages and disadvantages, phase 3 work should allow us to go beyond immediate causes,

such as lack of adequate architectural and engineering provisions, lack of available land, lack of participatory processes etc, to delve deeper into the structural or non structural causes of these immediate explanations. In essence as the PAR model developed by Blaikie et al (Blaikie et al, 1996) moves from unsafe conditions to dynamic pressures

and root causes, here we propose the same. It is imperative to understand what can be modified given a particular economic, social and political regime in place and what cannot be modified without significant transformation of values and practice.

### 3. On concepts, notions and definitions used in the research

#### 3.1 On “risk analysis” or “cost-benefit” analysis of resettlement.

The terms risk and cost-benefit are those used in the Project description to depict the goals of the third stage of work of the urban resettlement project. Clarification and specification of these is required as they informed project development.

Firstly, they are not used to cover processes undertaken prior to the decision to implement a resettlement process. That is to say they are not applied in the sense of analysis by government or others that provided a rationale for the undertaking of a resettlement project. This is of course a legitimate use of such notions and processes which are in fact undertaken in many cases of resettlement and relocation. In the cases studied, only in the lower Belen resettlement process was it possible to identify a fully fledged cost benefit analysis applied for the current New Belen scheme and for the extant Sustainable Belen Project. In both cases the cost benefit equation was negative with the New Belen scheme less so than in the case of the suspended Sustainable Belen Project (see Peru national report). Peruvian law is the only circumstance where econometric cost benefit analysis is required in order to substantiate a resettlement versus an on site improvement process. Risk analysis, understood as a search to measure and understand the risk conditions existing in a community or area affected by different hazards, is almost inevitably undertaken in some way or another prior to decision making. This may be based on empirical observation, experience or perception or on more sophisticated approaches with systematic measuring of hazards, exposure and vulnerability.

In the present project, cost-benefit and risk analysis are used as synonyms for post resettlement analysis of gains and losses, advantages and disadvantages. They refer to the outputs of resettlement, measured in the short and longer terms, and how they are perceived or measured by beneficiaries, decision makers and implementers. Cost-

benefit or risk analysis essentially refers to the advantages and disadvantages, gains and losses, or positive and negative impacts of resettlement. Cost signifies existing risks maintained or repeated or new risks incurred. Benefits refer to risks reduced, avoided or addressed. “Risk” is understood in a full development scenario including not only disaster risk (the probability of loss and damage with the occurrence of damaging physical events) but also chronic and everyday risks that signify a loss of opportunity and are a reflection of disadvantage for the population- bad health, insecurity due to social and family violence, unemployment, malnutrition etc.

Costs and benefits can be explained by structural drivers or conditioners or by personal characteristics, capacities and adaptation opportunities. Following the concept used by the India research team, risks and benefits relate to the opportunities that exist for asset building seen from an economic, social, cultural, psychological, political and physical perspective. A sustainable livelihood framework and process is thus implied in looking at benefits and costs.

Outputs may be measured in quantitative and/or qualitative terms and be either positive or negative. Analysis should permit an understanding of the balance or contrast between these and their impact on attitudes, decisions and actions in support of or against the resettlement scheme and process. Quantitative analysis pushes us towards more traditional econometric techniques couched in terms of summation processes that take into account the additional or reduced costs to the individual or to implementers in achieving different outcomes (such as mobility, mitigating or reducing disaster risk in old and new locations, housing and service provision). Qualitative measures take us along the road of intangibles and the “unmeasurable”-cultural identity, social cohesion and networks, lifestyle needs and wishes, identity with place, psychological security etc. As explained and argued in the Peruvian research, more traditional quantitative cost benefit analysis refers to

aspects captured under the notion of “exchange value” while more qualitative aspects are better considered under the notion of “use value”.

Outputs (costs and benefits) accrue to different and many times varied social actors, ranging from the beneficiaries (families, individuals, neighborhoods, which in turn may be classified in terms of existing types, functions, roles, position etc.) of resettlement through to those involved in the decision and implementation process (government at different levels, builders, planners etc.) and collateral agents that have derived benefits from existing settlements (NGOs, commerce, churches, service providers, etc.) or could derive benefits from new settlements (local government at the resettlement site, already existing population and existing commerce, service providers and business persons near or around the new site, etc). Clearly from a humanitarian and social perspective it is the costs and benefits as accruing to or perceived by beneficiaries that should assume a higher status although we know that decisions are taken and results forged according to the values of implementers and decision makers. Such a conclusion substantiates the need for highly participatory processes from the outset and throughout the resettlement process.

Outputs can be time related and will vary according to the time period considered, taking into account the long (10 years or more), medium (5 to 9 years), short (1 to 4 years) and very short (less than a year) terms. Initial negative or positive overall and individual results may be transformed over time and originally difficult or unsuccessful processes may be turned around and vice versa. Longitudinal analysis can allow us to understand the processes at play including the role of social organization, government support mechanisms with infrastructure or employment creation, contextual factors relating to the town or city and the opportunity they provide for integration and employment. Unfortunately, the time frame of the present research does not allow for a longitudinal analysis, although some aspects of this are touched on in research in Mexico and Colombia where the resettlement schemes analysed have been in place for some time.

Outputs are also typology related. A broad categorization of types of movement would include ex post disaster related, or preventative preimpact movement, and climate change induced relocation from previously safe sites. Whether it is a resettlement (longer distance movements accompanied by recreation of life conditions and livelihood options) or relocation (shorter movements where existing conditions can be taken advantage of in work, service provision, social networks, cultural ties etc.) process will be important. The size of settlement or community is also significant, as is the size of the town or city where resettlement occurs and the type of social structure and livelihood basis that exists in the original and new settlement.

Outputs may be classified differently including according to economic, social, political, cultural, psychological, organizational, governance, urban planning, environmental, health, urban or regional considerations. The challenge of measuring and dimensioning intangible benefits and impacts is always present, never mind which category we are dealing with. Due to the time frame for this research and the range of cases involved such a typology is referential but not exhaustively dealt with. This contrasts with the case of India where more concentrated and intensive research has permitted far more detail and disaggregation.

In the present research endeavour it has been possible to pursue an analysis of advantage and disadvantage, gains and losses from a principally qualitative perspective with some quantitative aspects covered. Analysis is more general than specific and takes into consideration different stakeholders recognizing that each case analysed is a world unto itself in many ways.

Finally, it is important to point out that costs and benefits have been looked at in two ways: firstly based on post resettlement or relocation experience in different time frames (from 28 years ago in Colombia til three years ago in Peru) and secondly, in the case of Peru and Mexico, as they relate to evaluations under pre movement conditions where a resettlement process has been announced for the future. That is to say, analysis based on people's perceptions or considerations as to future costs and benefits. Such perceptions and considerations inevitably feed into and influence the attitudes and position taken by different persons, families or groups when faced with the decision to resettle.

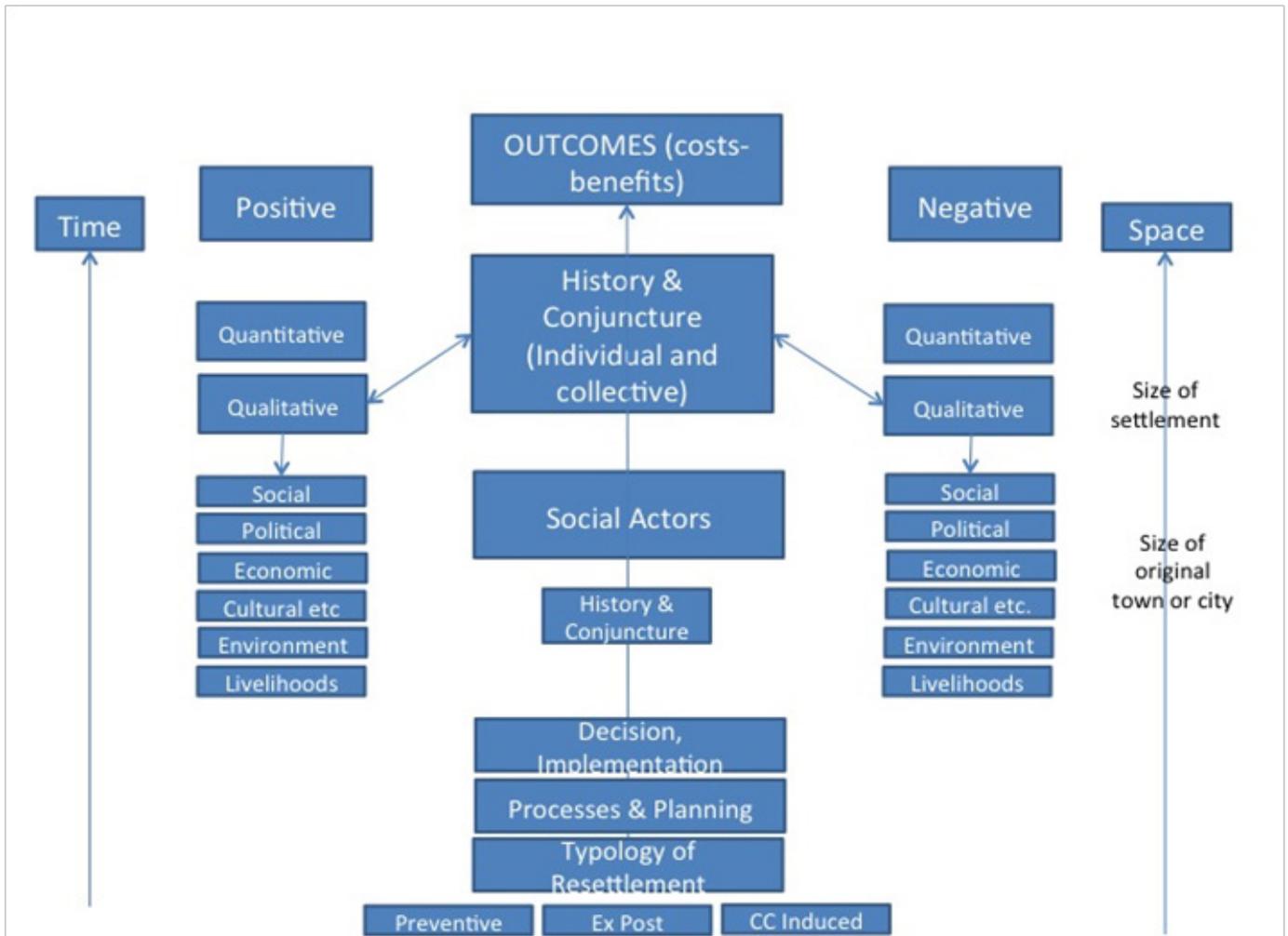
Clearly, both post and pre resettlement valorations will be tinged in differing degrees with subjective considerations and inexact evaluation. In the case of pre movement evaluation this is more likely to be true and operate to a greater degree, being influenced by politics, social pressures, perceptions, individual and collective influences on thought, etc. This is the case with Peru and the New Belen scheme which, moreover, is a large scale scheme where distortion of notions and ideas and influences beyond the family and the beneficiary operate on a large scale. One way or another, an understanding of how costs and benefits are measured or valorized in pre movement conditions is fundamental as it will normally show the importance of pre resettlement communications on the part of decision makers and implementers and the need for ample participation on the part of beneficiaries. Distortion, manipulation, political gerrymandering, imposition of others' values and criteria is much more likely where such conditions are not satisfied. This is amplified where prior government schemes have failed with little knowledge of the whys and whereabouts of such failure, as in the case of the Sustainable Belen Project.

**3.2 On interpretative models of gains and losses, explanation and outcomes.**

Discussion amongst the research team both in LAC and in India and Africa concluded with a first guiding hypothesis, namely that specific outputs over time are closely related to and explained by the original decision making and implementation processes. Here, local versus national inputs and knowledge, local and beneficiary participation in decision making and implementation and sensitivity or not to cultural mores and needs come into play. Decision-making processes and implementation procedures may be subverted or downgraded in their effects due to contextual or historical factors in situ. With time new conditions can be forged and the resettlement outcomes altered in both positive and negative ways.

This complex scenario is depicted in the diagram reproduced on the following page, originally posited by the LAC team and modified after discussion with the full research group from Africa and India.

Understanding of the causes of different impacts or outputs and their classification in accord with the type and magnitude of proposed resettlement schemes should provide important inputs into future decision making and implementation processes. The lessons from this analysis should be built into ad hoc, ex ante decision and implementation formats. Here it is important to point out that many of the criteria used to judge the efficacy and goodness of resettlement projects in ex post evaluations were probably never considered in the original decision making and implementation process. This makes such evaluations rather utopic experiences, valid in pointing out errors but invalid in positing that results do not conform to posited goals or needs (as limited or circumscribed as these may have been). Many times the singular objective of reducing disaster risk dominates the project process while the wide ranging social, economic, cultural, psychological and other considerations that are accepted to be fundamental in success have rarely been considered fully or at all during implementation.



### 3.3 Conditioning factors in understanding resettlement impacts and the evaluative process made by beneficiaries and other stakeholders.

An overarching fundamental theme in an explanation of the decisions taken and the outputs achieved relates to the position resettlement decisions and prior political, social and economic processes have with regard to overall disaster risk policy, and this in turn with sector and territorial, environmental and social development planning and policy. This is relevant both with corrective risk reduction strategy reflected in post impact and climate change related resettlements and with pre-impact preventative resettlement. Consideration must be given here to how much the more lasting option of prospective land use planning and normative controls of location in hazard prone areas, searching to avoid the need for later resettlement, has been considered, and in what framework.

A basic tenet of our research and understanding of the often negative outputs of resettlement is that many resettlement decisions and processes are guided by a narrow view of risk that essentially relates to avoiding exposure to hazards and thus, disaster risk. Such views are “determined” by the ways DRR is seen and who enacts its postulates and seeks for results. Moreover, when resettlement schemes are analysed ex post and many times found to be lacking, the analysis is, as we have pointed out above, often undertaken on the basis of a far wider ranging series of “risk” conditions or livelihood opportunities. These include health, social cohesion, income and employment opportunities which clearly have never been taken into account when resettlement criteria and decisions were decided. The contrasts, conflicts or relations between “disaster risk” and “everyday risk” and the lack of a clear view in resettlement policy that this should aim for wider development goals (including contributions to poverty reduction, land use planning, environmental control, transformational development etc.) may in many ways relate to the sectoralization of attitudes towards disaster risk and the lack of its integration with wider development concerns and actors. Outcomes then become the result of approaches, attitudes and mindsets

as to why and how to enact disaster risk reduction and according to what guidelines and criteria. Here we can testify to the fact that resettlement – when enacted under conditions of environmental stress – is seen primarily to be a disaster risk management and reduction but not an integral development problem.

There is of course a complex contradiction in all DRM work. The very reason most people are in harm's way relates to their “underdevelopment”, exclusion or marginalization. That is to say, persons in conditions of poverty are more likely to be at risk due to lack of access to safe land or safe housing and building practices. Thus, if resettlement is seen primarily as a means of getting people out of unsafe environmental conditions without transforming their livelihood conditions, their asset accumulation and capabilities and capacities, resettlement is likely to only be a means of trading risk of one type (disaster risk) for increased risk of another type (chronic or everyday risk). In reality, many times resettlement does not even eliminate disaster risk but only recreates it in a different or even similar form. Only through integral planning methods where overall holistic risk is considered can resettlement hope to achieve sustainable goals. The hypothesis here is that in practice this is not the case and DRR enacted through resettlement is developed with little consideration for other forms of risk and their reduction.

It is within this overall context and according to the basic hypothesis detailed above that research took place. This searched for complementary diversity among countries and an accumulative result that pushes the notion and method of outcome analysis forward, providing results, criteria and considerations that can be used in future decisions on resettlement and on the planning and administrative process this should follow. Attention to the complexities associated with climate change induced changes in historical patterns and manifestations of hazard were sought, but research was firmly based on the notion that vulnerability and exposure and livelihood precariousness are still the dominant aspects to overcome with policies directed at hazard prone communities.

## 4. Major results and conclusions from research on costs and benefits

Case studies of resettlement undertaken during the present project, and elsewhere, on physical hazard related resettlement and relocation are generally negative as to outcomes, with some outstanding exceptions that are explained by the particular circumstances and conditions under which they are enacted. The sui generis nature of much work in this area is clear and results are very much case dependent and influenced by the very different conditions under which they are enacted. Despite this, many results are in common despite different on-the-ground processes. Here we will concentrate on providing a summary of major results as these have appeared in common and idiosyncratically in LAC case studies. A consideration will also be given to the diverse and discriminatory factors that have impinged on common outcomes wherever they may have occurred.

The major factors that favor a negative balance in costs and benefits are the following:

- Compliance with legal and normative requirements as regards human security from hazards in the aftermath of disaster and which lead to concerns as to legal action against non complying public servants, leads to a bureaucratization of procedures and ignorance of wider concerns associated with resettlement, be they social, economic, environmental or cultural.
- The tendency to see resettlement as essentially a housing and service provision problem where getting people out of harm's way is the preponderant concern and the wider livelihood, development and poverty reduction needs of the population is ignored or forgotten.
- Problems of coordination and participation between relevant government sector ministries.
- The lack of experience with resettlement and a rapid turnover of professionals dedicated to such activity.
- A lack of coincidence between the cultural, aesthetic and functional premises of those designing resettlement schemes and the backgrounds and needs of local populations.
- The political nature of the problem and the manipulation of information and ideas among contrasting groups.
- The state of deprivation, exclusion, need and resilience of beneficiary populations makes them easy "victims" of inadequate schemes where the satisfaction of needs related to housing, land security and access to services in particular tend to override the satisfaction of wider livelihood needs (employment, incomes, health and security).
- Beneficiaries are provided with information but are not part of decision making as such on location, housing, services etc.
- The use of post impact resettlement as political expediency and a quick fix approach to resolving problems along with a failure to guarantee adequate funds for following through with and making good on resettlement requirements. This is especially true with regard to local governments who are normally responsible for service provision on site and land titling.

Independent of the existence of one or more of these conditions and circumstances operating in the context of post resettlement conditions, research in Peru on an as yet mostly incomplete resettlement process is illustrative of things that can occur where the original settlement is large, has a long standing cultural and social position, and where multiple stakeholders are involved and multiple social processes are active. The situation of Lower Belen is in no way comparable to other sites studied in other countries, serving once more to illustrate that each case has its own characteristics even if demonstrating various facets in

common. The whole process by which future costs and benefits are analysed and internalized, thus influencing population in terms of acceptance or not of movement to another site, may be examined in detail in Lower Belen. The majority of resettlement schemes are not, however, essentially preventative but follow on from severe damage and loss where conditions for protracted and detailed discussion and formation of perceptions do not exist.

In Lower Belen the long established and highly populated area has inevitably been associated with a highly diversified livelihood base, mostly informal but with elements of formality as well. From legitimate business through to criminal activities, different groups have made a living out of fishing, farming and market commerce; as well as drugs, child enslavement, prostitution and other illicit activities. Churches and NGOs, local government and others have derived benefit from the area over the years. Such a situation has inevitably given rise to contrasting perceptions and views on resettlement, tinged with notions of personal or group benefits or costs. This leads also to subjective opinions on such costs and benefits, and a social movement has grown defending and opposing such a process. This has been coloured further by the fact that due to failed projects and promises in the past the population is less likely to believe government as to new proposals, concocting ideas on costs and benefits that probably do not correspond to reality. However, this is further complicated by the fact that to date some 1000 families have been resettled in different areas outside of the Lower Belen area but close to or on the main resettlement site at New Belen. These have their own opinions and measures of costs and benefits which can be contrasted with the perceptions of as the yet non mobilized population.

According to Angel Chavez (in the analysis provided in the Peruvian annex to this report), this context provides an opportunity for the erosion of the as yet still dominant, more-well organised, determined and numerous anti movement lobby through what he calls the “free rider” effect. That is to say, persons who are possibly in favor of movement, but who are reticent to take a final decision. They do not participate actively in defending the idea of resettlement but are susceptible to persuasion on the basis of the evaluations and ideas of already resettled persons. The experience of already resettled persons whether in the New Belen scheme or in Calipso or Villa Olimpica becomes critical for the final decisions of those that have as yet not moved or been moved.

#### **4.1. A synthesis of notions and evaluations as to costs and benefits across the studied cases in LAC.**

One overriding consideration exists when searching to evaluate costs and benefits, advantages and disadvantages, gains and losses from resettlement. This is the fact that such processes are generally

enacted in the context of poor to destitute population groups where disaster risk is a result in good part of this context and where reducing disaster risk per se without consideration of the alleviation of other livelihood risks is an unsustainable premise. Any evaluation of costs and benefits of disaster risk reduction resettlement processes must inevitably pass through a filter where the attitude and conclusions as to these is contrasted with wider livelihood security and sustainability criteria. If satisfaction or dissatisfaction with resettlement were to be evaluated merely in terms of the reduction or non reduction of disaster risk, the results of analysis would be vastly different in many cases as compared to when people evaluate their experience in a wider livelihood context. Multi risk analysis is thus required and in accepting this we also accept that evaluation on the part of the population is coloured by diverse and varied political, economic, social and cultural criteria. It is many times objectively subjective or subjectively objective!

Results of analysis in the towns and cities considered in the LAC research which take into consideration the above argument as to the livelihood contexts in which resettlement takes place basically lead to the the same conclusions and results, with some outstanding differences. A summary of the results provided in the three national reports annexed to this summary document include:

- Only in those cases where the resettlement was small scale (Yarumales, Manizales), involved short distance movements (Celestun FONDEN, Yucutan), was based on an already existing urban expansion with pre-existing service provision (Flamboyanes-Progreso, Yucutan) or involved an innovative split community based solution within the same city or town (La Playita, Manizales) were the benefits seen to be well in excess of the costs. The split community solution whereby families were provided with finance to allow them to purchase a house in any part of the city which satisfied their needs, was probably the most successful of all.
- In each of these cases the implementation process was characterised either by innovative elements involving different types of professional collaboration, high levels of agreement with, or participation by the population, high levels of regional or local collaboration and incentives, or a combination of these.
- Large scale processes such as that studied in Iquitos with the New Belen scheme are exceptional, the exception that proves the rule, and rarely to be found. But given the commitment of government, due to the exceptional circumstances in which these large scale processes arise (in Colombia various comparable cases exist outside of the Project study area), multi institutional and multi process implementation

procedures occur and can objectively lead to a more adequate costs-benefit balance. Moreover, such processes have normally taken place in circumstances where large scale disaster has not yet occurred and time is on the planners' side. Moreover, budgeting procedures exist that go beyond those present in an emergent or emergency process. However, where such processes occur in long established, extremely marginalised and excluded populations, located in largely excluded areas of the country (as is the case with Lower Belen and Iquitos) both the process of resettlement and the process by which populations evaluate the costs and benefits of any future planned movement is extremely distorted by political gamesmanship, protection of vested interests and the very exploitative context in which social relations exist in the risk area. Under such circumstances it is only with a consideration of the opinions of the already resettled population that a balance can be introduced in analysis. Clearly, interviews with resettled populations have shown that the balance between costs and benefits is positive and few would contemplate moving back to the original Lower Belen area. This probably means that the so-called free rider effect will increasingly operate and the strength of the anti resettlement factions will be eroded over time.

- Clearly a resettled population desires easy access to employment, services, social networks, and environmental health. However, interviews and analysis at multiple sites show that if titled housing and land is made available and services are adequate, the balance of costs and benefits is seen to be favorable in general, despite downfalls in the provision of other social and economic attributes. If, as in the case of Mexico, originally occupied land does not

have to be handed over to the State but can be used later for productive purposes, the incentives and balance of costs and benefits turns out to be even more favorable. Resilience of the population to prior conditions of environmental and social stress ameliorate their demands for a more adequate solution and over the years the resettled population make good on improvements in employment, services and overall location costs.

- In the majority of the Colombian and Mexican cases, the population expressed dissatisfaction with early resettlement employment opportunities, increased costs of transport to work, the breakdown in family and other social relations, the inadequacy of original service provision and house size and design, but were still of the opinion that resettlement had improved their overall situation and increased their security when faced both with physical hazards and social violence. On many occasions it was expressed that the concern for security from flooding or other hazards was not high on their priority list, being overshadowed by everyday life concerns.
- The combination of the high levels of exclusion and marginalisation of resettled populations with high levels of on site resilience, and the importance for the population of being given free housing and land make the population prey to bureaucratic and organizational inefficiency and lack of comprehensibility. This is especially true where participation is low. Government can get away with doing little and still have a result where the population sees their situation as improved. Such a context requires far more consideration for ethical and moral issues, backed by more concern for intersector and territorial planning mechanisms



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## 5. Conclusions as to controlling impact and outcomes in the future: towards a policy brief for Latin America

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There is a clear relationship between outputs and the ways resettlement is considered and conceptualized (from considerations couched in terms of disaster risk reduction and housing and service provision through to wider spatial, sector and livelihood development aspects and criteria) and its insitutional base and logic of implementation. This has been evidenced by the results of the research in Mexico, Colombia and Peru and as one reviewer of our research results commented “adds more grist to the mill” as far as evidence against bad practice goes worldwide. The results, obtained in the frame of a concept which placed emphasis on the causal aspects of outputs and perceptions, allows us to reach a series of conclusions as to the necessary factors or conditions for any succesful, or at least acceptable resettlement process which has a balance of positive outputs when faced with disaster risk or disaster associated with hydrometeorological hazards and climate change. As such, these conclusions offer a basis for the development of a regional or more global policy brief aimed at policy makers and project implementers. Moreover, they constitute overall conclusions of the research endeavour undertaken in phases 1 to 3 of the present Project. We do not conclude automatically that such conclusions are valid for resettlement associated with geological hazards or with other social demands and needs such as development or violence based resettlement. But we are sure many are also relevant in such situations.

In order to present such conclusions, we will first announce the more general, context and concept based conclusions and then those associated with the different impacts or outputs that have been seen to arise in the resettlement schemes analyzed.

### Overriding considerations:

1. Most resettlement-relocation associated with hydrometeorological and other hazard types in towns and cities is inspired by the on-going, recurrent experience with disaster loss and damage or by the occurrence of a large disaster that seriously affects the population, livelihoods and infrastructure. Some type of formal risk analysis normally backs up the decision to resettle but there are **very few cases where resettlement is based solely on disaster risk analysis that precedes some type and level of prior disaster loss.**
2. The only sustainable means for avoiding the need for resettlement is by the use of urban land planning strategies and instruments that efficiently and equitably prohibit the occupation of such sites and through the prohibition of investments in services and infrastructure by private and public sector organizations at such sites. In order for this to be successful **land use planning, investment decision-making and urban governance must be greatly improved and secure land for occupation by poorer population made available** through the creation of viable municipal land banks or reserves at a local level. Despite this fact it must also be accepted that with human intervention in the environment, land degradation and climate change places that were previously deemed safe for occupation may become increasingly hazardous. This requires actions which protect places from such effects and outcomes.
3. Due to the complex economic, social and cultural factors and costs involved in a large majority of relocations or resettlement of populations living under

climate-related risk, this should be considered as the **last possible management option and solely contemplated for extreme cases**. Before deciding on resettlement of already exposed populations all other possible options for reducing risk should be closely considered and costed.

4. Where considered absolutely inevitable and essential, population relocation/ resettlement should never be conceived and planned as a project, with its own specific and limited disaster risk reduction goals, although these clearly should be present in the formulation of objectives. Given that the vast majority of at high risk communities are poor or very poor and it is poverty which best explains their hazardous location and the levels of risk they experience, **all resettlement projects should be formulated and planned in terms of wider poverty reduction goals and associated employment, income and livelihood needs**. That is to say, they should be considered from a **wider sustainable development perspective and involve relevant development institutions**. Schemes that judge success primarily in terms of disaster risk reduction goals are likely to fail. Poor populations will always favor access to employment, income, livelihoods and social and economic infrastructure over the singular objective of reducing disaster risk or avoiding infrequent disaster. **Risk tolerance and trade-offs between everyday, chronic and disaster risk contexts will inevitably occur**.

5. Population resettlement projects should not only deal with the physical components (housing, infrastructure and service provision) of habitat but should also give equal importance to the **social, economic and cultural needs and requirements of the affected population**. While the physical components and land and housing security and ownership are the conditions generally **most valued by the population**, the lack of, or difficulty in sustaining livelihoods, employment and social-family cohesion and networks leads to a serious risk of failure.

6. Resettlement does not have to be governed by a specific law, although this option may be contemplated under determined national and local conditions. Rather than dictating rigid and fixed conditions and characteristics of resettlement schemes, laws or norms should clearly establish the holistic and integral nature of resettlement and the roles, types and levels of coordination and collaboration that must exist among relevant national and local government agencies. These should include land use, employment and livelihoods, housing and infrastructure, social relations and cultural concerns, amongst others.

7. **Typologies** of resettlement according to type and size of urban area and type and size of resettlement must be established and **procedures adapted to accommodate the differences**.

#### **On the scientific and information base for resettlement:**

1. When resettlement is judged to be unavoidable, **a rigorous and objective scientific assessment** of the actual risk conditions of the population and the need for relocation must be available. This scientific evaluation should be **comprehensive and participatory**. It must include not only a consideration of physical hazards (magnitude, intensity, recurrence, etc.) and the levels and types of exposure and vulnerability to these, but also **the social needs of the population, the range of risk contexts they face and their overall attitudes and perceptions of risk and its different manifestations**. Under many circumstances the population **understands the risk it faces**, have been affected by disasters in the past and are many times willing to accept determined levels of disaster risk in order to **maintain ongoing livelihood and lifestyle options, thus reducing everyday as opposed to strictly disaster risk**.

2. The national and local government institutions responsible for DRM should **monitor areas of high unmitigable risk** in order to avoid further urban occupation and densification and increased progression of risk in such areas.

3. On the institutional side, prior to a relocation the following should be **evaluated accurately** (see below for detail as to these aspects): a) the most appropriate site for the new settlement; b) the existence of a viable project for the use of vacated land; c) the financial resources available and the sources for these; d) the ability of municipalities to meet their fair share of needs (usually the provision of basic services); e) opportunities for the project to realistically be concluded, culminating in the delivery of the corresponding property titles.

#### **On the siting of resettled communities and the use given to abandoned land:**

1. Location is fundamental for success of resettlements. Location is many times a surrogate or indicator of employment and income opportunities, costs of transport services to and from work or for recreational purposes, access to service provision, as well as certain health related and other social concerns. Where dealing with large communities requiring relocation **maximum attention must be given to their siting in lieu of the above mentioned factors and circumstances**.

2. Since relocation of urban populations is most closely related to **urban land use and planning issues** and the spatial development of urban areas, it is essential that protocols be established for resettlement projects as part of existing rules and norms. These should clearly assign the responsibilities of different levels of government, private sector and civil society and the procedures for implementation.

**The review and updating of existing legal frameworks relating to urban development planning and land use** is urgently required in many countries.

3. Many times, due to land costs and availability, it is difficult if not impossible to procure an adequate, well located lot of urban land and resettlement takes place many times on distant and socially and economically untenable land. Although it is normally considered that a community should be moved as a whole **this idea should not always dominate.**

Even where a single adequate piece of land is found, able to accommodate all of the resettled population, consideration should always be given to other options involving the **separation or segregation of an existing community with its relocation to different parts of a city.** This may more adequately serve the interest and needs of the population in terms of work, income, social relations and costs. Such division of the population, by groups of families or individually, can be fostered by schemes that allow, for example, for the purchase or rental of used housing in different parts of a city, trade-off schemes whereby a proposed resettled population could take the home of others and these take the new location offered in the relocation scheme.

4. Abandoned land should never be used for new housing or made available to other population groups through invasion or illegal occupation. The abandoned land should be ceded to the State on the hand-over of new, titled housing in relocation sites. Incentives and schemes for environmental and recreational uses in abandoned high-risk areas should be considered as a mechanism to prevent attempts to use it for new housing and to increase the ecosystem service provision in the urban area.

#### **On the settlement pattern and housing for relocated populations:**

1. Plans for resettlement in urban areas should include all those services necessary for a new generation of safe and healthy urban spaces. This requires **participation and coordination of sector and territorial development institutions** in order to achieve the goal of safeguarding the physical and livelihood integrity of the population at risk.

2. Cultural diversity is the basis of **numerous lifestyles in cities.** These merit close consideration in the design of resettlement schemes in order to avoid traumatic changes in the target population. New houses should be **functional and appropriate to the geographical conditions and needs of the population, as well as being consistent with their customs.**

3. Given the diversity of climates and customs that can prevail in a country, **standardization in the style, size and layout of housing for relocated populations should be avoided** if what is sought is permanence of the population in the new settlement and a minimizing of the discontent that a project of this type can and often does generate. The use of local materials and techniques and the “local” design of houses has a clear rationale, and knowledge is required as to autochthonous or local styles in order to achieve improved results. It will always be far **less costly economically and socially to invest in improving traditional housing construction techniques,** than imposing inefficient and degrading models with which people cannot readily identify. In order for this to occur, **socially and culturally sensitive architects and builders must be employed,** many from the areas where relocation is enacted.

4. The practice of granting free housing **is not sustainable in general** and must be avoided. Such practice involves a high financial cost for relocation projects, high levels of inefficiency, and low incentives to population.

#### **On participation:**

1. The participation of the population during the earliest stages of the process and later must **stop being seen by policymakers as demagogic and unnecessary.** Decision makers often view the participation of society as a mechanism that hinders or delays process due to the large number of interest groups that have to be considered and taken into account. However, practice has shown that even if there are conflicts involving people in planning a project of this type, there are greater **chances of success when negotiating such conflicts than when decisions are imposed without consultation.** Participation is the only way of ensuring appropriation and rationalization of costs and benefits.

#### **On financing of resettlement:**

1. Finance and technical expertise must be ensured and legislated **beyond particular periods of government** in order to promote continuity and successful completion of schemes. Full financing

for an integrated approach to resettlement must be guaranteed from the outset.

2. Good practice with financing can include: the creation of a contingency reserve fund financing the initial actions of a resettlement process; sector-specific interventions financed with institutional budgets; the articulation of financing to housing bonds created for the various social housing programs handled by the State.

3. The economic benefits generated by the activities on abandoned land (income, employment, production etc.) can or should be **shared with the relocated population**, thus respecting and maintaining past ties to land, ensuring an additional incentive for accepting relocation and guaranteeing employment and income for the resettled population or a part of it.

## Bibliography

Blaikie, P; T. Cannon; I. Davis; B. Wisner (1994) **At Risk: Natural Hazards, People's Vulnerability, and Disasters**. Routledge, London and New York.







