

# The Itaparica Dam Project in north-eastern Brazil: models and reality

by John Horgan

Development-induced displacement represents one of the major challenges to international organisations and NGOs working with displaced people today. This article critically examines Dr Michael Cernea's eight-stage model of the processes involved which lead to the impoverishment of those displaced.

Over the last 10-15 years, a minimum of between 80 and 90 million people have been displaced by dam construction and urban transportation projects alone, and each year a further 10 million are uprooted by development projects generally. Given that increasing industrialisation, electrification and urbanisation in areas of the South are likely to further increase this figure, international organisations and NGOs are currently drawing up strategies to deal with the human repercussions of these processes.

In September 1996, academics and practitioners from 24 countries came together to address the problem at the Second International Conference on Displacement and Resettlement, at the University of Oxford. Existing models to mitigate the human cost of development projects were built upon and improved, and the Conference Report states that the "single most significant technical finding is that displacement need not necessarily lead to impoverishment"<sup>1</sup>. A detailed model was presented to the Conference by Dr Michael Cernea, then Senior Adviser to the World Bank on Social Policy and Sociology, which identifies eight different processes in development-induced displacement, the convergent and cumulative effect of which is the rapid onset of impoverishment<sup>2</sup>: (i) landlessness, (ii) joblessness, (iii) homelessness, (iv) marginalisation, (v) increased morbidity and

mortality, (vi) food insecurity, (vii) loss of access to common property and (viii) social disarticulation.

Cernea recommends that the model be used as a tool to anticipate the major risks of development-induced displacement, explain the behavioural responses of the displaced, and guide the reconstruction of their livelihoods. The model provides a means by which the problems faced by development displacees may be addressed. This article, however, questions whether the model lacks specific recommendations for the implementation of any plan of action devised from it, with particular reference to the experience of those displaced by the Itaparica Dam in north-eastern Brazil - a project which has often been cited as an example of good practice.

## Historical background

The São Francisco River in north-eastern Brazil captured planners' attention both for power generation and irrigation projects. The first two dams in the valley - Paulo Afonso I (1955) and Paulo Afonso IV dam at Sobradinho (1974) - were built with World Bank assistance. For the rural majority of those displaced by the latter dam the experience was disastrous, in that cash compensation was limited to those farmers who held legal title to their land. In total, approximately 120,000 people were displaced by the

dam, and around half of these received no compensation at all. Many became virtually destitute overnight, dependent entirely on emergency food and shelter programmes.

## The Itaparica Dam Project

The Companhia Hidroelétrica do Vale do São Francisco (CHESF), a branch of the state energy agency Centrais Elétricas Brasileiras, SA (Eletrobras), planned the Itaparica dam in the mid-1970s. Forty thousand people were to be displaced, three-quarters of them reliant on agriculture. Land expropriations began in 1977 and construction of the dam in 1979. Initially, CHESF did not have resettlement plans for most displacees - 10,000 urban people were to be rehoused alongside the lake but the 30,000 rural people were to be offered financial compensation only. Mindful of the Sobradinho experience, the local population mounted sporadic protests and refused to cooperate with surveyors. This soon led to the formation of Polosindical - a federation of local communities and 13 rural trades unions, supported by radical sections of the Catholic Church and international NGOs. Polosindical campaigned for CHESF to make their maps and plans public so that the impact of the dam could be accurately gauged, and public rallies were held in Petrolândia, the region's principal town, to demand that resettlement plans be created and made public. CHESF released their plans and maps after the peaceful occupation of their offices in Petrolândia.

By 1985, however, relatively little progress had been made in terms of an adequate strategy for resettlement. CHESF had established a resettlement working group, which produced a resettlement plan, but Polosindical, who took the view that most of the proposed sites were unsuitable for irrigated farming due to salinity in the soil, were not consulted. Public rallies were

strengthened by an international campaign by NGOs, most notably the US-based Environmental Defence Fund (EDF), who made strong representations to the World Bank. In 1985 World Bank officials concluded that the Itaparica resettlement plan was substantially flawed, and they made approval of the second and third tranches of the previously agreed power sector loan (total US\$500 million) conditional on the development of an adequate strategy to mitigate the impact of displacement at Itaparica. In 1986, the World Bank drew up the Itaparica Resettlement and Irrigation Project, and in 1987 they lent US\$132 million towards the project (supplementing this in 1991 with another US\$100 million).

At the end of 1986, following occupation of the site for six days by thousands of prospective displacees, CHESF and Polosindical eventually signed an agreement which included many of Polosindical's demands. These included specific dates for land acquisition; compensation linked to inflation; larger irrigated plots; and, perhaps most importantly, maintenance payments of approximately US\$75 per month, pending the first harvest after resettlement. The Resettlement Project finally began to be implemented. By early to mid-1988, five thousand rural families had moved to 109 new *agrovilas* (agricultural villages), each with a house and an irrigated plot, and an infrastructure of sanitation, health, education and roads. Three hundred rural families had moved to new towns; 500 had opted for cash compensation. Two thousand urban families had moved to new towns. The sluice gates closed in February 1988, and the resulting lake flooded 18,000 ha. Another 40,000 ha were to be used for rainfed agriculture and grazing.



Paul Guayle/Panos Pictures

The Sardar Sarovar dam on the Namada river, India, will submerge the land of this mother and daughter

## Analysis

Although Cernea's model was not used to design the Itaparica Resettlement Project, the Project marked an important breakthrough in the way the World Bank treated displaced people, and in effect there is a substantial degree of coincidence between the two. Returning to the model, Cernea recommends that we 'turn it on its head' to create an action matrix for reconstructing the livelihoods and incomes of those displaced, with four distinct elements, as follows:

### 1) From landlessness to land-based re-establishment; from joblessness to reemployment.

Cernea describes the process of re-establishing people on cultivable land or in income-generating employment as "the heart of the matter in reconstructing livelihoods"<sup>3</sup>. The Itaparica Resettlement Project offered a variety of new livelihoods, ranging from land-based options in purpose-built agricultural villages, to resettlement in new towns. However, the actual experience of many of those resettled proved strikingly different.

Construction of the irrigation works was halted in 1989 due to lack of funds, and was only resumed in 1991. The first irrigated plots only began to operate in 1993. As a result, when they had been rehoused, many people felt unhappy at being unable to work the land and having to rely on handouts. In 1997, Polosindical submitted a request to the World Bank Inspection Panel to investigate the Resettlement Project.<sup>4</sup> One of their complaints referred to the problems engendered by incomplete or badly functioning irrigation systems.

In this case, the delay in implementation of a detailed and comprehensive plan for reconstructing livelihoods resulted, in fact, in dependency and loss of dignity for the displacees.

### 2) From homelessness to house reconstruction.

Cernea quotes the improvement of shelter conditions as being "one of the relatively easier achievable impoverishments in reconstructing resettlers' livelihoods"<sup>5</sup>, though he qualifies this by pointing out that it is still relatively rare. The Itaparica Resettlement Project involved building new, relatively high quality housing. Again, however, a gap between theory and practice emerged.

Polosindical complained that buildings in the new *agrovilas* had deteriorated, with deep cracks developing in the walls in some cases. Again, lack of proper implementation - in this case shoddy building work - reduced a plan for new dwellings built with modern materials to a situation in reality which fell so short of intentions as to result in physical danger to some inhabitants.

### 3) From social disarticulation to community reconstruction; from marginalisation to social inclusion; from expropriation to restoration of community assets.

Cernea refers to these facets of social reintegration as receiving only a low priority in current approaches, and points to the lack of sensitive planning for rebuilding social capital, facilitating reintegration and compensating for the loss of community-owned assets. The Itaparica Resettlement Project, however, attempted to maintain communities by consulting people as to whom they would like for neighbours. Practice again, however, fell short of theory.

Although displacees had been consulted as to whom they wanted as neighbours, this did not always work out in practice, and many former neighbours lived in distant *agrovilas*. Also fundamental to the social disintegration which occurred were enforced idleness and doubts about the future.



**First harvest for farmers whose lands were flooded by the Itaparica dam; it took seven years before they received the irrigation equipment promised to enable them to farm the land to which they were moved.**

Polosindical made the following complaints:

- i. Beneficiaries were living in worse social and economic conditions than they did before relocation.
- ii. The delay in implementing the irrigation systems contributed to an increase in violence, alcoholism and family breakdown.<sup>6</sup>

Thus, failure to implement detailed and participative relocation plans, as well as the demoralising effects of dependency caused by failure to successfully establish the irrigation systems, resulted in community breakdown after relocation, which could have been avoided had the plan been adhered to.

#### **4) From food insecurity to adequate nutrition; from increased morbidity to better health care.**

Cernea states that “nutritional levels and health care will depend in the long term largely on progress in resettlers’ economic recovery (land and/or employment)”<sup>7</sup>. He qualifies this, however, by advising that emergency relief may be necessary in the short term, before the effects of economic recovery can be enjoyed. Displacees from Itaparica, on the other hand, took the view that short-term social security payments were unsatisfactory, and there was widespread anger at increased dependency.

Clearly, the lack of implementation of the irrigation programme, if not redressed, will result in a lack of long-term food and health care security for the displacees, these needs being ulti-

mately dependent, as Cernea says, on the restoration of livelihoods. Polosindical believed that a large portion of the responsibility for the problems at Itaparica lay with the World Bank, for failing to ensure implementation:

“In view of the above, we believe that IBRD-World Bank, as a financial institution, bears responsibility for the project’s current state, by omission, by not adequately supervising and monitoring progress in the implementation of resettlements and irrigation systems. The World Bank is obviously not the only one responsible, since the Brazilian Government, Eletrobras and CHESF are borrowers and executors of the work. However, IBRD bears an important share of the responsibility for having financed the work without ensuring that borrowers and executors comply with policies for resettlement and treatment of communities involuntarily displaced by dams.”<sup>8</sup>

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The World Bank rejected Polosindical’s conclusions, and summarised its own position as follows:

“The Bank has complied with all relevant policies in the design and implementation of the Itaparica Resettlement Project. It is true that compliance with the Bank’s requests was not always sufficient, and many unconscionable delays occurred due to an accumulation of factors. However, the history of this project shows that Management and staff made significant efforts to detect and correct problems as they arose and took appropriate and timely action to remedy problems. The current situation is far from ideal, but the shortcomings to which the Request points did not arise from the Bank’s failure to follow its policies.”<sup>9</sup>

## **Conclusion**

In conclusion, if the Itaparica Resettlement Project *per se* is evaluated against Cernea’s model, it appears to be an ideal plan, involving participation and consultation, and dealing with not only physical but social capital. However, there is a very wide discrepancy between intentions and results at Itaparica, which, by the admission of the World Bank, can be traced back to an inability to enforce the implementation of their recommendations.

In his concluding paragraph, Cernea describes improved implementation as one of the factors “apt to make possible the socio-economic reconstruction and development of resettlers’ livelihoods”<sup>10</sup>. His foregoing consideration of this issue, however, is limited to a brief comment to the effect that the model can be used to monitor implementation. The knowledge that the authorities are limiting their actions to monitoring exercises is unlikely to be of much comfort to displacees watching their lives fall apart. Cernea’s model, therefore, falls short in that it contains no active provision for the facilitation of implementation, backed up, if necessary, by adequate sanctions. Assurances that the authorities will take note of the problems faced by development displacees are simply not enough. Indeed, a strategy which fails to consider means to ensure implementation may in fact result in increased impoverishment in the future, in that it may create a false sense of security and encourage the creation of ever more and bigger development projects.

The value of the model as a tool in the construction of a realistic, achievable resettlement plan is not in dispute. Indeed, Cernea enumerates various practical constraints relating to each element

of the model. These refer more, however, to implementability than implementation, and we must beware of making the false assumption that because a plan is practical and achievable, it will therefore necessarily be implemented successfully. The fact remains that practicality does not guarantee implementation, which may be hindered by external factors such as wavering borrower commitment or lack of coordination between agencies (two major factors at Itaparica). It is the identification of strategies to deal with these and similar factors upon which future research should be concentrated.

A ninth risk should therefore be added to the model: 'failure to implement'. Strategies to minimise this risk in practice could be identified using the same method as Cernea used to establish the other risks - a detailed comparison of a large number of case studies seeking to establish common factors in examples of both adequate and inadequate project implementation. The findings would then be used not to shape the plan as such, as this is not the area where the problem lies, but rather to identify best practice in the handling of the plan.

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#### Notes

1. Downing T and Mc Dowell C (1996), 'Conference Statement/Report', Second International Conference on Displacement and Resettlement, 9-13 September 1996, organised by the RSP, University of Oxford, p 1.
2. Cernea M (1996), 'The Risks and Reconstruction Model for Resettling Displaced Populations', paper presented at the International Conference on Reconstructing Livelihoods: Towards New Approaches to Resettlement. Refugee Studies Programme, University of Oxford.
3. *Ibid* p29.
4. 'Request for the World Bank inspection panel to investigate the project for resettlement of persons affected by the Itaparica dam', Polosindical, 12 March 1997.
5. Cernea, *op cit*, p31.
6. Polosindical, *op cit*.
7. Cernea, *op cit*, p37.
8. Polosindical, *op cit*, p7.
9. Report and recommendation on request for inspection: Brazil: Itaparica resettlement and irrigation project (loan 2883-1 BR), World Bank, 24 June 1997, p17.
10. Cernea *op cit*, p38.