

The Polavaram dam in Andhra Pradesh as a case of adverse incorporation. How changing the way we look at displacement can improve the design of Resettlement & Rehabilitation packages*.

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Abstract

Looking at the case of the Polavaram dam in Andhra Pradesh, this paper suggests that in order to design adequate Resettlement & Rehabilitation (R&R) policies, development-induced displacement should be analyzed as a process of adverse incorporation which contributes to the production and reproduction of poverty.

Drawing from the findings of a fieldwork conducted in Spring 2009 in the area which will be submerged by the dam, the paper argues that a displacement-inducing project is never a power-neutral process, but it rather implies an unequal redistribution of costs and benefits, with impoverishment and vulnerability effects.

On the basis of interviews with the affected people and the analysis of the Polavaram R&R package, it is shown how the latter attempts a restitution of the material losses with no consideration for the dynamic consequences of displacement. In particular it doesn't address the problem that payment of land compensation, in an area characterized by centuries of tribal land alienation, will lead to a redistribution of property rights in favor of Scheduled Tribes, but will also create a number of new landless households. The R&R package also neglects the fact that cash compensation alone can't substitute for the loss of the forest, which is a major source of livelihood for most families. This despite the fact that land and forest constitute the basis of the livelihood of the affected population, as confirmed by the results of a choice experiment conducted in the affected area and investigating the type of compensation preferred.

The paper concludes that investigating displacement as the imposed inclusion of a group into a process of capitalistic accumulation through the dispossession of its resources, can help the understanding of its impoverishment effects and moreover can improve the elaboration of fair and adequate R&R packages. In particular it permits to acknowledge the imbalances of power implicit in the project and correct the ensuing unequal distribution of costs and benefits.

KEYWORDS: displacement, adverse incorporation, Resettlement & Rehabilitation package, Poverty Dynamics.

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1. Introduction

Development-Induced-Displacement is increasing in depth and intensity all over the world and particularly in emerging countries (the official and very conservative estimation, provided by the World Bank, is of 10 million people displaced every year- see McDowell 1996, Cernea 2000, Serageldin in Mathur 2006). It is the same nature of the growth process which requires the implementation of projects with specific and disruptive spatial requirements, which have a heavy burden on the environment and the population.

Displacement and its negative consequences so far have been addressed inadequately (or they haven't been addressed at all) and Resettlement&Rehabilitation (R&R hereafter) policies have been unable to avoid the impoverishment of the displaced population and restore the previous level of well-being (see for instance the extensive literary production of Michael Cernea on the topic and the many reviews on the performance of resettlement in India, among which Jain 2006 and Walter Fernandes in Cernea and Mathur 2008) .

Much has been written on the reasons of this failure and on how to improve the design, the implementation and the management of R&R packages. Two recent volumes (Mathur 2006 and Cernea and Mathur 2008), which aim to provide a picture of the advancement in the knowledge about displacement and forced resettlement, stress out how the resettlement costs are systematically underestimated and the budget allocated for R&R inadequate to meet the stated objectives. They also argue that improvement won't be possible as long as an approach to R&R based purely on cash compensation as a restitution of the material losses is not overcome. An effective R&R programme has to approach resettlement as the management of risk and focus on livelihood reconstruction.

While this literature constitutes an important advancement in the debate around R&R and also in the recognition of the intrinsic unfair nature of displacement, it's still weak in linking the performance of R&R to a thicker and problematic (which some might call political economy) analysis of displacement. For resettlement to be effective, displacement must be put into context, identifying how the circumstances in which it takes place determine its dynamic consequences.

This paper argues that compensation and R&R programmes fail because they fail to acknowledge that displacement is a process of adverse incorporation, that is the imposed incorporation of a group of people into a process of capitalistic accumulation through the dispossession of their resources. The affected people are included because their resources are needed, but they bear the costs disproportionately more than they enjoy the benefits of the project. So displacement implies an unequal redistribution of costs and benefits. It's imposed because the decision to implement displacement-inducing projects is the outcome of the interplay of power relations and often of pre-existing conflicts for the access to resources, which determine the winners and the losers. Ultimately, it produces and reproduces poverty because it deprives people of the basis of their livelihoods.

The concept of adverse incorporation has been elaborated to bring poverty back into the political debate, or better to give back a political economy connotation to the debate around poverty and its causes (Harriss 2007).

Adverse incorporation is concerned with the causal processes that lead poverty to be produced and reproduced, where these processes are given by particular forms of interaction among the state, market, community and household (Hickey and du Toit 2007).

Poverty is seen here not as a residual but as a relational phenomenon: poverty is the consequence of social relations of production and reproduction, of property and power, especially those associated with

the spread and growth of capitalism. (Bernstein et al 1992). A recurrent issue emerging from all the authors writing about adverse incorporation and relational approach to poverty (see for instance Murray 2001, Bracking 2003, Green and Hulme 2005) is the necessity to link the macro with the micro level of the analysis, as investigating causality means to tackle the way in which social relations that produce poverty are embedded within the existing political institutions and economic structures.

Following this research path, David Mosse (2007) suggests a framework for an approach to poverty analysis “that understands persistent poverty as the consequence of historically developed economic and political relations [...]; and second, an approach that rejects methodological individualism and neo-liberal rational choice models, emphasizing the importance of social processes and relations of power” (David Mosse 2007:1). According to Mosse, not only poverty has to be investigated as an outcome of the dynamics of capitalism, explicating through relations of accumulation, dispossession, differentiation and exploitation (as for instance stressed in Harris-White, 2006), but also accounting for the social mechanisms, categories and identities which perpetuate inequalities and make those relations possible.

It's not the aim of this piece of work to discuss how the framework of adverse incorporation and relational approach to poverty applies to displacement¹. We take it as an assumption here, upon which the argument is built.

The concern of this paper is rather to show how neglecting the nature of displacement leads to the design of inadequate compensation packages and negatively affects the performance of R&R programmes.

A case study approach will be used to show how displacement deprives people of the (re)sources of their livelihood and how these resources not only can't be replaced, but they are not even adequately compensated. This is due to the fact that displacement is embedded in power relations and environmental conflicts and the resources needed are generally scarce, their access is conflictual and their distribution is skewed. Therefore, displacement and the loss of livelihood have dynamic consequences aside from the loss of material assets, and these dynamic consequences are not accounted for in R&R packages.

The empirical results of a fieldwork conducted in the displacement area of the Polavaram dam in Andhra Pradesh will be used to illustrate how the failure of R&R programs depend on the neglect of the dynamic consequences of displacement, and ultimately of the fact that it's a process of adverse incorporation.

The underlying assumption is that compensation and resettlement so far have performed poorly because of practical difficulties and implementation problems (resettlement *is* a complex and still unknown process) but also because of underlying shortcomings in the theoretical interpretation of displacement. Because of these shortcomings, important aspects of the phenomenon of displacement have been overlooked.

Assuming that the theoretical debate around displacement and resettlement can and indeed has informed and influenced the design of R&R packages (if not their effective implementation at least their guidelines), this paper suggests that an alternative theoretical interpretation of displacement, based on a political economy interpretation of the phenomenon, which looks at it as a process of adverse incorporation, can inform and improve the design of R&R packages.

For this purpose the two major shortcomings of the Resettlement& Rehabilitation package offered by

¹The author is currently working on a paper whose topic is how and why displacement can be interpreted as a process of adverse incorporation.

the Government of Andhra Pradesh to the displaced families will be discussed: the inadequacy of compensation for the loss of land and access to the forest.

In section 2 the most salient features of the Polavaram dam project will be presented and the background in which it takes place will be described. In particular we will mention the conflicts for the access to land and forest which have traditionally characterized the region and how they affected the tribal population. It will be stressed how land and forest represent the sources of the livelihood for the Polavaram affected population and how the ownership of these sources has always been challenged.

In Section 3 the fieldwork which has provided the empirical data for this paper is described. A small survey and a choice experiment have been conducted with the population affected by the Polavaram project and some of their results will be used in section 4 to show how the Polavaram R&R package neglects the dynamic consequences of displacement, not adequately accounting for the loss of livelihoods induced by displacement and the power relations and environmental conflict in which it is embedded. We will dwell particularly on the inadequacy of compensation for the loss of forest and expropriation of land.

Section 5 sums up how the empirical findings from the case of the Polavaram dam supports the argument of this paper and attempts some suggestion for the improvement of R&R programs.

2. The Background: The Polavaram dam project and the conflict over land and forest in Andhra Pradesh

The Polavaram dam is a big multi-purposes dam, located next to Polavaram town, on the Godavari river, in the West Godavari District in the Indian State of Andhra Pradesh.

It's part of the National River Linking Project (NRLP) and it was firstly conceived in 1947-48, although its constructions started only in 2004, mainly because of the opposition received from the other two affected States, Orissa and Chhattisgarh. The estimated cost of the project is of 8198 crores (as per 2003-2004 rates), that is around 82000 millions rupees (Hanumantha Rao 2005).

It will be 2.32 Km long and it will cover an area of 34,963 hectares. It will divert 5,325 million cubic meters of water to the Krishna delta through a 174-km Right Main Canal and to Visakhapatnam district through a 208-km Left Main Canal.

The benefits generated will affect key sectors for growth promotion: power generation and irrigation and water provision. In particular they will be seized by an economically dynamic region, that of Visakhapatnam. This city is one of Indian most important ports and has recently experienced a rapid economic growth.

960 MW hydroelectric power will be generated and irrigation water will be provided to 40 millions acres in East Godavari and Visakhapatnam districts through the left main canal, and to 32 millions acres in Krishna and West Godavari districts through the right main canal. The city of Visakhapatnam will also receive water for domestic and industrial needs and drinking water will be supplied to all the villages along the left and right main canals.

On the downside, after the completion of the dam, around 60,063 ha in Andhra Pradesh will be submerged, as well as 2,398 ha in Chhattisgarh and 1,230 ha in Orissa. This will cause the submersion of around 276 villages only in Andhra Pradesh, according to the initial displacement survey conducted by N. Subba Reddy for the Centre for Economic and Social Studies (CESS) of Hyderabad, released in 1996. The survey reported the total affected population to be of 117,034 persons, which however has increased to 170,000 since then (as estimated by Volume II: Agricultural Finance Corporation, "Resettlement and rehabilitation project affected persons economic rehabilitation plan (PAPERP)),

published in September 2005)

As concerns the social composition of the affected population, the aforementioned CESS Report found that 48.2% was from scheduled tribes (ST) and 15.27% from scheduled castes (SC). At the State level, scheduled caste represent 16.2% of the population of Andhra Pradesh, while 6.6% belongs to Scheduled Tribe.

Scheduled tribes and scheduled castes constitute the most vulnerable groups in India. Mehta and Shah (2001) for instance report that whereas in 1993-94 at the All India level 37.23 % of the total rural population was found to be poor, the share was of 52% for Scheduled Tribes and 48% for scheduled caste. Besides, estimates of severe poverty show that whereas 12% of non SC/ST rural households were severely below the poverty line as many as 22% scheduled castes and 25% scheduled tribe households were in severe poverty. (Mehta and Shah 2001).

The situation is not different at the State Level. SC and ST of Andhra Pradesh show backwardness in every aspect of human development, from income level to health and education indicators as well as access to basic infrastructure and amenities (Andhra Pradesh Human Development Report 2007). One of the reasons of the perpetuation of these disadvantageous conditions is that 58.5% of the workforce is still employed in agriculture, in the greatest majority as casual laborers or small or marginal farmers.

Agriculture is the main occupation and source of livelihood also for the majority of the households affected by the Polavaram dam. In fact, according to the data reported by Padmanabha Rao (2006), 56.9% of the households are cultivators, of which 6.7% are large farmers, 11.7% are medium farmers, 13.7% are small farmers and 24.8% are marginal farmers. The rest are landless families.

The same author also reports that in two-thirds of the habitations the tribals constitute more than 50% of the population, although only 23% of the settlements were inhabited by tribals alone. This means that the majority of the displaced communities are composed by different social groups (as will be explained in section 4, this fact implies that within the same community households belonging to different social groups receive different versions of the R&R package).

The unequal distribution of land characterizing the displacement (and also the resettlement) area is the heritage of a history of conflicts and disputes over land. While traditionally the land belonged to tribal people, land alienation has occurred throughout the centuries as the outcome of the penetration of market economy in the hills region and the creation of relations of dependence between the tribal people and the plainsmen operating as traders, intermediators and moneylenders.

This process has progressively forced tribal people deeper and deeper into the forest². However the tribals' customary forest uses have been and still are put at stake by the reservation of large forest tracts for environmental safeguard and for commercialization of forest produce, especially timber (Saravanan 2009). For instance *podu* (shifting cultivation) in Andhra Pradesh is declared illegal and considered as a form of forest encroachment by the Forest Department (CESS-Reddy et al 2004). The takeover of control and management of forest and forest resources was initiated by the British rule and followed up by the Independent State, mainly in the form of environmental legislation and forest policies (Gadgil

²In the words of Rupavath (2009: 4): In Andhra Pradesh “[t]he process of land alienation has manifested itself mainly in large-scale migration of tribal communities from fertile plain areas to the neighbouring forests. The structural changes occurring in the plain areas have been responsible for this shift [...]. These changes introduced rapid capital penetration, irrigation facilities, railway and communication facilities, sale and purchase of lands and creation of certain land systems like Zamindari, Ryotwari systems, etc”.

and Guha 1992) .Since 1894 forestry is considered as a land use distinctly different from agriculture, so implicitly declaring illegal shifting cultivation. Progressively further restrictions have been imposed upon forest use in the name of environmental protection (institution of “reserve forest”), with the tribal population being blamed for the degradation (and retreat) of the forest surface .

The post-independence Forest Policies in fact have maintained the focus on the productive and profit making aspect of forest management, eventually just being another way of subsidizing the industrial sector. Only towards the end of the 1980s (with the 1988 National Forest Policy) tribal people's dependance upon the forest was acknowledged and forest policies designed also to safeguard the customary rights (and well-being) of tribal people (CESS- Reddy et al 2004 and Saravan 2009). However not even the most recent *Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act* of 2006 seems adequate to adequately restore tribal rights to forest and at the same time enhance environmental conservation. (Saravan 2009).

As a measure to make up for the injustice suffered by the ST in the form of land alienation and forest eviction, the former tribal land (including the land expropriated for the Polavaram project) belongs today to the Fifth Schedule Area and its administration and control is regulated by the Indian Constitution as a form of special protection for tribal people³. The AP Government throughout the decades has reinforced this measure with a stringent legislation prohibiting alienation of tribal land to non-tribals: according to the Andhra Pradesh Scheduled Area Land Transfer Regulation of 1959 (as amended by regulation 1 of 1970) in the Fifth Schedule Area non-tribals are prohibited to purchase land from tribals but also from non-tribals. The presumption is that all land in the scheduled area originally belonged to the scheduled tribes (Balagopal 2007).

3 The Fifth Schedule is contained in Article 244 of the Indian Constitution and it lists the Scheduled Tribes and the Scheduled Areas (in 9 states: Andhra Pradesh, Jharkhand, Gujarat, Himachal Pradesh, Maharashtra, Madhya Pradesh, Chattisgarh, Orissa and Rajasthan) which are given special safeguard in reason of their disadvantageous conditions and as a measure to achieve social justice.

According to Article 342 of the Constitution, the Scheduled Tribes are the tribes or tribal communities or part of or groups within these tribes and tribal communities which have been declared as such by the President through a public notification. As per the 2001 Census, the Scheduled Tribes account for 84.33 million representing 8.2 percent of the country's population.

3. Fieldwork in Polavaram and methodology

This paper uses a case study approach to investigate how the shortcomings of compensation and R&R programs depend on the fact that they overlook that displacement is a process of adverse incorporation which deprives people of the basis of their livelihood and has dynamic consequences.

The case under study is that of the Polavaram dam in Andhra Pradesh and the discussion is informed and supported by the results of a fieldwork carried out by the author between April and July 2009 in the area affected by the project.

The main objective of the fieldwork was to conduct a household survey and a choice experiment in the villages which will be displaced by the construction of the dam. The survey was meant to collect information on the socio-economic characteristics of the affected families, while the choice experiment aimed at eliciting their preferences regarding the Resettlement & Rehabilitation package provided by the Government of Andhra Pradesh.

A second objective of the fieldwork was to generate information on the R&R package elaborated for the Polavaram project: its formulation and actual implementation, the degree of involvement and awareness of the affected people and the critiques by the anti-dam movement.

The work was conducted with the support of a local NGO, named SEEDS (Socio-Economic Educational Development Society).

Nineteen affected villages⁴, located across three districts (West Godavari, East Godavari and Khammam) were visited, and 167 families were interviewed. Each interview was composed by a survey questionnaire and by the choice experiment.

Villages with different social composition were included, that is villages with majority of ST, villages with majority of SC and villages with mixed population (SC, Backward Castes and Other Castes). Of the selected villages, 13 had a majority of ST population, 3 of SC population and three had a mix of SC, and OC population, with a minority of ST.

The survey was composed of questions regarding characteristics of the households, more specifically the social group, demographic and educational characteristics, the main source of income and the main occupation of the household members, the ownership of land and the dependence upon forest products. The purpose was to collect information on characteristics which might possibly explain the differences in the preferences regarding the packages offered and generate data on the living conditions of the affected population. Questions were also made in order to test the level of awareness about the Polavaram project and the R&R package.

During the choice experiment the respondent (often supported by other members of the family) was asked to implement a sequence of choices among different kinds of hypothetical Resettlement&Rehabilitation packages, including different forms of compensation.

Whilst the real package actually offered by the AP Government to the Polavaram affected people (described at the end of this section) was taken as a benchmark to elaborate the alternative packages, it was never offered during the choice experiment.

4 The villages visited were: Ramayapeta, Devaragondi, Mamidigondi, Koruturu, Sirivaca, Chegondapalli, Tutigunta, Pydipaka in West Godavari; Kondamodalu, Talluru, Kegunduru in East Godavari; Lacchigudem, Rudramkota, Aghra Koderu, Sabari Kothagudem, Vinjaram, Gundala, Bovanagiri, Totapalli in Khammam.

Each package was represented by a set of attributes, so that choosing a particular package the respondent was expressing his or her preference for one or more attribute:

-package A offered no cash compensation at all but relocation in a place similar to that of the original village, in particular close to the forest and to the river. This package aimed at replicating the conditions in which the affected people are living at the moment and it involves as less change as possible.

-package B only offered cash, specifically as compensation for the loss of land, loss of housing, loss of access to forest and river, loss of livelihood. It was intended that the government was to provide the relocation site and supply it with basic facilities, but would not give any land or housing.

-Package C is the one that most resembles the package offered by the government. It offered housing in the relocation site, cash compensation for the loss of access to forest and river and land for land compensation. The main difference is that land compensation is provided to every family owning land, irrespective of the social groups (Scheduled Castes, Scheduled Tribes, Other Castes).

-package D offered only cash compensation for land and, apart from housing and cash compensation for the loss of forest and river, training and technical and financial assistance to implement a self-employment activity (petty shop, carpenter, tailor's shop, etc). The rationale of this package was to offer the possibility to abandon the farming activity and to move to self-employment.

-Package E is identical to Package A apart for the fact that the families won't be relocated all together. Its rationale was to test whether the preference for a package offering the perpetuation of the access to the forest and the river was modified when this privilege came at the cost of losing one's own community.

The experiment was composed of two exercises, the first one consisting in a sequence of binary choices and the other in a ranking of the four packages. The exercises were conducted with the help of visual tools: each package was represented by a card and each card contained images portraying an attribute of the package (e.g, a house to represent housing facilities provided by the government). This expedient made it simpler to explain the characteristics of and underline the differences among the different packages, as well as easier for the respondent to keep in mind both through the different stages of the exercise.

One of the main objectives of the experiment relied in observing the trade-offs in the preferences for packages with different attributes, in particular the preference for package A (representing the maintenance of of the status-quo, especially in terms of access to the forest and the Godavari river) vis-a-vis the other packages. A higher preference for package A when compared to the alternatives would then indicate a preference for the status-quo.

The results of the survey and of the choice experiment are used in section 4 to stress the importance attributed by the affected population to the forest and to land and how their loss is likely to have long term consequences. It will also emerge how their preferences concerning the kind of compensation provided go in the opposite direction of the Polavaram R&R package, which therefore turns out to be inadequate to achieve its task.

THE POLAVARAM RESETTLEMENT AND REHABILITATION PACKAGE

-LAND COMPENSATION

•For Scheduled Tribes

- for land holdings up to 5 acres, land for land compensation is given;
- for land holdings exceeding the 5 acres, cash compensation is given for the excess land (at the same rate provided to non-ST, see below).

• For Non-ST

- cash compensation for land at the following rates: Rs 115,000 per acre for non irrigated land; Rs. 130,000 per acre for cultivable land with canals and irrigation tanks; Rs. 145,000 rupees for land having deep bore wells or small irrigation projects.

-HOUSE CONSTRUCTION AND RELOCATION SITE

- Free house site
- 45,000 Rs grant for house construction;
- the resettlement colony must be provided with basic amenities and infrastructure: drinking water, internal roads, drainage, electricity, primary school, playground, community hall, approach road, community center.

-WAGE AND ALLOWANCES

- 750 days @ 85 Rs per day of minimum agricultural wage for loss of livelihood if after the acquisition of land the owner becomes landless;
- 500 days @ 85 Rs per day of minimum agricultural wage as one time financial assistance if after the acquisition of land the owner becomes marginal farmer;
- 375 days @ 85 Rs per day of minimum agricultural wage as one time financial assistance if after the acquisition of land the owner becomes small farmer;
- 625 days @ 85 Rs per day of minimum agricultural wage as one time financial assistance for laborers;
- 240 days @ 85 Rs per day of minimum agricultural wage as one time financial assistance for each displaced family;
- 500 days @ 85 Rs per day of minimum agricultural wage as compensation for the loss of customary rights and usage of forest produce;

-OTHER

- 5,000 Rs grant for construction of a new cattle shed;
- 5,000 Rs for transportation from the old to the new place,
- 25,000 Rs for income generating scheme grant.

4. The dynamic consequences of displacement in the case of the Polavaram dam and the shortcomings of the Polavaram R&R package.

Development-Induced displacement deprives the affected people of the main sources of their livelihood- most typically land, forest and water. Displacement in fact occurs because those (re)sources are scarce and are needed for the realization of a development project. In the case of the Polavaram dam for instance, land is needed in order to realize a dam in the most propitious location to exploit the water and the energy of the Godavari river. Being these resources *scarce*, it's evident that they cannot be replaced once lost, and likewise restituted to the displaced&resettled people.

It is this scarcity and intrinsic impossibility of restitution which makes of displacement an impoverishment process. Depriving (already vulnerable) households of the resources which constitute the basis of their livelihood and putting them in a situation in which they are not adequately replaced means creating the conditions for a fall into poverty. The task of R&R programmes should be exactly that of providing alternative resources necessary to build alternative livelihoods. This means providing assets but also accompanying the households along the path and insuring them against shocks.

What is observed in practice instead, is a clumsy and rather unfair attempt to estimate a value of what is lost and give it back in the form of cash. Sometimes, when possible, land for land compensation is attempted, but this is in most cases not enough to recreate the previous livelihood. Finally, resettlement often takes place in localities characterized by dual labor markets and lack of employment opportunities, so that building alternative livelihoods is particularly difficult.

So, what counts for the displaced people and what is most neglected or inadequately addressed by R&R programs is *what happens next*. It is the very dynamic and filled-with-obstacles process of building a new livelihood which should be of concern (to politicians and policy makers) and which is instead left at the mercy of fate and good luck.

This section will show how the Polavaram R&R package (as it's the case for most R&R programmes) at best attempts a restitution of the material losses from displacement, with no consideration for the dynamic consequences due to the fact that it deprives the affected people of the basis of their livelihood and therefore it can't prevent the production and reproduction of poverty.

4.1 The Loss of Forest

The Godavari river is surrounded by hills covered with tropical forest. Villages are spread between the river bank and the hills' side. In all cases the forest plays an important role in the life of the villagers: as a source of products for self-consumption and marketing, but also at the cultural, social and spiritual level.

However even in a hilly region the forest is a scarce resource. The resettlement colonies arranged by the government for the relocation of the displaced villages are all located in plain areas, usually 15-20 Km away from the forest. This means that displacement will also imply the loss of free and easy access to the forest for the affected people.

The 2005 AP Policy on R&R of Project Affected Families includes 35,000 Rs (equivalent to 500 days of minimum agricultural wage @ 70 Rs per day) as compensation for loss of customary rights and usages of forest produce and so does, at least in theory (as this money hadn't been paid yet at the time the fieldwork was conducted and there weren't clear signs that this was going to happen any time soon) the Polavaram R&R package⁵. This amount anyway is insufficient to replace the material and

5 In the Polavaram R&R the total amount is actually higher (i.e. Rs 42,500) because the minimum agricultural wage has

immaterial benefits generated by the forest, but at least its inclusion in the R&R package constitutes an official recognition that its loss is one of the costs of the project.

Even a higher amount of cash compensation for the loss of customary rights and usages of forest produce would however have mainly a symbolic value, as the most important function it plays is that of providing a buffer against shocks, ensuring a minimum level of income and consumption no matter what the performance of the monsoon or the trend of the economy.

The results of the survey conducted during fieldwork confirm that the forest is a fundamental component of the livelihood of most families, while the choice experiment demonstrates the importance and the attachment that they attribute to it (see later in this section).

Of the 167 families interviewed for the survey, 79% declared that they regularly collect forest produce for both self-consumption and marketing. The products most commonly collected are honey, tamarind, gum, soap-nuts, bamboo, beedi leaves and timber. They are either sold on local markets (For instance the sale of beedi leaves, used to manufacture cigarettes, generates around 1000 Rs per year, for no more than 5/10 days of work⁶) or consumed. So the forest allows to diversify the consumption basket of the families and it also provides a small but certain flow of income. While the former is particularly important during the lean season, when no agricultural wage labour is available and many families run out of cash, having access to free staple food can mean the only chance of survival in years of weak monsoon and bad harvest.

The loss of access to the forest is also going to have a substantial impact on the household budget and ultimately on the composition and dimension of the consumption basket. The most important product for everyday life collected from the forest in fact is timber, which is needed in significant amounts for house and tools construction and even more as combustible.

In the big majority of cases the resettlement area is too far from the forest for the people to keep collecting it, which means that they will have to purchase alternative source of fuels for everyday consumption. This will have a substantial impact on the household budget, reducing the cash available for other needs.

Indeed, during the interviews the loss of access to free timber was often mentioned as one of the biggest worries and disadvantages of the resettlement area.

So, for most families being deprived of the forest will mean losing access to a sustainable and self-regenerating buffer stock, as well as to a kind of informal insurance against shocks. A reallocation of the household budget, with likely negative effects on the satisfaction of other basic needs, will also come from having to purchase firewood, which had been freely available in the original settlement.

The pivotal role played by the forest in the life of the displaced people is confirmed also by the results of the choice experiment conducted during fieldwork with the affected families.

As mentioned in section 3, two kinds of exercises were realized.

This first exercise consisted in four binary choices. Package A, (i.e. the “status quo” package) constituted the benchmark against which the other packages were evaluated. The respondent was asked to make an explicit choice between the maintenance of the status quo and a change (possibly an improvement) in a particular aspect of their lives, represented by the attributes of each package. That is he was asked to choose between A and B; A and C, A and D.

been set at 85 Rs per day).

6 This is the amount reported by the respondents during the survey interviews, while Padmanabha Rao (2006) finds that among the displaced population each household gets Rs. 919 per year by the collection of minor forest produce.

Table 1 Results of the Binary Choice Exercise

A VS B	A VS C	A VS D
A=14 (86%) B=27 (14%)	A=136 (81%) C=31 (19%)	A=126 (75%) D=41 (25%)

Source: author's calculation

Table 1 presents the results of the Binary Choice exercise. It's evident how package A was the preferred option in the big majority of cases, regardless of the alternative offered (package B e.g. cash compensation; package C e.g. housing and land compensation; package D e.g. self-employment programme).

A similar result was found with the ranking exercise (whose aim was to double-check the preferences expressed in the previous exercises, making the respondents reflect deeper on the options faced), as presented in table 2. The respondent was asked to rank the four packages in order of preference.

Table 2 Summary of Ranking results

	A	B	C	D	TOT
1 st	133	20	4	9	166
2 nd	9	4	126	27	166
3 rd	2	32	28	104	166
4 th	22	110	8	26	166
TOT	166	166	166	166	

Source: author's calculation

On a total of 166 answers⁷ in fact package A appears 133 times at the first place (that is as most preferred option), 9 times at the second place, 2 times at the third place and 22 times as least preferred option.

So, both the exercises suggest that the displaced people have a clear preference for a R&R package which guarantees relocation close to the forest and the river. On one side this is a further indicator of the importance attributed by people to the forest, on the other it adds elements to the critique of the Polavaram R&R package. As already discussed, the latter does not acknowledge the real value of the forest for the affected people. Attempting an estimation of this value does not seem a feasible solution and at the same time even a substantial increase in the cash compensation for the loss of customary rights and use of forest produce wouldn't be adequate to replace the multiple functions it plays. However, this is not a good reason for not attempting to improve forest compensation in R&R packages.

As it stands no institutional device able to replace the role of sustainable buffer stock and informal insurance is available to low-income families. Given that the forest seems to be not replaceable, R&R programmes should focus exactly on measures to assure a stable flow of income and a buffer to compensate for oscillation in consumption in case of shocks.

⁷ The ranking exercise was done 167 times, but of one of the respondents refused to rank packages C, D and B, saying that he was willing to accept only package A. This interview has therefore been eliminated by the aggregate count.

4.2 Inadequacy of land compensation

The main shortcoming of the Polavaram R&R package and the main reason why it's inadequate to prevent the impoverishment of the affected population, being actually likely to increase their vulnerability, is the failure to effectively address the issue of land compensation.

There are two kinds of problem: in the first place, the compensation provided for the lost land (either in cash or as land in the new settlement) is inadequate, insufficient and eventually unfair. While the inadequacy of the land provided can be attributed to its structural scarcity, the insufficiency of the cash compensation is nothing but a policy choice.

Moreover, the payment of two different types of compensation implies a redistribution of property rights over land which is likely to create new landless families (especially among the Scheduled Castes) and deepen the inequalities that it is seeking to correct.

As mentioned in section 2, according to the *Andhra Pradesh Scheduled Area Land Transfer Regulation*, non-tribals are prohibited to purchase land in the Fifth Schedule Area. The aim is to eventually reconstitute to tribal people the land alienated throughout the centuries.

This attempt to use positive discrimination to restore social justice is also reflected in the Polavaram R&R package. The package in fact grants land for land compensation only to tribal families, whereas non-tribals (Scheduled Castes as well as Other Castes) are offered cash in exchange of the lost land, at the following rates: 130,000 rupees per acre for cultivable land with canals and irrigation tanks; 115,000 rupees per acre for non irrigated land; 130,000 rupees per acre for cultivable land with canals and irrigation tanks; 145,000 rupees for land having deep bore wells or small irrigation projects.

The rationale is that only tribal people are entitled to own land in the displacement area and therefore they only are entitled to land for land compensation in the resettlement area. All the other households own land somehow "illegally" and therefore are only compensated with cash. The assumption is that the cash compensation will be used to re-purchase land not located in the Fifth Schedule Area (as mentioned in section 2, the social composition of the majority of the affected villages is mixed, including Scheduled Caste and Scheduled Tribes but also Other Castes and Backward Castes).

However, there are two major constraints for this to happen: in the first place, most of the villages (especially the villages with the majority of ST population) will be resettled in colonies which are located *in* the Fifth Schedule Area. The motivation is obviously the safeguard of the special rights attributed to ST in that area. The implication however is that SC and OC families will be relocated in an area where they are *not* supposed to own land. Of course they are free to leave the community and move out of the Fifth Schedule Area, but in the greatest majority of the cases this option is not even contemplated. Not only mobility is scarce because it's risky and costly, but the same idea of leaving the community is regarded as the unluckiest eventuality.

In the second place, even if non-ST families were willing to purchase land in non-Fifth Schedule Area, they wouldn't in most cases be able to do it, as the cash compensation provided is just not sufficient.

The price for a hectare of land prefigured in the R&R package is in fact below the market price of land in the resettlement area, where it ranges from 5 to 7 hundred thousand RS per acre. This means that many non-tribal small farmers (owning a few hectares of land) will become landless when resettled, as the amount of money that they are given as compensation is not enough to repurchase even a minimum amount of land in the resettlement area. They will then depend even more heavily on agricultural wage labour.

The data collected with the survey confirm this.

For instance, respondent No. 26 declared to have received Rs. 201,250 as compensation for the loss of 1.75 acre of land (that is at the rate of Rs. 115,000 per acre). With the same amount, assuming that land

in the resettlement area costs Rs 500,000 per acre, he will be able to purchase only 0,4 acre of land. Similarly respondent No. 107, which declared to have received Rs 618,000 for 6 acres of land, will only be able to re-purchase 1,23 acre of land. So from being considered a small farmer (i.e. owning five or more acres of land) he will become a marginal farmer (with less than five acres).

At the same time, non-tribal big farmers, for as much as disappointed as they can be for the unfair price paid for land, only gain from this solution: expropriation is for them a good chance to get rid of land which they are not supposed to own and to even get some compensation for it. The loss of land won't significantly affect their livelihood, as in most cases they own land in other settings.

The scarcity of land and its unequal distribution is reflected also in the fact that even when land for land compensation is granted, as in the case of tribal families, the re-establishment of the ex-ante conditions is not guaranteed. A number of the families interviewed, among those which had already received compensation or had been shown the resettlement area, reported that the land offered is of low quality or far away from the resettlement colony. Low quality land (because infertile or because not ready to be put immediately into production) implies lower productivity, more intense work and above all a delay in the collection of the first harvest. The fact that land is far away from the resettlement colony implies that a significant amount of time and/or money for transport will have to be spent to travel to the fields. At present many farmers own land in an ideal position: between the river and the hills and within walking distance from the village, however this fact doesn't seem to be taken into account in the estimation of the value of land and land compensation.

Again the results of the choice experiment conducted in the Polavaram area confirm that the affected people deem land as the most important asset and that they are aware of the consequences in terms of redistribution of the property rights of the Polavaram R&R package and of the inadequacy of the cash compensation provided.

As mentioned in section 3, package C resembles the package effectively offered by the government, as it includes a relocation site, housing, some cash compensation for the loss of access to forest and river and land compensation. The main difference is that it provides land for land compensation to every family irrespective of their social group.

The experiment proved Package C to be very popular across all social groups. Being aware that the cash compensation given in exchange of the loss of land is insufficient to repurchase an equal amount of land in the new settlement, non-tribal families (especially small farmers) considered it as a guarantee of the perpetuation of a claim over land, and also the only opportunity to keep being farmers after relocation.

It wasn't however at the stage of the binary choice exercise that the generalized preference for package C was clearly expressed. When compared with the status-quo package in fact, 81% of the families opted for the latter, confirming that the access to the forest&river does make a difference for the structure of preferences (see Table 1).

In the ranking exercise however package C appeared more often at the second place (126 times out of 166), confirming its status of "second-best" option (see Table 2). That is, people declared to prefer land for land compensation to cash compensation (package B) and self-employment (package C).

To conclude, it's evident how the R&R package is attempting to correct for the injustice endured by tribal people in the past, but structural constraints hamper the possibility to set the record straight in the agrarian structure. The area has been characterised by land scarcity, conflictual access to resources and exploitative labour relations for centuries, creating divisions among social groups and impoverishing the lowest castes. A redistribution of property rights obtained as the outcome of a already brutal event

such as displacement is likely to have a significant impact only on small and marginal farmers, be they SC, BC or OC. So, not only the package is unfair because the cash compensation paid is below the market price, but it's also counterproductive because it will create new landless families.

This is true despite the fact that land constitutes the main productive asset and source of livelihood for the affected people and that, as demonstrated by the choice experiment, they show a clear preference for land for land compensation. Rather than contributing to re-establish social justice, the R&R package is therefore likely to deepen inequalities and create divisions and resentment among families belonging to the same community.

5. Conclusions

Based on the argument that displacement is a process of adverse incorporation, which is embedded in power relations, implies an unequal redistribution of costs and benefits and deprives people of the basis of their livelihood, this paper has suggested that compensation and R&R programmes fail because they fail to acknowledge these features of displacement. This shortcoming implies neglecting the dynamic consequences of displacement and therefore the inability to prevent the impoverishment of the affected population.

The case of the Polavaram dam in Andhra Pradesh and in particular the results of a fieldwork conducted in the affected area have been used to support the argument.

The people which will be displaced by the Polavaram project will be deprived of the main sources of their livelihood, that is land and forest. As discussed in section 2, agriculture is the main source of employment in the displacement area and land is the most important productive asset. The forest provides products for both marketing and self-consumption, contributing substantially to income and consumption during the lean season.

The forest however can't be replaced and the Polavaram R&R package doesn't provide an adequate land compensation. These resources are scarce in the area and therefore there are environmental constraints which hamper the possibility of a full restitution of what is lost. However power relations and competition in the access to resources also play a role.

The Forest Department seems in fact inclined to keep people far from the forest, which can then more easily be exploited for commercial purposes on one side and put under reservation on the other.

Distribution of land in the displacement area is unequal, being the outcome of centuries of tribal land alienation. The Polavaram R&R package attempts to restore social justice granting land compensation only to tribal people and cash compensation to non-ST families. However the package is altogether likely to obtain the opposite outcome, deepening inequalities and divisions: because the land allotted is of low quality and need substantial investment to become productive, because the redistribution of property rights will lead to the creation of new non-ST landless families, because the price paid for cash compensation is too low and therefore unfair.

So, because of power relations, unequal redistribution of costs and benefits and deprivation of the sources of livelihood, displacement has negative dynamic consequences which cannot be addressed with the sole restitution of the lost assets, but so far have been ignored by the R&R package.

Indeed, as a consequence of the loss of land, people lose a source of income and consumption and a form of informal insurance/buffer stock in case of shocks. Moreover, being land compensation insufficient and inadequate, and being resettled in area lacking alternative employment opportunities, most households will increase their dependance upon agricultural wage labour.

Ultimately after resettlement the displaced people will be poorer because deprived of the most important asset and more vulnerable because exposed to the fluctuations of the agricultural sector.

To conclude, to be effective R&R programmes should aim in the first place at tackling the dynamic consequences of displacement, following a contextual analysis of how these consequences depend on and are embedded in power relations and conflicts over access to resources.

In the case of the Polavaram project, the first step for improvement would be an increase in the price paid for land compensation and in the compensation for the loss of forest. A more significant advancement towards a fair compensation however would require a serious effort to provide land for land compensation to every family (especially to small and marginal farmers) and the institution of special devices to support the reconstitution of the lost livelihood.

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