12. Impacts arising from land acquisition and resettlement

HOW TO USE THIS CHAPTER IN THE CONTEXT OF EA AND ROAD PLANNING

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<th>Stage in road planning</th>
<th>EA activity</th>
<th>Involvement in addition to EA team</th>
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<td>Screening</td>
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<td>Pre-feasibility</td>
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Shaded area = (A) Stages of EA covered in this chapter; (B) focus of this chapter; and (C) primary target readers.

KEY QUESTIONS ADDRESSED:

? What is the measure of a government’s success in minimizing adverse social, psychological and economic impacts arising from land acquisition and resettlement?

? Who is affected by land acquisition and resettlement, and how?

? What are the major difficulties facing road planners in ensuring minimal disruption to the lives of persons affected by road projects, and how can they be overcome?

? What is the approach to be taken to squatters occupying the government-owned right-of-way and privately owned lands that are to be expropriated?
12.1 IMPACTS AND SETTING

Road development often requires the procurement of privately owned land. This land has to be acquired by the government from its current owners. While it is sometimes possible to negotiate a price for voluntary sale of a property, governments often have to use their rights to compulsory acquisition (expropriation) of properties for public projects. By its nature, expropriation causes economic loss, and social and psychological disruption for the affected individuals and their families. Naturally, the greater the number of people involved, the greater the disruption and loss.

A government’s right to expropriate carries with it a responsibility to ensure that those affected do not bear an unfair share of the costs of a project which will bring benefits to others. In the simplest terms, this responsibility should be to ensure that the standard of living of all affected persons is restored to the level enjoyed before the commencement of the road project. To the extent that a government is successful in restoring those living standards for all affected, the adverse impacts will have been minimized and possibly obviated. The mitigation plan often involves resettlement. Depending on how well the resettlement is planned, it may go a long way in compensating for the loss and disruption, or it may exacerbate the suffering.

The economic impacts of expropriation may include the loss of houses or businesses, or the loss of business income, either temporary or permanent. These can be estimated and costed. However, the actual valuation of these losses often proves to be a difficult and protracted process (see Chapter 19).

The social and psychological impacts and associated costs are more complex, and they are often much more devastating. Neighborhoods can be disrupted and, in the worst instances, broken up completely by large construction projects. People who meet on a daily basis and who constantly do each other small but important favors may be left deprived when separated by physical barriers or long travel distances. There are also social and psychological costs associated with disruptions to businesses. Business people may find their established clientele cut off from their shops or experience changes in business practices they neither anticipate nor like. These kinds of social and economic changes often find personal expression in a variety of physical or psychological disorders.

The manifestation of these impacts is heavily influenced by the linear nature of road projects and, in the case of road upgradings, by the existence of what may be a sizeable, but often well-established, right-of-way. Typically, road projects

- cut across communities (as opposed to affecting the entire community equally);
- run through many governmental jurisdictions, and
- in the case of upgrading projects, tend to displace a disproportionately large number of squatters who have occupied the government-owned right-of-way.

In reality, many road projects consist of some stretches of new highway along with the upgrading of link roads to nearby communities. It is important that such projects be conceived of and planned holistically. If they are not, there is a danger that many people occupying the link roads, for example, may be subjected quite abruptly to a major increase in traffic generated by the new highway to which the link roads connect.

The presence of squatters on the right-of-way poses particular challenges. There are many reasons why the poor, the homeless, those pursuing informal economic activities, and small-scale farmers encroach upon the publicly owned right-of-way and, in many cases, the existing road surface. More often than not, road projects tend to displace these persons whose very presence signifies their need for special attention. National legislation, which determines the categories of land ownership, often recognizes only formal, registered title. However, in many countries there are various forms of informal or unregistered title, including usufruct rights (permanent or temporary use), seasonal use rights, rights of access to commons, and others. In short, lack of legal tenure of land or assets should not be regarded as a criterion for withholding financial compensation or assistance in relocation. However, it is important to distinguish those who were living in the project area prior to project approval from those who have invaded the area simply to benefit from the relocation.
The above-mentioned scenario implies that the teams conducting the assessments and implementing the land acquisition and resettlement programs will have to invest considerable time and effort in:

- inter-jurisdictional coordination of studies and mitigation activities;
- establishment and management of field surveys to obtain data (which are not available from censuses or secondary sources) on the strips of affected lands and their all-too-often unregistered occupants;
- prevention of invasions onto the right-of-way; and
- land availability and land use restrictions in the "host" community.

Keeping in mind these broader considerations pertaining to the impacts arising from land acquisition and resettlement, as well as the setting within which they are carried out, the implications for determining the nature and scale of the potential impacts must now be examined.

12.2 DETERMINING THE NATURE AND SCALE OF IMPACTS

In the preliminary planning of a road project, the approximate number of properties, houses, businesses, and roadside activities likely to be affected by land acquisition should be identified for each option under consideration. In addition, it is necessary to identify the number of squatters, their kiosks, and other informal activities affected by road proposals. This provides a first indication of the potential need to investigate land acquisition and resettlement issues more closely.

Where no land acquisition would be required, and where only very minor impacts are likely to be experienced, simple measures to avoid or mitigate these effects should explored.

Where land acquisition or a change of land use is required, a table of project-affected persons should be developed. This table may be somewhat inexact in the early stages of project planning, but the details should become precise as options are defined more clearly and as the land surveys (and ultimately the final design) are completed. At each stage, the table should identify the types of people affected (e.g., as owners, tenants, employees, squatters); the type of impact on land (e.g., farm size reduced, house or shop acquired, access limited); and the type of impact on people (e.g., reduced livelihood, lost house). Table 12.1 provides an example of the categories of project-affected people that could be used. Modifications may be required for specific situations.

Assessing the scale of impacts requires more detailed analysis. For residences, impact assessment requires an inventory of houses affected and the extent of property acquisition from each. It also requires a determination of the type of occupancy for each resident and an indication of length of residence. The potential for local resistance to change often increases in proportion to length of residence. Owners, tenants, and squatters are distinct categories of residents under most national laws. As explained in Section 12.1, however, only the first category—owners—are usually entitled under the law to compensation for expropriated property, even though the latter categories—tenants and squatters—will also have to resettle and may enjoy some rights. It is advisable to plan to compensate or assist all affected persons.

Assessment of impacts on businesses requires a slightly different approach. An estimate of temporary financial loss and of temporary relocation costs, if any, will be required for businesses that will be able to relocate within the immediate area. By contrast, for businesses that will have to move out of the area, or that will suffer a major loss of clientele, it will be necessary to estimate the minimal costs of relocation and re-establishment. Allowance should also be made for technical and financial assistance to modify and adapt businesses to new circumstances. For farmers, economic losses can include the value of crops in the ground and the loss of earnings due to unfamiliarity with the new land (see Chapter 19).

Land acquisition and resettlement actions also have impacts on the remaining residents and businesses, who may be faced with diminished family and community structures and business clientele, and reduced property values.

In addition to site inspection and land surveys, household and business interview surveys are often required to establish the extent of impacts. Because of the lack of secondary
### Table 12.1
**Example of Categories of Project-Affected People and Proposed Actions**

<table>
<thead>
<tr>
<th>Category of Person by Effect</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Owner: loses house and all land</td>
<td>Replace house and lands in new area</td>
</tr>
<tr>
<td>2. Owner: loses house and some land (land left not viable)</td>
<td>Replace house and all lands in new area</td>
</tr>
<tr>
<td>3. Owner: loses house and some land (land left is viable)</td>
<td>Replace house, as proprietor wishes; either on remaining land, with compensation for land lost, or on new plot</td>
</tr>
<tr>
<td>4. Owner: loses house but no land lost</td>
<td>Replace house either on remaining land or on new plot</td>
</tr>
<tr>
<td>5. Landless owner: loses house</td>
<td>Replace house on new plot in original or new area, as proprietor wishes</td>
</tr>
<tr>
<td>6. Tenant: loses house</td>
<td>Assist with housing in old or new area, depending upon tenant’s wishes</td>
</tr>
<tr>
<td>7. Squatter: loses house</td>
<td>Assist with housing in old or new area, depending upon squatter’s wishes</td>
</tr>
<tr>
<td>8. Owner: loses all land but not house</td>
<td>Either replace lands within a reasonable distance of house, or replace house and lands in new area, as proprietor wishes</td>
</tr>
<tr>
<td>9. Owner: loses some land (land left not viable), but not house</td>
<td>As with #8</td>
</tr>
<tr>
<td>10. Owner: loses some land (land left is viable), but not house</td>
<td>Compensate for lost lands</td>
</tr>
<tr>
<td>11. Owner: loses home-based business income (temporary), but not home</td>
<td>Compensate for lost income</td>
</tr>
<tr>
<td>12. Owner: loses home-based business and home</td>
<td>Replace house in original or new area, as proprietor wishes, and compensate for lost income during relocation process</td>
</tr>
<tr>
<td>13. Tenant, squatter or street vendor: loses effective use of business site</td>
<td>Provide alternative location with equal or better access, services and business potential</td>
</tr>
<tr>
<td>14. All categories: lose neither land nor house</td>
<td>No action</td>
</tr>
<tr>
<td>15. Host community/area</td>
<td>Strengthen resource base and social services stressed by influx of resettled people</td>
</tr>
</tbody>
</table>

Sources of data, as emphasized in Section 12.1, this type of individual consultation with affected persons and communities should play an important role in identifying potential impacts, possible alternatives, and mitigative measures. This is discussed further in Chapters 5 and 11.

In some informal sectors it is not easy to determine exactly who is affected or what the long-term impacts are likely to be. Many markets and ‘squatter businesses’, such as roadside kiosks and small workshops, are not formally organized and have few, if any, records of ownership, tenancy, income, or length of occupancy. Tax collectors or unofficial market administrators may have detailed knowledge, which can be supplemented by other forms of local consultation. A related problem is that the benefits of compensatory and mitigative measures may not go to those most affected and in need, especially if alternative facilities are of a
higher quality than those lost and thus become attractive to other, more influential, groups in the community. Similarly, the survey team should be looking for signs of recent invaders who may have moved into the area once it has become public that some assistance with improved housing may be available. Community-based organizations and other interested non-governmental agencies can frequently be enlisted to help prevent such invasions.

In some cases, property ownership or development rights are not clearly defined under the law. These should be identified as early as possible, since they can take many years to resolve. Examples of problematic situations include the possible rights of long-term squatters who have established homes and rental arrangements as well as property development rights 'allocated' to individuals or companies without clear legal documentation.

12.2.1 Stresses in the "host" community
While most resettlement planning concentrates on those people who need to be resettled, the community or communities that receive and absorb the resettlers must also be taken into consideration.

In regions where arable land is scarce, or where other basic resources such as fuel wood and water are in short supply, the impacts on the host community from the influx of a new group of "users" can be severe.

EA planners should always investigate the host areas' ability to sustain a resettled population without serious resource depletion. Important factors to consider include

- availability of clean water (in all seasons);
- amount and productivity of agricultural land;
- health services;
- school system;
- sewage disposal and water delivery systems;
- road network; and
- utilities.

Planners should determine which resources will not be able to support the influx of displaced people in a sustainable way. Mitigative measures should then be planned to fill any gaps.

Great care must be taken to avoid resettling people in areas where they will be viewed as trespassers taking up resources in short supply, or in areas which are totally foreign to them. In the former case, the resettlement can become a major source of tension within the community and may end up being the basis for enduring conflict. In the latter case, people who are resettled in unfamiliar environments may have considerable difficulty adjusting, e.g. having to learn new agricultural methods to apply on different soils. Resettlement may condemn these people to lasting poverty.

12.3 REMEDIAL MEASURES

12.3.1 Prevention
Impacts on roadside land users can be avoided by choosing route locations away from built-up areas and by restricting the extent of road works to avoid interference with existing activities. In some cases, the adoption of a reduced-speed design, reduced right-of-way land requirements, or design changes (underground drainage, for instance) can avoid impacts on properties and activities.

It should also be noted that the impacts associated with not acquiring land can also be significant. Many road improvement projects, for example, follow existing alignments and seek to minimize the extent (and cost) of land expropriation. This approach can result in the widening of roads through villages, towns, and major urban centers. In these locations, the existing roads are sometimes so narrow that road widening eliminates sidewalks and pedestrian access—with negative effects on the safety of pedestrians, on informal modes of transport, and on the quality of community life as a whole (see Chapters 11 and 17). As a second example, adoption of a narrow road reserve can substantially limit options for controlling water flows and soil erosion—with potentially negative effects on the environment. In short, serious consideration should also be given to the social and environmental costs of non-displacement of people and business activities.

12.3.2 Mitigation
As with prevention, mitigation of land acquisition impacts is achieved primarily by modifying the route or design of a road to minimize its effects on nearby properties and land uses. The design of alternative access to affected proper-
Local consultation and participation are essential to the success of compensation plans. Family-by-family consultations and, in squatter communities, informal groupings, should often be used in preference to the more formal, larger community meetings in order to ensure satisfactory outcomes. A typical example is the issue of replacement housing provided by a road agency. Dissatisfaction can arise for a variety of reasons, including basic disgruntlement over being moved, discontent over the style of architecture, the construction materials, the number of rooms, or the cost of additional services. Through a process of local consultation and participation, it may be agreed that the agency will install the basic public infrastructure (electricity, water supply, for example) and provide either a choice of house types or a house frame. In this latter approach, the agency allows the resettlers to salvage as much of their former houses as possible, supplies other needed construction materials, and provides funds to enable the prospective resettlers to complete the houses. The agency will have to complete the home for those resettlers who are unable, for whatever reason, to finish the house themselves.

Consultation with affected people and other interested parties (Box 12.1) can assist planners in mitigating the impacts of land acquisition and resettlement actions by providing clear and timely information as well as opportunities for a complete discussion of options, preferences, and likely outcomes. Thus, by taking full account of the needs of those affected, the design of implementation arrangements should be based on more solid information (see Chapter 5).

In the event that displacement is necessary, or that disruptions to livelihoods will occur, a comprehensive assistance strategy is required. This should go beyond financial compensation to include social and commercial rehabilitation or replacement.

12.3.3 Compensation

Many countries have laws and regulations governing property rights, compensation, and appeal procedures for land expropriation. Road planning should make allowances for the considerable time and money which are commonly involved in these processes.

Rehabilitation is a term often used by environmental specialists to describe the process of reestablishing lifestyles and livelihoods following resettlement, recognizing that this process involves more than just replacing lost property or assets. The term is confusing when applied to road projects, since it is also used by transportation engineers and planners to describe construction works that bring a deteriorated road back to its original condition. "Social and commercial rehabilitation" may prove to be a more precise term. Such rehabilitation may require additional financial, technical, and organizational assistance, which is rarely provided for in legislation or administrative arrangements.

Legislated compensation procedures generally provide only for the owners of property and make no allowances for tenants, employees, or squatters. Additional arrangements must be defined to ensure that these affected groups are not substantially disadvantaged by land use changes, and that they are assisted in relocating and re-establishing their homes and sources of income. These additional arrangements are provided in a resettlement and rehabilitation action plan (see Box 12.2).

For landowners, assistance provided under existing legal statutes—in addition to provisions laid out in the environmental management plan—will be sufficient to generate appropriate compensatory action. However, for other persons without legal title to land, such additional assistance will be the major means of compensation and mitigation of losses.

Monetary compensation poses a number of concerns in resettlement and rehabilitation programs. Most notable are the following:

Valuation of assets is usually significantly lower than present market value, especially since book (or tax) value of properties is commonly employed in such valuations. Even present market value can leave people less well off than before (see Chapter 19). If, for example, there are many resettled people seeking scarce land, prices may rise, and resettlers may have to pay more than the previous market rate just to replace their...
IMPACTS ARISING FROM LAND ACQUISITION AND RESETTLEMENT

former assets. In anticipation of the problems that may arise, the road planners should acquire a clear understanding of expropriation and valuation procedures, and ensure that negotiation and arbitration procedures are in place and operating effectively.

Property markets do not always exist in a form which allows ready replacement of land and livelihoods. In densely populated areas it may be especially difficult to buy property with an agricultural, housing, or community environment similar to that associated with the property expropriated for road development.

Timing of payments can be critical. When properties are valued, but payment is delayed for several years, the ultimate monetary compensation may not reflect market rates at the time of payment. This consideration is especially important when high inflation characterizes the national economy, and delayed payments may result in depreciated compensation. Thus, inflation should be taken into account.

The manner in which compensation is paid can be significant for the long-term welfare of the recipients. People not used to money—or with insufficient resources to meet current expenses—will typically spend the compensation payment on other articles of consumption, thus becoming vulnerable to landlessness or homelessness. Therefore, in many instances it is useful to pay most of the compensation into a blocked bank account, from which the funds are released when the resettler has identified a new home, business or land, and signed all relevant contracts. A small amount—up to 20 percent of the funds—can be paid in cash to the resettler so that he or she can take care of other domestic needs.

Restoration or replacement of any assets expropriated may be preferable to financial compensation; it may prove to be a better way to replace, in full, the source of the owners' livelihoods. However, these assets must be replaced at the new site before displacement and relocation occur. This may require considerable front-end investment. In urban areas, for example, it may be desirable to incorporate commercial arcades and other similar arrangements offering displaced street vendors access to markets. Continuation of their economic activities would thus be ensured under safe conditions for both customers and vendors.

Wherever possible, restoration or replacement should be provided at a minimum distance from the previous location.

The recovery of the costs of resettlement can sometimes be achieved through the use of toll systems. Since such direct systems are not always available, however, the costs of resettlement may have to be incorporated into the project's budget. There should be no reason why the displaced persons should have to bear the costs of their displacement.1

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**BOX 12.2**

THE RESETTLEMENT AND REHABILITATION ACTION PLAN (RAP): CHECKLIST OF TYPICAL CONTENTS

1. Objectives and principles
2. Project description
3. Project benefits
4. Project losses and impacts
5. Linkages with existing laws and guidelines
6. Entitlement framework (title holders; squatters and encroachers; loss of land and assets; loss of income; other impacts)
7. Replacement cost for losses
8. Rehabilitation and income restoration
9. Choices and option
10. Consultation and participation
11. Targeting of vulnerable groups
12. Resolution of grievances
13. Development of resettlement sites
14. Integration with host communities
15. Institutional arrangements
16. Guidelines for implementation

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12.4 MINIMIZING IMPACTS OF LAND ACQUISITION AND RESETTLEMENT: AN ACTION CHECKLIST

The specifications for land acquisition and resettlement in road projects are guided by the basic notion that the conditions of life, including income, must be restored at least to those levels that existed before the project was undertaken. These specifications must be written

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1 A well prepared resettlement and rehabilitation action plan addresses all the above considerations and is contained within the overall EMP.
down in a resettlement and rehabilitation action plan (RAP). Box 12.2 provides a checklist of the major points to be covered in an RAP.

This section highlights the more important steps in the EIA process relative to the incorporation of this basic notion in the road development process and their formulation in an RAP.

Baseline data and potential environmental impacts
Given the linear nature of road projects and their potential for disrupting people's lives, it is important that

- project-affected persons and properties for both the displaced population and the host area should be identified at the earliest stages of the road planning process;
- impacts should be categorized in terms of the types of land, persons, and activities affected, and whether the effects are temporary or permanent; and
- land surveys—as well as household and business interview surveys—should be used to provide detailed information, especially where initial analyses identify possible effects on land use, social interactions and psychological well-being (see Section 12.2).

Analysis of alternatives
Given the social, psychological and economic costs inherent in any option, it is important that

- each alternative under consideration be fully costed (see Section 12.2 and Chapter 19);
- the valuation of each impact recognize the full costs experienced by those faced with relocation of homes and businesses, as well as those affected in the host community;
- tenants, squatters, and employees be included as well as property owners; and
- consultation be used in the comparison of options, since their impacts will depend on the priorities and perceptions of those affected.

Mitigative and compensatory measures
To ensure the effectiveness of these measures, it is important that

- individual entitlements and other rights, whether legally recognized or not, be catalogued and awarded if considerable impoverishment is to be avoided for many, if not most, of those affected (see Section 12.3.2);
- expropriation and valuation procedures be investigated to determine: a) their basis and accuracy; b) the effectiveness and fairness of any existing negotiation and arbitration procedures; and c) the arrangements for the making of payments (see Section 12.3.3);
- relocation assistance arrangements be reviewed, to determine: a) what assistance people will be afforded in the search for new locations; b) what follow-up support will be provided; and c) what help is available to those who, for whatever reason, fail to re-establish their homes or businesses;
- follow-up remedial procedures be introduced to monitor the effectiveness of compensation, relocation, and assistance programs, and to provide additional assistance to those who have not been sufficiently protected by the initial arrangements. Responsibilities, entitlements, and finances for these remedial procedures need to be clearly defined in the action plan, while taking into account the overlapping responsibilities of different governmental agencies;
- institutional capabilities to carry out the relocation and rehabilitation operation be assessed and, if necessary, strengthened. Road construction agencies rarely have the in-house capacity to manage resettlement operations. Thus, they look either to other governmental agencies or to private sector agencies. The goals in this context are to define responsibilities clearly and to establish whether the agency or organization selected has the charter to deal with all the affected parties (small shops and enterprises, for example), the legal right to acquire and transfer land title, and the administrative capacity to carry out the operation required. These measures are generally defined in an EMP.

Environmental specifications for contractors
These should ensure, first of all, that temporary works and traffic management do not disrupt unduly nearby land users, and that remedial measures for resettled persons are implemented in ways that take account of their social and economic concerns (defined in the RAP). Secondly, contractors should participate in the preparation of the host areas (in terms of either constructing or upgrading of infrastructure) to accommodate the increased use.
**Legislation**

Legislation on the following issues should be considered:

- property rights, expropriation procedures, and compensation requirements; and
- public participation and appeal processes.

### 12.5 REFERENCES AND BIBLIOGRAPHY


