Instruments of Land Mobilisation – concepts and examples

This paper discusses characteristics of land mobilisation and conceptualises it as a type of a land management intervention

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The land mobilisation is more than just a spatial legal conversion of land. In all phases of a land interventions – preparation, execution and finalisation – changes in governance, legal, social, economic relations, perceptions and behaviour occur.

The construction of infrastructure requires land on which the infrastructure is planned. If the constructor does not have any formal rights to that land, land use conversion needs to takes place such that the land can be legally acquired by the construction company or the construction authority. Such a process can be referred to as land 'mobilisation', a process supporting the formal conversion and transfer of land in order to enable the process of construction. Mobilisation of land does however not come without problems. There are numerous examples of where the original land owners or users resist, either because of opposing the anticipated infrastructure, or because of fearing losing their land without any compensation. Hence, the process of land mobilisation is not a very generic term related to legal land acquisition or conversion only. It involves a number of additional conversion processes which need to be executed simultaneously and in parallel. So, how generic or context- specific are the problems of land mobilisation? This question needs to be better understood in order to make future land mobilisation more effective and/or successful.

This paper first discusses characteristics of land mobilisation, and conceptualises it as a type of a land management intervention. Then, 5 examples of land mobilisation instances are compared based on the key descriptive and relational aspects of land management interventions. Finally, a number of conclusions and recommendations are given.

Conceptualising land mobilisation

There are three main aspects of land mobilisation. First, in addition to activity of land acquisition, land mobilisation is usually associated with a public purpose or a public service. Land mobilisation is often also associated with a change of land use relevant for this public use. This in itself requires a formal, democratic, process of justifying the need for this public service and debating the need with both stakeholders. Only if the public need is approved the acquisition can occur.

Secondly, the conversion of land use occurs in multiple ways. A change from agricultural use to roads requires such a physical change of the land itself such that the road can be constructed. In addition, the legal change will need to be enforced by a public land use planning decision with legal force. Essentially a conversion is a change of the physical, biological, economic and legal land use. One can differentiate between a functional conversion of land use (e.g. from agricultural to industrial or residential), a legal conversion (from public land to private land, or vice versa), economic conversion (from agricultural manufacturing to infrastructure combined with service industry) and a physical conversion (from vegetation to a change of topsoil, soil compaction, stabilization, road/ building construction). This conversion is only possible, allowable, steerable, and controllable through land use planning.

Thirdly, there is the aspect of compensation. If land is acquired for a public purpose, than there has to be some sort of compensation, either in the form of money or in the form of alternative land or alternative services. If people need to be moved from one location to another than land mobilisation also refers to the (temporary and structural) allocation of land for (trans)migrants, storage of resources or materials.

In sum, land mobilisation refers to processes of conversion of land rights, land interests, land values, land sizes, land claims prior, during and after a large infrastructural projects or projects of public use, public value, public means. It occurs in the form of evaluation, planning, valuing, acquiring and compensation of land.

If we combine these different characteristics then one can explain land mobilisation as a type and instance of land management 'interventions'. de Vries and Chigbu (2017) argue that Land management is both the science and the practice related to the conceptualisation, design, implementation and evaluation of socio-spatial 'interventions', with the purpose to improve the quality of life and the resilience of livelihoods in a responsible, effective, efficient, consensual and smart manner. One can describe the intervention of land mobilisation as an instance of a land management intervention ΔLM, resulting in and relating to a combination of 6 types of changes and adaptations:

1. Governance -> ΔG
2. Land, property, real estate, land use Law -> ΔL
3. Social-spatial relations -> ΔS
4. Economic opportunities and dependencies -> ΔE
5. Perceptions/beliefs/values) -> ΔP
6. Behavior -> ΔB

In short form, any instance of land mobilisation can be described as a function of a number of changes which either occur or need to occur:

ΔLM (Land Mobilisation) = f (ΔG, ΔL, ΔS, ΔE, ΔP, ΔB)

This generic relation can be used to describe and review a number of examples of land mobilisation.

Examples of land mobilisation

In order to explain how each of the changes occur during a land mobilisation intervention five types of archetypical land mobilisation projects are described and further reviewed.

Construction, improvement or expansion of a new major road

If a major road or highway is (re-) constructed it directly affects both the users and owners of the plots where the intervention is planned, and the residents and firms which are located in the vicinity (Figure 1).

Indirectly the construction affects an entire village or region, as transportation and mobility possibilities and associated behavioural patterns may change. The land mobilisation process stands or falls by the requirements to acquire the immediate plots affected, but it is typically also accompanied by a re-construction and exchange of parcels, i.e. a specific form of a land consolidation. Ultimately the decision behind the land consolidation also provides the government agency responsible for the decision the possibility to expropriate individual parcels if ultimately needed. For the case of Bavaria in Germany STMELF (Bayerisches Staatsministerium für Ernährung (2012) describe in detail how land mobilisation for the purpose of road construction typically relies on an extensive land consolidation and public participation process. Complementary, Šumrada et al. (2013) describe the detailed process of expropriation for a 'public benefit', such as a road construction, in Slovenia. It is usually a long administrative process in which various types of stakeholders

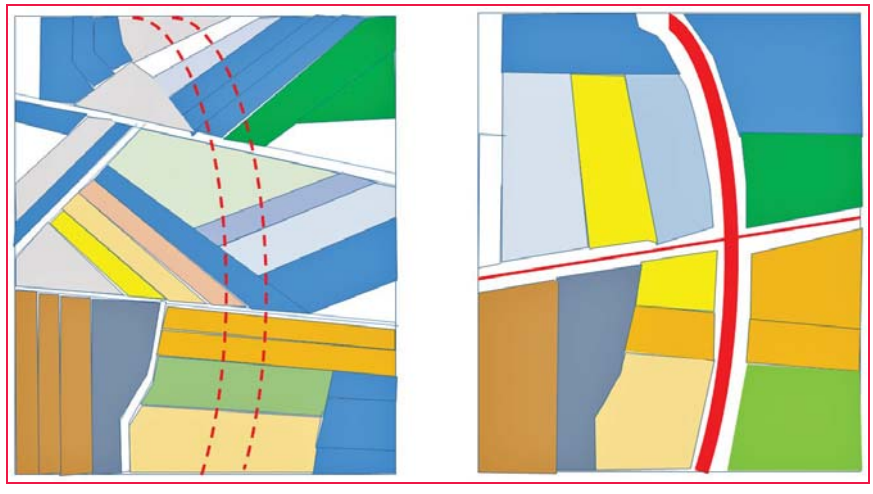

Figure 1: Affected parcels and re-constructed parcels before and after land mobilization

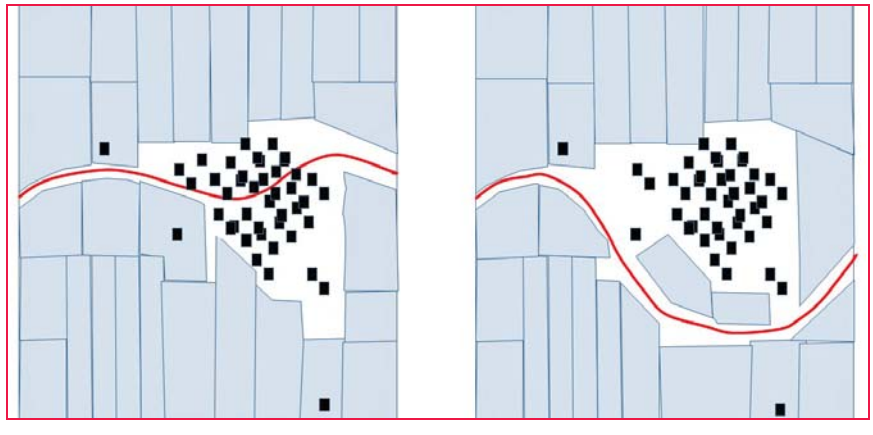

Figure 2: Replacement of a road from a town centre to outside a town

and government agencies are involved. Governments often like to avoid opting for compulsory expropriation given its complexity and duration even though ultimately the change of legal right to the affected land is transacted from individual owners to or via a government agency. If the original legal rights are not secured or are not registered at all, as in many developing countries, direct expropriation does not take place, but still people need to be evicted. Moreover, once evicted, the affected owners, tenants and users will need to be compensated. Especially this part is not a standard procedure in different countries.

Replacement of a road from a town center to outside a town

Instead of constructing a road anew, a road can also be reconverted and improved (Figure 2).

This occurs especially in and around villages where inner city roads are causing negative effects in the form of traffic jams and decreased accessibility of inner cities due to through traffic. In these cases there are not so much economic gains for the village from the re-construction. Instead the re-construction reduces noise levels, inner city pollution, and improves inner city mobility. At the same time, land needs to be acquired and re-allocated outside of the main settlement areas. This outer city road construction is typically accompanied with creating additional access points and access roads for firms adjacent to the outer city road. Figure 3 shows an example of these parallel road structures alongside the new main through road.

Figure 3: Main road and adjacent secondary access roads after land mobilisation project in Schwaben, Germany

Reconstruction of a riverside or waterway

When a waterway is expanded in size or complemented with either boulevards or flood protection structures additional space and land is necessary. International renowned waterfront development projects include that of Shanghai's Bund or London's St. Katherin's Docks. Alongside inner city development, land mobilisation is required, which usually reduces the size of the land of the adjacent plots of the waterway. If land belongs to the State, such as in China, both the acquisition and redevelopment is State-led. Yet, the re-construction also tends to directly benefit the affected land and building owners, users or developers in terms of better access, improved facilities and, ultimately, increased value for their property.

In the preparation process it must be clear however which stakeholders are affected in which way. Rukmana (2017) investigates the land mobilisation effects of an extension and improvement of an inner city waterway in East Jakarta in Indonesia (Figure 4).

The project itself could be initiated by 3 formal government regulations and decrees, backed-up by a land procurement act for public purposes. The extension and improvement of the riverbed over a length of almost 5 km affected 706 land parcels with a total area of 20207 m^2. Due to a significant amount of informal land tenure and occupation there was a lot of uncertainty of land right along the river. As a result, it became difficult to establish who the actual right holders were, so public land ownership was the default in case on uncertainty. This avoided direct expropriation but still led to eviction. Moreover, as long as uncertainty exists opportunistic behaviour from both government agencies and directly affected stakeholders can persist – mostly in the form of speculation through rapid and undocumented transactions.

Construction of ecological corridors

The construction of ecological corridors consists of connecting disconnected or fragmented nature conservation or habitat areas (Figure 5).

The connection allows exchange and movement of groups of animals which became isolated due to roads or built-up areas. One of the largest ecological structures is the European green belt in Eastern Europe (http://www.europeangreenbelt.org/route.html). This did not require a lot of land acquisition or land conversion however. In the more densely populated Netherlands, the 'Ecologische Hoofdstructuur' (ecological spatial structure), recently renamed the Natuurnetwerk Nederland (Nature network Netherlands), land conversion and acquisition has been inevitable. This required however a special fund to enable this acquisition process, largely

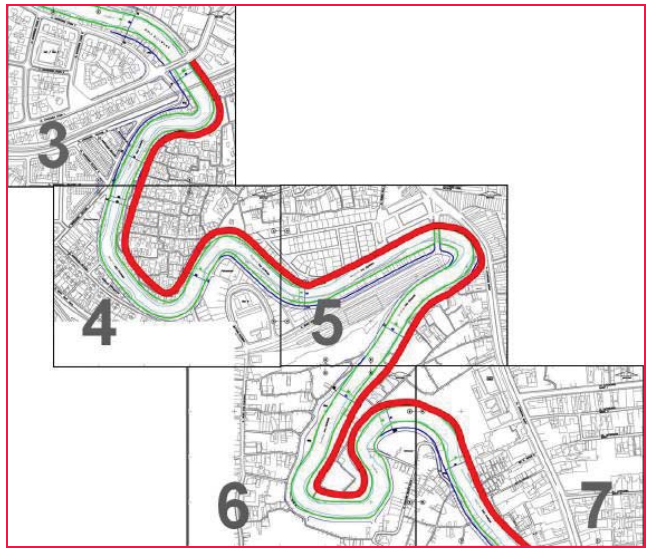

Figure 4: Land acquisition Kampung Melayu (source: (Rukmana 2017)

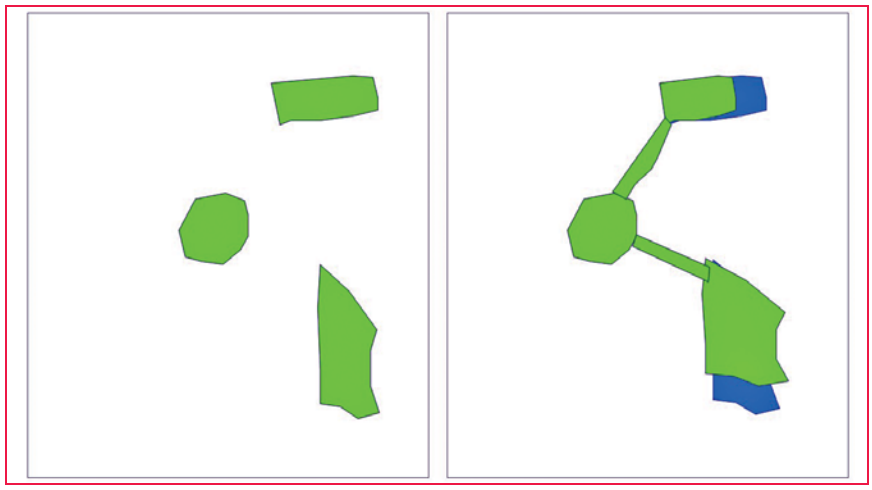

Figure 5: Construction of ecological corridors

undertaken by regional governments. The obligation to manage the land for ecological or nature purposes is connected to the subsidy. This may imply that a change in responsibility in converting the land use and maintaining the quality of land use of the area. Accredited or acknowledged nature organizations may take up that responsibility.

A major problem with creating ecological corridors may be a conflict of norms and perceptions towards the ecological value. A recent public TV documentary on a project in Germany revealed the failure of a 30–year long effort in participation and consensus building in order to reach a decision between the protection of local fauna versus the construction of a highway in a rural region (Bosse 2016). The rationality of the cost/benefits of road infrastructure was incompatible with ecological value systems, whilst changes in public or private ownership rights resulted in public resistance. Hence, land mobilisation decisions related to ecological corridors need to resolve incomparable public and private interests in land use at both national and local scales.

Replacement / extension of urban / city boundaries

The enormous urbanisation rate in especially countries in transition, such as China and Vietnam, often requires a redefinition and re-delineation of urban boundaries (Figure 6).

Long et al. (2013) compare various methods to compare anticipated or planned urban growth with de facto urban growth. They conclude that current models are not appropriate to manage and control urban growth resulting in ever growing urbanized areas. Land is needed for this rapid urban expansion which is accompanied by large-scale land conversion from agricultural or ecological lands to residential or industrial lands. This is not only accompanied by a formal land use conversion, but also by a change in responsibility to uphold the living or use quality certain areas (or simply put: a change in spatial governance) and a significant socio-spatial change (framers becoming urban residents). Thanh et al. (2016) clarify how these accompanying changes are shaping up, and observe that even with financial compensation of converted farmers the social implications are more drastic than anticipated. They not only lose their land, but also lose their livelihood and daily social network.

Discussion – aggregated changes due to land mobilisation intervention

Change in governance (ΔG)

All types of land mobilisation can only start with a formal decision of a government agency. Besides a land use planning decision or a re-definition of boundaries, the process also involves a land re-allocation or land consolidation process. In this process a committee may be established with stakeholders who may contribute to the preparation of the re-allotment plans and ultimately also decide on actual re-allotment. Most land mobilisation projects differ however from typical land consolidation projects for agricultural purposes in the sense that the compensation may not be in form of agricultural land, but in financial terms. Most land consolidation laws still do not foresee a compensation in terms of ecological value if part of the re-allocation deals with ecological improvement or exchange of plots with ecological value, making mobilisation for ecological purposes still different from most other forms. In this case the governance change primarily affects the stakeholder being responsible for the use of the (re-allocated) plot rather than the actual ownership.

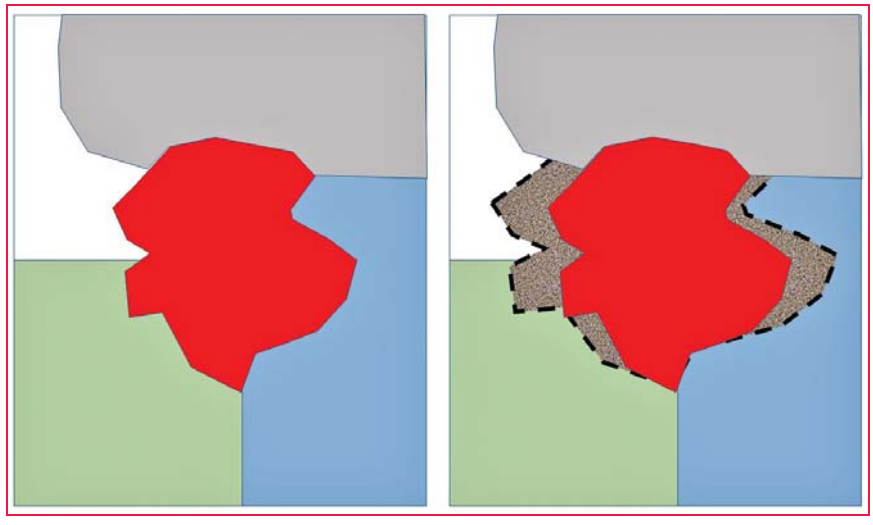

Figure 6: Conversion of land use due to extension of urban boundaries

Change in legal relations (ΔL)

There are various moments in time where land rights change. First, there is a form of expropriation, either voluntary or compulsory. Land rights are transferred from individuals to the State, or a facility – such as a land consolidation committee of stakeholders - supported by the State. Then rights are both reconverted to the private companies who execute the construction and the private or corporate parties who were affected by the project. All-in-all, it leads to a spatial re-allocation of rights.

Change in socio-spatial relations (ΔS)

Land mobilisation for road replacement or for urban expansion often changes agricultural land use to residential and industrial one. This process affects the social and economic daily life of those who were previously only relying on farming. In case of road replacement the process allows for new types of business with access to the new roads, or alongside the new roads. In case of urban expansion providing more housing and residential space within the city boundaries has both positive and negative socio-spatial side effects. Farmers do not just stop being farmers if they are absorbed by the cities. Their social and economic activities were often historically and culturally rooted in their spatial location. It is not so easy to change this at the same pace as the urbanisation rate. As a result, especially in countries in transition, many of them are still struggling to make ends meet and find a new avenues for daily activities. Compensation in money terms is then either not enough or sometimes even not appropriate.

Change in economic relations and dependencies (ΔE)

The economic changes involve both changes in economic opportunities due to the land mobilisation effects (e.g. new types of businesses along the new roads or improved waterways, or ecological tourism activities in the ecological corridors), a dramatic change in land value (given the change of access and mobility), as well as a shift in government expenses (given the cost for the acquisition and conversion of land). To which extent the acquisition processes are cost-effective and cost-efficient depends however to a large extent on how much administrative transaction costs can be kept to a minimum and the degree to which the anticipated benefits can be realised. Groetelaers et al. (2013) provide a normative framework to demonstrate that costs for land acquisition are often underestimated. This may be due to the delays, or due to underestimation of amount of parcels and diversity in (often undocumented) existing land tenancy and land use relation in a certain area.

Change in perceptions, beliefs and values (ΔP)

Land mobilisation is often built on different rationalities and norms and as a consequence different perceptions and values of what is considered appropriate. The conflicts in values systems become most apparent when land with economical value needs to be exchange or converted into land with ecological value, or vice versa. There is no universal value system available to make this exchange acceptable and appropriate to all stakeholders. Consequently, land mobilisation projects tend to prioritize one rationality over another. The examples discussed above show that usually the economic rationality prevails, even in the land mobilisation for ecological corridors (where still emphasis is placed economic means for managing the corridors).

Change in behaviour (ΔB)

Land mobilisation may inflict several behavioural effects. Land speculation may emerge once people or firms become informed of a land mobilisation project, knowing that it usually results in properties with more value. In addition, compensation demands of affected parties may increase, knowing that without their plots the entire project may be delayed. So, the project creates new dependency relations on the basis of which opportunistic behaviour may arise.

Conclusion

The example indicate that land mobilisation is more than just a spatial legal conversion of land. In all phases of a land interventions – preparation, execution and finalisation – changes in governance, legal, social, economic relations, perceptions and behaviour occur.

Further comparative research is recommended to which extent countries effectively and efficiently employing their legal instruments for land mobilisation and under which conditions and by which factors perceptions and behaviour change before, during and after a land mobilisation process. This is important to understand how to manage the socio-economic dynamics which develops in conjunction with the land mobilization.

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