

Land Consolidation as a Tool of Rural Sustainable Development

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Key words: land consolidation, rural sustainable development, land management, land administration.

SUMMARY

It has been accepted that mankind has gone into the space-technology and information century and also cities become the center of the economies, however community requirements that depend on the rural land have been increasing and becoming more varied day by day.

In lots of countries socio-economical plans, physical application plans had been made and keeping on making for developing rural areas. The main purposes of these plans; increasing the agricultural production and productivity, creating new job opportunities, raising the revenue for per person and prevent the immigration from rural to urban. But, accepting the development only as an increment of economical indicators can not be rationalistic and sustainable approach.

Land consolidation is accepted as a primary instrument of rural development has various functions with its dynamic structure.; to provide secure of nutrition; to conserve the environment; to resolve of conflicts concerning the ownership and boundries; to keep traditions and cultural value of rural structure alive; to get optimum results of land management policies and applications; arrangement of physical environment can be summarized as these functions.

Every theory needs an application tool. Land consolidation is the unique tool for sustainable development in rural areas with its dynamic structure that gives opportunities getting the best solutions for land management decision applications and, arranging and recording the physical environment. In this case, a general overview about interconnectedness of sustainable rural development, land management, land administration and land consolidation will be given.

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1. INTRODUCTION

Land is the ultimate resource, for without it life on earth cannot be sustained. Land is both a physical commodity and an abstract concept in that the rights to own or use it are as much a part of the land as the objects rooted in its soil (UNECE 1996).

Land and its use may be examined from many different aspects. From an ecological perspective, land has vital role in the breeding and survival strategies of many living species. In every country, land, building and structures attached to land are one of the most important financial assets and all of the investments are depend on land. From the sustainable development perspective, land accepted as a scarce community capital source that must be most efficiently used, protected and transferred future generations.

Environment had not been taken into consideration and destroyed for economic development that followed industrialization and technological progress in the middle of the 20th century. Local scaled environmental problems had accepted as innate and tolerated results of economic development.

Environmental problems, which were not heeded, local, accepted as a natural result of economic development and also solved later easily, had exceeded national boundaries and become needed worldwide solutions. United Nations established the World Commission on Environment and Development to define and solve these problems and sustainable development approach, which includes both economic development and environment, underlined for the first time by this commission.

2. SUSTAINABLE DEVELOPMENT APPROACH

Sustainable development concept firstly aims development. Development term expresses ascending usage of resources for better conditions of living. The purpose of sustainable development is equalizing developing countries to developed countries level and to avoid repeating mistakes which had been done by developed countries in previous time. The principals of the sustainable development model which envisage efficiently using of resources and protecting of natural resources, is valid both developed and developing nations. It is generally accepted that, the economy and environment is whole for all countries.

In the United Nations Conference on Environment and Development, held at Rio de Janeiro in 1992, two important documentations which embody of sustainable development approach were accepted. These are called as '*Rio Declaration*' and '*Agenda 21*'. The Rio Declaration is composed of 27 items, which are intending to create a new development approach which provides both protecting of environmental resources and providing economic development in a global integrated approach. Agenda 21 consists of four chapters and 40 subchapter which

are related to social and economic dimensions of sustainable development; protecting of natural resources for development, increasing power of major groups; application instruments. Also, relationships between environment and development were evaluated with all aspect, and aims, methods, and application tools of sustainable development approach were determined.

2.1 Land Management

Land management, defined in The Bathurst Declaration on Land Administration for Sustainable Development (1999) as; *“the activities associated with the management of land as a resource from both an environmental and an economic perspective towards sustainable development”*. Land management is the processes by which the resources of land are put to good effect. In addition to this, it is an integrated system which solves land related problems. It covers all activities concerned with the management of the land as a resource both from an environmental and an economic perspective. It can include farming, mineral extraction, property and estate management, and the physical planning of towns and the countryside. It embraces such matters as (UNECE 1996);

- property conveyancing, including decisions on mortgages and investment;
- property assessment and valuation;
- the development and management of utilities and services;
- the management of land resources such as forestry, soils, or agriculture;
- the formation and implementation of land use planning;
- environmental impact assessment;
- the monitoring of all activities on land that affect the best use of that land.

The functions of land management in sustainable development can be summarized; establishing an effective and transparent real estate market by providing information and protecting rights on land; well-balanced urban and rural development by supervision, land arrangements, planning and acquisition land for public interests; environmental protection by environmental effect assessment and land policies.

2.2 Land Administration

Land administration, is defined by the The Bathurst Declaration on Land Administration for Sustainable Development 1999 as; *“the processes of determining, recording and disseminating information on ownership, value and use of land when implementing land management”*

These processes include legal definitions of rights on land and attributes of land, documentation of these rights and attributes and preparation of all related data with the support of land markets.

Land administration can be defined compilation and updating of good data related to planning of urban and state or agricultural arrangements.

As MOLEN (2002) pointed out, land administration systems depend on culture, history and people behaviours. By these reasons, land administration systems are different for every country. These show us why there is not a best application. Land administration systems include various tools for implementation of land policies. These tools is summarized in Kirk and et al.(1998) as follows;

- Promotion of ownership security
- Regulation land markets
- Planning, development and maintenance of urban and rural land
- Setting up bases for taxation
- Management of environmental resources.

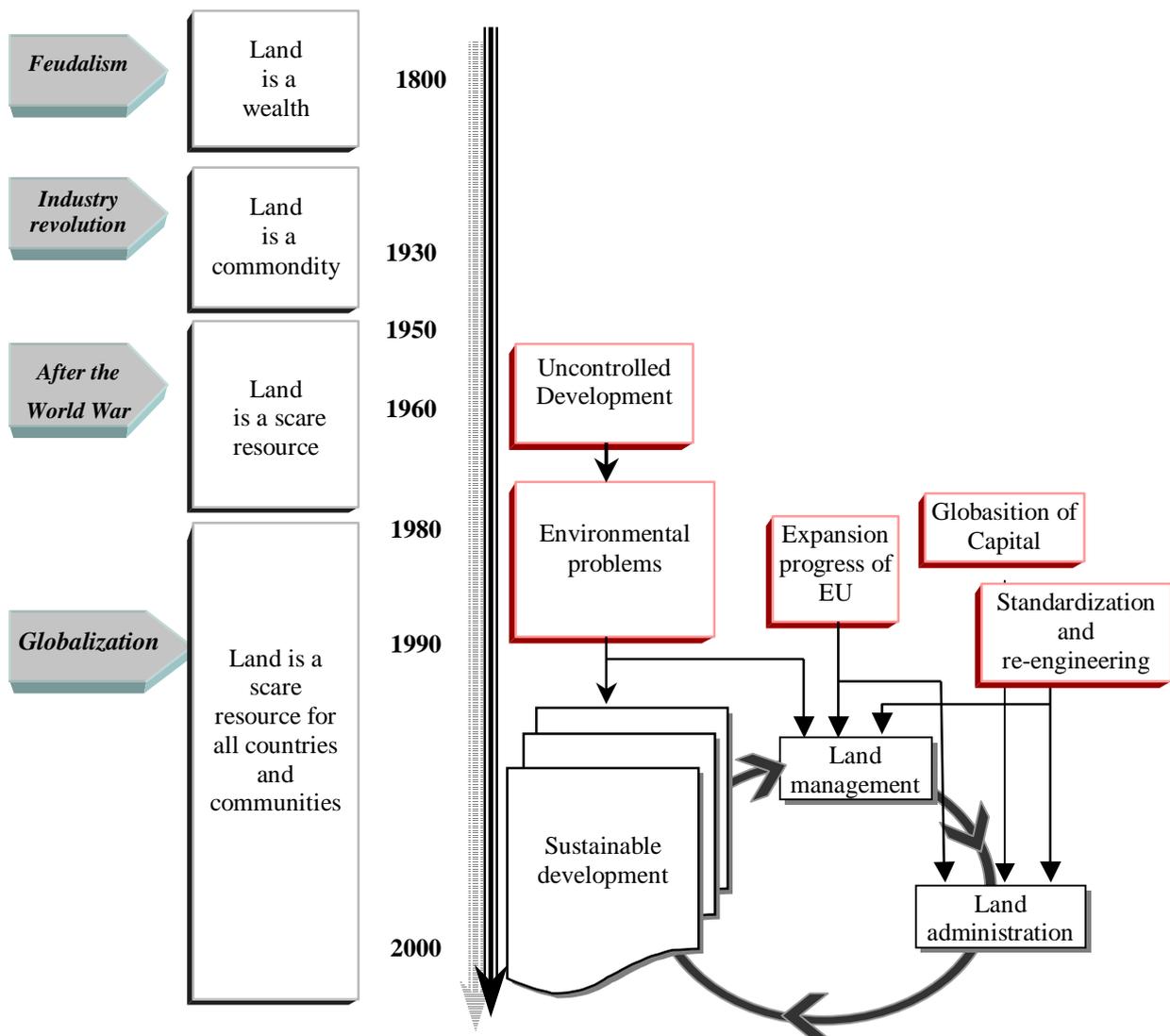


Figure 1: The evolution of perception of land
(Enhanced from WILLIAMSON 1999; ENEMARK 2001)

According to United Nations Land Administration Guidelines (1996); a good land administration system should produce benefits, many of which cannot in practice be quantified in cash terms. These benefits are outlined below:

- Guarantee of ownership and security of tenure
- Support for land and property taxation
- Provide security for credit
- Develop and monitor land markets
- Protect state lands
- Reduce land disputes
- Facilitate rural land reform
- Improve urban land planning and infrastructure development
- Support environmental management
- Produce statistical data.

The first aim of land administration system is to provide sustainable development. Environment has been changing continuously in the process of mankind activities or natural events. The important point is in here monitoring changes, explicating these changes and improving land use appropriate to sustainable development concept (DALE and MCLAUGHLIN 1999).

3. LAND CONSOLIDATION FOR SUSTAINABLE DEVELOPMENT-LAND MANAGEMENT AND LAND ADMINISTRATION

Socio-economical and physical plans have been prepared for developing rural areas in many countries, but many of them defined development as only change and variation of product pattern, and use of agricultural techniques. Furthermore in those plans, agricultural areas, village settlements and nature planning had not been handled together in physical plans and also fiscal problems have not been solved. It can be said those plans were expensive, lack of legal and technical base, impractical and not sustainable.

Impact of the improvement of agricultural methods on the agricultural productivity and income increment has been remained limited without solving problems about rural structure. An efficient agricultural management has been obstructed by littleness, scattered and irregularity of agricultural enterprises. Besides insufficient infrastructure and living conditions affects negatively to productivity and causes other economical and social problems. In addition to these, giving priority to agriculture, not taking environment into consideration and demolition of nature are primary problems of rural lands.

The average of increment of cultivated agricultural land is 4.8%, while this ratio is very low about 0.3% in developed countries; in developing countries like Turkey this ratio is high, about 9%. This increment has been met from marginal agricultural areas, pasture, forest, etc. (GUR 2001).

In the last 50 years, the pasture areas have decreased from 30 million hectares to 21.5 million hectares, on the contrary agriculture areas have increased from 13 million hectares to 28

million hectares (Gur, 2001). Although inappropriate areas had been used in agriculture, about 70% of constructions that are necessary for industrialisation had been builded on the first and second degree agriculture areas.

It is not possible to provide sustainable development without any application tool in rural areas. Land consolidation with its dynamic structure that is integrated with nature, environment, rural landscpae and village renewal studies, takes role in most productively application of land management policies, and also supports land administration system that is the other part of sustainable development by recording and registering the physical structure that it readjustes.

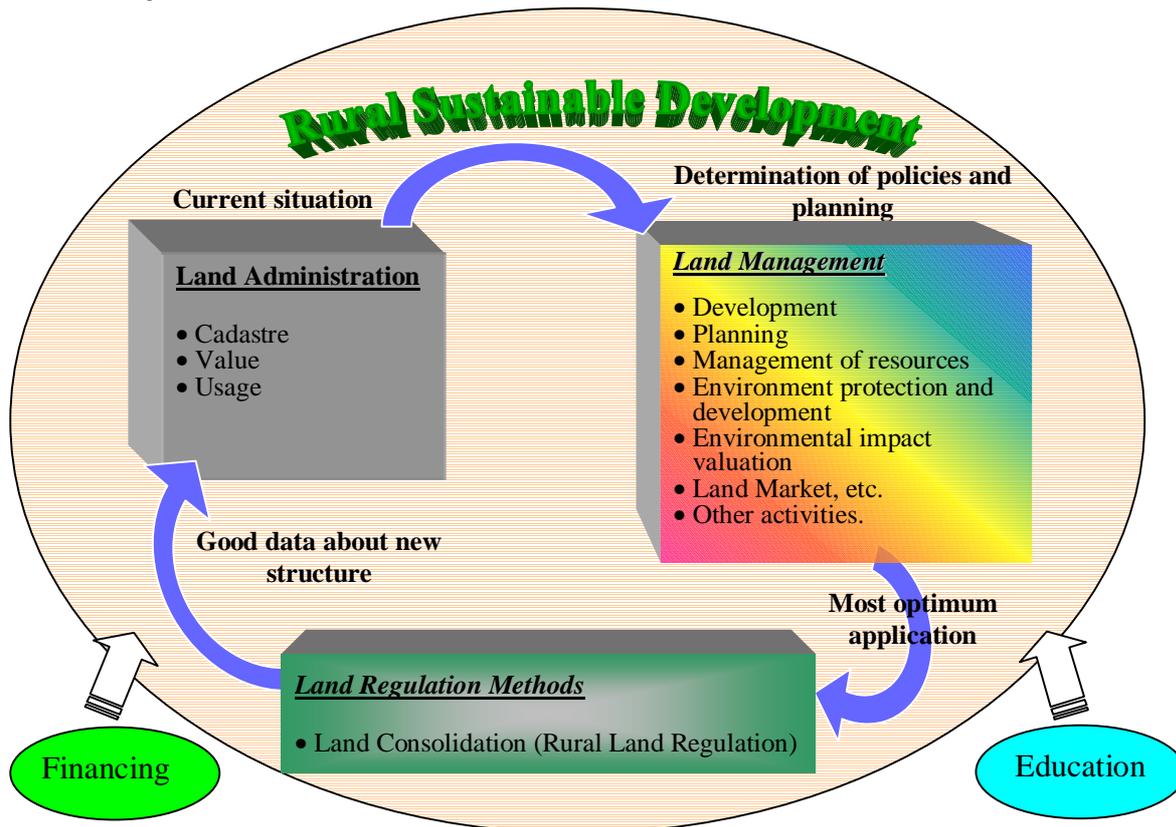


Figure 2: Cycle of Sustainable Development- Land Management- Land Administration and Land Consolidation

In Turkey, land consolidation applications applied only in irrigable areas have aimed irrigation and consolidation of scattered plots since 1961. Arable field development services such as soil improvement and leveling has been performed with land consolidation. In 378 projects, 384,000 hectares areas have been consolidated until the end of 2001. 8.5 million hectares of 27.5 million hectares agriculture area can be irrigated economically. 4.5 million hectares of 8.5 million hectares have been irrigated and only in the 8.5 % of irrigated areas land consolidation had been applied. The expensive and unproductive applications in the other irrigated areas and giving insufficient attention to the other agricultural areas are the clear proofs of the lack of a rationalist land management system in rural areas and agricultural sectors while entering the 21th cebtury in Turkey.

Since 2001, new code works that are appropriate to the principle of sustainability and accept rural areas as a whole and contain following principles, have been started after evaluation of land consolidation in the scope of reconstruction. The general context of these works as follows;

- Regulation of agricultural areas
- Planning of land usage
- Expropriation aimed consolidation
- Village renewal-revival
- Environment conservation and improvement of rural landscape
- Consolidation of dry and other agricultural areas.

Unfortunately environmental effect evaluation, people participation and fiscal subjects have not been considered in these works.

3.1 Land Consolidation In Nowadays

Increasing productivity is an insufficient definition for development of agriculture. Minimize differences between rural and urban and also realize balanced development between regions become more important nowadays.

In today's, conservation of nature has turned out to be more important and related precautions have become an important part of land consolidation. Land consolidation has oriented to planning and realizing all precautions that intend to conserve, strengthen and improve living, settlement, nourishment, economy, environment and vacation functions of rural areas with readjustment to ownerships.

Land consolidation has been improving living and working conditions, guaranteeing nourishment in rural areas by;

- Protecting and keeping alive farming
- Developing villages as settlement areas
- Strengthening a healthy environment

Furthermore, it supports other specialty field to perform their goals (DEMIREL 1999), especially;

- Environment
- Settlement
- Little industry
- Water economy
- Protection of cultural wealths
- Tourism
- And etc.

There is a close relationship between precautions of agricultural structure improvement and conservation of rural areas. These precautions have been evaluated in the aspect of providing environmental balance, preventing erosion and improving rural landscape in rural areas. Thus, healthy and balanced cycle and continuity of rural areas will be provided with guaranting yield and productivity.

The common purposed public structures such state roads, power stations, etc, which are needed great land, has been added the scope of land consolidation projects. Burdens and damages caused from expropriation have been prevented for both public institution and land owners.

Tools that are used for realizing these purposes of land consolidation are defined into 8 groups (DEMIREL 1999);

1. Road construction
2. Irrigation
3. Protection of agriculture and land culture
4. Village renewal
5. Preservation of nature and rural landscape
6. Construction of recreational and leisure areas
7. Land readjustment
8. Land acquisition.

Villages must be kept functional as living and working areas to preserve rural life and culture and to carry on the of agriculture managership. By this way, immigration to urban settlements and irregular urbanisation will be prevented. Villages have been renewed without losing their properties and functions and capacity of meeting contemporary social requirements in developed countries for a long time. Village renewal means providing living conditions in rural areas as in cities in the same value, but not in the same form (DEMIREL 1999).

The relationship between sustainable rural development and contemporary rural land readjustment is shown in the Figure 3.

Land consolidation supports land administration systems and land management by regulations of the relationship between land and mankind in the most optimum form. In addition to its good effects on agricultural and ownership structures, land consolidation has positive effects on the other directly or indirectly related economical, social and physical structures.. These impacts are generally as below;

- production expenses decrease
- nourishment requirements is guaranteed
- working times reduce
- relationship beetwen agriculture and nature are balanced
- total income rises
- costs of agricultural investments reduce and effectiveness raises
- community consciousness and democratic behaviours develop

- agricultural land, nature and the other rural resources conservation are provided
- living conditions in the rural areas are improved and pressure on the urban settlements is reduce
- problems about ownership are solved and cadastre updates.

In addition to this today and future land consolidation is a unique tool for developing rural land markets and applying all rural land policies.

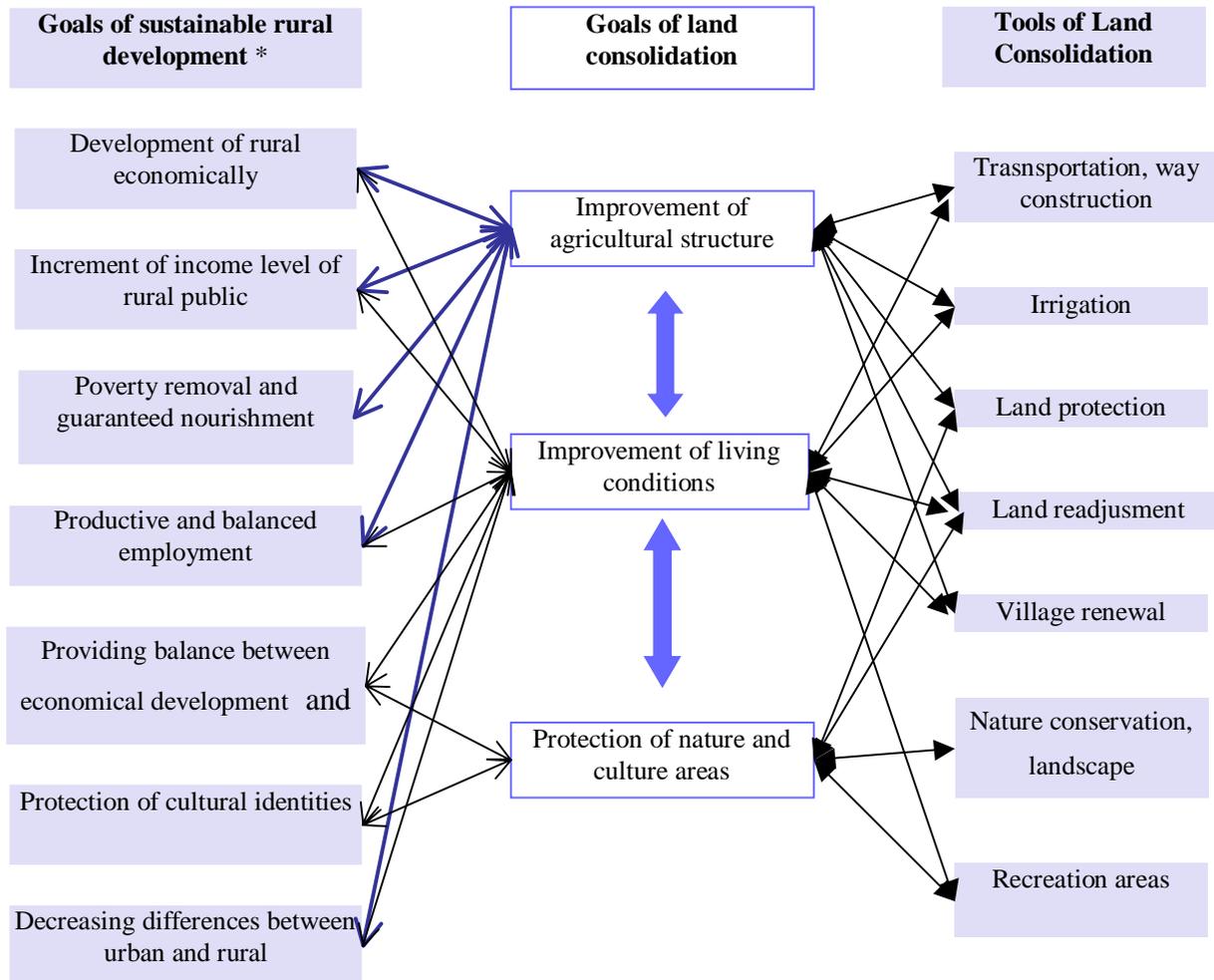


Figure 3: The relationship between sustainable rural development and contemporary rural land readjustment (land consolidation) (GUR 2001)

* Goals of development taken from the VIIIth Fifth Year Development Plan for Turkey

4. RESULTS AND SUGGESTIONS FOR DEVELOPING COUNTRIES

The basic component of capitalist system ‘the using and sharing of resources’ has been changed by the effects of globalization as exploitation of resources of developed or developing countries or by wars in favor of economically developed countries. Land is a unique resource that all resource depend on it.

The positions of developing countries to new conditions that are formed by globalisation and integration are very important. In this position, it is very vital to give importance to registration of all land and land dependent resources, determination and planning of their usage, rights and policies, readjustment and monitoring according to these policies and plans for avoiding from negative effects and taking advantage of new conditions.

New conditions can be defined in the view of surveying engineer as multipurpose cadastre, land administration, land management and urban and rural land readjustments. At this point keeping alive and current the system is a must. Thus, the profit that is gained from development can be turned back to community.

Land management and land administration are only conceptual approaches and it is not possible to show the best application and form. To put these concepts into practice successfully, the organisational structure, social structure and demands of the country should be examined carefully and solved.

If code of laws, public institution and application methods related to urban and rural readjustments, cadastre, expropriations and etc., arrange individually, unconformity and faults are inevitable. It will be an ordinary conclusion that the system can not meet expectations and become disfunctional in a short time period. Because these activities that affect all of the community could not be thought individually and they are constituted from some components as below;

- Rules
- Theoretical bases
- Tools
- Resources in man
- Organization

These components should be designed according to the special conditions, possibilities and expectations of the country (Figure 4) (GURKAN, 1984).

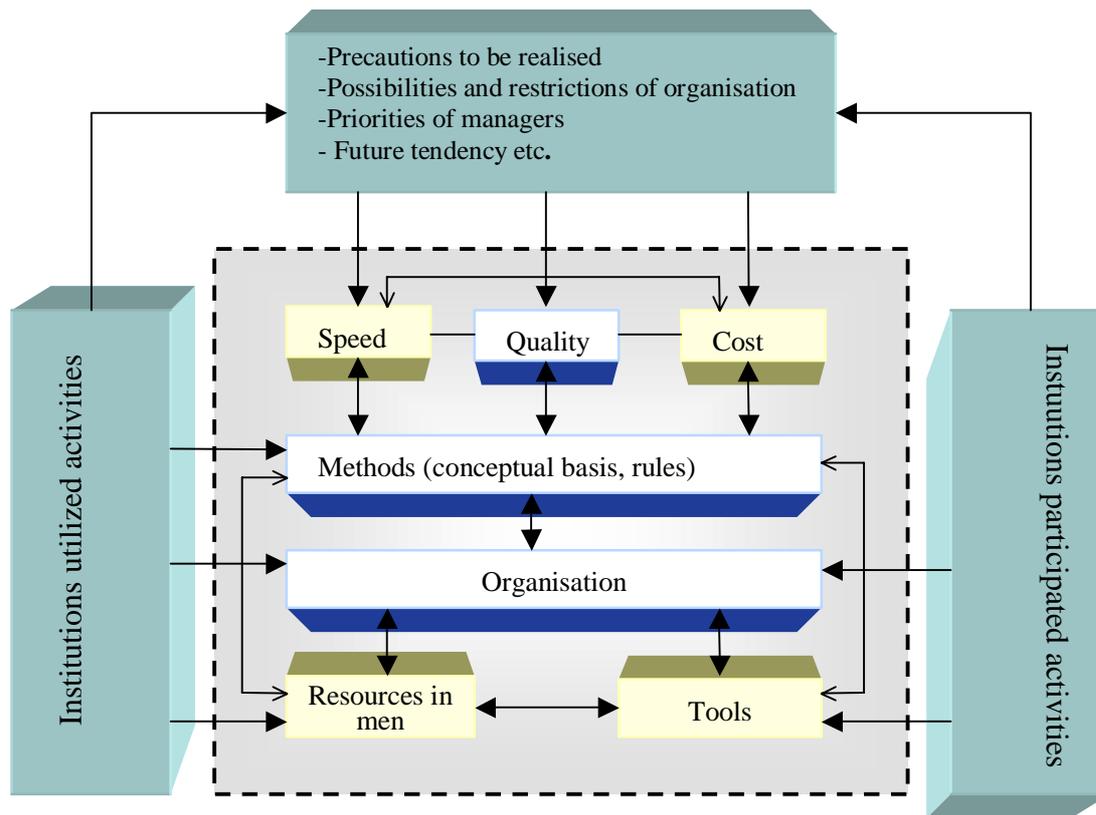


Figure 4: Components of re-engineering of land related systems

Clear frame definitions must be made according to nation exigencies and circumstances for providing a successful reengineering of land related activities such as urban and rural readjustment, cadastre, expropriations and etc. by competent authorities. In addition to this, all these activities must be designed and codified together to avoid any legal blank, repeats, contradictions and indefiniteness.

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