



OUTLINE OF THE METHODOLOGIES FOR SPATIAL PLANNING IN REPUBLIC OF SRPSKA (BIH)

November, 2004



INTRODUCTION

This material was made as part of the project `Review of after-war situation of land resources in Bosnia and Herzegovina which started the Organization for food and agriculture of United Nations (FAO).

The Institute for Urbanism of Republic Srpska was engaged to make the survey of methodology used in last 10 years in the area of Republic Srpska, as one of two entities of Bosnia and Herzegovina. Within this survey, basic conclusions were that in mentioned period in Bosnia and Herzegovina there had not been applied the special methodologies for planning of agricultural land use, but purpose and the way of land resources use was the subject of general plans related to the development and spatial use, i.e. the plans that had been defined by laws within the area of spatial development.

The law on spatial development of ex-FR BiH had been applied till 1996 year, and since then new Law on spatial development of RS came into force. These both laws had a lot of changes so in further text the law on spatial development of ex-FR BiH is related on its changed text from 1987 year in period from 1988 to 1991 year. (`Official Gazette of FR BiH` 9/87, 23/88, 24/89, 10/90, 14/90, 15/90 and 14/91). When it is referred to new Law on spatial development of RS it is only referred to changed text from 2002 year. (`Official Gazette of RS` 84/02 and 14/03).

Regarding the previous conclusions i.e. facts that the same laws valid for other lands (forest, construction and other) were also used for the defining of purpose and the way of agricultural land use, the working team of Institute for Urbanism engaged for making of this survey concluded that it was necessary to attach not only description and comment of methodology applied in general planning but also brief review of some regulations of other laws which were related or significant for treatment of total land resources in aspect of agriculture. Also, there were given the relevant guidelines of two spatial plans of Teslic municipality (old and new) as well as Spatial Plan of RS for period from 1996 to 2015 year as illustration of the methodology of land resources use.

The structure of this material showed under the title `contents` came out this approach. In chapter under title `Methodological approach to spatial planning`, it was given a brief comment of valid methodology (Regulations about contents of plans made in 2003 year) as internal methodology applied by Institute for Urbanism of RS within introduction of ISO 9000 the system of quality.



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2. METHODOLOGY OF SPATIAL PLANS FOR THE TERRITORY OF BOSNIA AND HERZEGOVINA UNTIL THE ADOPTION OF NEW LAW AND STATUTE ABOUT SPATIAL PLANNING

2.1. GUIDE OF THE METHODOLOGIES FOR PREPARATION AND LEGISLATE SPATIAL AND URBAN PLANNING

(Above it was mentioned the term `DEVELOPMENT PLANS`, the term that was officially used in previous methodology for spatial plans).

Preparation and work out of development plan is carried out in two phases as it follows:

1. First phase-preparation that includes the work out of analytical-documentation foundation and the adoption of development concept
2. Second phase-work out of development plan

1. First phase

1.1 Work out of analytical-documentation base includes the following:

- survey of existing condition of spatial and urban development, its analysis and estimation of further development options,
- general goals of spatial and urban development,
- particular goals of spatial and urban development,
- work out of basic outline of spatial and urban development based on the guidelines from the

Article 103 of Law on spatial development (it also includes alternative options for individual fields of expertise).

During the preparation of analytical-documentation base, the contractor engaged for preparation of spatial and urban plan informs the Federal Secretariat, so called national defense about approach to making of plans according to the Decision about the required procedure and about the federal administration body which can set up the requirements regarding the needs of general national defense and war destruction control, and according to them there will be adjusted spatial and urban plans (Official Gazette of SFRJ, no. 35/83).

Analytical-documentation base in short version contains all relevant components for planning of spatial and urban development, i.e. development, protection and use of space in the planned area. Starting from the fact that this document should serve as base for planning of spatial and urban development of given area, as well as for the planning of the purpose and organization of the one, all data must be presented in way providing discussion about the ones as well as making the choice about the best development concept.

Analytical-documentation base, depending on which development plan is worked out, is formed from the following sources:

- documents, outcomes and research done for the purpose of Spatial Plan of Bosnia and Herzegovina for period from 1981 to 2000 year, as well as data included in the Plan,
- documents and outcomes of survey done for the purpose of spatial plans of wide and narrow area, as well as from the plans themselves,
- documents and data from long-term and middle-term social plans of the Republic and municipalities,



- statistical data from the public book-keeping service, long-term development programs for individual fields-branch programs,
- documents and data of the subjects of planning (development plans, development studies and others),
- data and documents of Republic, regional and municipal institutions (seismologist, hydro meteorological, agro-pedology, geology institutes, institutes for health protection, protection of cultural monuments, country museums and others) and self-management interest communities,
- previously made spatial-planning documents for related area,
- other sources that can be used in preparation and work out of development plans (forest economical base, water management base, different studies, field of expertise, proposals, cadastre data, municipal provisions dealing with area of spatial development and similar).

When there is no appropriate information for the particular field of special significance in terms of the planning of development, it will be carried out the survey in aim of making the special studies, survey and expertise for individual fields, and in the aim of solving some concrete problems in the area.

1.1.1 Within the survey and presentation of existing condition of spatial and urban development, its analysis and estimation of further development options, for the area in borders determined by the decision about work out of development plan, in textual and graphical terms there will be processed the following issues:

1. Natural conditions
2. Purpose of space
3. Natural resources
4. Population, settlements and flats
5. Traffic, water, energy, communal infrastructure and communication systems
6. Public infrastructure
7. Environment
8. Features of economical development
9. Spatial development in terms of national defense and public self-protection
10. Analysis and estimation of the condition of spatial and urban development
11. Potential development directions depending on the natural and work created conditions as well as the conditions of social-economical development, assigned middle-term and long-term social plan of public-political community.

Issues cited in the above points (the points 1-9) are developed and presented according to the minimum of compulsory unique indicators for development plans, and depending on the type of development plan to be worked out. Issues cited in the above points (10 – 11) are related to plan period i.e. to possible development directions.

Graphical part of existing condition of spatial and urban development has one map showing the synthesized outline of spatial use. The map of synthesized outline of spatial use is worked out according to the working maps for individual above mentioned issues. Working maps will be done in scale that provides the identification of purpose and significant objects on the map and in the space, and synthesized outline of space use is done in scale prescribed for the graphical part of development plan that will be worked out (chapter III).

1.1.2. During the process of determination of general goals for the purpose of development plan for any planned area, it should be taken into consideration the following: mutual interests and goals determined in the Arrangement about the foundations of Spatial Plan of Bosnia and Herzegovina in the period from 1981 to 2000 year, general goals from the spatial plans of wider area (Spatial Plan of Republic, municipality, two or more municipality, and of special area), policy of



rational use of the space and goods in general use, protection of environment and goals of social-economical development.

1.1.3. Special goals of spatial and urban development for each development plan are determined on the base of following:

- condition of spatial and urban development and estimation of further development options,
- spatial plans of wider area,
- public targets determined by public plan,
- public -political community for concrete area and development plans of planning subjects,
- long-term programs of development of individual fields-branch plans,
- demands of Federal Secretariat for purpose of national defense regarding the preparation and development of territory for the needs of national defense and the needs of territory development in terms of social self-protection.

Special goals contain all particularities of spatial unity for which it is worked out the spatial plan and they present the foundation for determination of guidelines for preparation and work out of development plan, the choice of development concept and creation of development plan.

1.1.4. Foundation for work out of basic concept of spatial and urban development and possible alternative options for individual fields, presents the outcomes and estimation of spatial and urban development condition, set up the possible directions of development, general and particular goals and guidelines for work out of development plan. Basic concept should have a clear pronounced dimension of spatial purpose, to acquire a complete insight in spatial options (natural and built) taking the planned functions, as well as insight in degree of rationality and spatial balance of planned activity in relation to natural conditions and resources. Basic concept of development is done according to the content prescribed for individual development plan.

Basic development concept concretizes the policy of spatial development and environment control being determined by spatial plan of Republic Srpska, obligatory offers the choices regarding construction and reservation of the area for construction of physical structures determined by spatial plan of wider area, and spatial options brought from previous development plans and municipal provisions dealing with spatial relations and finally this concept proposes reinvestigation of the choices made in this document.

Basic development concept is made for scheduled period specified in decision about work out of development plan, but some individual parts of this concept can be treated even for longer period of time (demographic forecast, huge infrastructural systems and similar). Projection of basic development concept is given for whole planning period, and especially for the first phase (phase plan).

Alternative solutions of basic development concept are worked out in synthesized form as alternative spatial purpose for confirmation of options and rationalization of individual alternative options. Basic concept of spatial and urban development, besides textual part of the concept is presented on appropriate number of thematic maps, including also the alternative solutions, which are worked out according to obligatory graphical supplements and in the scale prescribed for appropriate development plan.

1.2. Contractor of development plan preparation together with the subjects of planning considers the basic development concept, takes the attitude in relation to proposed solutions and adopts the development concept to be worked out in pre-draft of development plan.



2. Second phase

2.1. Organization and body working out the development plan is obliged to make the pre-draft of development plan obeying the contents of textual and graphical part of the appropriate development plan prescribed within the instructions for spatial and urbanism plans and town planning works. Contractor of the work out of development plan submits to the contractor of preparation the pre-draft of the development plan in the following form:

-textual part should be made in at least five copies, and graphical part in at least three copies on transparent basements and three on print papers.

The contract about making of development plan specifies the obligation of making the short version of textual and graphical part of development plan in appropriate scale, for purpose of public hearing.

2.2. Contractor of development plan preparation investigates if delivered documentation has been done according to the law and this methodology, and to the adopted concept of development and concluded contract.

2.3. Contractor of the preparation and the contractor of the work out of development plan mutually consider all remarks and suggestions gathered during the public hearing and the analysis of the pre-draft of development plan made at the parliament of social-political community. Based on the taken attitudes regarding the remarks and proposals, the contractor of the work out of development plan is obliged to include all approved alterations and supplements in textual and graphical part of the development plan, as well as to give and cite the reasons why certain remarks and suggestions could not have been accepted.

2.2. II CONTENTS AND DOCUMENTATION OF DEVELOPMENT PLAN

2.2.II/1. SPATIAL PLAN

3.) Pre-draft, draft and proposal of spatial plan are consisted of textual and graphical parts.

1. Textual part of spatial plan including pre-draft, draft and proposal is formed by shape and contents and it has three following parts:

- General and special goals of spatial development,
- Projection of spatial development (work out of adopted development concept) with scope for bringing the measures and the activities for plan realization,
- Decision about realization of spatial plan.

General and special goals of spatial development are taken from Analytical-documentation base.

The projection of spatial development must contain the following issues:

1.2.1 Population:

- constant number of population and temporary number of population (students, pupils, part-time workers and similar),
- structure of constant population (sex, age, education),
- employment and deficit of job opportunities,
- migrations,
- process of urbanisation and de-agrarian process,



- number and size of households,
- population density by urban area.

1.2.2. Urban areas classified by significance and main activity

1.2.3. The purpose of urban areas and construction land out of urban area, their communal equipment facility (water supply, evacuation of waste waters, energy supply, waste landfills, cemeteries and others) and regime of construction.

1.2.4. Agricultural land:

- arable and non-arable land by purpose,
- balances of agricultural land by usability,
- land reclamation, redistribution of land and similar.

1.2.5 Forest and forest land:

- balance of forest land,
- forest economic area,
- protective and protected forests, forest reservation,
- nursery,
- the area planned for forestation and turn into more valuable stands,
- the use of forest and forest land,

1.2.6. Water and water area:

- balance of waters (Article 139. Law on waters `Official Gazette of SR of Bosnia and Herzegovina`, number 36/75)
- water springs, still water, running and ground waters, mineral, thermal and medicinal waters, drinking water with protection zones and belts.
- artificial accumulations, their purpose and solving the problems occur during their construction.

1.2.7. Water infrastructure

- water supply (regional water supply systems, network and objects of other water supply, pumps, water intakes, reservoirs, pump stations and others, country water supply),
- runoff and disposition of waste waters (sewage network and the area connected to this network, waste water industry-polluters, transport and disposition of waste waters),
- water development (stabilization and improvement of rivers, flooding control, erosion control, torrent development, hydro melioration, river bank improvement for bathing purpose and similar)
- harbors, wharfs, marina, roadstead, fishponds, fishing farms and similar)

1.2.8. Mine and mineral findings:

- verified fund,
- the use of fields (ground and surface mine) and the use of land located over underground mines,
- landfill of waste rock,
- the use fields planned for rehabilitation.

1.2.9. Production and transmission of energy:

- energy sources (hydro resources, oil, coal, natural gas, nuclear fuel, biomass, energy of wind and sun), and demands in planned period,
- facilities for energy production and transmission of energy followed with protective zones and belts.



1.2.10. Traffic

- traffic connection to the planned area and wider one.
- traffic infrastructure followed with protective belts and zones (roads, railways, water and air traffic, goods-traffic centre, PTT and RTV and other traffic communications).

1.2.11. Economy:

- economy development and basic factors of development,
- orientation and allocation of economy in the space, followed with working positions in the urban areas,
- polluters and environment control issues,
- development of small-scale economy.

1.2.12. Public infrastructure:

- balance of the requirements,
- spatial distribution of public infrastructure facilities (health, education, social welfare, supply, services, children care, the objects of science, culture and physical culture, business and financial objects etc.)

1.2.13. Special protected area:

- national parks, commemorative area, natural parks and the landscapes of natural beauties, reservations of nature, natural resources and rarities,
- specially valuable area of cultural-historical heritage,
- the area suitable for tourism, recreation, climatic sanatorium and similar,
- endangered area,
- the area of special purpose,
- reserved area for further development.

1.2.14. Protection and improvement of environment:

- explanation of planned solutions in terms of water, air and soil pollution control,
- the area and measures of rehabilitation,
- evaluation till the end of planned period

1.2.15. Protection and revitalization of cultural-historical and natural heritage and availability of all resources in terms of further development.

1.2.16. National defense and social self-defense:

- evaluation of war conflict danger in planned area, evaluation of elemental catastrophes and technical catastrophes till the end of planned period.
- explanation of planned solutions in terms of territory development and protection of objects for the purpose of national defense and social self-protection.

1.2.17. The frameworks for making the measures and the activities for realization of spatial plan:

- measures of economic policy,
- land policy,
- investment policy,
- obligations in further planning (work out of more detailed plans of spatial and urban development) and obligations in making of phase plans,
- obligations of alterations and supplements of brought plans. For all contents of the plan, it is determined the first phase of realization-phase plan of the spatial plan that is balanced with middle-term public plan of social-political community.



1.3. Decision about the realization of spatial plan determines the conditions of use, construction, development and protection of the area and facilities in the space and in this way providing the realization of plan.

Decision contains the following:

- borders of urban area and borders of construction land outside the urban area with their purpose, all shown in figures of enclosure cadastre plots or natural and constructed stretches,
- regime of building (article 7. of Law on spatial development),
- relation to existing objects left outside of borders, outside the urban area and construction site determined by the plan, or at construction site but contrary to determined purpose and particularly relation to the structures located on protective infrastructural belts, zones and protective areas,
- relation to the illegally constructed objects,
- specifications in the area planned for the construction of weekend cottages,
- specifications of agricultural objects for agricultural producers as well as economic facilities and ancillary works as part of households,
- specifications of temporary structures,
- urbanism-engineering specifications and others for issuing of urbanism approval as well as the approval for construction in the area where making of more detailed plans is not required (III and IV degree of construction),
- specifications of spatial use on protective infrastructural belts and zones as well as protected areas,
- specification of connection to classified roads,
- specifications for construction and use of local water supply and other drinking water springs,
- specifications for construction and use of individual structures for outlet of waste waters (septic tank),
- specifications for siting and use of communal waste landfills, cemeteries, and for the area of III and IV degree of construction,
- specifications and the way of issuing the approvals for land use, for setting up of the objects for the purpose of camping and recreation, tree cutting, development of façade, placing of fences, replacement of existing roof, placing of pillars and single-handed promotional objects,
- specifications of manhole construction,
- transitional provisions regarding control and issuing of urbanism approval as well as approval for construction in the area where more detailed plans are required till the final realization of the plans.

Detail work out the individual contents of the textual part of spatial plan depend on the following: the type of spatial plan, its spatial scope, the determination of the social-political community for the contents of spatial plan of the particular area, spatial plan of the region or spatial plan of more municipalities.

Graphical part of spatial plan as the projection of spatial development, is presented on the appropriate number of thematic maps built on updated geodetic plans in appropriate scale such as:

- synthesized outline of existing condition of spatial development,
- extract from the plan of wider area,
- urban area and construction land out of urban area, with designations of construction regime and purpose,
- agricultural and forest land with review of usability in planned period, borders of forest-economic area, the land planed for rehabilitation, land-reclamation, land consolidation, forestation, change of degraded forests in more valuable products and similar,
- water and water area (springs, still water, running, ground, mineral, thermal, medical), routes for water transport, device for water conditioning, reservoirs, disposition of waste



waters, artificial accumulations and similar, all with protective zones and belts, regulation of water courses and torrents, flooding control, the canals for irrigation and drainage, and other facilities of water infrastructure,

- verified findings and surfaces planned for subsurface and over surface use of mine resources and other mineral raw materials, surfaces of final exploitation planned for reclamation, landfills of waste rock and similar,
- economic zones out of urban area and more significant economic zones within the urban area,
- surface for production and transmission of energy with protective belts,
- protected area and objects of cultural-historical and natural heritage with regimes and protection degrees, and other especially protected area, the area planned for rehabilitation,
- the area planned for sport, tourism, recreation, complex of health sanatoriums,
- the surfaces out of urban area planned for collection of communal and industrial waste from the cemeteries, cattle markets and similar,
- the surfaces of special purpose,
- synthesized review of spatial use in planned period.

Phase plan of the spatial plan adjusted to the middle-term public plan of the public-political community is determined for all contents of the plan.

All subjects are worked out by elements worked out in textual part of the plan.

Depending on the demands, spatial plan in graphical form can also contain other contents.

Number of maps on which are given mentioned contents will depend on the options of joining the individual subjects, having in mind that the contents must be clearly presented, providing the possible identification of sites and objects of each individual subject.

Spatial plan is bind text with all graphical contributions.

The plan must contain the following:

- title of the plan
- which area is planned
- name of contractor for preparation of the plan,
- name of the contractor for making of plan,
- an opinion of Republic Committee for urbanism, civil engineering and communal affairs about coordination of the spatial plan with spatial plan of Republic and the decision about adoption of spatial plan.

Documentation of spatial plan consist of all materials and documents related to the preparation and work out of spatial plan, and especially: decision about production of spatial plan, working schedule on preparation and work out of spatial plan, contracts with bearers of plan, analytic-documentation base, minutes made at public hearings and other discussions about plan (contractors of preparation, advisory body, parliament of public-political community), explanation of public hearing remarks that had not been adopted, brief version of spatial plan done for the needs of public hearing, opinions and approvals of the bodies and organizations about matching of the spatial plan with individual fields, studies, proposals, expertise, reviews and similar.

2.3.III SCALE OF MAPS CONTAINING THE GRAPHICAL PARTS OF DEVELOPMENT PLANS

Graphical parts of development plans are made on updated layered maps and geodetic plans in following scale:



Spatial plan of Republic 1:200.000 (layered map)
-spatial plan of the municipality 1:25.000 (layered map)
-spatial plan of two or more municipalities 1:25.000 or 1:50.000 (layered map) or 1:10 000 (basic map)

Selection of the scale for making of graphical parts of development plans, within prescribed scales, is identified depending on the size of area for which the plan is made and then entered in the agreement about making of development plan.

For the purpose of making the graphical parts of development plans, in the aim of easier and more precise identification of particular contents and objects (borders of urban area, of construction and other land, protective zones, protected area and similar), there are made the working maps in larger scale on geodetic plans, which can be used during the public discussions and application of the plan, and are compositional part of documentation.

2.4.IV. OBLIGATORY UNIQUE INDICATORS

Obligatory unique indicators of spatial and urban development present one of the basic ways of showing the spatial issues significant for analysis and estimation of situation, as well as planning of spatial and urban development, and they are integral part of obligatory unique indicators of the social-political community plans, not excluding use of other indicators from the decision about obligatory unique methodology and minimum of obligatory unique indicators necessary for preparation, making and accomplishment of the plans of self-management organizations, communities and the plans of social-political communities (Official Gazette of SFRJ no. 45/84).

Minimum of obligatory unique indicators for development plans is established on the existing standards of social information system containing types, groups and subgroups as it is given in the point 17, item 9 of the decision cited above Official Gazette).

During the work out of development plan, contractor of preparation will offer all necessary support to the contractor of plan realization in terms of data gathering for forming of the review of minimum obligatory unique indicators of spatial and urban development.

All organizations of associated labor, working organizations, composite organizations of associated labor and other self-management organizations and communities, banks and other financial institutions, self-management interest communities in the area of social-political community for which development plan is worked out, are obliged to give all necessary data for forming of the review of minimum obligatory unique indicators of spatial or urban development.

The bodies and official services in self-management organizations, communities and the bodies of social-political communities are responsible for accuracy of indicators, expertise and reality of their estimation and planning as well as for skilled and timely mutual informing of the subjects (contractors) of planning.

The outline of minimum obligatory unique indicators of spatial and urban development is shown for basic year. In development and phase plans (projection of spatial and urban development), the use of land and other data are systematically shown in the same way as the data for basic year.

Minimum obligatory unique indicators of spatial and urban development can be extended and worked out depending on the type of plan and specific terms, as well as the needs of area for which development plan is made. Plan does not include the indicators dealing with the structures not existing in the planned area.



Real indicators are shown in appropriate units according to the nomenclature of Federal institute for statistics.



3.METHODOLOGY OF SPATIAL PLANS OFFICIALLY USED IN REPUBLIC SRPSKA

Methodology of spatial plans contains general and special REGULATIONS (Articles according to the law) about the issues of plan.

3.1.GENERAL REGULATIONS are the following:

- Basic issues and structure of the plans determined by the article 33 of the Law.
- The issues of the plan are stated with words, maps, drawings, numbers, tables, charts, photographs and other tools suitable for expression of appropriate plan's issues.
- According to the predominant way of showing the issues, each plan is composed of the two parts as:
 1. textual part and
 2. graphical part.

Textual part of the plan consists of the text followed by maps and drawings in appropriate scale, tables, charts, diagrams, photographs and similar.

Graphical part of the plan consists of the appropriate number of the maps in prescribed scale (in further text: maps).

Structure of the textual part should contain the obligatory structure and the issues of plan from the article 33 of the Law.

Textual part is divided in wide and narrow-scale organized entities-parts, chapters, points and sub-points.

The parts are marked with capital letters of alphabet-A, Б, В, Г, etc.

Chapters are marked with ordinal numbers-Roman numerals-I, II, III, IV, etc.

Sections within the chapters are marked with ordinal numbers-Arabic numerals-1, 2, 3, 4, etc.

Points within the sections are marked with ordinal numbers-combination of Arabic numerals, of which the first ones mark ordinal number of section, and the other ones mark the ordinal number of point (for example, 1.1, 1.2.)

Sub-points within the point are marked with ordinal number -combination of Arabic numerals, of which the first ones indicate ordinal number of section, and the other ones indicate the ordinal number of point, and third one, the number of the sub-point (for example, 1.1.1, 1.1.2.)

If there is the need for further classification of the text on lower level units within the sub-point, then they are marked with ordinal numbers presenting further combination of numerals (for example. 1. 1.1.1, 1.1. 1. 2).

Parts, chapters and sections must have the titles briefly marking and reflecting the contents of these parts of text.

- Textual part of plan should have the following basic structure pronounced with the marks and titles of parts:

- A. Introduction
- Б. Organization, development and use of the space
- B. Needs, options, goals and directions of spatial development
- Г. The plan of organization, of development and use of space
- Д. Regulative and guidelines for plan implementation.



-In graphical part of the plan, i.e. on the maps, there are placed the issues of plan that can not be adequately presented within textual part (borders, forms, spatial arrangement, posture and mutual relations of surface and objects, lines of infrastructural objects, geodetic coordinates of significant points and similar.) and which in aim of achieving visibility, clarity, precision or explanation of constants, appraisals or planned solutions presenting the elements of the plan shown in textual part.

Depending on the number and mutual relations of the involved subjects, the maps are worked out as thematic or synthesized.

Thematic map contains one or few related planned entities, and synthesized map shows integral condition of organization, development and spatial use, or number of related thematic entities (for example: synthesized plan of infrastructure).

Clarity and visibility of the maps must not be disturbed by grouping of more thematic maps on one thematic map.

If it is necessary to present one thematic entity with more relevant features (for example, for agricultural land-usability, the way of use and similar) or to show its time or spatial development, that thematic entity will be worked out on many suitable thematic maps.

-The following ones serve as foundation for making of plans:

1. survey plans in scale of 1:500, 1:2000, 1:2500 and 1:5000.
2. basic map in scale of 1:5000 or 1:10000,
3. layered and general map, in different scales.

Survey plans and basic map used as foundation for making of the plans must fulfill certain provisions about survey and cadastre of real estate and about maintaining of survey and cadastre of land.

Existing and planned purpose of the surfaces and other elements of plan on the map are presented with standard graphic symbols, which with its shape, color, position on the map or other details marking the type and function of the object, accurate or approximate position of the object in the space, purpose of the object or surface, certain technical or other characteristics of the object or surface and similar.

Outline of standard graphical symbols is attached as supplement and compositional part of the regulations.

-Besides the elements presenting the subjects, each map should contain the following:

1. standard graphical symbol marking the cardinal points,
2. legend, i.e. outline of applied standard and other graphical symbols and their meanings,
3. title of the plan, title of the map and its ordinal number in graphical part of the plan,
4. scale of the map and year, the month when map produced,
5. the firm and its main office, and if exists the symbol of the organization-contractor of the plan making.
6. surname, name, skills and sign of the specialist responsible for the contents and design of the map, as well as the leader of the working team engaged for making of plan and legal entity-organization as contractor of plan making.
7. stamp of the organization- contractor of plan making.

Each plan has the title.

The title is fortified by the decision about making the plan.

Plan title contains the following:

1. type of the plan, according to the article 2 of this methodology,
2. title of the area covered by the plan.

As title of the area covered by the plan, it is used the following:

1. for spatial plan of Republic Srpska-title `Republic Srpska` ,



2. for spatial plan of the area-geographic title of the area or its characteristic part (of settlement, site, river or river catchment, mountain and similar), title that points to the basic purpose of the space (spa-tourist area, national park, hydro accumulation, industrial pool, exploitation field of mineral raw materials, mine complex and similar), title pointing to the spatial-functional entity of the area (region, sub region and similar), or to the administrative entity (town).
3. for spatial plan of the municipality-title of municipality,

-Informative-documentation base is the supplement to the plan, composed of the expertise and other documents for making of the plan, or the documents related to the plan which in its authentic form are not compositional part of the plan.

Informative-documentation base is composed of all kinds of the documents where the authorized bodies and organizations, and particularly scientific and competent institutions or individuals presenting data or opinion about the facts, circumstances or issues relevant for plan making (information, reports, reports, analyses, studies, expert opinions, reviews, bidding proposals and recommendations, skilled opinions, programs, plans, projects, cartographic publications, extracts from the records, minutes, headlines in media, extracts from the textbooks, video and sound records, photographs etc.).

-Informative-documentation base, generally, contains the following:

1. plans or extracts from the plans of wide-scale and surrounding spatial entities, previous plans for the same spatial entity, and informative-documentation base of such plans or its parts,
2. geodetic, topographic, general and other maps which are foundation for plan making,
3. documents, extracts and data from official records legally kept by certain bodies and organizations (statistical records, record books, cadastre of communal devices, title deeds of cadastre, records of public enterprises, institutions, funds and other public organizations, register of drives that can or already endanger environment, register of natural values and cultural-historical resources, records of economic chambers and similar associations, institute for employment, organization for payment circulation, insurance and similar, management organization of public goods, etc.),
4. documents related to the description, analysis or estimation of the condition in individual fields included in the plan, or to the needs, possibilities, goals or development directions in related area (programs and plans of the development, information and reports about implementation of programs and plans, water management, forest-economy and hunting-economy bases, programs of construction land development, investment and similar programs, programs and construction plans, reconstruction, rebuilding of certain objects or the surfaces etc.),
5. decision about making of the plan, and decision about changing of the plan or about plan revision,
6. documents about registration and license of the organization-contractor of the plan making as well as the organization-participant in plan making,
7. documents (records, official notes, conclusions, decisions and other acts) about balancing of the attitudes with bodies and organizations from the Article 56 of Law, and about expertise and other verification of individual phases in plan making (pre-draft, draft and proposal of the plan),
8. documents about given opinions and approvals of the bodies and organizations from the Article 56 of the Law, and about approval of the proposal (spatial, urbanism or regulative) plan from the article 62 of Law,
9. documents about approval the implementation of brief procedure from article 63 of Law, if it has been applied,
10. documents about given opinions and approvals of the bodies and organizations from article 56 of Law,
11. documents and data about public opinion and discussion about draft of the plan,



12. documents about performed control of the proposal (spatial or urbanism) of the plan from article 59 of Law, and about agreement on the proposal (spatial, urbanism or regulative) plan from the article 62 of Law,
13. documents about approval of implementation of brief procedure from article 63 of Law, if it has been applied,
14. proposal of the decision about plan making, with explanation,
15. extract from the parliament session meeting on which the plan was made,
16. decision about plan making, with data about title, number and contents of Official Gazette where it was stated.

3.2. SPECIAL CLAUSES ARE THE FOLLOWING:

- Plan should have its own structure and contents determined for individual type of the plan. From justified reasons coming from the specific characteristics of the concrete plan, during making of the plan it can occur the deviation from prescribed structure and contents in minimal extent, and in this case it is necessary to respect and pronounce these characteristics.

3.3. SPATIAL PLAN OF REPUBLIC SRPSKA

Textual part of spatial plan of Republic Srpska should have the following structure and content:

A. INTRODUCTION

I. Data about planning

1. Current spatial plan
2. Decision about making of spatial plan (article 54 of Law)
3. Planned period (article 32 item 3 of Law)
4. Contractor of preparation and contractor of plan making (article 55 of Law)
5. Working team for plan making
6. Council of plan (article 58 of Law)
7. Applied methodology
8. Data about cooperation, balancing of attitudes with bodies and organizations from the article 56 of Law and opinions and approvals of such bodies and organizations
9. Public inspection and expert discussion about draft of the plan (article 60 of Law)
10. Proposal of the plan (article 61 of Law)
11. Expert control and approvals on plan proposal (articles 59 and 62 of Law)
12. Outline of informative-documentation base of the plan (article 33, page 2 and 3 of Law)

A. CONDIITON, ORGANISATION, DEVELOPMENT AND SPATIAL USE

I. Territory, population and settlements

1. Territory and connection to neighboring area
2. Population
3. Organization of the space, spatial entities, settlement structure, system of centre and urbanization
4. Housing and accommodations

II. Natural conditions and resources

1. Geographical position, relief, climate and other natural characteristics of space
2. Agricultural land
3. Forest and Forest land
4. Water
5. Mine and other mineral resources



6. Energy resources
 7. Flora, fauna and other natural resources
- III. Infrastructure
1. Traffic infrastructure
 2. Energy infrastructure
 3. Hydro technical infrastructure
 4. Telecommunication infrastructure
 5. Communal infrastructure
- IV. Economic activities
1. Agriculture and forestry
 2. Industry, mining and energy
 3. Traffic and telecommunication
 4. Civil engineering
 5. Water management
 6. Trade, catering, handicraft, and tourism
 7. Other economy activities
- V. Public service and other public activities
1. Education and science
 2. Culture
 3. Health
 4. Social welfare
 5. Communal activities
 6. Management, financial and similar activities
 7. Sport
 8. Other public services and activities
- VI. Environment
1. Water, soil and air,
 2. Urban standard
 3. Natural values and cultural-historical heritage
 4. Control of natural disaster, technical perils and war effects
- VII. Balance of surface use
1. Agricultural land
 2. Forest land
 3. Water surface
 4. Construction land
 5. Other land and surface
- VIII. Balance of resource use
1. Energy
 2. Water
 3. Raw materials
 4. Other resources
- IX. Balance of objects use
1. Residential objects
 2. Objects for economy activities
 3. Objects for the work of public services and other social activities
 4. Other objects



X. Evaluation of organization, development and spatial use, by individual thematic entities and synthesized ones

V. NEEDS, OPTIONS AND GOALS OF ORGANISATION, DEVELOPMENT AND SPATIAL USE

- I. Population
- II. Housing
- III. Economy activities (according to schedule and structure from the point of B.V.)
- IV. Public services and other public activities (according to schedule and structure from the point B.V)
- V. Infrastructure (according to schedule and structure from the point B.III)
- VI. Environment (according to schedule and structure from the point B.VI)
- VII. Balance of the needs and options
 1. Agricultural land
 2. Forest and forest land
 3. Construction land
 4. Water
 5. Energy
 6. Transport
 7. Residential and working space
 8. Other needs

G. PLAN OF ORGANISATION, DEVELOPMENT AND SPATIAL USE

- I. General strategy of organization, development and spatial use
- II. Organization of the space, spatial entities, purpose of space, settlement structure and system of centre
- III. Housing
- IV. Economy activities (according to schedule and structure from the point B.IV.)
- V. Public services and other public activities (according to schedule and structure from the point B.V)
- VI. Infrastructure (according to schedule and structure from the point B.III)
- VII. Environment (according to schedule and structure from the point B.VI)
- VIII. Balance of the planned spatial use (according to schedule and structure from the point B. VII.)
- IX. Balance of planned use of resources (according to schedule and structure from the point B.VIII)
- X. Balance of planned use of objects (according to schedule and structure from the point B.IX.)

D. CLAUSES AND GUIDELINES FOR PLAN IMPLEMENTATION

- I. Further spatial and urbanism planning
- II. Land policy (preservation, control and use of agricultural land, management of construction land and other).
- III. Creation of lasting several years of spatial development programs of Republic and other spatial units, as well as creation of sector studies, analysis, programs and projects
- IV. Development of informative system about space
- V. Legislative initiatives

- In graphical part of Republic Srpska spatial plan, there are processed the following thematic entities:

1. Territory, borders, border belt and administrative-territory division
2. Relief and drainage system
3. Climatic characteristics



4. Engineer-geological characteristics
5. Hydro-geological characteristics
6. Seismic characteristics
7. Agricultural land
8. Forest and forest land
9. Water
10. Mineral raw-materials
11. Mineral and thermo-mineral waters
12. Energy resources (coal, oil, natural gas, wood, hydro-energy resources, thermal waters, biomass, wind, sun)
13. Population
14. Organisation of the space, region, special area and other spatial entities, settlement structure, system of centre and urban area
15. Housing and accommodations
16. Traffic and traffic infrastructure (road, railroad, river, air)
17. Production and transport of energy and energy infrastructure
18. Telecommunication and telecommunication infrastructure
19. Water use and water infrastructure (water supply, treatment and disposition of waste waters)
20. Solid waste (collection, treatment and disposal)
21. Economy capacities
22. Public services and other public activities
23. Environment-sources of pollution and measures of protection
24. environment-natural values and cultural-historical heritage.

On the maps containing thematic entities from 1 to 6, it is presented only condition (spatial arrangement and basic characteristics), and on the maps containing thematic entities from 7 to 24 showed condition and planned solutions.

Graphical part of Republic Srpska spatial plan contains two synthesized maps ,i.e.:

1. Condition of organisation, development and spatial use
2. Plan of organisation, development and spatial use

- Graphical part of Republic Srpska spatial plan is made on the maps in scale of 1:200 000 or in larger scale.

3.4. SPATIAL PLAN OF MUNICIPALITY

Textual part of spatial plan of municipality has the same textual contents as spatial plan of RS, which is above mentioned in the chapter `Special Clauses`. Also, above mentioned `General Clauses` are also valid and current for spatial plan of municipality.

Clauses of the articles 18 and 19 are valid (current) for the contents of spatial plan, and planned parameters, planned indicators and other planned categories are related to the area of municipality and to basic spatial entities within that area

-Basic spatial entities within the area of municipality are determined with spatial plan of the municipality as spatial-functional entity defined by the same or similar features of the condition of organization, development and spatial use (natural or created conditions, the way of surface use and objects and similar), or the same, related or mutually complemented spatial resources, and according to that, planned purposes of the surfaces.



-Spatial entities based on the regulations about territory organization, local self-management, statistics, cadastre of real estate and similar (settlements, residential area, communities, cadastre municipalities, cadastre districts, statistical area, area of national authority bodies, public enterprises and institutions and similar) can only be determined as spatial-functional entities if they at same time fulfill criteria from previous article.

-If spatial-functional entities are determined by the plan of wider area, which are totally or partially located on the area of municipality, their borders and purpose will be taken out of spatial plan of municipality.

-Titles of basic spatial entities within the area of municipality are determined according to the geographical features or to the dominant purpose of area, where the term `zone` is used for marking of each entity.

-The urban area borders of settlements are obligatory defined in the spatial plan of municipality, according to the criteria from article 7 of Law and in appropriate scale depending on the scale of the maps on which base is done graphical part of the plan.

-Graphical part of spatial plan of municipality is done on the maps in scale of 1:25000 or in larger scale.

3.5.SPATIAL PLAN OF AREA

- According to the general and special characteristics of the planned area as well as to planned purpose of space, spatial plan of the area can be of general or special type.

Spatial plan of the area is of special type, when development and spatial use is exclusively or mostly planned for one or less number of specific or functionally related purposes (for example. Agricultural complexes, exploitation of mineral raw materials, hydro accumulation, valuable natural or cultural-historical area, tourist-recreation area, bigger traffic corridors or infrastructural corridors, catchments area or similar).

Spatial plan of the area is of general type when it is planned multipurpose and complex spatial use including basic purposes such as –housing, work and recreation.

Plan of general type is generally related to the area of two or more surrounding municipalities, especially when the area of these municipalities entering in content of wide spatial-functional entities (region, sub-region and similar), as well as in special cases, for larger spatial parts of one or more surrounding municipality. Then, for the content of general spatial plan of the area (article 21, page 3 and 4), according to the clauses of the articles 18 and 19, where the planned parameters, planned indicators, and other planned categories are related to the planned area, and also if it takes on narrow spatial entities in that area.

Special spatial plan of the area (article 21, paragraph 2) should have the structure and content reflecting the particularities of special purpose, as well as of special goals.

According to the principle from above mentioned attitude, planned categories related to the specific purpose of space are processed on more detailed and profounder level, and other planned categories on more general level and in extent necessary for providing the complexity of the plan.

- General spatial plan (article 21, pages 3 and 4) defines the urban area of towns, of town settlements, of new settlements located or will be located in the planned area, all in measure specified by the plan type and scale of the maps.



In special spatial plan (article 21 of attitude 2) the urban area is only defined for purpose of plan complexity or for defining of planned solutions.

- Spatial plan of the area should contain in textual and graphical part the extracts from spatial plans of wider area as well as interpretation of relevant planned solutions from those plans, as it follows:

1. from spatial plan of Republic Srpska,
2. from spatial plans of other wider area (region, sub-region and similar), if those plans exist,
3. from spatial plan of the municipality, if the planned area is located in the area of one municipality, and from spatial plans of the municipalities if the area is sited on one or more municipalities.

- Graphical part of spatial plan of the area is made on the maps in scale of 1:50 000, or in larger scale.

4. METHODOLOGY APPROACH TO SPATIAL PLANNING

Methodology of making some document usually implies expert rules related to defining of contents and the method of processing the individual parts and documents on the whole, and often procedure rules i.e. the rules about procedure needed to be applied in individual or in all phases (gathering and study of relevant materials, information and documentation, making of working material, pre-draft, draft, proposal, necessary verifications of individual phases, organization of expert or public discussions and similar.) In terms of methodology for making the spatial-planned documents, base entries about contents and procedure were given within the Law on spatial development, and within sub-legal acts (rule book). It was only made the contents of plans, while such rule book about procedural issues had not been brought yet. Concerning that, all spatial-planning documents are of multidisciplinary character and of significant degree of complexity; the institutions dealing with this activity can, as the internal rules for making these documents define individual issues of methodology, under the condition that such rules are not in contrast with appropriate law regulations and sub legal acts. Such rules were prescribed within the Institute for Urbanism of RS within the application of ISO 9000 system of quality which will be briefly examined below.

Rule book about the contents of plans defines only the contents that one spatial plan must contain as well as define the subjects and fields of activity which spatial plan must work out. The rule book contains the following phases of spatial planning: condition of organization, development and spatial use (survey of condition); needs, opportunities and goals of organization, development and spatial use, and finally the plan of organization, development and spatial use. These three phases are cited as key phases of spatial-planning process within every theoretical work about spatial planning. The rule book as compositional part of introductory gives the review of informative-documentary base of the plan, which is also within professional spatial-planning literature defined as first phase or one of the initial phases in creation of spatial plan.

In procedure of making the spatial plan within the application of ISO 9000 system of quality (further in text: the procedure) there were also defined the phases in making of spatial plan, and in accordance with the rule book and spatial-planning literature. These phases are the following ones: taking of assignment; forming of the working team; gathering of informative-documentary base; terrain visits; defining of goals; survey and estimation of existing conditions; defining of planned solutions; preparation of the plan draft; acting by remarks; the proposal; the plan adoption. Between these phases there were foreseen so called, control points such as the control of input data (informative-documentary bases); concept; draft; proposal; submission of individual graph and textual enclosures to the Ministries and their approvals; final control of textual and graphic enclosures.

4.1 METHODOLOGY APPROACH IN THE NARROWER SENSE

According to the rule book, procedures and spatial –planning literature, making of spatial plan starts with (after taking of the assignment and forming of the working team) the gathering of informative-documentary base of the plan (IDB). This term indicates the significance of documentation about making of spatial plan, because IDB basically is the foundation of spatial plan. IDB covers all spatial components: natural (physical-geographical), socio-economic and technical elements. These are data about natural spatial characteristics such as geological, geomorphologic, soil, climatic, biogeographically (vegetation) data, environment and environment elements; data about socio-economic elements: population, economy, residential fund, public services; data about technical spatial aspects, such as data about infrastructural systems (traffic, electric power system, telecommunications, applied hydraulics, communal systems). IDB also includes previous spatial-planning and design documents (not only in urbanism, but also in other fields: traffic, mining ...). Data sources for natural spatial aspects are different studies and surveys (if exists) in the area of geology, geomorphology, soil science, hydrology, climatology, biogeography, environment.



Besides this information from the studies, for the needs of spatial planning there are used the statistical data from hydrological and climatology almanacs (these are hydrologic data), as well as thematic maps: basic geological maps (scale 1:100 000) and orthographic maps. Significant data about natural characteristics can be compiled during the terrain visits. The problem presents non established monitoring of the environment elements, both at entity and local Bosnia and Herzegovina level.

Data sources for socio-economic spatial aspect are primarily national statistics, results of census, households, flats and agricultural households as well as current economic statistics. Within this segment there are a lot of problems because of the non-conduct of census in period from 1991 year, because the previous census data from 1991 year are incomplete and mostly exceeded. There is better situation with economic statistics data (employment, income, yield, loss) which are taken not only from Republic department for statistics of RS, but also from the Agency for mediator, informatics and financial services, Economic chamber of Republic Srpska, municipal economic departments and others. Residential fund presents big problem concerning data delivery, so data about this fund are taken from indirect sources (data about number of electric energy consumers from the category of households) such as data of international organizations. Data about public services are received from the statistics of the Ministries, as well as from data of municipal department. Results of different socio-economic surveys and studies are also used for the needs of spatial plan.

Studies, surveys, plans and projects from earlier period, data from Directorate for roads, Directorate for waters, public enterprises of electrical industry and telecommunications, municipal departments for residential-communal affairs as well as communal enterprises are data sources for technical spatial aspect (traffic, electrical industry, telecommunications, applied hydraulics, communal systems).

After gathering of IDB it follows the determination of preliminary goals of organization, development and spatial use. These preliminary goals present guidelines in further process of making the spatial plan.

Survey and estimation of the condition based on the gathered IDB is the third phase of spatial – planning process. Qualitative survey and estimation of all spatial components is pre-condition for defining of spatial solutions. Through the survey and estimation of the condition there are determined the possibilities and limitations of organization, development and spatial use.

Redefining of goals (in dependence on estimated condition) and determination of the possibilities and limitations of the space, as well as the requirements of spatial beneficiary is the next phase in making the plans. This is one of the control phases in whole process, but very significant one. Estimation of economic parameters (gross domestic product, national income etc.) as well as population number and certain population quotas, number of households and residential fund present compositional part of this phase.

Fifth phase is composed of the defining of planned solutions of organization, development and spatial use.

These planned solutions are related to the organization of the space, spatial aspects, spatial purpose, settlement structure, system of centers, dwelling, economic activities, public services and other social activities, infrastructure, environment and balance of spatial use. In accordance with the planned solutions the spatial-planned documentation of higher level is implied.

Defining of tools for plan implementation presents the sixth phase of spatial-planning process. The most dominate tools are legal regulations and guidelines, but there are also present organizational, financial and technical-informative tools.

The next control phase would be determination of the concept or the pre-draft of the spatial plan which is reconsidered together with the Council of the plan in reinvestigation of planned solutions.

Preparation of the spatial plan draft is the eighth phase in making the plan. The remarks from the Council of the plan will be incorporated in the draft, which then will be submitted to public hearing and expert discussion (ninth phase-control one).

Tenth phase of spatial-planning process is composed in following the remarks from public insight. Team of planners responds on the remarks, i.e. adopts them if they are justified or rejects them if they are unjustified. Then it follows the control phase of the determination of the plan proposal.



Last control phase includes the getting of approval of plan proposal from authorities (ministries and other administrative organizations) as well as the Ministry for spatial development, civil engineering and ecology. Such controlled and investigated plan proposal goes to the adoption by authorized Parliament (13th phase).

Cyclic process of the evaluation of planned solutions was followed and incorporated through this methodology, mostly through numerous control phases. In terms of that, the survey II follows the survey I, and after the synthesis I coming the synthesis II.

5. ABSTRACTS FROM THE CONCRETE SPATIAL PLANS

(Conditions and the plan of agricultural land use)

5.1 SPATIAL PLAN OF TESLIC MUNICIPALITY FROM 1986-2005 YEAR.

Spatial plan of Teslic municipality for planned period from 1986 to 2005 was made in draft form adopted in 1987 year. Because of the local's matters, this plan was never adopted so below there would be given only basic data from the draft paper related to agricultural land.

5.1.1. AGRICULTURAL LAND

Agricultural land cover 28,716 ha or 33, 94 % of total territory of the municipality, of which the plowed fields and gardens cover 19,963 ha, the orchards 1,151 ha, and meadows and pastures cover 7,597 ha.

Of total available agricultural land of 28.716 ha, there is 21.114 ha of cultivated land, of which ploughed lands and gardens cover 13.963 ha, and the orchards 1.151 ha. (Data source: republic survey administration)

The plan determines the three categories of agricultural land as it follows:

First utilization category –first degree of protection

This category primarily includes the most fertile plain soils of I and II category of usability value but also partially the soils of lower usability value on slight inclination if are involved the potentially valued soils. This soil category also includes all plots cultivated by public sector organizations. Within this category there are partially included less enclaves of land under forest, which can be maintained as the forest land or can be used for agricultural purpose if needed.

Total surface of the first utilization category is 2.577 ha and it is exclusively planned for agricultural purpose.

Second utilization category – second degree of protection

This category mostly includes the soils of III and one part of IV category of usability values with only few exceptions of I and II category, if are involved the terrains for which it is assumed that they must be used for other purposes- the traffic communications and similar. This category also includes some soil types of lower usability value, cultivated and owned by public sector organization as well as the enclaves under forests.

Total surface of the second utilization category is 1.390 ha and it is planned for agricultural use and only in some cases for other purpose.

Third utilization category – third degree of protection



This category includes all other agricultural soils not included within the first two categories. These are mostly the soils of lower usability value on inclined or karsts terrains in hilly and mountain area.

Total surface of the third utilization category is 25.649 ha and it is planned for agricultural and other uses, which it is to be reduced by the end of planned period for 1.127 ha of land changed in building land so there will be totally 24.522 ha of agricultural land in 2005 year.

SPATIAL PLAN OF TESLIC MUNICIPALITY FROM 2004-2015

5.2.2. AGRICULTURAL LAND

The agricultural land covers 34% of total area of municipality which is 844 km² of total surface of the municipality (less than an average of RS which is 49.7 %).

Plowed lands and gardens cover 19.951 ha or 68% of total agricultural land and these are dominant categories of agricultural land in the territory of municipality. Meadows and pastures cover the surface of 7955 ha, making 27% of agricultural land, and finally orchards cover 1389 ha (4, 7 %). Percentage involvement of the category `other` (implying the category `other`) is 7, 5 % of total agricultural land. (Data source: republic survey administration).

There is pronounced plotting of the households and an average size of the plot is 2, 37 ha, which is below the average of Republic Srpska which is around 3-3, 5 ha. Size of the plot goes from 0,4 ha in Stenjak to 8,01 ha in Liplje 1.

Within the municipal area, there are all categories of usability value of agricultural land, except the first one, the most qualitative.

The second land category cover the surface of 1005 ha or 3.4 % of total agricultural land. This is the most qualitative category of agricultural land in whole municipality, and as such it should only serve for the agricultural production.

Third soil utilization category covers the surface of 3908 ha or 13, 3% and the fourth utilization category covers the surface of 11.091 ha or 37, 8 % comparing to the total agricultural land. Fourth soil utilization category is the most dominant category of agricultural land. These are mostly cultivable soils (ploughed land, gardens and orchards).

The soil types of second, third and fourth category are the most qualitative ones, and the land in the territory of municipality and in accordance with the Law on agricultural land should be exclusively saved for agricultural production, i.e. to be permanently protected from non-purpose use. The soil types of fifth category cover 10.777 ha (36, 7 %), of the sixth 4632 ha (15,8%), of the seventh 1790 ha (6,1%) in relation to agricultural surface. These are heterogeneous located in the territory of the municipality mostly on the borders of agricultural and forest land and at some higher altitudes where dominates the meadows and pastures. (Data source: the map of usability value of Teslic municipality land)



The land resources are also used for other purposes, out of agriculture and forestry sphere, such as construction of the settlements, industrial facilities, communications, recreation terrains, as resource of different raw materials for waste disposal and other. Different stakeholders compete for possession of land resources, and in some cases they come into the conflicts. In that continuous conflict of interests, the basic problem becomes the protection of the most qualitative soil, as well as its preservation for food and goods production for constant increase of population.

During the last years, the soil as natural resource was exposed to different forms of damage and degradation because of that the protection of agricultural land and integral management of this resource is very important in function of sustainable development of the municipality in the future. Bigger attention should be paid to the protection of agricultural land which resources in the territory of municipality are very poor.

Protection, preservation and rational use of agricultural land fund are relevant functions of planning and spatial arrangement. Rational planning in this area will provide permanent keeping of agricultural land resources for production of necessary amounts of high qualitative food.

The general targets in the area of protection and use of agricultural land in planned period are the following:

- Make the strategy of use, protection and management of agricultural land, at level of municipality ,
- Make the program of integral land management in function of sustainable development,
- Consolidates a new approach of the determination of agricultural land categories,
- Disable or utterly reduce the use of best agricultural land for non-agricultural purpose,
- set up the condition of potential and real land erosion, in aim of the conservation, purpose use, making of detailed program of land protection from erosion (water and wind erosion) and repair of landslide,
- develop the national incentive program of quality improvement and agricultural land development (irrigation, drainage, calcinations, phosphating, and others) in aim of achieving the higher and more qualitative yields,
- identify and record the condition and causes of agricultural land damage (contamination, degradation, waste, mines) in aim of their revitalization for production,
- establish permanent land monitoring within the global system of environment protection,
- educate the population about importance of land for sustainable development,
- establish the soil information system.

5.3. SPATIAL PLAN OF REPUBLIC SRPSKA from 1996 – 2015 year, PHASE PLAN from 1996-2001.

5.3.1. AGRICULTURAL LAND

Republic Srpska has 1.245.170 ha of agricultural land, which makes 49, 7 % of total territory. Availability of agricultural land indicates a high dependence on the altitude, population of the region and achieved level of urbanization and industrialization. With increase of agricultural land, the altitude gradually drops up to the height of 450 m. This is mostly in direct connection with the inclination of the surface. With further increase of altitude, the reduction of agricultural land depends on the inclination of surface and degree of forest involvement. Observing by the regions, total agricultural surface reduces from the north to the south of Republic, mostly because of the increase of the forest land and reduction of the depth of soil cover.



Also, going from the north to the south it grows both the altitude and inclination of surface. The increase of altitude changes the structure of agricultural land so the biggest surface includes agricultural non-productive soils, meadows and pastures.

Except of less number of sites, general soil and other natural conditions for the development of agriculture becomes more unfavourable with increase of altitude.

Going from the north to south, it drops the participation of ploughed land in total agricultural land. In relation to the total agricultural land, the area of Krajina covers the most of arable land – 274.318 ha or 35, 4% of total, and at least Herzegovina – 40.156 ha or 5, 18%. Share of arable land in total agricultural land doesn't only depend on climatic but also on soil conditions.

Soil classification for evaluation of productive-use value of different soil units from the aspect of their favourability for cultivation is performed on the base of classification in eight classes. Although this classification has not yet been performed in most areas, global survey indicates that there is no soil category of the first class in RS. Soil category of the second class with some limitations covers 196.779 ha or 7, 96% of total territory of Republic Srpska.

Significant limitations of soil use appear on 409.960 ha (third soil class) and the soil category of fourth class on which farming production is conditioned by many protective measures, covers 296.430 ha. The soil categories from fifth to eighth class cover 1.567.086 ha of land or 63% of total area of Republic and are mostly favourable for the use as lawns and forests.

Structure of agricultural land use is competed in high degree of spatial differentiation. This structure is the consequence of different soil, climatic and other conditions. Inequality by the depth and width of soil cover is the basic characteristic of total agricultural area. With increase of altitude, general and agricultural engineering conditions aggravate which impact on the structure of agricultural land use.

Besides the natural conditions, the small size of the plots has significant impact on the structure of agricultural land use. All these factors limit or disable the change of structure in use of the establishment of favourable relations in agro ecosystem. This condition imposes the need of the structural change of agricultural land by the application of the following measures such as:

1. calcification of the soil,
2. soiling,
3. runoff of excess water in winter-spring period,
4. irrigation in summer period,
5. establishment of regular crop rotation,
6. increase of leguminous in the structure of crops,
7. significant increase of cattle fund and establishment of balanced relations between farming and cattle production,
8. change of regulative about inheritance of soil,
9. agricultural categorization of total area of Republic,
10. national incentives for certain structure in all regions and for individual regions in total.

Total supply of land of RS constantly reduces. This tendency covers the whole territory, but with different intensity per areas. Dropping of the supply of land is more pronounced in plain area, in contrast to hilly-mountain area where total supply of land stagnates. The most qualitative agricultural land such as ploughed land and gardens are exposed to the biggest changes in contrast to meadows and pastures. The exploitation of the most fertile agricultural land in construction and other non-agricultural purposes can not be argued for any reason. Such non-agricultural use is very frequent besides the regulations about protection of agricultural land. The changes of the supply of land in hilly-mountain area were made by the construction of hydro accumulations, mines and different landfills. All these changes can't be avoided, because the reduction of total supply of land is regular occurrence in the processes of economic growth.



By different bases, total agricultural land of Republic Srpska was reduced for 13.970 ha during the last fifteen years or for 1, 12 %. For short period of time, Serbia lost 63.000 ha or 1%, and Europe lost 7, 1 million of ha or 3% of agricultural land. Trend of agricultural land reduction should be stopped by different national and economic measures, reduced or at least kept at same level.

According to different sources, Republic Srpska currently has 0, 89 ha of agricultural land per inhabitant, of which 0, 56 ha of arable land (ploughed land, gardens, orchards, vineyards) and it is used only 0, 21 ha per inhabitant.

Size of agricultural or ploughed land per inhabitant is still larger comparing to surrounding area and specially comparing to the average land size of West European countries. These significant land resources are insufficiently used. Current arable land per inhabitant can be thought as critical, and any further reduction would mean higher deficit in food production. On significant arable land there is no climatic and on one part also land limitations for development of intensive and various agricultural production.

In terms of hydro reclamation, until now it was treated totally 268.324 ha or 21, 5 % of total agricultural land. Around 162.672 ha of mostly agricultural land were exposed to direct flooding from outland and inland waters. With recent construction works, there have been built the facilities for flood control on 91.230 ha and those areas are protected completely or partially. More 71.777 ha is exposed to direct flooding. Agricultural lands are exposed to exceeded wetting, meaning they are not endangered by direct flooding, but they have unfavourable water regime for agricultural production because rainfall waters are kept for long time in the soil profile.

Completely control of river and hill waters is the area where are built embankments, enclosure canals, pump stations, and there is partially protected area where after construction of these facilities water nevertheless stays in controlled area. There have been built the following structures for control of external waters: levee embankments (282 km), enclosure canals (136 km), flow control (28 km). The control of internal waters is performed by 11 pump stations. Within the control area of 52.155 ha there were built the drainage systems, which are still in the phase of construction because of insufficient and shallow canal network and insufficient capacities of pump stations. In the area of RS, there is around 7000 ha of the land under drainage.

Irrigation system covers 4.183 ha, which is 0, 34% of total agricultural land. It is estimated that irrigation should cover 100.622 ha or 8% of agricultural land, and potentially it is possible to irrigate 251.544 ha or around 20% of agricultural land.

Besides above mentioned 268.324 ha under hydro reclamation works, there is still significant agricultural land out of defined reclamation area, which needs to be included by hydro reclamation interventions. According to recent soil surveys, it is estimated that still around 196.212 ha of land is exposed to exceeded wetting, in other words this land needs drainage of different intensity.

The plan of agricultural land is based on permanent relations between farming, cattle breeding and fruit-vine production as well as processing, agricultural-food industry. The establishment of these relations is the base of balanced development and necessary optimal relations between plant and cattle-breeding production. Only this kind of relations can stop the growth of poverty, protect soil cover, preserve general ecology balance, establish market character of agriculture as economic branch and create the base for structural, technologic and other organizational changes.

More detailed study of natural, economic and social conditions as well as the agricultural condition per municipalities and regions shows the necessity of more efficient and more completed use of total agricultural productive potential. For realization of those tasks, it is necessary to achieve the following:



1. permanent protection of arable agricultural land by legal protection of the most fertile land from non-economic and non-rational use for non-agricultural purpose to return of degraded land to its natural purpose and undertaking of reclamation measures for improvement of soil classes,
2. restructuring of the way of land resources use for establishment of more favourable relations between individual agricultural branches, that will provide the strengthening of strategic position of agriculture at local and national market,
3. Regional focusing of agricultural production, for fuller use of comparative advantages of individual regions for economic rationalization of production, especially for production of green healthy food for local market and export,
4. legally bind the agricultural land beneficiaries to cultivate the farms regularly and to apply contemporary agricultural engineering, reclamation and erosion control in aim of protection and efficient land use,
5. significant improvement of agrarian structure by new opportunities, enraging of plots or more rational organization of land complex for establishment of more optimal relations between individual agricultural branches,
6. Radical increase of cattle fund of all cattle breeds in total territory of Republic Srpska.

In below frameworks, there are determined the following general interests regarding the control of quantity and quality of agricultural land as well as improvement of the size and use of land:

1. balancing of size and use of agricultural land with natural conditions and limits, which imposes the change one part of agricultural land in forest land, actually ploughed in grass land,
2. determination of the subsidy systems and other incentive measures for fuller productive involvement of agricultural resources of hilly-mountain and border area,
3. stop the process of depopulation of neglected rural area with systematic incentive measures, because without keeping of necessary volume of spatial dispersion of population and settlements, the significant fund of agricultural land will be automatically excluded from agricultural production,
4. systematic support to trainings and intensification in all branches and at all levels of agricultural production at territory of all Republic,
5. improvement of agricultural land quality, by redistribution of land and ploughed fields and reclamation of mountain-hilly pastures, with appropriate support measures within area of flow control, expansion and rationalization of road network, development of settlements, forests and other elements of rural environment,
6. Consistent controls of soil cover from degradation and damage, in accordance with the regulations on protection of agricultural land, as well as the involvement of the tools of selective, investment-credit and task policy, in terms of production-technology aspect, and as one of the key pre-conditions for prevention of recent negative trends is the establishment of organic relation between plant and cattle-breeding production. Cattle-breeding is indirectly reflected on increase of productive soil features and the balance of biocenosis by introduction of appropriate crop rotation, by systematic use of manure and keeping of necessary minimum of grass surface, having strong anti erosion impact,
7. drainage of over moisture land, construction of multi-purpose accumulations and solving of the problem of water supply and irrigation, in accordance with water supply management,
8. Classification of all agricultural land within realization of complex programs of land development, detailed soil investigation and evaluation of its production features, for establishment of rational structure of production and application of appropriate technology.