

Alternative Proposals and Landscape Protection

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SUMMARY

The paper presents a role of defining, evaluating and comparing alternative proposals of particular developing programs as possible mechanism of landscape protection. The main reasons why alternatives should be used in planning process are explained. There are many different interests in space present and with analysing alternatives it can be found out how particular interests are respected. The proponent of an action has a set of aims to be met, which can normally be satisfied in a number of alternative ways, each of which has different effects upon the environment. Forming alternatives and offering possibilities of choosing among them is a way of optimising decision making.

The paper deals with themes like: why and how different interests in space should be included in alternative proposals, using alternatives in different levels, how and when alternatives should be established in planning process, how many alternatives there should be and why it is important to define all possible and reasonable alternatives and what distinguishes alternatives one from another.

KEY WORDS

alternatives, decision making, landscape protection, spatial analysis

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Received: May 13, 1999

Alternativni prijedlozi i zaštita krajobraza

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SAŽETAK

U radu je prezentiran značaj opredjeljivanja, vrednovanja i uspoređivanja alternativnih prijedloga razvojnih programa kao mogućeg mehanizma zaštite krajobraza. Predstavljene su glavni razlozi zašto upotrebljavati alternative u planskom procesu. U prostoru postoji mnogo različitih interesa i kroz analizu alternativa moguće je pronaći kako su ti interesi poštovani. Predlagatelj zahvata ima neke ciljeve, koje je moguće obično ostvariti na alternativne načine i svaki od njih ima različite utjecaje na sredinu. Formiranje alternativa i nuđenje mogućnosti izbora znači optimizaciju donošenja odluka. Rad se dotiče tema kao: zašto i kako uključiti različite interese u alternativne prijedloge, uporabe alternativa na različitim razinama, kako i kada formirati alternative u planskom procesu, koliko da bude alternativa i zašto je potrebno definirati sve moguće i razumljive alternative, te što razlikuje jednu alternativu od druge.

KLJUČNE RIJEČI

alternative, donošenje odluka, zaštita krajobraza, prostorna analiza

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Primljeno: 13. svibnja 1999.



INTRODUCTION

We deal with decision-making through all our life, from the simplest decisions concerning what to wear or eat, to more important, essential life decisions. While decisions in our everyday life, art, design or even architecture are often made in intuitive way and the reasons "because I like that" or "because I feel that way" could be acceptable, such a method can not be used as a proper one in landscape planning.

The main reason is that personal life concerns only us, while our professional planning decisions usually concern different interests, groups of people or individuals in space.¹ Considering just one interest, interest of an investor for example, is not acceptable, because in that way somebody else can be affected in a negative way. Therefore we have to search for solutions that not just accomplish the investor's goals, but also as little as possible affect other interests. One of the ways of finding those solutions is forming different alternatives and checking them.

The paper presents the role of using alternatives in processes of decision-making within spatial or landscape planning. Using alternatives in planning is not something new of course, but there are still great many theoretical questions about shaping them. Therefore we have to search for more objective methods of finding, evaluating and comparing alternatives. Actually, the entire planning process is full of possibilities considering goals, planning strategies, methods, technical solutions, and locations of action. John Dewey's ABC questions "What is the problem? What are the alternatives? Which alternative is the best?" (Lyle 1985: 131) are actually going on and on not only concerning the content of planning, but the planning procedure itself.

The paper presents some cases connected with highways in Slovenia. The intention of this article is not to present the problems of highways and landscape protection itself. This case is used, because the question of alternatives appear along the national highway program all the time on different levels, from the most global to the most detailed one. Many methodological questions have risen till now and it seems that highway case is going to be a fine lesson for further planning actions in Slovenia.

WHY USING ALTERNATIVES?

The first reason why we should use alternatives in spatial planning is already mentioned consideration of different interests in space. All interest should be respected on equal terms and as much as possible. Basically there are as many alternatives as many different interests in

space are present. It is necessary to recognise those alternatives and find out how particular interests are respected in each of them.

Alternatives should be described with criteria that lead to its arising and supported by adequate arguments and reasons for that. The availability of criteria on which alternatives were established enables assessment of how much the values of particular groups or individuals were affected. The analysis of benefits and damages is easier that way, consecutively also comparison and choosing the optimal alternative - alternative that respects all interests as much as possible.

Forming alternatives and offering possibilities of choosing among them are also conditions of optimizing decision making (Chechile 1993). Namely, it is incorrect to say that something that is offered as the only option to consider is acceptable, if we do not know what are other possibilities of achieving the same goal (Marušič 1998). Legitimacy of decisions is increased with comparison and selection of the best possible and reasonable alternative if we know that there is simply no better solution. It is also important that the public involved becomes acquainted with all the alternatives and is given the chance to contribute their part of planning process.

Forming alternatives is a way of landscape or nature protection, what we can treat as one of the most significant interests. The consideration of alternatives has been described as "the heart" of the environmental impact statement in the United States. The National Environmental Policy act 1969 specifically refers to the

² On the other hand there is no mention of alternatives in the main text of the European Directive on EIA System. Subject to member state requirements, the information specified in Annexe III should be provided: "Where appropriate, an outline of the main alternatives studied by the developer and an indication of the main reasons for his choice, taking into account the environmental effects". One of the reasons why demand for alternatives is not so strong in Europe might be in establishing a system of "conditions and agreements" (Marušič 1993: 70). The issue of nature protection is somehow included in planning process with agreement or disagreement of responsible nature protection offices to the proposed action.

The issue of alternatives is not included in Slovene physical planning and environmental legislation very clearly as well. In chapter 45.a of Spatial arrangement act, there is ordered that variants of different infrastructure objects should be elaborated and compared. In chapter 17 of Direction about contents and methodology of technical basis and spatial components for local community's plans (connected with upper act) is ordered that a plan of long term development in space should be prepared in variants, if there is more than one estimation about importance of different uses. Slovene Environmental protection act (EPA) as basic environmental law does not deal with expression of alternatives (or variants) at all. Direction about contents and methodology of complete (strategic) environmental impact assessment (connected with EPA), where that issue should be included is not prepared yet.

¹ For example, if an artist paints a painting because he feels that way and someone does not like his feelings, he simply will not buy the picture and it will not disturb him, if someone else buys it and has it in his apartment. But he would be disturbed, if some investor wants to build a shopping center and he thinks or even feels that the location in front of his house is "nice".

coverage of alternatives to the proposed action (Wood 1995: 102).²

Environmental impact assessment is described as an instrument of choosing the best alternative for the environment. The proponent of an action has a set of aims to be met which can normally be satisfied in a number of alternative ways, each of which has different effects on the environment (Wood 1995: 102). If satisfaction is given to main investors goal, we can choose the alternative that best reduces the environmental impacts on action.

There is a question how the issue of alternatives should be considered in spatial legislation - straight and clearly or in more soft way - somehow left to professionals or administrative workers to decide for individual projects. The problems of defining alternatives just to meet the formality, dealing with forced alternatives and reproaches that all possibilities were not properly considered, are quite common.

Through legislation of course we can assure the discussion about alternative development programs or different technical solutions of proposed action and in that way maybe as well assure that the right decision would be made. But on the other hand straight directions render more difficulties in process of finding decisions. Namely, it happens quite often that there are no alternatives, but comparison has to be made (the law says so) and variants, usually unreasonable ones, has to be even invented because of that.

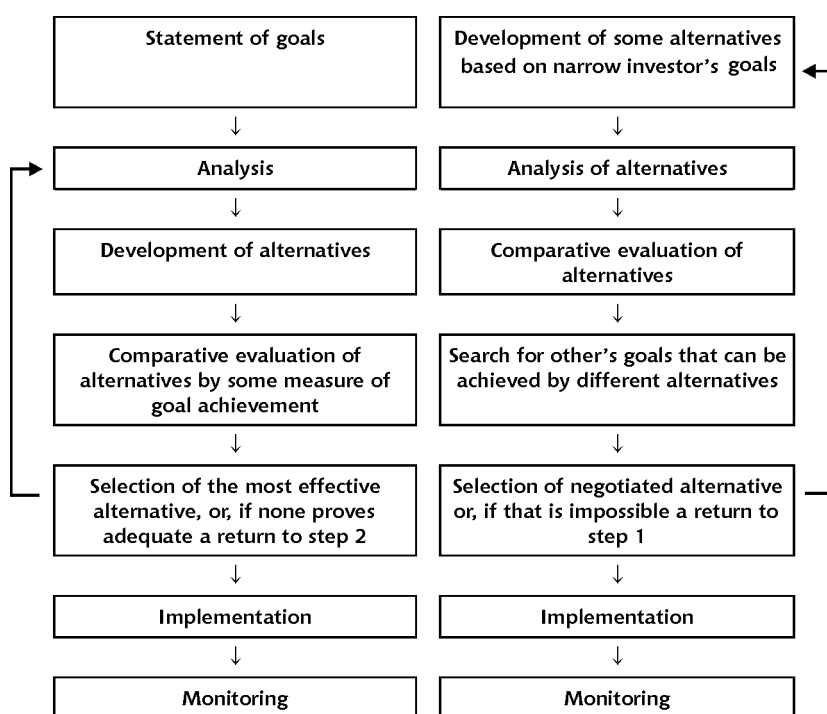
Therefore it seems that just to prescribe a comparison of alternatives, as a formal thing is not enough. It has to be also clear why, how, where and when alternatives should be used in planning process.

The Canadian Environmental Assessment ACT distinguishes between "alternative means" and "alternatives to" (Wood 1995: 109).

"Alternative means" of carrying out the project are methods of a similar technical character or methods that are functionally the same. "Alternative means" with respect to a new road, for example, includes selecting a different location of the road, reconstructing the existing road, different technical solutions.

In contrast, "alternatives to" the project are functionally different ways of achieving the same end. For example, "alternatives to" new roads include train transportation or stimulation of public transportation. Those are alternatives on global and earlier levels in planning process.

That distinguishing is also very important considering the environmental protection. Marušič (1993: 70) reminds, that it is a frequent practice that protection demands are included in projects too late and inside them it is impossible to form alternatives with significant differences in effects upon the environment. Notion "Alternatives to" is close to the demand of so-called assessment of policies, programs and plans included also in European Community program of policy and act in relation to the environment and sustainable development (Towards sustainability 1993). That means, that protection demands should be included in planning process in global levels, in assessment as well as in forming alternative programs and developing politics (Marušič 1994b) and alternative politics of landscape protection.



Picture 1. The map shows vulnerability model prepared for highway section passes town of Radovljica.

ESTABLISHING ALTERNATIVES

An important question is when and how alternatives should be proposed in a planning process. Alternatives can be established in many ways, but there are two basic ones -creative / intuitive and analytical.

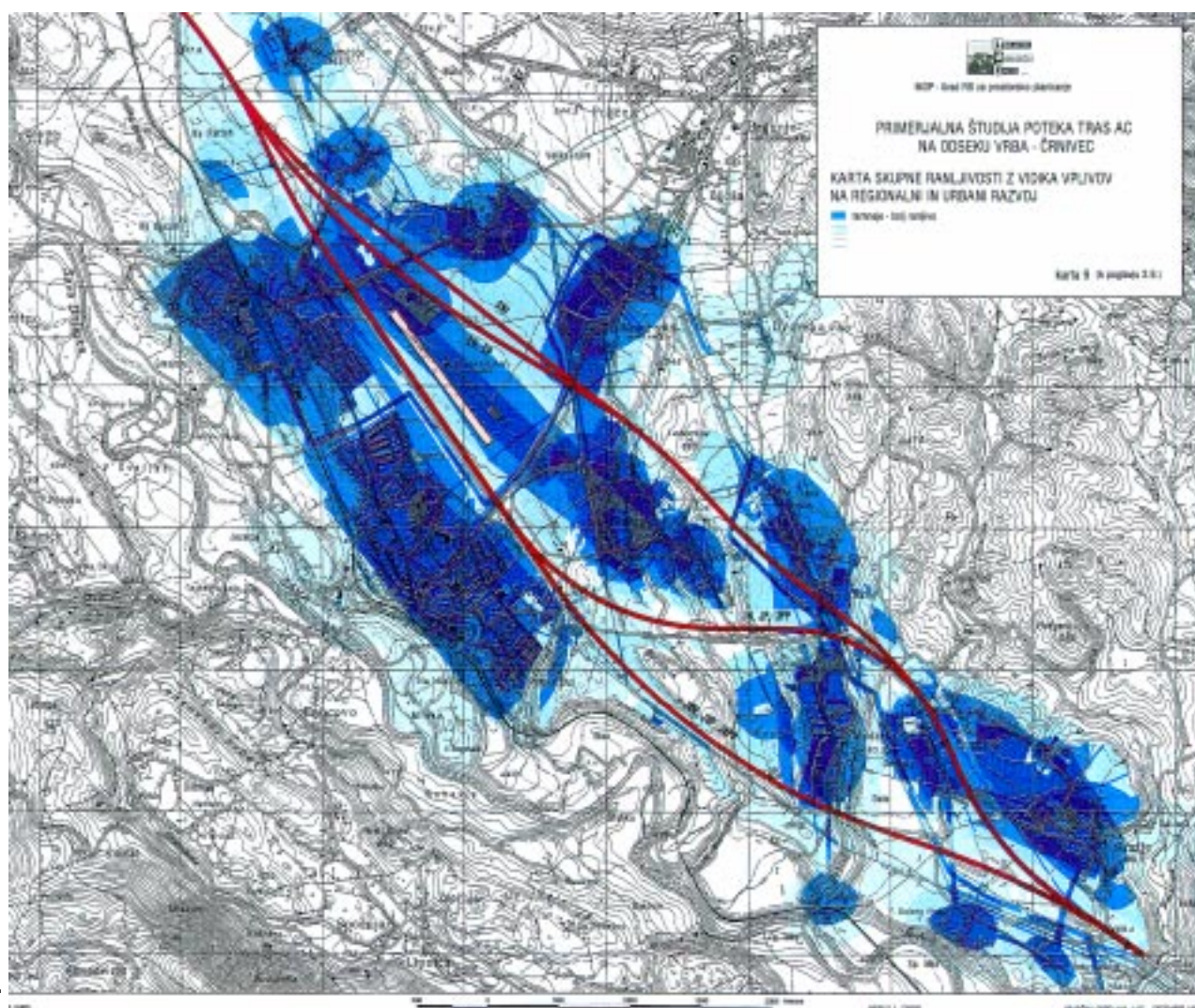
In case of first one some good ideas might appear, but there is now an explanation how the solution was prepared or what are the goals behind it and the possibility of not finding all solutions is large. Process of proposing such kind of alternatives should be at least very open. Alternatives can be proposed by politicians, investors, services responsible for environment, professionals, and affected local communities. The disadvantage of the second way is that analysis can last long and can be expensive, but solutions are more transparent.

Steps in planning process may vary from some authors, but basically there should be as those proposed by Lyle (1985: 131) in so called "rational problem solving paradigm" (on left).

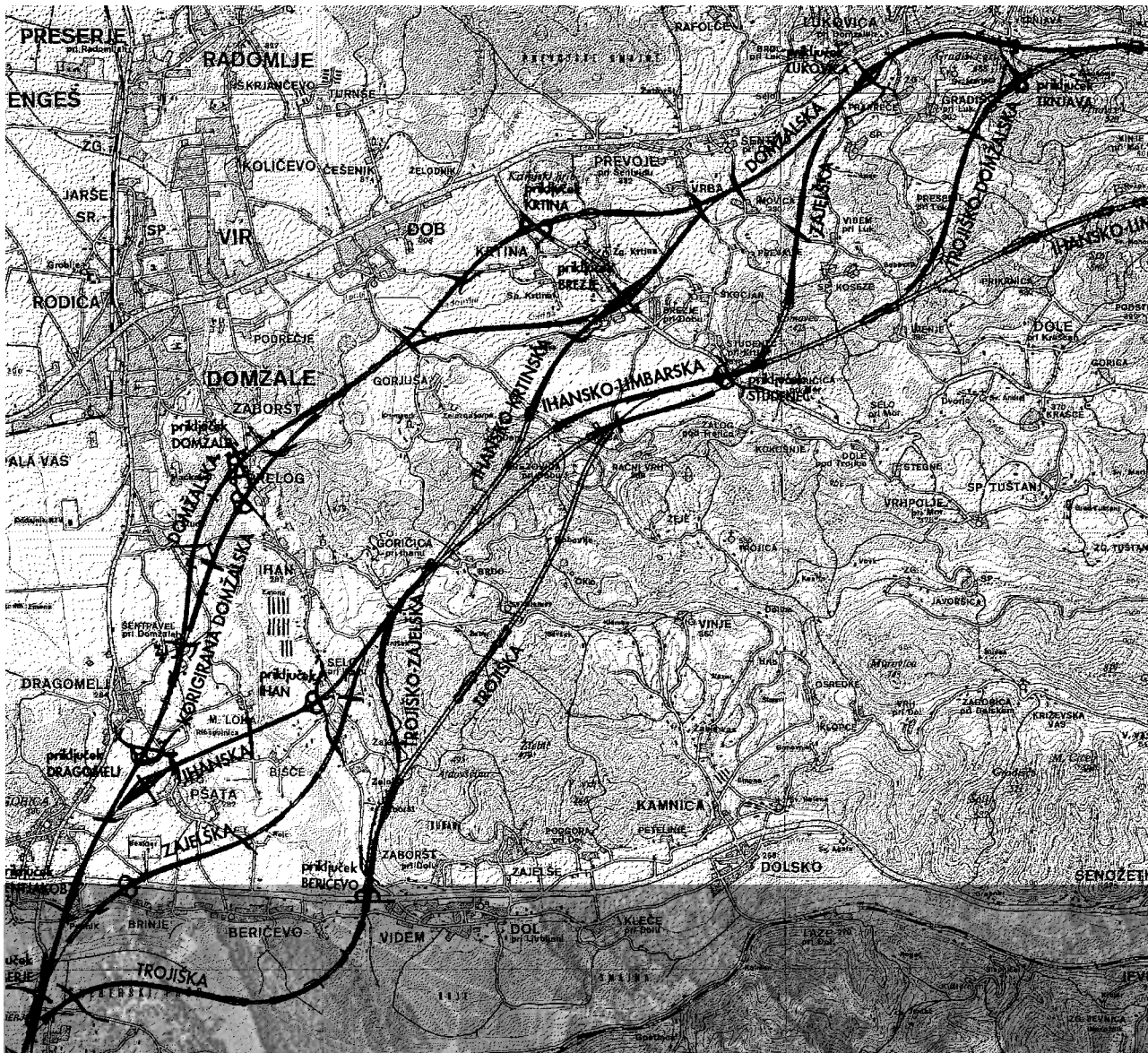
In practice those steps are often turned around. Some alternatives are proposed in advance, intuitively, without explanations why. The result of absence of wider goals,

and what is the most problematic in practice, proposing alternatives without analysing all possibilities, usually come out as finding new and new alternatives in late stages of planning process, when the decisions should already be made. The demand of affected interests in space is that also those alternatives have to be compared. That can repeat again and again and can take much time and money, usually more than preliminary analysis which investors are not prepared to pay in advance. This kind of planning process can no longer be called "rational" but "a method of attempts" (shown on right diagram). If there is no time or money left those "late" alternatives are usually eliminated in a very incorrect way or they are not even treated at all.

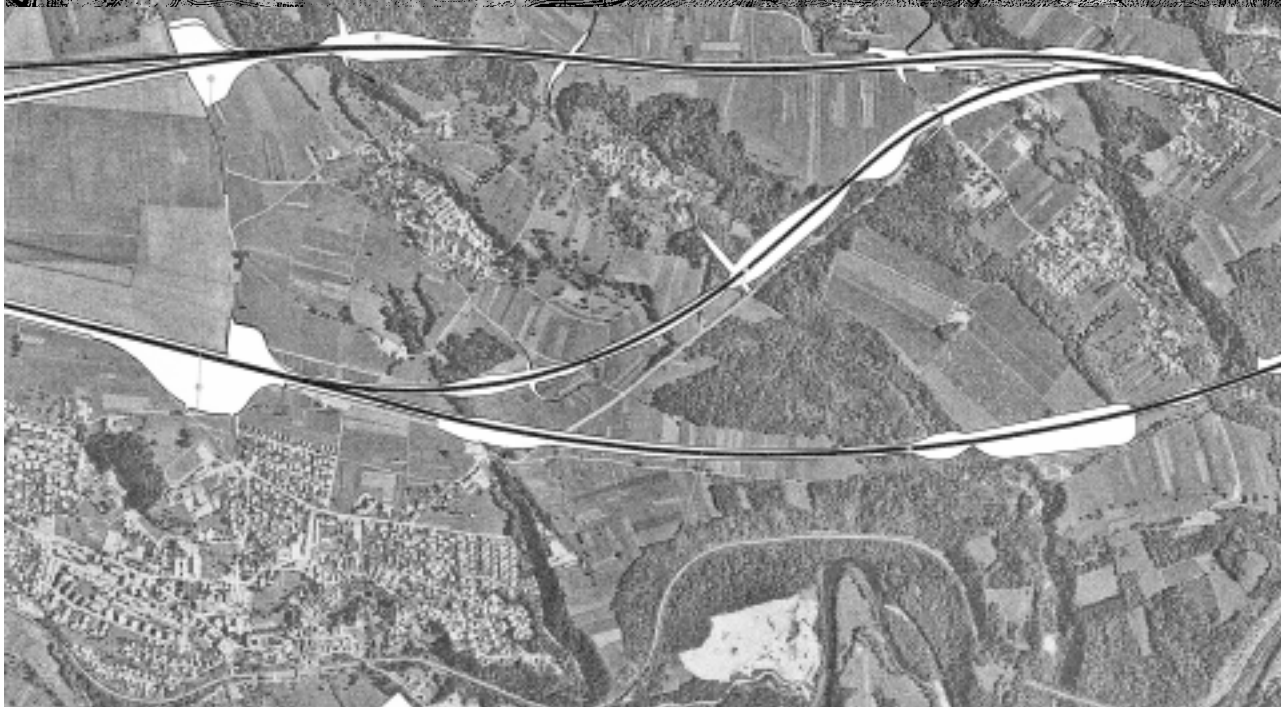
The use of alternatives itself does not mean a receipt for the right final solution. The correct analysis, phase of searching for solutions is what is important. We have to derive from space and from goals. Within analysis, we have to search the whole range of possibilities (field of alternatives) (Marušič 1994). That means not allowing any idea that might contribute to an eventual resolution to be disregarded, concerning different programs, the widest area of possible locations, different technical solutions and acceptable degrees of an action.



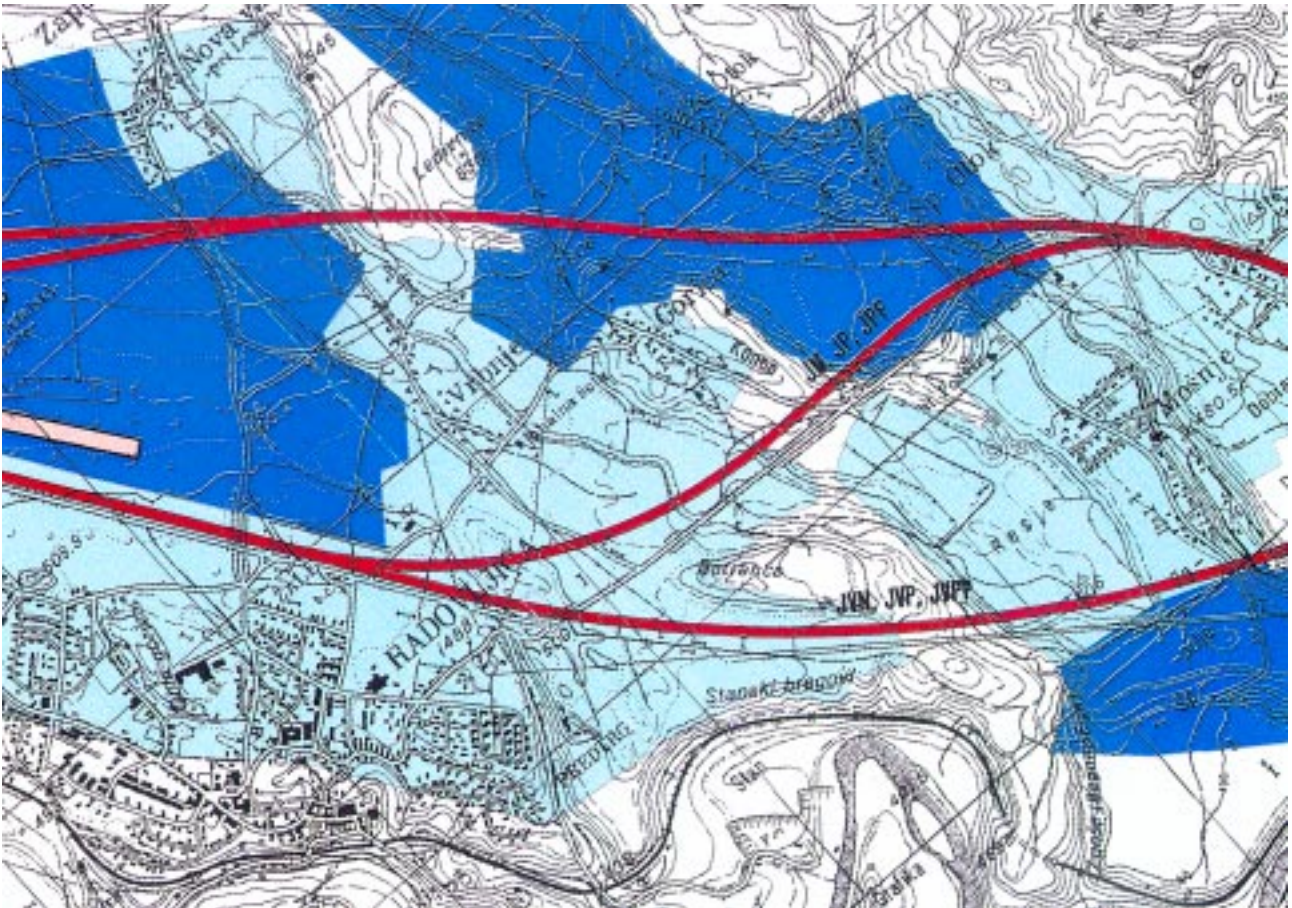
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Picture 2. The map shows possible highway traces from Sentjakob to Blagovica. There were 19 combinations of shorter parts treated.

Pictures 3 and 4. Picture 3 shows three main road traces on highway section passing town of Radovljica. One of the criteria included in comparison study was the effect on landscape quality. Different levels of landscape quality were attributed to single areas (picture 4) and then compared which alternative effects higher valued areas the most.

In searching for the best location of an action using vulnerability models (picture 1) and working in a grid, each cell can be treated as alternative more or less vulnerable. The protection mechanism is in that way included on the very beginning. All alternatives proceeded from analysis include that mechanism, because eventual alternatives that might affect space of high vulnerability are not included in phase of comparison at all, of course if there is an agreement of values achieved in phase of assessment of politics, programs and plans.

NUMBER AND SORT OF ALTERNATIVES

How many alternatives there should be? Lyle (1985: 162) suggests “enough to include all promising possibilities, but not too many to be manageable”. At site scales, we may not have to consider alternatives formally at all - the problem concerns individuals or a very small group of people. At larger scale, for very complex projects, like highways for example, the number might be much bigger (picture 2).

Marušič (1994b) reminds that it is very important to define all possible and reasonable alternatives and that it has to be proved there are no other possibilities. In that way, the most incorrect thing is to define in advance how many alternatives there should be concerned within the project, which happens very often in practice.

But how do we (clients, investors) feel, when there is a wide range of possibilities and how when there are only few? The problem of great number of alternatives is their manageability. In such cases the choices are usually made in stages. The question is if it is correct to compare in two levels – first on general (for example main corridors for infrastructure objects) and then, inside the proposed corridor, on a more detailed level (variations with different project solutions). It is obvious



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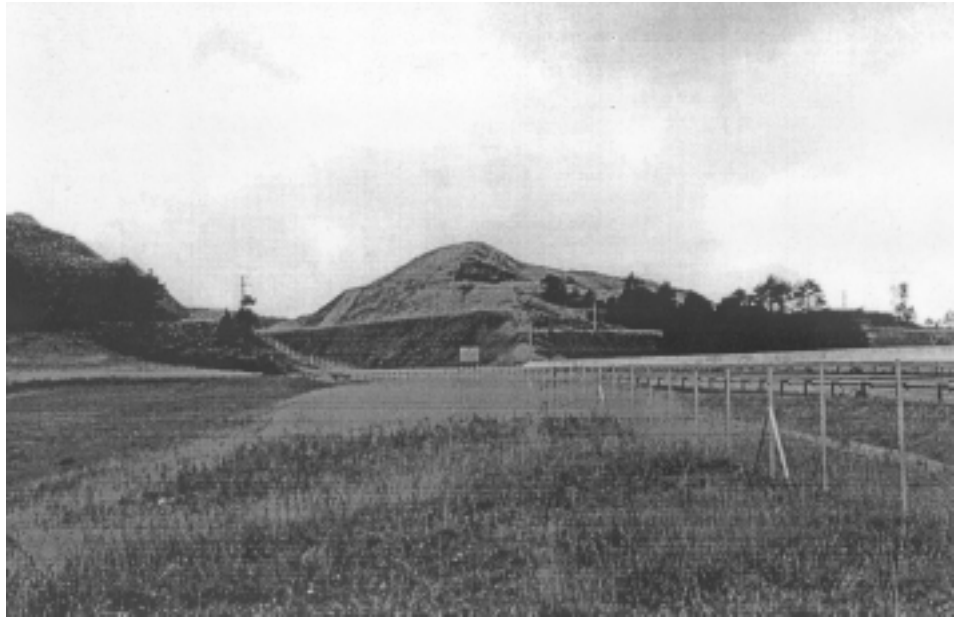
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Pictures from 5 to 8:

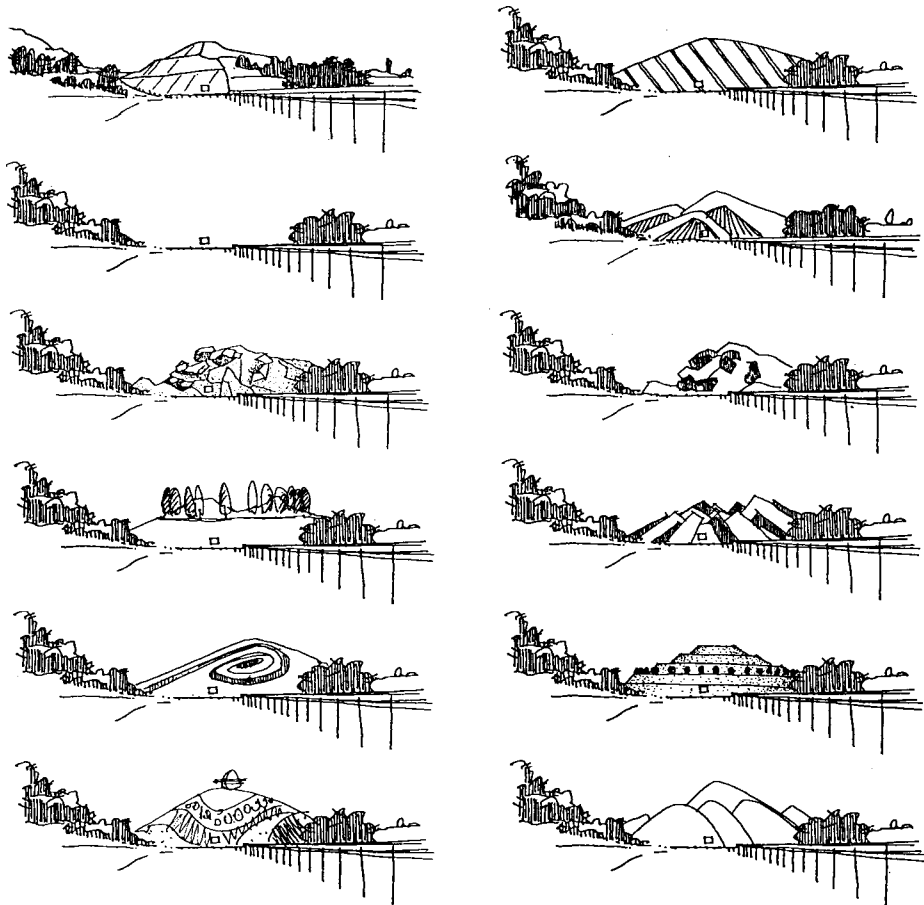
Pictures show detailed solutions of highway passing the town of Radovljica. Existing situation is shown in picture 5. First suggestion (picture 6) was to deepen the highway completely not to be seen from town of Radovljica at all. In that way there is no need for noise barriers as well, which are visible from town and also unpleasant for drivers (picture 7). Second suggestion was to keep the highway on existing level, but to search for noise barriers that provide views from the road and are less visible from town (picture 8).



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Pictures from 9 to 12.

Picture 9 shows unpleasant road cut on a highway to Slovenian coast. First a wide range of possibilities were sketched (picture 10) and then for two reasonable ones more detailed simulation was prepared - the first one proposing a complete removal of a hill and so opening view (picture 11) and the second one proposing partial elimination with planting vegetation (picture 12). That is already a question of differences in degree. Actually the improvement is going on now what is positive and almost half of the hill was already cut out. But the degree of removal will not depend on how it would look like, but on need for building material.



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that the process of planning is easier that way, but what if one would find a well optimised solution inside the first level eliminated alternative. That is why link between stages or levels must be established as Lyle (said 185: 132) - "we must keep every possibility in mind as we go along".

There is an important question what distinguishes alternatives from one another. Alternatives can vary in:



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- differences in contents (programs)
- differences in location of the same action
- differences in solutions of the same action in one location
- differences in degree of an action

(1) Alternatives with difference in contents (programs) concern **what** to locate in different areas with intention to protect the landscape. That is possible in cases where we have a set of actions (programs) to be treated in a wider area. We compare the effects of different programs as alternatives. For single areas we choose a program with fewer effects.

(2) Alternatives with differences in location of the same action concern **where** to locate a proposed action in a way the landscape could be protected. We choose the location not affecting high valued landscape (pictures 3 and 4).

(3) The differences in solutions of the same action in one-location concern **how** the proposed action should be arranged to protect the affected landscape. If for some reason the road is going through a valid landscape we choose the technical solution that is the most protective one (pictures from 5 to 8). Alternatives with differences in solutions concern also solutions of improving (pictures from 9 to 12).

(4) The differences in degree (Lyle 1987) concern **how much** the nature resource should be exploited. Usually we treat one alternative featuring minimal (protection alternative) or even no development (no action alternative or no build alternative), one featuring maximum resource exploitation or development (use alternative) and one or some that fall in between (balanced alternative).

“No action” alternative is limited to rear situation, where there that is a real alternative (Marušič 1993: 43). The majority of proposed action still proceeds from people or society needs. If those needs are proper, “no action” alternative is not realistic one.

Roads, for example, are built for improving traffic conditions. If a road is not built, that could be described as no action alternative, the traffic will increase anyway, maybe not in extent stimulated with a new road, but still. The increasing traffic on existing roads means additional burdening of the environment, reduction of safety and so on. Looking that way, building no road can actually be the worst alternative, not “no action alternative”.

Comparing alternatives with differences in degree usually ends with choosing a “balanced” alternative. We somehow agree in level of nature protection. In that way it seems that such cases are more a matter of a negotiation than comparison (pictures 11 and 12).

CONCLUSION

There are many reasons why we should use alternatives in spatial planning. There are many different interests in space present and with analysing alternatives we can find out how particular interests can be respected. The proponent of an action has a set of aims to be met, which can normally be satisfied in a number of alternative ways, each of which has different effects on the environment. Forming alternatives and offering possibilities of choosing among them is the way of optimising decision making, because defining acceptability of an action is easier if we know that there are no better solutions.

So when we have a problem in landscape process to be solved, we have to ask ourselves three basic questions: **what is the problem?**, where it is important to identify different interests in space and goals that has to be satisfied, **which are alternatives?**, where it is important to search the whole range of possibilities and **which alternative is the best?**, where it is important to establish the objective mechanism for selecting the best alternative.

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- Picture 2: Prostorska dokumentacija za avtocesto na odseku Šentjakob - Blagovica, LUZ d.d., Blaž T. et al, 1995
- Picture 9 -12: Idejna rešitev dokončne občestne ureditve na odseku avtoceste Razdrto - Čebelovica, LUZ d.d., Mlakar A., april 1996