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Abstract

In recent years crossing the Alps has become a central issue in European transport policy. The increase in global transport flow has contributed to bringing two themes to the centre of attention: making transalpine transportation easier and reducing the negative impact of this on the Alpine environment. The resulting debate has shown that there are conflicting transport policy proposals. The main reasons behind such differences are not so much the different evaluations of the trends in transalpine transport, and not only the diverging local and national interests, but rather the implicit reference to three alternative policy paradigms: 'competition', 'sustainability' and 'de-growth'. The aim of this paper is twofold: 1) to identify the links between policy paradigms and the transalpine transport policy framework; 2) to propose a multilevel and multi-criteria approach to transalpine transport policy. The explicit consideration of policy paradigms and the structured participation of citizens and stakeholders are at the heart of such a new and more widely shared approach.

Keywords: Alps, Transport Policy, Participated multi-criteria, Policy paradigms

JEL: Q56, R48

1 Introduction

The policy framework of the transalpine transport issue has been always characterized by diverging interests (PSAC, 2007). In almost all Alpine countries local communities have fostered grassroots movements against transit traffic and its negative impacts. Some Alpine Regions (such as North and South Tyrol), Austria and Switzerland have tried to aim their policies at both reducing transit road traffic and promoting their transport and logistic industries. Italy and France have been more interested in promoting new or better infrastructure to ease their transalpine import-export flow; this particular interest has been shared by other European States – Germany, Netherlands, etc. – nonetheless they never appeared as interested parties. The European Union – though not having an Alpine transport policy – has influenced the policy framework by promoting the overall objectives of its transport policy (trans-European networks, traffic shift from road to rail, tolls based on the "polluter pays" principle).

Two processes have pushed the policy framework of transalpine transport towards greater coordination. The European Union signed two agreements with Austria (in 1992) and Switzerland (in 1995) in order to share with both countries a common approach to road charging and to consider the Brenner link as a trans-European priority project. In 2000 all the Alpine States and the European Union have completed the ratification process of the Convention on the protection of the Alps (also known as Alpine Convention) which – inter alia – bind all signing parties to the reduction of both volume and dangers of transalpine traffic. General strategies and technical measures were specified by the following Transport Protocol[1].

[1] Both texts available at www.alpconv.org

Notwithstanding these tendencies towards harmonization and integration, the resulting debate on transalpine transport policy (TTP) is still featuring radically different proposals (Lückge et al., (2008). Five new transalpine railways axis are among the European and the Swiss Confederation priorities, but two of them – the new Turin-Lyon and Brenner railway tunnels – are strongly called into question by NGOs (CIPRA, 2005). Two new road axis are part of the "2020 horizon" of the trans-European transport outline plan whilst new "large capacity" transalpine roads are forbidden by the Transport Protocol of the Alpine Convention. Transalpine intermodal transport and sustainable logistics – inter alia – are promoted by the European "Marco Polo" programme and by the new Swiss tax on heavy road vehicles; at the same time, short haul transport and logistics are considered as an effective way to reduce the transalpine freight flow (Ademe et al., 1999). Italian ports are promoted internationally as a "gateway" to central and northern Europe for Mediterranean and Asian freights (Ministero delle infrastrutture, 2007) – therefore increasing the transalpine freight flow – whilst the Transport Protocol of the Alpine Convention explicitly encourages the use of shipping as an alternative to transalpine through traffic.

Academic literature has explained this counter-positing of proposals about TTP as the result of a lack of a multilateral and multilevel approach, namely with reference to conflicting interests about the transalpine through traffic (Giorgi and Schmidt, 2005). Such an approach would help to reduce policies inconsistencies, through both coordination of national and regional interventions (Ollivier-Trigalo, 2001), and participation in appraisal and decision (Rui, 2004).

But another notable explanation is missing in the literature and should be added to the above. The irreconcilability of TTP proposals is also due to the references, often

implicit, to alternative policy paradigms, each featuring its theoretical foundations, basic concepts and – what is more important here – its own agenda; then, such policy paradigms should be explicitly taken into consideration when setting the institutional framework of TTP. Accordingly, assessment procedures of TTP proposals are needed that are able to simultaneously consider plural visions and values, instead of referring to single criteria and rationality, as is the case of standard economic evaluation tool.

The rest of the paper is divided into three parts. In the first one the salient elements of the tendencies in transalpine transport are described, both in terms of the historical development of the transport flow and in terms of the structural changes in global logistics. The second part makes explicit the links between three alternative policy paradigms ('competition', 'sustainability' and 'de-growth') and the more debated TTP proposals. In the third part we propose a deliberative multi-criteria procedure to compare alternative TTP proposals through the explicit consideration of the above policy paradigms and the structured participation of citizens and stakeholders.

2 The Transalpine Transport Policy Scenario

In 2008 around 160 million tons of goods were carried across the Alps, 68 per cent by road and 32 per cent by rail. Road traffic accounted for 82 per cent of goods to and from France, 36 per cent to and from Switzerland and 72 per cent to and from Austria. Most traffic is North-South: put together, the flow across the Brenner (48 million tonnes; 34 by road and 14 by rail), Gotthard and Simplon passes (37,5 million tonnes, 25,5 by rail) comes to more than 50 per cent of the whole transalpine traffic flow. This is an increase

of 83 per cent when compared to 1990. The increase has not, however, been uniform: French transalpine trade increased by only 18 per cent, Swiss by 81 per cent and Austrian by 174 per cent; road transport increased by 103 per cent and rail transport by 49 per cent. (BAV, 1991-2009)

Predictions of the future evolution of transalpine transport must bear in mind three intimately connected elements of the changes, which are already modifying the structure of the global transport scenario.

The first one is certainly the growth in elasticity between transport demand and GDP. The two (partly complementary) processes of delocalisation and deverticalisation of the production process at global level, and the growing internationalisation of the world economy have caused an increase in the quantity of transport required for the final products (Ruzzenenti and Basosi, 2008).

The second element of structural change is the new role played by logistics. Logistics has become more important because of the multiplication of the points of origin and destinations of the flow and the need to manage just-in-time production and distribution processes (Jespersen and Nielsen, 2004). This is why logistics is increasingly outsourced to large specialised groups that have already universally opted for a hub & spokes organisational model. This system means that the route taken by the goods no longer depends only on the origin and destination and can lengthen the journey in an apparently irrational way, while in reality reducing the unit cost of transport (Priemus and Konings, 2001).

The third element of structural change is equally important. Transport networks are losing the direct role in development which was assigned to them in the literature (Banister and Berechman, 2000) and become indirect: increasingly they are an essential

element in the competition between Regions and States to offer better local conditions to multinational companies, especially to global transport and logistics companies and to their macro-regional hubs (McCann and Shefer, 2004).

As a result of these structural factors and of their impact on the global growth of transport, transalpine transport will certainly increase; but the intensity of this increase cannot be predicted. This will depend on the relevant strategic actions and decisions taken by the countries which directly or indirectly influence the Alpine region: if, and to what extent, they decide to participate in the race to attract the global transport flow; how many new transport infrastructures they build; what weight they give to environmental objectives; etc. Thus the results of mere statistical projections based on the GDP growth forecasts of the Alpine States, such as those of a recent European study (Cowi et al., 2006), are indeed arguable, if not without foundation.

3 Policy Paradigms and Transalpine Transport Policies

3.1 Three policy paradigms

The concept of paradigm was first used by the historian and science sociologist Thomas Kuhn. Kuhn emphasised that scientists form communities – within which they develop relationships between universities, journals, scientific societies, etc. – and they share core knowledge, research goals and investigation methodologies. All these elements must be considered as social and cultural factors which influence research programmes. A paradigm approach can also be applied to economic (Dasgupta, 1985) and environmental (Driessen and Glassesberg, 2002) policy: a community of politicians,

scientists and stakeholders gather around a certain core of knowledge and primary concepts which are assumed as demonstrated, and they thus share and foster policy aims[2]. Here we will refer to three policy paradigms that are not only relevant to transport policy, but whenever economic growth and environmental protection are simultaneously at stake.

The first policy paradigm we consider is 'competition': according to the fathers of economic thought – Adam Smith, Léon Walras, Vilfredo Pareto – welfare depends on material growth and in turn material growth depends on the extension of competitive markets. This policy paradigm is still influential and one of its last "frontiers" is the promotion of economic globalization as a way to spread growth and wellness all over the world (Goldin and Reinert, 2007). Building new transport infrastructures and opening them to global freight carriers is a fundamental corollary of this paradigm (ITF, 2008; WEF, 2008).

The second policy paradigm we will refer to is 'sustainability': in this case any policy must take into account all economic-environment interactions, in order to ensure the right of future generations to satisfy their needs and desires (UN-WCED, 1987). Sustainable transport policies help to reduce negative environmental impacts thanks to 'decoupling', that is reducing the intensity of transport per unit of goods produced and distributed, and to 'ecological efficiency', that is reducing the environmental impact per unit of goods transported and distributed (OECD, 2002 and 2006).

Following the last policy paradigm – 'de-growth' – our planet is not capable of sustaining the present model of production and consumption, even if a consistent and

[2] The policy paradigm concept is very similar to the Michel Foucalts' concept of 'political discourse': in both cases one can see the inter-twinning of knowledge, interests and power. For an application of the discourse approach to environmental themes and to a transport issue see Hajer (1995) and Bogelund (2007), respectively.

prolonged effort were to be made to make it sustainable (Georgescu-Roegen, 1971). Thus, to allow the global environment to survive, we must radically change our economic system, reducing energy consumption and waste and increasing conviviality (Illich, 1973; Latouche, 2006). The reduction in the number, speed and length of passenger and freight movements, is an important corollary of this radical approach (Illich, 1978).

Differences and discontinuities between the three policy paradigms are less clear-cut than it may appear from the above brief descriptions. For instance, market-based policy tools (such as green taxes and tradable pollution permits) can be aimed at sustainability, and the building of new railway infrastructures may result from the implementation of both the paradigms of 'competition' and 'sustainability'. Moreover, it must be stressed that, though both "strong" sustainability and de-growth consider the capital-natural resources substitutability to be very limited, only the former involves a thorough critique of development and modernization as such (Pezzey at al., 2002). The fact remains that policy proposals could be better understood and compared if explicitly linked to policy paradigms. And that is what we suggest to do with reference to TTP.

3.2 The Competition Paradigm: the Alps as a Barrier

Globalization is considered by the competition policy paradigm as a typically win-win process: while the economies of the South compete to attract new production facilities and, on this basis, attempt to begin their own development, the economies of the North compete to attract the national and international distribution hubs for the goods produced by the South countries (Krugman, 1991). However, this means activating flows of traffic in countries which are neither the country of origin nor the destination of

the goods; in these countries new infrastructures must be built, and the capacity of existing ones increased. Crossing the Alpine passes is one of the areas where this need is felt. This has a direct impact on the strategy for completing the trans-European transport network. The new list of 30 priority projects includes three transalpine proposals: The new Simplon, Moncenis and Brenner rail tunnels. Probably the one which is most consistent with the logic of globalization is the "corridor between the two seas" which is designed to connect Genoa and Rotterdam. This involves building two new railway tunnels: the Simplon in the Alps and the Giovi in the Apennines (EPEC, 2004). Traditionally the European Commission (EC, 2001 and 2006) has always preferred alternatives to road transport, and thus the three priority projects for the Alps are for railways. But new tunnels can only be justified if it is assumed that new transalpine traffic flows will be generated by the increase of intercontinental traffic.

As part of this approach – and due to the constant growth in transalpine truck traffic (especially in the French and Austrian Alps) – there has also been support for new transalpine road projects. Here we are speaking of attitudes and pressures which have not been explicit, but which can be seen in two important facts: 1) The Italian and Swiss Governments have not ratified the Transport Protocol of the Alpine Protection Convention which, among other things, obliges the contracting parties to not construct new transalpine motorways; 2) The Asti-Cuneo-Nice highway project – with the new Mercantour tunnel – has been inserted in the first list of public works in the trans-European road network scheme (EPEC, 2004).

3.3 The Sustainability Paradigm: the Alps as Environmental Capital

The already cited Alpine Convention the additional Protocol for the transport sector are probably the best synthesis of the objectives and applicative instruments of this policy paradigm. In Article 2 of the Alpine Convention the contracting parties assume the responsibility to activate instruments which will "reduce the volume and dangers of intra-Alpine and transalpine traffic to a level which is not harmful to humans, animals and plants and their habitats, by switching more traffic, in particular freight traffic, to the railways and in particular by providing appropriate infrastructure and incentives". At operational level this translates into two main lines of intervention: a) application of the principle of "true costs" by using fiscal instruments which take into consideration the costs of infrastructure and external costs; b) promotion of rail transport, and construction and development of "large transalpine rail axes".

Switzerland is the country which has most coherently applied the transport policies set out in the Protocol and it can be considered as an example of best practice in sustainable Alpine transport. Two actions are at the heart of the Swiss approach: 1) the development of rail transport, also thanks to two new base tunnels (Lötschberg and Gotthard) (SC, 1991), and 2) the implementation of a new environmental electronic toll which apply on all the Swiss road network[3] and it is charged on Swiss and foreign vehicles of more than 3.5 tonnes on the basis of the mileage covered, the gross vehicle weight and the pollution emission rating of the vehicle (ARE, 2004). The two actions are conjointly designed to limit the increase in the volume of heavy traffic, to encourage the transfer of goods traffic from road to rail and to reduce pollution: two thirds of toll revenues go to the Swiss federal government and are used to finance rail network development; the toll

[3] The Swiss toll (as the new German one) is the only Alpine road toll based on the environmental characteristics of the vehicle; all others are calculated only in relation to mileage covered. Since 1.1.2008 the average Swiss toll is 1,78 Euro cent per tonne-km (i.e. around three times the Austrian and German tolls).

rate will be progressively increased once the two new transalpine tunnels are opened. But the Swiss approach to a sustainable TTP has not yet come to an end: in 2007 an official study about the Alpine crossing exchange (i.e. the proposal of a transport scheme based on the 'cap-and-trade' approach) joined the policy arena (ARE, 2007).

An ideal hypothetical policy model for sustainable Alpine transport must also take into consideration the EU "Marco Polo" program. This instrument was established by the EU in 2003 to promote intermodal transport and – more generally – alternatives to "all by road" transport. "Marco Polo" was very successful; and as a result "Marco Polo II" was established at the end of 2006 (EPEC, 2006). This is not only better funded than the original "Marco Polo", but the range of proposals which are eligible for financing has also been expanded to "sea highways" and to logistic projects designed to reduce road traffic[4].

3.4 The De-growth Paradigm: the Alps as a Common

As already stated, an important corollary of this policy paradigm is the aim of reducing transport demand. From this point of view, globalization and the increase of international transport flows, with their compounded negative impacts on the Alpine environment, are a true hiatus, and should be opposed by two instruments, one constructive and the other defensive (Deltorn and Louchet, 2008).

The constructive instrument would be the consumption of local products (and thus the exact opposite of one of the constituent elements of globalization). This would be made economically sustainable by means of the organisational and technological tools of modern logistics and marketing. These would be able to create high income for

[4] For more information see: http://ec.europa.eu/transport/marcopolo/home/home_en.htm

producers and low prices for consumers in a regional area, beginning with the agricultural and food sector (Coley et al., 2009).

By contrast the defensive instrument would be based on rediscovering and re-elaborating the concept of common in order to relieve the environment from free market forces, and to set more participated regulating institutions (McCay, 2002). Consistently, the Alps should be considered as an international common with a highly relevant impact on the various interested States; these would be forced to cede far more sovereignty to citizens and to multilateral bodies than that envisaged in the Alpine Convention. The status of common would be the preliminary stage for two concrete actions: 1) Using the capacity of existing transport infrastructures as a "limiting factor" of the transalpine flow (Schneider, 2008); 2) banning those territorial marketing initiatives which cause, as a side-effect, an increase in the transalpine flow of goods. It is clear that this means giving up any attempt to defend local and national economic interests; for example, one should prefer Marseilles, Trieste and the Northern range ports (Rotterdam, Hamburg, Antwerp, Bremen, etc.) to Genoa or La Spezia (not to mention Naples, Salerno or Gioia Tauro) as gateways for the freight flow from the Far East to Central Europe.

3.5 Using policy paradigms to map TTP

Policy paradigms are useful not only to better understand and compare TTP proposals, and to unveil the implicit reference to contrasting visions and goals, but also to enrich the analysis of the TTP framework, especially with reference to the diverging interests summarized in the introduction.

As shown in table 1, one could connect: grassroots local movements to the de-growth paradigm; most Alpine Regions and States, and the EU, to the sustainability paradigm;

other European States (among which Italy and France) to the development paradigm. Obviously this is a somewhat forced taxonomy. Paradigm-stakeholders connections are not so clear-cut: for example all institutions that here are connected to the sustainability paradigm incorporate stakeholders that are in favour of competition (and vice-versa). Moreover, paradigm-stakeholders connections are not static, but evolve together with the political framework and the transalpine transport scenario; just to refer to the two main on-going changes: the increasing – though indirect – involvement of the EU in the TTP framework is implicitly pushing all interested parties towards the sustainability paradigm[5]; many subjects (both institutional and non-governmental) are more and more interested in the de-growth paradigm as a reaction to the increasing transport flow caused by globalization and rebound effects.

[5] For example the European Directive 38/2006 imposed that starting from 2010 – or from concession renewals – road tolls must be differentiated by vehicle emission class.

Table 1 – Policy paradigms and TTP: visions, objectives, proposals and stakeholders

	Policy Paradigms		
	Competition	Sustainability	De-growth
Vision	The Alps as a barrier	The Alps as natural capital	The Alps as an international common
Main objective	Easing transport flows through the Alps	Increasing ecological efficiency of transport flows through the Alps	Reducing transport flows through the Alps
Main proposals	New/better transport infrastructures	Environmental tolls Modal shift and intermodal transport New/better railways	Alternative corridors Short haul supply chains
Main stakeholders	European States (Italy, France, Germany, Netherlands, etc.)	European Union, Alpine Regions and States (Austria, Switzerland, Tyrol, Alto-Adige, Trentino, Rhone-Alpes, etc.)	Grassroots local movements
Other stakeholders	Infrastructure managers and builders Road transport companies National industries	National environmentalists associations Railways transport companies National and regional industries	Local and national environmentalists associations

4 A participated assessment of Transalpine Transport Policy

4.1 From incommensurability to participated multi-criteria

The proposed analysis of the three different policy paradigms showed not only that they generate conflicting TTP proposals, but that they incorporate incommensurable TTP visions and objectives too (see again table 1 for a synthesis).

But this should not be considered as a barrier to the implementation of TTP. As stressed by Joan Martinez-Alier, Giuseppe Munda and John O'Neill in their seminal paper "incommensurability, i.e. the absence of a common unit of measurement across plural

values, (…) does not imply incomparability. It allows that different options are weakly comparable, that is comparable without recourse to a single type of value" (Martinez-Alier et al., 1998, p. 280). Standard economic assessment procedures (such as cost-benefit analysis) are then inappropriate when incommensurability is at stake, just because they refer only to monetary values (Aldred, 2002 and 2006)[6]. Moreover, incommensurability implies that assessment procedures should foster social learning (i.e. the co-evolution of values and behaviour) through deliberation, instead of referring to an alleged single, static and objective rationality (van den Bergh and Stagl, 2003).

These considerations led to the diffusion of participated multi-criteria procedures, that is, using some form of collective deliberation to open up the policy debate, and a multi-criteria technique to close it down and to arrive at final recommendations (Stirling, 2006). "Social multi-criteria", "Deliberative mapping", "Stakeholder dialogue analysis", are just some of several ways of involving citizens, stakeholders and experts into a structured and participated deliberation procedure (Stagl, 2007). Such a theoretical and practical approach has been applied to several issues[7], including transport projects and policies (O'Riordan et al., 1999; Dooms and Macharis, 2003; De Brucker and Verbeke, 2007; Macharis, 2007; Mameli and Marletto, 2009).

Practical implementation has shown that deliberative multi-criteria procedures can effectively manage issues that feature uncertainty and incommensurability. They are able to take into account at the same time: short-term and long-term preferences and

[6] Even David Pearce (1997) and Kerry Turner (2007) acknowledged the existence of such a problem in economic evaluation, especially when economic and environmental issues are simultaneously considered, but this does not mean they were in favour of a shift from monetary and expert-led procedures to participated multi-criteria ones.

[7] The list of issues is almost endless: energy, access to water and other natural resources, forest and park management, land use, coastal planning, local and urban planning, health policies and procedures, waste management, evaluation of technological risks, etc. What Sigrid Stagl (2007) reported to the Sustainable Development Research Network can be used as a gateway to the applied literature about deliberative multi-criteria procedures.

objectives; overall scenarios and specific data; qualitative and quantitative information; monetary and non-monetary values. Moreover, they can help in unveiling latent diverging visions and in considering collective costs and benefits. On the other side, it must be said that their usefulness is not so much in generating unequivocal results (multiple rankings are not unusual at all) as in producing shared outputs, i.e. a greater mutual understanding between interested parties, which in turn is an essential element for arriving at a final political decisions.

4.2 An iterative multi-criteria procedure

Goods results from previous applications encourage us to suggest that a participated multi-criteria procedure could be used to effectively manage the issue of TTP with the aim of: a) making underlying policy paradigms more explicit; b) generating collective learning through the mutual understanding of alternative visions and objectives; c) defining a common conceptual framework to be used as a basis for future decisions.

Citizens and stakeholders representing all involved interests and geographical areas[8] should be involved in the procedure through an iterative process that integrates top-down and bottom-up steps as synthesised in table 2.

[8] See paragraph 4.3 for more details on this point.

Table 2 – Steps of the TTP participated multi-criteria procedure

Step	Who	How	What
1	Experts	Literature analysis Closed Workshops	• TTP conceptual framework: paradigms, objectives and proposals (first version)
2	Citizens	Panel groups	• Shared terminology • Changes and additions to the TTP conceptual framework
3	Experts	Analysis of results of Step 2	• TTP conceptual framework: paradigms, objectives and proposals (second version)
4	Citizens	Survey	• Appraisal of TTP paradigms and proposal
	Stakeholders	Dialogue	
5	Experts and Citizens	Joint workshop	• Deliberation on the results of Step 4 • Input to decision

In step 1, a group of experts defines a first conceptual framework to be used as a basis for the participated multi-criteria comparison of alternative TTP proposals. To achieve this goal, experts analyse all relevant literature (published and grey scientific materials, policy documents, position documents of involved parties, etc.) and they organize closed seminars to share their knowledge with other experts, including those coming from institutions, organizations and other involved parties. The output of this step will be something along the first three lines of table 1, i.e. a conceptual map of connections between policy paradigms and TTP visions, objectives and proposals.

In step 2, some citizens' panel groups are organized to discuss the conceptual framework elaborated by experts in step 1 and to suggest possible integrations and modifications. To ensure the transparency of the following steps, specific attention is given to the overall understanding of policy paradigms and TTP visions and objectives.

In step 3, experts integrate all indications coming from panel groups into a second version of the conceptual framework. Then, this version is used in step 4 to score general and specific TTP proposals against criteria derived from policy paradigms. A

structured survey and a "stakeholders dialogue" (Clark et al., 1998) – both based on a multi-criteria scheme – are used: the former is oriented at collecting citizens' opinions as expressed by a sample of the population; the latter at generating a shared evaluation of proposed alternatives between all involved parties[9]. An example of how the multi-criteria scheme may be built can be found in the Appendix.

In Step 5 a "joint workshop" (Davies et al., 2003) is organized to support discussion between experts and citizens panel groups about the results of previous steps[10]. The content of such a debate – together with the results of Steps 4 – is the final product of the deliberative procedure and may be used as a basis for designing a shared TTP.

4.4 The institutional framework

Given the geographical dimension of transalpine phenomena, the procedure to compare alternative TTP proposals should be implemented on a multilateral and multilevel basis. Citizen, stakeholders and experts participating to the procedure should represent all involved interests and should come from all Alpine States. But – as already shown in paragraph 3.5 – other European States are interested in TTP too. With the aim of not complicating the procedure too much, a compromise solution could be to consider the European Union as the representative of all other States' interests, integrating the deliberative arena with a European sample of citizens and with experts and stakeholders coming from European institutions and NGOs. To complete the multilevel approach,

[9] In order to reach a shared evaluation, the stakeholders dialogue is divided into (at least) two sub-steps: in the first one, stakeholders' representatives collectively weigh criteria; in the second one, smaller sub-groups score alternatives against criteria. Moreover, to avoid equivocal results, stakeholders should know the evaluations of citizens before starting their "dialogue". About these and other technicalities of a stakeholders dialogue, refer again to Clark et al. (1998), chapter 4.

[10] Sensitivity analyses of stakeholders' and citizens' evaluations should be implemented by experts For instance by using population's weights with citizens' scores, and vice versa; or by eliciting one policy paradigm at a time.

particular care should be given to the selection of citizens, stakeholders and experts coming from the sub-national level, namely from Alpine areas.

At this point, two main questions are on the fore. What should be the impact of such a multilateral and multilevel procedure on final decisions about TTP? At what institutional level should such a decision be taken? To find the appropriate answers the Alpine Convention should be integrated with a new section, based on the French *débat public*[11] and leading to a new decisional procedure about TTP, that can be summarized as follows: 1) A TTP Office is instituted inside the Permanent Secretariat of the Alpine Convention; 2) All TTP new proposals with a relevant impact on the Alpine region must be submitted to the TTP Office; 3) On the basis of a first assessment the TTP Office decides whether a deliberation is needed; 4) If the deliberation is to start, a participated assessment procedure (organized as sketched in paragraph 4.3) will be managed by a specific and independent Committee; 5) The results of such a procedure must be taken into consideration by the initial proponent but do not bind its final decision.

Stricter alternatives may be envisaged; for example by leaving the final decision to the participated multi-criteria procedure or by introducing an optional referendum (based on the Swiss model[12]). But these further proposals are not consistent with existing national and European legislation.

[11] The *débat public* is a participated deliberative procedure – managed by an ad hoc independent body – whose results must be taken into consideration by the French Government, when deciding about infrastructure projects with substantial environmental and economic impacts. For more details see www.debatpublic.fr

[12] The Swiss referendum is a democratic procedure – regulated by the Swiss constitution – that leaves to the population the faculty of taking the final decision on constitutional laws and federal acts. In some cases referenda are mandatory. About this and other details see the specific section in www.ch.ch

5. Conclusions

The quantitative and qualitative changes caused by globalization have brought crossing the Alps into the centre of the European transport policy debate. This article has explained that conflicting TTP proposals are generated by reference, however implicit, to three alternative policy paradigms and to the incommensurable visions and objectives they incorporate.

The first paradigm is 'competition' and it considers transport infrastructures to be an essential element to attract foreign direct investment in the logistic and transport sectors. Then, the transport policy objective is to make transalpine flows easier; from this are derived the planning priorities for new Alpine infrastructures. The second paradigm is 'sustainability', and it sees the environment as the key question. Two policy options are offered for crossing the Alps: providing incentives to encourage intermodal transport and sustainable logistics, and developing the rail network. The third paradigm is 'de-growth' and this believes that the present economic model is incompatible with the global ecological equilibrium; consistently, transport flows through the Alps should be reduced. The "recipe" for Alpine transport is thus as simple as it is drastic: consider the Alps to be an international common and use modern logistics more widely to encourage consumption of local products.

A multi-criteria procedure – explicitly based on the above three policy paradigms – has been proposed as a tool to compare conflicting TTP proposals. The structured deliberation of citizens, stakeholders and experts coming from all involved Regions and States should be part of such a procedure; the needed multilateral and multilevel

framework could be adopted and implemented as the result of an amendment of the already existing Alpine Convention.

The aim of this new institutional tool is not so much to reach a final ranking of alternatives, but to make the different position of the various parties more comprehensible to each other, thus helping future discussions and decision making about TTP.

Appendix

A simplified multi-criteria evaluation scheme of TTP proposals

	Criteria (policy paradigms)			
	Easing transport flows through the Alps (Competition)	Increasing ecological efficiency of transport flows through the Alps (Sustainability)	Reducing transport flows through the Alps (De-growth)	
TTP Proposals	Weight:....	Weight:....	Weight:....	Ranking
Promotion of international transport hubs and corridors	Score*:...	Score*:...	Score*:...	
New/better highways	Score*:...	Score*:...	Score*:...	
New/better railways	Score*:...	Score*:...	Score*:...	
Environmental tolls	Score*:...	Score*:...	Score*:...	
Promotion of modal shift	Score*:...	Score*:...	Score*:...	
Promotion of alternative corridors	Score*:...	Score*:...	Score*:...	
Promotion of short haul supply chains	Score*:...	Score*:...	Score*:...	

* Against one criterion at a time

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