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# Up the Participation Ladder

## Problems of Public Involvement in Environmental and Technological Policy-Making<sup>1</sup>

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### Abstract

The paper highlights issues of public participation within the framework of technological and environmental policy. The problem is considered in the context of interrelations between societal actors, experts and policy-makers taking into account common processes of democratic development, its historical aspects, and the level of maturity of civil society institutions.

The acceptance-oriented model of decision-making in the political fields mentioned above is characterised as a standard model; as an opposite model the decision-making process under the conditions of a totalitarian regime may be mentioned, where human beings, nature, science, technology etc. are only means to achieve political purposes. Both models as well as transitive forms of environmental and technological policy-making are examined from the point of view of different degrees of citizen participation including mechanisms of plebiscitarian democracy. In order to overcome the weakness of the acceptance-oriented model the principle of acceptability can be substantiated, which is, in essence, a societal reflection turned to normative-ethical, cultural and cognitive preconditions of acceptance, or a process of mutual learning of societal actors in connection with the problems of environmental and technological policy.

### Social acceptance of decisions in the field of environmental and technological policy

The problem of public participation is very important within the framework of technological and environmental policy. This problem should be analysed in the broad context of interrelations between societal actors, experts and policy-makers taking into account common processes of democratic development and the level of maturity of civil society institutions. At the same time the complete analysis of the problem is impos-

sible without consideration of both the historical and socio-cultural backgrounds.

In the first half of the 20th century society gradually came to understand the fact that it should not be indifferent to inventions and technological development (Röpke 1946, 310). The solving of so-called 'big problems' during the Second World War and the Cold War (Manhattan project, project of Soviet A-bomb etc.) led to a radical change in the scientific functions and involvement of science in politics (see Bernal 1939; Weinberg 1972).

Participation of prominent scientists in big technological projects of paramount importance in times of military and political confrontation resulted in promoting their role in the political decision-making process. The impetus and formulation of the common purpose were, of course, defined by politicians. But the scientist's terms of reference covered the detailed problem definition and solution. Thus science not only met the societal call, but also assumed a major part of the responsibility for appropriate political purposes. Thus a politicisation of science was involved in solving the 'big problems'.

Scientists maintained close contacts with politicians, officials, industrial managers, and—especially in Western countries—with public activists and journalists. This position gave some scientists an opportunity to exert an influence on the decision-making by 'non-scientific' means such as mass media, non-governmental organisations etc. (see Nelkin 1987). In the 1940s and 1950s the main object of public activity of some prominent scientists was the threat of nuclear war between the Soviet Union and the USA (Russell-Einstein manifesto, Pugwash movement etc.). Later the area of public activity of scientists included such problems as technogenic pressure on the environment and the exhaustion of natural resources. This activity not only found response in civil society, but also contributed to understanding that public participation should be considered as an important factor of environmental and technological policy.

The development of new approaches to planning, scientific advice and assessment of technological activity was a reflection of an essential shift of public opinion in connection with consequences of scientific and

technological progress. The environmental movement in Western countries in the 1960s and 1970s not only influenced the institutionalisation and implementation of methods such as Environmental Impact Assessment or Technology Assessment, but also contributed to changes in the traditional policy-making process including characteristic forms of interrelations between experts and decision-makers (see Carroll 1971; Coates 1975; OECD 1975).

It should be stressed that the case of Technology Assessment (TA) was something of a paradox. Although public participation had been considered as a postulate for the basic concept of TA, the real practice of the pioneer TA-institution—the US Office of Technology Assessment—left almost no room for direct involvement of civil society in the assessment process. The institutional model of the US Office of Technology Assessment was based on the principles of representative democracy and the US-specific forms of feedback between Congressmen and the electorate.

The institutionalisation of Technology Assessment in Western Europe already took place in the 1980s when the notion of the potential of participatory democracy had been evolved in a more positive sense. Acceptance-orientation developed into the guiding rule of environmental and technology policy-making. Against this background not only advisory support of environmental and technology policy, but also contribution to social acceptance of appropriate political decisions were included in the priorities of Technology Assessment as well as other kinds of expert opinions.

The level of current acceptance of technological and ecological policy by social groups should be taken into consideration already at the initial stages in the preparation of an expert opinion (problem identification and selection). It clears chances and risks of a possible decision and broadens the scope of optimal problem solving.

A purely acceptance-oriented model of environmental and technological policy-making, however, has some shortcomings. A. Grunwald points out two negative aspects of such a model:

1. The acceptance to be reached can always be only the *present* acceptance; it is not possible to predict the level of acceptance because of its possibly fast-varying nature and its dependence on singular (and unpredictable) events like accidents.

Therefore, it is impossible to design technology to meet the *future* level of acceptance.

2. Shaping the future requires some medium- or long-term visions for giving orientation [...] But if factual acceptance is the only parameter for shaping technology policy, the well-known problem arises that people mostly prefer short-ranged advantages to long-term obligations, burdening them with some more or less uncomfortable confinements to reach some goal in a future relatively far away from their life-worlds. (Grunwald 2000, 111)

Furthermore, policy-makers sometimes prefer to avoid necessary decisions when such decisions lead to political confrontation. At the same time acceptance-oriented decisions cannot exclude future conflicts and what is more, they can even provoke such conflicts in some cases. Decisions made within the framework of an acceptance-oriented model are often highly dependent on political conjuncture. This brings with it the threat of substitution of clear strategy in the field of environmental and technological policy for incremental actions and unstable compromises.

## **Models of environmental and technological policy-making from the point of view of public participation**

The acceptance-oriented model can be considered as a *standard* model because it prevails at present over other models of technology and environment oriented policy-making in the democratic developed countries. As an opposite model the decision-making process under conditions of a totalitarian regime can be mentioned, where human beings, nature, science, technology etc. are only means to achieve political purposes of a ruling party, elite or leader.

The specifics of transition from a totalitarian regime to a democracy is especially important in Russia and other post-communist countries. In fact, we are dealing in this case with a long historical process, the first stage of which is a total control of the so-called communist *nomenclature* over society, and the interim, present-day stage is a prevalence of authoritarian tendencies in the political system.

The fall of single-party regimes and ideological dictate, the development of political pluralism, privatisation and diversification of economic activity etc. have led to a substantial transformation of the shape and contents of the policy-making process. Corporative interests are in the foreground at the current stage of social and political development in Russia and many other countries in transition. Under these circumstances the decision-making process can be considered as a searching for compromise between influential individual and corporative actors. Nevertheless the legitimisation of decisions made by politicians is also necessary at this stage. Although the oligarchic and paternalist model of decision-making still prevails, we can see the gradual increase in the importance of social acceptance and democratic procedures.

The case of the planned high-speed railway line from Moscow to St. Petersburg is one of the striking examples of this controversial evolution of decision-making. The project was officially announced in 1991. Later several assessments of the project discovered both its economic inefficiency and potential environmental damage especially for the Valday National Park, the territory of which would have been dissected by the high-speed railway. In spite of the experts' conclusions the preparatory phase of the project was launched. It provoked public protests including hearings in the State Duma and the bringing of a legal action against the 'high-speed railway' joint-stock company and the Russian government. Nevertheless one of the project lobbyists Mr. V. Bolshakov was re-assigned as Deputy Prime Minister of the Russian government, after which time state investment in the project steadily increased each year. It was only in 1998, after the default of the Russian banking system and a change of government, that President Boris Yeltsin in a time of social and political crisis declared the 'freezing' of the high-speed railway project by special decree.

The above-mentioned example demonstrates the gradual approach to the acceptance-oriented model of environmental and technological policy-making. But of course, there are elements of technocratic paternalism and strong influence of corporative interests within the framework of environmental and technological policy-making not only in Russia or other countries in transition, but also in countries with a long demo-

cratic tradition. Taking this into account, it is necessary to distinguish different degrees of public participation in policy-making. A classical distinction was made by American sociologist S. Arnstein in the 1960s. Studying the role of American ethnical minorities in urban planning and governance, she distinguished eight degrees of participation in a so-called *ladder of citizen participation*:

- (1) Manipulation
- (2) Therapy
- (3) Informing
- (4) Consultation
- (5) Placation
- (6) Partnership
- (7) Delegated power
- (8) Citizen control (Arnstein 1969).

The two first rungs—manipulation and therapy—mean factual non-participation of the public in decision-making, and one-way communication aimed at the forming of a positive or—at least—neutral opinion by ordinary people with regard to impacts of a new technology or project. This is only a public relations campaign supported by selected experts who play the role of social therapists. The characteristic example here was a ‘sedative’ campaign in the Soviet media after the Chernobyl disaster.

The next three rungs—informing, consultation and placation—can be characterised as tokenism, or rather formal participation, where societal actors have an opportunity to be sufficiently informed and to give their own views, sometimes both in the media and within the framework of advisory committees. The taking into consideration of the opinions, suggestions and fears of the general public, however, depends on the goodwill and foresight of the decision-makers, or on the correlation of forces in the committee.

Partnership, delegated power and citizen control are the highest degrees of civil society participation in the policy-making process. This

level of participation implies that the sides of the dialog between politicians, stakeholders and organised groups contesting the decisions are quite equal; it 'is the first attempt to correct the imbalance between the decision-makers and those wanting to have a say in their decisions' (Salomon 2000, 27).

Citizen control also implies plebiscitarian forms of democracy. But the referendum is a very controversial instrument. Indeed, this instrument has often been used not only for advancing democracy, but also for strengthening totalitarian regimes. In other words, a referendum itself cannot be interpreted as the 'best of the bests' within the repertory of participatory democracy. Even in Switzerland with its strong tradition of cantonal or federal plebiscites, the referendums on problems such as nuclear energy and genetic technologies showed some shortcomings—over-politicisation of the problem, polarisation of viewpoints, dominance of emotions over rational argumentation, attempts of political parties burdening the discussion by additional issues etc. (see Bütschi 2000).

It should be noted that Russia has its own experience of plebiscitarian democracy in the field of environmental and technological policy. In December 1996 a referendum was organised in the Kostroma region on the building of a nuclear power plant. The referendum was initiated by the regional environmental NGO *In the Name of Life* and Russian *Greenpeace*. The preparatory campaign had a strongly pronounced propagandist character on both sides—environmental NGOs and the Federal Ministry of Nuclear Energy, which managed the project. Fifty-nine per cent of voters in the region went to the polls; eighty-eight per cent of them said 'No' to the nuclear power plant (Yablokov 1997, 168). As a result the project was stopped, but this is not to say that the Kostroma region is at present more advanced in understanding environmental problems than other Russian regions. It is evident that such an event will not have any long-term positive effect without systematic efforts of civil society aimed at a better life and a better environment.

In general the ascent of S. Arnstein's ladder of civil participation reflects the democratisation of the policy-making process: its lowest rungs correspond to the model of technocratic paternalism, whereas its highest

rungs correspond to an acceptance-oriented model of policy-making. But this correspondence is no more than approximate. The characteristic feature of real progress of environmental and technological policy-making is not formal bottom-up dynamics, but *systematic* participation of civil society based on the using of a broad range of instruments and procedures of decision-making. In this sense the acceptance-oriented model is still far from ideal.

Thus the searching of a new model to overcome the weakness of the acceptance-oriented model is an important task for both decision-makers and civil society. The introduction of the *acceptability* principle could be one of the possible solutions. A. Grunwald defines and comments this principle as follows:

The basic idea is that there are *implicitly* accepted norms and presuppositions in society (elements of the 'social contract') which can be used to formulate criteria for acceptability. [...] The question then is no longer what technology will be accepted but what technology and technology policy *should be acceptable* according to such underlying normative presuppositions of society and to its inherent rationality standards. [...] The level of acceptance required is shifted from acceptance of the factual technology and technology policy *to the acceptance of the rationally justified criteria and procedures for decision-making*.  
(Grunwald 2000, 131)

In other words, acceptability is a societal reflection turned to normative-ethical, cultural and cognitive preconditions of acceptance.

The advantage of the approach mentioned is its relative stability because the criteria of acceptability are not so dependent on the change of public opinion. Even in the case of non-acceptance of technologies or projects by some societal groups (for instance, if the local population does not agree with the building of a civil airport which could be extremely important for the development of air transportation at the regional or national level), consensus concerning democratic procedures of decision-making in the long run contributes to acceptance of decisions.

The principle of acceptability exceeds the joint searching for compromise in relation to foundations and procedures of environmental and technological policy.

## Social learning process

First of all social learning means the obtaining of new factual knowledge, a better understanding of other actors' motivations and the development of political culture by its participants. Reflexive participation is aimed not only at consensus finding, which can only be a by-product of an interactive process. More important is the procedure itself, which contributes to both better understanding of the problem and tolerant dialogue between participants.

'Recontextualisation of expertise' (Nowotny 1999) takes place within the framework of the social learning process, an addition of 'pure' expert knowledge to the specific knowledge of societal actors, which includes their guiding visions, interests and values. Even the elementary analysis of facts reflecting motivations and purposes of different actors gives experts an opportunity to improve the quality of their advice.

However the essence of social learning is a reflexive synthesis of visions, values and purposes of actors and affected groups. Such a synthesis means the change of the foundations of acceptance. For example, determination of *acceptable risk*, which is necessary for decision-making, is a result of a discourse of societal actors. As W. van den Daele noted, public perception of risks of new technology is not primarily a problem of objective cognition, but rather a problem of semantic policy (Daele 1989, 185).

It should be stressed that the decrease in public anxiety with regard to environmental and technological risks, which has been caused by some wrong negative forecasts (for example, the well-known forecasts concerning the rapid depletion of natural resources or recurrence of catastrophic incidents in nuclear power plants) or other factors, does not mean a proportional reduction of risks. This is of particular importance for Russia where the importance of problems of technological risk and environmental damage are weakened at present because of public anxiety about economic and social problems. Such a tendency can be observed not only in countries in transition, but also in Western Europe and the USA.

The determination of acceptable risk is connected with the public perception of factors of uncertainty, such as unknown cause-effect relation-

ships, stochastic processes in nature and society, synergetic effects in non-linear systems, difficulties of forecasting scientific progress, cultural evolution and value dynamics. But the process of social learning can lead to a reduction of uncertainty in such fields as cultural evolution, value dynamics, problems of ethics and responsibility (see Efremenko 2002).

Of course, there are elements of social learning in the context of traditional technical design too. In practice we deal with the following sequence: design of a new technology, change of the structure or conditions of production, evaluation of the market and—in the end—consideration of social and other consequences. But the latter is usually a reaction to irreversible consequences (see Ropohl 1994). At the same time participatory design as well as participatory and constructive technology assessment make it possible to deviate from this sequence and to attain a higher level of compatibility of technological development with the needs and interests of societal actors. In particular the Danish experience with so-called consensus-conferences shows the potential impact on societal discourse and therefore on decision-making at a relatively early stage of technological development (Agersnap 1992). With regard to the theoretical framework, Social Studies of Technology including Social Construction of Technology (SCOT), analysis of guiding visions (*Leitbildforschung*) and Actor Network Theory can be used for a comprehensive examination of civil society participation in technological and environmental policy-making (see Rohracher 1998; Schot 2002; Sørensen 2002). Besides, the social learning process can create additional opportunities ('niches') for social experimentation with new technologies.

It should be noted that public participation in discussion and decision-making in the field of environmental and technological policy organised as social learning is not a panacea. On the one hand, social learning is an attempt to strengthen the readiness of society to be challenged by technological development. On the other hand, it is an impulse to further technological development that in its turn imparts a new quality to social communication (see Efremenko 2002).

The idea of social learning is a prospective framework concept for public participation in environmental and technological policy-making. It is evident that some overestimations connected with the participation of

civil society at almost all stages of environmental and technological policy will mostly be forgotten. Practical social learning with its lasting dilemma of ‘*technology push versus demand pull*’ looks like a quite difficult job (Wieser 2002, 307). Nevertheless there are many hopeful signs that this concept will leave enough room for new interesting initiatives aimed at uniting efforts of political forces, NGOs and other societal groups and actors for the sake of a more secure and sustainable future for both present and future generations.

## Note

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