Regulating noise nuisance in an area-oriented way: research on a promising policy concept in Dutch environmental and planning law

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Summary

This article addresses future changes in the Dutch system used by government bodies in the allocation of rights for causing noise nuisance. The article presents results from a recent practical study on a promising policy concept, called *environmental distribution policy*. With this concept, noise nuisance can be allocated and controlled 'area-oriented', instead of with rules that orient only on a source and on the location of the activities that experience noise nuisance. The Environment and Planning Act, the upcoming Dutch law that regulates activities in the physical environment, expands the possibilities for decentralized government bodies to allocate 'noise nuisance'. Especially municipalities will have the freedom to work with acceptability standards that they can contextually fill in. They can make decisions about the acceptability of noise nuisance that for example is caused by industrial activities. In the Act the policy concept *environmental distribution policy* is introduced. This is the ideal concept that can combine the issues of area-oriented goals, space for effects on the environment and the regulation of for example noise nuisance. The authors researched the functioning and added value of the concept in an expert meeting. In this article, the authors argue for flexibilization of noise regulation by creating space for *environmental distribution policy* in EU and national laws by adjusting the directive relating to the assessment and management of environmental noise. Furthermore, the article describes how the concept *environmental distribution policy* can help to examine choices and to make decisions relating to the controlling of noise nuisance in an area-oriented way. This assessment will be useful in various situations in Europe, for example concerning port areas, urban areas, infrastructure, airport noise and construction noise.

PACS no. 43.50.Sr

1. Introduction

Recently the Dutch legislator launched the concept of environmental distribution policy which has been developed into a law that is expected to come into force in 2021. Under this Environment and Planning Act it will be primarily up to municipal authorities to allocate space to activities that cause effects on the physical environment. That space is called the user space. For example, governing bodies are distributing user space when they grant rights to activities for producing sound or for taking up planning space. The explanatory notes to the Environment and Planning Act state that deliberate control on user space can be helpful for government bodies in realizing ambitions for the physical environment in complex areas. According to the Environment and Planning Act, this may take place in particular in the policy-based concept 'environmental distribution policy'. This concept is particularly important in areas with a scarcity of user space. In the Netherlands, this is the case, for example, in the port areas of Rotterdam and Amsterdam. In these areas, as much space as possible should be left for port-related functions to develop economic activities, but other important objectives are the health care of nearby (noise-sensitive) functions (dwellings). These dwellings must be protected against undesirable effects due to the (accumulation of) noise nuisance caused by port activities. It is important that the effects of activities are considered and controlled in an area-oriented way, and

not just at the level of individual sources of noise nuisance. EU law and former environmental law in the Netherlands are not yet optimally geared to this area-oriented management of environmental noise. This article therefore explains the essence and the emergence of the environmental distribution policy, discusses its added value (in Europe) and examines how the concept could be embedded in European law.

2. What is the concept *environmental distribution policy*?

2.1 What is user space?

In general, a maximum should be defined for the effects that activities have on the physical environment. If activity A is allowed to produce unrestricted noise, this may be at the expense of the health of nearby activity B. In other words: the user space of activity A must be limited because of the desired quality of the physical environment. The user space of an area is limited by the maximum of desirable, possible effects that functions have on other functions. That maximum depends on the combination of objectives of an administrative body. These goals cousld be, for example, the realization of a healthy environment, the provision of an attractive business climate or the creation of a quiet area. This is shown in Figure 1.

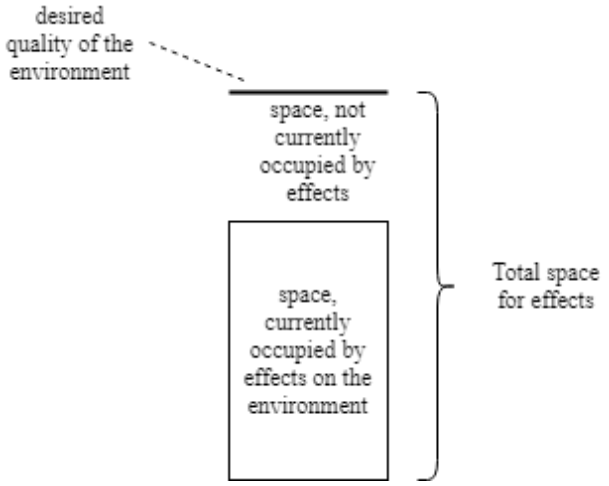


Figure 1: What is user space?

2.2 What role can the control of user space play in the regulation of noise production?

If user space is implemented into the policy of governing bodies, this will have an effect on the way of observing and acting in the physical environment. An environmental distribution policy will focus attention on the desired planned, environmentally damaging, nature-bearing or water-stressing user space in an area. In this concept, the regulation of user space is therefore the area-oriented control of effects of activities in relation to each other. This involves the use of the physical environment (including economic or social activities) versus protection of the physical environment, for example to support the importance of health (see figure 2). The way in which user space is divided determines the actual balance that is created between protecting and utilizing the physical environment. Whether that balance is reasonable will depend on the objectives of the government body in the area.

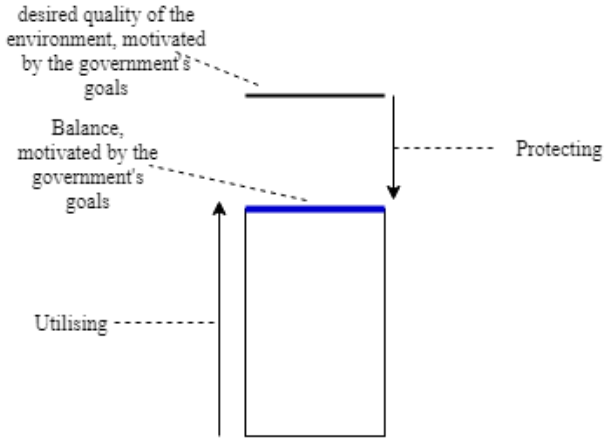


Figure 2: Relationship between the user space and the goals in the physical environment

The control of acceptable noise nuisance is immanently also a control of relationships between effects of activities in areas and desired results. After all, noise nuisance is the nuisance that one activity experiences because of the noise production by another (group of) activities. Whether a certain level of noise production is an acceptable nuisance, may depend on objectives with respect to the importance of health in the physical environment or the requirements of economic use of the physical environment by (other) activities. For example, a certain degree of nuisance may be considered acceptable by administrative bodies or society, because this nuisance allows business or social activities to a significant extent. Given the objectives, the interests of 'protecting' (health) and 'using' (economy, society) are then in balance. Authorities can base their policies and deliberations on this: limiting and distributing the user space comes down to a political-administrative weighing of interests, within the legal possibilities and the application of general principles of law. In the next section, the concept of environmental distribution policy and its applications will be discussed in more detail.

2.3. Environmental distribution policy in relation to issues of user space

The execution of environmental distribution policy will lead to important relationships in the management of

user space. The concept combines the following three elements:

1. Goals: the objectives of a government body for the physical environment, for example the protection of health and the desired space for economic and social activities. This requires a government-based vision on area level;

2. Space: in their administrative weighing of interests, a government will determine the desired quality (the user space) of areas. This requires governments to define the maximum of desirable effects on the physical environment;

3. Regulation: by means of adequate use of regulatory options, a government can control the user space in an area. For example, the government may allow where, in which manner and when activities cause noise nuisance to each other. Here the accumulation of noise nuisance in an area can be important. This requires a government body to impose rules and standards for locations. In order to realize a balanced distribution of user space over an area, activities at the locations must adhere to the standards and rules. This requires a government that specifies the goals and space into regulation.

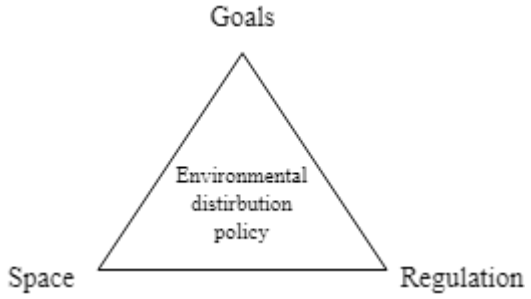


Figure 3: Elements of the concept *environmental distribution policy*

In our view, the three elements are interdependent in an administrative process on control of user space. For example, the following relationships in the triangle will converge:

- If it turns out that the goals are not achieved, then this should have an effect on the space and regulation in an area;
- If there appears to be still some space left to reach the goals, more regulation space can be used;
- Changed goals may lead to restriction of other space or the need for different regulation;
- Exceeding the space poses a threat to the quality of the physical environment. That should in principle lead to the adjustment of the goals or to the adjustment of regulation.

Environmental distribution policy requires a continuous interweaving of goals, space and regulation. Following the concept, administrative bodies in an area will apply appropriate management tools in order to achieve the goals for the physical environment. If they proceed successfully, this can lead to a balanced control of user space. This is particularly important in areas with complex issues of user space. These may include areas with a high level of economic activities and adjacent sound-sensitive residential functions, such as may be the case for port areas and business parks. Space is limited there; achieving the goals is a complex process. For one thing this requires control measures as to what activities are allowed to cause effects on the physical environment at what moment. Also flexible management of the user space is required when activities want to enter the space quickly and frequently (for which space must be available) or when they temporarily no longer produce effects (which makes space available). This can only be achieved by working in an area-oriented manner and by specifying regulations for the various (combinations of) locations in the area. Source-oriented environmental policy, in which regulations are aimed primarily at preventing significant contamination of one activity with respect to another, cannot optimally control the complexity of the area processes and objectives in port areas.

Other complex examples are the control of effects including environmental effects by wind turbines in quiet areas and function combinations of catering industry, traffic and (temporary) events. Such situations require deliberate control over the user space as multiple types of functions make demands on user space while at the same time other functions require protection.

The concept of environmental distribution policy will turn out differently in each of the above-mentioned situations, but the issue remains the same: the local management of situations with a (complex) mix of functions and / or functional density in order to reach the (often opposite) objectives in an area. The possibilities, provided by a national Act, to make local decisions about goals, space and regulation is relatively unique in the history of environmental law in the Netherlands. This will be seen in the next paragraph.

3. Development of environmental policy in the Netherlands

The introduction of environmental distribution policy is the current answer to the regulation of the friction between environmentally sensitive and environmentally

harmful functions in the Netherlands. The cause of this friction lies in the increased (economic) development that, within the Dutch context, is taking place in a limited (available) space. Since the 1970s this friction has been addressed in various ways in the Netherlands This section will highlight some of the most important developments.

3.1 Standards

The launch of the Urgent memorandum on environmental hygiene, on 4 July 1972 by the Minister of Health and the Environment, can be regarded as the starting point for environmental planning in the Netherlands (De Roo, 2008). This memorandum provided structure to the policy which until then had only been established on an ad hoc basis. Important elements of this environmental policy are its compartment-oriented thinking (air, water, soil) and the normative approach. The main task of the environmental policy is 'cleaning the compartments water, air and soil' (Hayer, 2013).

On the basis of this norm-setting approach, the ministry introduced general environmental hygiene standards that set a basic quality for the whole of the Netherlands. In this approach, norms are seen as 'general rules that are binding to a certain degree, whether or not expressed in quantitative terms'. (De Roo, 2008). The choice for the use of standards as an instrument of environmental policy can be explained as a logical consequence of the realization that the large number of environmentally harmful activities and human actions, as occurred in the 1970s, had to be limited. Structuring the environmental policy in this way has led to a growing need for environmental-hygienic standards about specific elements in the physical environment. As a result, the standards became increasingly more specific and fine-tuned.[1]

3.2 Environmental planning

An important quality lacking in the norm-setting approach was its spatial translation. The standards set may have had a spatial consequence, but an explicit spatial translation of the norm did not take place. As a result, the only activity to be controlled was (human) action in the environmentally damaging activity. A first impulse to connect the domains environment and spatial planning, and to achieve a spatial translation of standards, was given in the Noise Nuisance Act (1979).

In addition to concrete standards, this Act also introduced the obligation for a spatial translation of these standards into zones. This approach led to the separation of environmentally harmful and environmentally sensitive functions by requiring sufficient space between both functions. The Noise Nuisance Act can be seen as an environmental planning decree with standards, zoning and planning restrictions forming the core of environmental policy.

In the Noise Nuisance Act quantitative environmental standards were introduced by the central government, which had to be translated into zones by local authorities. This also revealed the biggest bottleneck of this environmental approach: an environmental policy initiated and developed at national level. The environmental standards are generic in use, without any distinction between location-specific aspects and effects. This approach is effective as long as there is not too much difficulty in implementing the standards locally.

3.3 IEZ approach

The compelling character of standard norms was typical of the environmental tasks of the Netherlands at the time: remediation. As public health was at stake, environmental policy quickly gained major social support. In addition, the (threatening) deterioration of nature provided a source of legitimacy (Hayer, 2013). With the help of this second source of legitimation, the then Minister integrated the compartment policy into a thematic approach to acidification (water and soil), eutrophication (of vulnerable ecosystems), waste (of raw materials), distribution (of harmful chemicals) and disposal (of waste) (Hayer, 2013). This integrated, thematic approach culminated in the first National Environmental Policy Plan (NMP), which was presented to the Dutch Lower Chamber in 1989.

Apart from the thematic integration, there was also an integration with regard to the methods. In 1989, the IEZ approach (Integrated Environmental Zoning) was an important initial change from the previously developed environmental zones. It became increasingly clear that the earlier regulations could not adequately cope with the complexity and interrelationship of environmental problems. In response to this, the Ministry of Housing, Spatial Planning and the Environment proposed a pilot project to improve the environmental quality around large industrial complexes. The IEZ approach fulfilled the target through which the Ministry wanted to shape

[1] The 1976 Environmental Hygiene Standards Act specifies five types of standards that are aimed at different points within the relationship between source and receiver.

the environmental policy by integrating (sectorial) standards and environmental zones into one integrated environmental zone. However, it was not passed into a statutory regulation.

3.4 ROM policy

Social developments and their connection with environmental policy have been continuously subject to development in subsequent years. The most important issue was the centrally-oriented environmental policy and the limited space for local customization and trade-offs. This was reflected in the administrative resistance to the framework character of the environmental policy that had been formulated until then. In contrast to this top-down approach, there was a demand for an environmental policy that was much more in line with the people involved in the conflict. One approach emerging from this discussion is the ROM approach. (the Dutch abbreviation for spatial planning and environment). The main characteristic of this approach is to recognize the unique characteristics of spatial environmental problems, local knowledge of participants in the process, and the subject-matter judgments of affected parties.

4. Application and stimulation of the environmental distribution policy

So, environmental distribution policy is a relatively recent concept. At the same time, it is a concept that is consistent with the history of Dutch environmental policy. The concept is needed to regulate complex situations of a mixture of functions and function density in order to reach the various local, area-oriented objectives for the physical environment.

This section examines how environmental distribution policy can be applied successfully, both in the Netherlands and in other countries. When determining whether this is possible, at least two application criteria play a role:
1. The extent to which laws and regulations allow decentralized application of the concept;
2. The courage and ability of governing bodies in using the instrument themselves.

We will now discuss these criteria and their application for the Dutch system.

4.1 Legal space for decentralized application

First of all, it is important that management bodies have the possibilities to control user space in the desired manner. This requires a central government to leave legal space for decentralized administrative bodies to apply the concept, as decentralized administrative bodies can provide area-specific customization. The space provided by the central government may be quantitative (the scope for decentralized norms), but also instrumental (the types of instruments to execute the concept). Of importance is the possible assignments that a central government body gives to decentralized government bodies. Are these assignments qualitative (e.g.: realize an acceptable level of noise nuisance) or quantitative (e.g.: maintain a central standard)? It is obvious that a qualitatively formulated assignment leaves more room for decentralized administrative bodies to control the user space locally and in an area-oriented way. Qualitative assignments will serve environmental distribution policy best at the decentralized level.

Application in the Environment and Planning Act
In the Dutch system this decentralized freedom is very large under the Environment and Planning Act. The central government instructs local authorities to ensure that activities shall experience only 'acceptable noise nuisance'. The term ‘acceptable’ is not unambiguously defined, but depends on the balance between protecting and utilizing that is deemed desirable at a decentralized level. Instead of imposing national environmental standards, the national government has preferred to give instructions with regard to the regulation of noise nuisance. It follows from these instructive rules that decentralized spatial plans must ensure that the average level of noise nuisance on noise-sensitive buildings and the level of peak noise is acceptable. Common standards are used for acceptable nuisance, but decentralized administrative bodies have the freedom to set smoother or stricter standards. For example, the competent authority can enforce stricter standards in quiet areas; in economically promising areas the board can set more flexible standards to stimulate economic activity.

4.2 Administrative bodies that embrace the concept

It is important that government bodies act in their practice on the principles of environmental distribution policy. To indicate what possible points of attention there is, an expert meeting has been organized.

The following conclusions can be drawn from the expert meeting.

Point of interest 1: area-oriented control of user space

The results of the expert meeting show that there is doubt about the willingness of Dutch government bodies to manage area-oriented user space. The experts

indicated that government bodies are not focused on realizing ambitions in a planning area as a whole, but especially on controlling noise nuisance at the source.

It is precisely in environmental distribution policy that ambitions come together to protect and utilize the physical environment. A first step in the application of the concept is to determine objectives with regard to noise nuisance in order to develop economic and social activities and also to protect the importance of health. This is followed by finding the right way of controlling user space within a planning area in order to be able to use the environment as much as possible within the desired level of protection of the physical environment. That method is not yet characteristic of many administrative bodies. Rather, governing bodies are focused on banning activities that may exceed the use space or on the realization of individual projects. The consequence of this may be that no conscious choices are made about the desired control of user space in an area. Here the optimal balance between protection and use may suffer.

Point of interest 2: decentralized administrative capacity

Important for environmental distribution policy is the primacy for decentralized administrative bodies. After all, at local levels these administrative bodies have the best opportunities to assess the ambitions and desired level of noise nuisance. This means that municipalities in particular should be able to officially and specifically distribute the user space. The experts doubted the ability of many municipalities to do so. As discussed in previous sections, the essence of environmental distribution policy is a combination of determining space for effects, defining goals and the adequate use of regulatory options. In order to apply this combination of aspects, separate official departments will often have to work together intensively. This is expected to present a major challenge to both large and small municipalities.

4.3 Bottlenecks in European law?

In the Netherlands and in the rest of Europe as well, environmental distribution policy ought to play an important role in realizing area-oriented ambitions for the control of, for example, noise nuisance.

EU environmental law, including its measures with respect to noise nuisance, is currently based on the following two fundamentals, namely (Spatial Planning Office, 2004):

- The idea of the single common market where competing companies must be able to operate in similar environmental conditions and be subject to the same environmental standards;
- The international scale of environmental problems.

Based on this concept, the policy on noise nuisance currently focuses mainly on limiting environmental nuisance at the source (the activity), from the perspective of health protection. But noise nuisance is often inevitable in order to develop social and economic activities. Limiting noise nuisance at the source is often insufficient to control complex situations of friction between environmentally sensitive and environmentally responsible functions to an extent that leaves maximum space for economic activity while health is protected as well as possible. Such situations require active and specific control on the desired balance between utilising and protecting the environment, and not primarily protection-oriented rules that orient only on the source of noise nuisance. This will be possible through the application of environmental distribution policy. Therefore the concept may have added value within the EU, provided it is worked out properly.

The question arises as to whether the specific European legislation on noise nuisance will motivate the successful application of environmental distribution policy by decentralized administrative bodies in European countries. The Directive on the assessment and control of environmental noise (hereinafter: the Directive) applies to the regulation of noise nuisance. The Directive contains rules on monitoring, information and action plans with regard to the prevention of environmental noise.[2] Legally, the Directive does not form an obstacle to applying environmental distribution policy in EU countries. Politically, however, the question is whether this also means that the concept will actually be applied successfully. The above-mentioned expert meeting shows, for example, that Dutch governing bodies in any case do not seem to be inclined to embrace the concept of their own accord. At this point we would like to formulate an impetus to adjust the Directive in the light of the principles of environmental distribution policy. The Directive is mainly aimed at protection against noise nuisance. This is reflected in its prescribing of action-oriented policy towards the causes of noise nuisance (the action plans).[3] In our view, the Directive should not primarily regard noise nuisance as a protection issue, but rather as a matter of control, for example by prescribing the preparation of action plans in a different manner. This

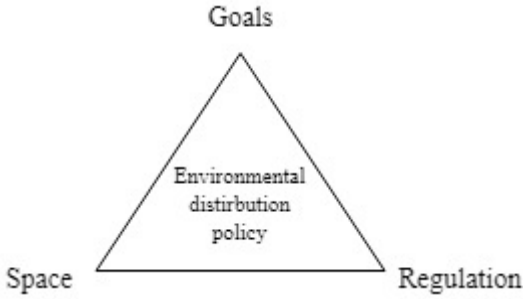
[2] See Recital 7 and Article 1 of the Directive.

[3] See, for example, Recital 1, Article 1 and Article 8 of the Directive.

will stimulate, in particular in complex situations, a better balance between ambitious area-oriented objectives with economic activity and the importance of protecting health. In our opinion, this could contribute to achieving one of the fundamental principles of the European Union: promoting economic activity.[4]

5. Conclusion

The application of environmental distribution policy, will in particular facilitate the management of complex situations of noise nuisance, which means that local policy objectives are met. These complex situations are not typically Dutch, but may also occur in other countries. Linking goals to space to regulation is important. For a successful application of the concept in European countries, the authors argued the necessity of adapting the Environmental Noise Directive. The Directive may encourage member states to create legal space for the concept. Decentralized administrative bodies are then more likely to apply environmental distribution policy in such a way that the objectives of protecting and using the physical environment are met. This will stimulate economic activity and protect health at the same time.



6. Future research

For further successful implementation of the concept in the policy of decentralized administrative bodies, follow-up research is important. The following investigations may be considered:

- How can official organizations be organized in a manner that intertwines policy, law, the environment and spatial planning?
- What are the most effective tools to apply flexible management of user space, with many changes of activities in the area?
- How can we deal with the tensions between legal certainty and property rights on the one hand and flexibility on the other?
- How can we apply the concept of environmental distribution policy in various area processes such as transforming, conserving and restructuring areas?
- How does the concept of environmental distribution policy, in which customization is central, relate to the single market concept?
- In which European regions is application of the concept particularly advisable?

[4] See in particular Article 3 (3) of the Treaty on European Union.

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