

# The social and policy approach of the environment in the Netherlands. A state of the art

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*Les Pays-Bas sont directement et hautement concernés par les préoccupations environnementales. Celles-ci sont donc l'objet d'une attention particulière tant au sein de la société que de la part des pouvoirs publics. C'est un pays dans lequel les scientifiques en général – et les sciences sociales en particulier – sont étroitement associés à la décision publique à un moment où la contribution des sciences sociales aux recherches sur la question de l'environnement est de plus en plus souhaitée ; il était intéressant de voir ce qu'il en est dans ce pays s'agissant de celles-ci. Le tour d'horizon qui nous est proposé soulève à nouveau le débat de fond sur la place qui peut être la leur par rapport au politique, c'est-à-dire sur leur autonomie.*

## Introduction

This article aims at giving a state of the art of the social and policy sciences of the environment in the Netherlands, as they have been developing since the 1970s. Such an overview provides an insight in the development of a relatively new field of scientific knowledge and may also draw our attention to the relative weight of certain issues and themes, the overemphasising of certain perspectives and the relative neglect of others.

First, we have to make clear what we mean by the social and policy sciences of the environment by delineating the disciplines concerned (section 2). Secondly, we argue the structuring of our overview by categorising the research efforts to date (section 3). We then turn to the actual overview of Dutch social and policy sciences of the environment (section 4), not aiming at an exhaustive enumeration of research and publications, but indicating what we judge to be key issues, comparing them with developments abroad. We conclude by summarising the most striking characteristics of the development and by indicating some possible trends for the future (section 5).

## The social and policy sciences of the environment

Though the analysis of environmental issues is, almost by definition, an interdisciplinary matter, we restrict ourselves to the social and policy sciences of the environment *sensu stricto*, that is mainly to sociology, policy sciences and public administration, with social psychology and social philosophy as adjoining fields. Research in disciplines such as law and economics, geography and anthropology will not be taken into consideration.

An assessment of the position of this specific field of socio-scientific research leads to ambivalent conclusions. It is obvious that the social sciences of the environment now have come into being both in the Netherlands and internationally (see for the latter Luhmann, 1989; Weale, 1992; Redcliff and Benton, 1994; Redcliff and Woodgate, 1995; Hannigan, 1995), but their position is still weak. A few years ago Dunlap and Catton (1992) observed that the environmental issue was almost absent in leading journals such as the 'American Sociological Review' and the 'American Journal of Sociology'. And only recently the International Sociological Association recognised a research committee on 'Environment and Society'. The development of the social sciences of the environment in the Netherlands is similar. Though the 'SWOME' (literally: platform for socio-scientific research on environment and energy) functions as a

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### Résumé – Approche sociale et politique de l'environnement aux Pays-Bas. Un état de l'art.

Cet article envisage de donner un tour d'horizon des sciences sociales et politiques de l'environnement (surtout la psychologie sociale, la sociologie et l'administration publique), tel que celles-ci se sont développées aux Pays-Bas depuis les années 1970. Ces études socio-scientifiques portent sur des questions diverses. Elles ont été structurées en cinq catégories : (1) l'analyse socio-structurelle des problèmes de l'environnement ; (2) la prise de conscience, l'attitude et le comportement vis-à-vis l'environnement ; (3) la communication à propos de l'environnement ; (4) le mouvement écologique, et (5) la politique en matière de l'environnement. Bien que l'article concerne la recherche néerlandaise, ses théories, ses approches et son évolution bien sûr sont comparables aux développements internationaux dans les sciences sociales et politiques de l'environnement. Faisant ainsi le bilan de plus de vingt-cinq ans de recherche scientifique, l'article en même temps indique les thèmes importants du débat scientifique ainsi que ses thèmes plus ou moins négligés. Ces derniers peuvent être le sujet d'un futur programme de recherche.

network of social scientists involved in environmental research since the late 1970s, its position has been rather marginal. Moreover, the environmental issue is virtually absent in (even recently published) introductory textbooks and journals.

The situation has changed over the last few years, however, as the social and policy sciences of the environment seem to be recognised as subdisciplines. And yet the situation is difficult: despite having received more attention, the social sciences of the environment still play a marginal role in the environmental debate. Environmental sciences still are dominated by biologists, ecologists, physicians and other natural scientists. Their dominance is obvious in terms of university staff members and volumes of research, both university and contract funded (Leroy, 1995). One can estimate the share of the social and political sciences of the environment as not higher than about 5% of the total of environmental sciences. The huge dominance of the natural sciences obviously affects the conception of environmental problems, and therefore the scientific and the political agenda setting. Just as in international reports on the environment, one can easily recognise the predominant natural scientist conception in the modelling of environmental problems in Dutch environmental policy reports.

This raises the question about the position of the social sciences of the environment in the interdisciplinary field. The recent growth of socio-scientific research seems to be paralleled by an increasingly interventionist role: the natural science definition of environmental problems seems to be accepted as 'correct', leaving the social sciences to devising solution strategies. Unfortunately, some social scientists do favour this interventionist role. This has also been provoked by the fact that about 60 to 70 % of the research in the social sciences of the environment is contract research, primarily trying to meet the solution-oriented needs of those commissioning this research. We assess such an interventionist or instrumentalist role of the social sciences as unbalanced, as it does not do justice to the need for an independent role of the social sciences apart from being an advisor to the king (Leroy, 1995).

## Structuring the state of the art

The Netherlands is a small, densely populated, highly-industrialised and wealthy country, therefore suffers much from environmental problems, reflected also in a high level of environmental concern. At the same time the social and policy sciences, especially sociology and public administration, evolved enormously as academic disciplines in the Netherlands from the 1970s to date.

A simple combination of these two conditions would lead to the conclusion that environmental problems were amongst the central issues of Dutch social sciences. As we indicated earlier, this was not the case. Moreover, as the classical social sciences did not give priority to environmental research till the late 1980s, most of this research did not take place at the university departments of the social sciences, but within the

centres for environmental sciences research. These centres, mostly interdisciplinary staffed and organised, have been established at almost all Dutch universities from the 1970s. They institutionalised in the 1980s and brought into being the 'environmental sciences' as a more or less autonomous academic field of expertise (Leroy, 1995). As a consequence, the social sciences of the environment could 'profit' from the growth of those environmental sciences centres, taking their 5 % part in the research. This organisational setting meant, however, that this research was carried out within a relative insulation from the general social sciences.

The pioneers of the social sciences of the environment though envisaged a subdiscipline closely related to main stream sociology. Hence, Hofstee (1972) defined the central task of environmental sociology as follows: "to study environmental deterioration and environmental control as societal phenomena" (translated by Spaargaren, 1997, 3). He designated 'environmental deterioration' as "human action leading to a change in the physical environment which has an adverse present or future effect on human well-being", whereas environmental control – we would say environmental management – was seen as "conscious human action to prevent or reduce environmental deterioration and/or to remedy or compensate for the effects of environmental deterioration". Hofstee's definition established a double agenda of environmental sociology which is still valid today: studying the societal causes of environmental problems and the societal reaction in order to control them. Nelissen (1979) elaborated this double agenda, distinguishing (a) the basic societal mechanisms behind environmental problems and (b) the emergence of environmental concern, environmental movements and environmental policies as a threefold societal reaction to these problems.

Both Hofstee and Nelissen paid attention to the meaning of sociological tradition for the social sciences of the environment. When Ester (1979) sketched the outlines of a social sciences research programme, he as well was inspired by the social sciences traditions. The same was true for an encompassing research programme the Social Science Council came up with (Van Rijn, 1983). But only few parts of the former and virtually none of the latter was carried out, since in the early 1980s only a few people were involved in the social sciences of the environment and nobody seemed to be interested in funding them. The social sciences mainly developed as a smaller part of interdisciplinary organised research.

Nevertheless, 25 years of research in the social and policy sciences of the environment has resulted in a huge number of publications, using different theories, concepts, paradigms and methodologies, and dealing with a wide variety of issues. This raises the question as to how to structure this legacy properly. In an overview of the international socio-scientific environmental research up until then, Leroy (1983) structured it along the lines of the classical micro-, meso-, macro-boundaries, paralleling more or less the sociopsychological, sociological and policy sciences, identifying three central issues: (a) environmental aware-

ness and behaviour; (b) the environmental movement; (c) environmental policy. In their overview of Dutch and Flemish socio-scientific research Ester and Leroy (1985) made similar distinctions. Though more implicitly, Tellegen and Wolsink (1992) use similar categories. Dealing mainly with Anglo-Saxon research, both Lowe and Rüdig (1986) and Buttel (1987) classified the field in a comparable way.

Though we realise that any attempt of structuring 25 years of research is imperfect and debatable, we opt for structuring the state of the art into five issues:

1. the *structural analysis of the basis of environmental problems*, the structural roots and basic causes of the environmental crisis, and the relation between the environmental issue and modernisation as a typical feature of our society;

2. *environmental attitudes and behaviour*, encompassing research on people's perception of environmental problems, on environmental consciousness, environmental behaviour and on the human response to environmental disasters;

3. the *communication concerning environmental problems*, with issues such as environmental values, publicity, public relations and environmental education;

4. *social mobilisation in favour of the environment*, with the role and strategies of the environmental movement, including its effects on policies;

5. *environmental policy*, encompassing the designing, the organisation and instrumentation of environmental policy, including the belief systems behind those policies.

## An overview of Dutch social and policy sciences of the environment

In this section we discuss each of these five research categories subsequently, while sketching their theoretical assumptions and some empirical evidence. These five categories, though distinguishable, do have a lot of interrelations. Some of them are more or less constant themes, whereas others can be considered as subsequent fashionable approaches.

### A structural analysis of the basis of environmental problems

From the very beginning of the societal and scientific concern on the environment in the early 1970s, it was clear to social scientists that environmental problems were the product of the existing social order. Consequently, social scientists tried to link the environmental issue to specific characteristics of society: its demographic situation, its economy, its technology and to relate environmental problems to processes of industrialisation, urbanisation, etc.

#### THE HUMAN ECOLOGY TRADITION

In the early days of environmental concern most publications stressed one key factor as being responsible for the ecological crisis: the demographic explo-

sion, the technological revolution, the capitalist economy or our cultural tradition. When some used a multi-factor model – most notably the first report to the Club of Rome –, the interrelations between the factors considered were regarded as rather mechanical, hardly sensible to human interference. Social scientists discussed this one-sided modelling arguing that population, social structure, technology, culture and environment are interwoven. Nelissen (1973), inspired by the tradition of human ecology, emphasised the importance of the morphological, social and cultural revolutions in a transitional society. He pointed out how basic institutions of contemporary society are responsible for the problematic situation, since they form a historical alliance of both structural and cultural factors (Nelissen, 1979).

#### THE STRUCTURAL ROOTS OF THE ENVIRONMENTAL CRISIS

Inspired by the tradition of critical social philosophy (the Frankfurt School), Hoefnagels (1979) and Vermeersch (1988) developed theoretical schemes in which the pillars of the capitalistic system were explored as being the fundamental causal factors of the ecological crisis. Hoefnagels underlined the role of the capitalist economic system, the large scale science and technology, and the egocentric mentality. Similarly, Vermeersch emphasised the role of science, technology and capitalism as being the causal factors of the destruction of the planet. Since his macro-sociological analysis implies a criticism of globalisation and modernisation processes, it shares common traits with publications from Beck (1992) and Hamm (1996).

### Environmental attitudes and environmental behaviour

Research on environmental attitudes and behaviour dominated Dutch socio-scientific environmental research till the mid 1980s. This research was inspired by comparable international research efforts, mainly based upon the model elaborated by Ajzen and Fishbein (1980). The societal relevance of the tradition was based upon the assumption that any improvement of the environment presupposed a major change in environmentally relevant behaviour, which in turn was said to depend on people's consciousness. Governmental bodies therefore were interested in knowing how attitudes and behaviour could be changed, thus explaining the funding of this kind of research. A series of research projects started in which the concept of environmental consciousness was operationalised and measured, either in a longitudinal or a cross-sectional way. In the end, however, it became clear that environmental concern was not the best indicator for environmentally sound behaviour, since the variance in attitudes seemed to be responsible for only 20 % of the variances in behaviour.

#### THE PERCEPTION OF ENVIRONMENTAL PROBLEMS

Environmental problems can only be regarded as social problems if they are perceived by and responded to by man. This perception, among other things, depends on characteristics such as the social visibility of the problem, its impact on the individual,

the seriousness of that impact, and its relative importance (Tellegen and Wolsink, 1992). Environmental problems as defined by natural scientists may thus not be part of the mental scheme of the citizenry whereas, on the contrary, environmental phenomena regarded as non-problematic by natural scientists can be considered as severe problems by citizens.

This is true particularly in case of hazards, risks and uncertainty. In the Netherlands Boender (1985), Baas et al. (1985) and Midden and Bartels (1994) have been involved in research on hazardous situations which directly threaten people's health or appeal to basic human life conditions: acute pollution accidents, extreme soil pollution, consumer risks. No matter what the problem was about exactly, the crucial issues were people's anxiety, their search for reliable information, the formation of action groups, the pressure on local authorities etc. These studies were used, among other things, to underpin governmental policies in cases of environmental catastrophes.

#### **ENVIRONMENTAL CONSCIOUSNESS**

Social scientists, especially in the US and the Netherlands, have done a lot of work on environmental consciousness. They were inspired by general theories on attitudes, their formation and change. In this tradition scaling techniques and survey research are used frequently. The Likert-scales developed by Schreurs and Nelissen (1974) to measure environmental consciousness consist of three sub-scales: on the environmental awareness of people; on their willingness to pay for environmental improvement; and on their environmental action orientation. As the same instrument has been used several times during the last decade, one is able to trace the changes in environmental consciousness over that period 10 years. Since the Dutch Social and Cultural Planning Office regularly reports on cross-sectional patterns and longitudinal developments in environmental concern, this approach has become institutionalised.

#### **ENVIRONMENTAL BEHAVIOUR**

Within the context of these longitudinal studies, a scheme for measuring environmental behaviour has been worked out. The theory behind this research was the previously mentioned Ajzen-Fishbein model in which actual behaviour is considered to be a function of intended behaviour, attitudes and social norms. Van der Meer (1981), the first in the Netherlands to work in this tradition, found out (a) a great discrepancy between environmental consciousness and environmentally sound behaviour and (b) the quasi-irrelevance of the concept 'environmental behaviour'. These conclusions led to a series of projects upon the discrepancy between consciousness and behaviour (a.o. Nelissen, 1987), either in general or distinguishing between consumption behaviour, energy behaviour, waste behaviour, traffic behaviour etc. (Halman, Maas and Nelissen, 1992). The conclusion was that each of them had its own complex of explanatory factors. Moreover, different types of citizens could be distinguished, each having their own pattern of environmental behaviour.

#### **ENVIRONMENTAL VALUES IN RELATION TO OTHER VALUES**

Attitudes and behaviour are related to value systems. Whereas predominant value systems seemed not in favour of the environment, environmental values are related to different value systems. Large scale longitudinal surveys on cultural values were based upon the theory on the 'silent revolution' (Inglehart, 1977). The evidence they came up with made clear that there is indeed a close relationship of environmental values with values such as political activism and concern for the future. On the contrary, traditional family values, political conservatism, authoritarian personality and hedonism were negatively linked with environmentally sound attitudes and behaviour (Nelissen and Scheepers, 1992).

#### **DISCUSSION**

As mentioned above, the research on environmental attitudes and behaviour dominated socio-scientific environmental research in the Netherlands until the mid 1980s, and is still evolving eg, with respect to consumption, energy and transport behaviour (RMNO, 1994). Most of it is based upon concepts from (social) psychology. Hence authors from a sociological perspective aimed a great deal of criticism at this research, arguing that the opinions, attitudes and behaviour of individuals who are more or less insulated from their socially-structuring environment, say little about the mechanisms controlling collective and structured environmental behaviour and the potential for changing it. For a more extensive critique, both on a national and an international level, we refer to Leroy (1983), Lowe and Rüdig (1986), Blowers and Leroy (1994) and Spaargaren (1997).

#### **Communication on environmental problems**

Part of the Dutch socio-scientific environmental research focuses on communicative aspects. Governmental bodies in particular were interested in how to influence environmental consciousness and behaviour, among other methods by publicity and education.

#### **ENVIRONMENTAL PUBLICITY**

Assuming that publicity could play a role in promoting environmentally sound behaviour, some research focused on the effectiveness of publicity either through mass media or small groups (a.o. Van Raaij, 1983; Kok et al., 1987; Van Woerkom, 1984; Weening, 1994). Their conclusion is that the effectiveness of large scale campaigns through mass media is limited as they primarily affect problem awareness and knowledge. The small group approach seems more useful in influencing environmental behaviour, particularly for those who are very involved in their neighbourhood (Weening, 1994).

#### **ENVIRONMENTAL EDUCATION**

After the 'discovery' of the environmental problems, an appeal for environmental education was heard. Several programmes for schools have been worked out, as well as educational programmes for adults. In

the beginning there were educational programmes to convince scholars and citizens of the seriousness of environmental problems (Huitzing, 1978). Later on, these programmes focused on the changing of environmental attitudes and behaviour on specific items. Recently educational programmes have been made aiming at changing attitudes and behaviour of well-defined target groups (Van Meegeren, 1989, 1997), eg, business men and employees (Klinkers and Nelissen, 1995).

### **Social mobilisation in favour of the environment: the environmental movement**

In the 1970s, the emerging environmental concern not only was reflected in public opinion polls, it also became organised in a newly-formed social movement: the environmental(ist) movement, clearly distinguishable from its older ally, the conservationist movement. The environmental movement has been a constant theme of social scientists engaged in environmental issues.

Internationally one can distinguish between three more or less subsequent approaches. Firstly, research was focusing on the demographic, socio-economic, political, ideological and other characteristics of the members of the environmental movement. Some of the authors involved regarded the environmental movement as an actor in an encompassing socio-cultural change, perceived as either a radical societal change (Touraine, 1980), or as shift towards 'post-materialism' (Inglehart, 1977). Secondly, research on the environmental movement has focused on its emergence and development, its ideologies, its strategies, etc., either by comparing it to other 'new social movements' (Offe, 1986), or by using an international comparative perspective (Jamison et alii, 1991). Thirdly, research was carried out into the strategic actions and the success of the environmental movement, either at a local or national political level (Blowers, 1984; Lowe and Goyder, 1983) or more recently, on an international level (Arts, 1998). Research on both the second and third issue was inspired initially by the 'resource mobilisation' approach (McCarthy and Zald, 1977) and, more recently, by the 'political opportunity structure' approach (Kitschelt, 1986; Kriesi et al., 1995).

Most of the Dutch socio-scientific research on the environmental movement can be classified within the second and the third approach, as it primarily deals with the gradual institutionalisation of the environmental movement, its strategies and actual influence. Tellegen (1983) provided a comparative overview of the environmental movement in different countries, whereas Van der Loo (1984) sketched its role in a supposed process of socio-cultural change. Cramer (1989) has described the history of the environmental movement in the Netherlands in depth: its starting period, its internal strategic debates, its acknowledgement by governmental bodies, its ideological and political shifting towards reformist positions, its strategies etc. Van Noort (1988) has compared the mobilisation strategies of the anti-nuclear energy, the 'squatters' and the envi-

ronmental movements, thereby elaborating critically the resources mobilisation approach. Huberts (1988) was also inspired by this approach when he aimed at measuring the actual influence of the environmental movement on the decision making on new roads. Van der Heijden (1992) and Duyvendak (1992) were primarily inspired by the political opportunity approach when sketching the position of the environmental movement from an institutional point of view.

### **Environmental policy**

Till the mid 1980s research on environmental policy was very limited, but once it had started abroad it also got under way in the Netherlands. One has even to state that, in the same way environmental behaviour research dominated the scene till the mid 1980s, environmental policy research dominated since and continues to do so today. The emphasis was on implementation and instrumentation issues at first, on organisational questions later, moving eventually towards the policy discourse approach.

#### **POLICY IMPLEMENTATION, POLICY INSTRUMENTATION AND POLICY EFFECTIVENESS**

Bressers' doctoral thesis (1983) on the effectiveness of water quality policy proved a turning point and led to successive studies of the effectiveness of environmental policy. Glasbergen (1994) gives a comprehensive overview of a long series of policy evaluation research, which we can only indicate the highlights of. Aalders (1984), Van der Tak (1988), Arentsen (1991), Vermeulen (1992) and others, were involved in research on policy implementation, using either an instrumentalist or an (inter)organisational perspective. The former paralleled the international discussion on the instrumentation issue, including the shifting from state-initiated regulation towards market instruments (a.o. Majone, 1976). The latter was in line with the international debate on the changing role of the State, shared responsibilities, co-production and the role of non-governmental organisations.

The ex post evaluation research rapidly gave rise to an ex ante debate on the deployment of certain environmental policy instruments (a.o. Klok, 1991; WRR, 1992). Making a distinction between command and control instruments, economic instruments and communicative instruments, research was focusing on the effectiveness of instruments within different organisational contexts (Doorewaard 1991, Van Vliet 1992, Van de Peppel, 1995, Smits, 1995). Research was particularly dealing with the target group policy, which was the most illustrative for changes in the instrumentation and the organisation of environmental policy in general. As those changes envisaged a greater share of responsibility for the industry, research focused on the way the industry could meet those challenges, partly by auditing methodologies or environmental management systems (De Hoo et al., 1991; Le Blansch, 1996; Van den Nieuwenhof, 1996).

#### **THE (INTER)ORGANISATIONAL APPROACH: POLICY NETWORKS**

The shifting contexts in turn gave new inspiration to research on the organisational aspects of policy making, particularly of the role of policy networks.

Some projects focused on an analysis of power relations and networks within a certain field of environmental policy (e.g., Frouws, 1993 and Termeer, 1993 on manure policies), others on the historico-political context of new developments within environmental policy (Van Tatenhove, 1993). Provoked by the need for knowledge with governmental bodies, however, most projects emphasised the problem-solving capacity of policy networks (Glasbergen, 1989; Termeer, 1993; Glasbergen and Driessen, 1993).

In its focus so much on the (expected) steering capacities of networks, lies also the bias of this approach: it assumes that the processes of designing, decision making and implementation can be improved by the set up of networks, offering the actors a platform for negotiation leading to win-win-situations and consensus. This presupposes political openness, an equal entrance for all, an equal distribution of resources etc. Ignoring these conditions, the policy networks approach ignores the political context including inequalities in power.

#### THE ECOLOGICAL MODERNISATION PERSPECTIVE

Authors such as Beck (1992) and Touraine (1994) consider environmental problems as characteristic for our late modern society. Though from a different angle, they both look at environmental problems as being aberrations of the modernisation process. Beck argues that we have entered a risk society and is looking for a way into another modernity. Touraine regards the environmental problems to be the results of forgetting the basic principles of modernisation. Huber (1982) emphasised that society needs to integrate the environmental issue with a process of ecological modernisation, while Jänicke (1993) suggests an ecological modernisation paralleled by a political one, looking for a new organisation of environmental policy (Weale, 1992).

In the Netherlands Mol (1995) and Spaargaren (1992 and 1997) have been using the ecological modernisation concept in research. Mol studied recent processes of restructuring within the chemical industry. He stresses the fact that the ecological modernisation theory integrates concepts from distinct areas, such as technology innovation and diffusion theories, economic theories, insights from environmental management and business strategy, theories on environmental policy, its organisation and instrumentation, etc. His research reveals the basic mechanisms initiating industrial restructuring in general and its ecologically-driven processes of modernisation in particular. Spaargaren has been emphasising the pros and cons of ecological modernisation theory comparing it to other social theories on environmental problems. He stresses the unilateral focus of the theory on industrial processes and its neglect of the consumption aspect of ecological modernisation. Hence his attempt to enlarge the ecological modernisation theory with theories on consumer behaviour, lifestyle, etc.

The ecological modernisation theory, though inspiring in many respects, seems to be relevant and applicable only to a geographically and socially

limited area (in short: to North-western European states), having its own presuppositions and its optimistic bias (see Blowers, 1997). The latter raises the question as to whether we have to deal with a sociological theory or, which seems more probable, with a political programme.

#### THE POLICY DISCOURSES APPROACH

The analysis of environmental policy has recently been inspired by concepts such as 'belief systems' and 'discourses' and their role in the definition and tackling of policy problems. Fischer, Sabatier and others are among the leading authors on the international level. Although the transfer from those concepts into the environmental policy analysis is very recent, we would like to draw attention to Hajer (1995) and Eberg (1997). The first looks upon the ecological modernisation concept from a 'policy discourse' perspective, studying the opportunities the concept provided to forge new coalitions for environmental policy, explaining at the same time the success of the ecological modernisation rhetoric. The latter has compared Dutch and Bavarian waste policy, not only within its different institutional context, but as resulting mainly from different definitions of the situation, different thoughts about technology, different cultures, etc.

## Conclusions

The social and policy sciences of the environment in the Netherlands have been developing rapidly, especially during the last 10 years. In the 1970s up until the mid eighties, they played a rather marginal role, both within the context of the environmental sciences and within the context of social sciences. Their growing importance over the last decade has, without any doubt, mainly to do with external factors: the need with governmental bodies and other organisations for socio-scientific support of the rapidly developing environmental policy, asking for a solution-oriented analysis and a (re)designing of these policies.

At first sight this rapid growth is encouraging. Dutch social and policy sciences of the environment have been elaborating their perspectives and approaches, bringing them up to international standards. Moreover Dutch social and policy scientists of the environment nowadays are well engaged in all kinds of international scientific and advisory boards. These optimistic statements, however, should be paralleled by more cautious ones: as Dutch socio-scientific research on the environment is dependent upon contract research to a very large extent (60 to 70 %), it is still very vulnerable since its position and development is highly dependent upon the knowledge interests of those commissioning research.

Historically one can distinguish the following main trends in the perspectives and issues.

The modelling of environmental problems as social problems, either inspired by the human ecology tradition or by analysing the fundamental societal causes of environmental problems. One can judge these approaches as an early attempt to phrase the

particular position of the social sciences vis à vis the environmental issue. It is striking that these starting points, relating the environmental issue to the fundamental characteristics of contemporary society, were hardly used for empirical research.

The analysis of environmentally relevant attitudes and behaviour, a socio-psychological approach focusing on the individual level. We may now think of this line of research as somewhat empiricist and, despite the hopes of its promoters, rather providing evidence of the marginal changeability of attitudes and behaviour. Nevertheless, it provided a lot of empirical evidence which has proved to be important to the further development of environmental education.

Several intervention techniques for influencing environmental values, attitudes and behaviour have been developed and practised. The most frequently used methods are publicity and education. The effectiveness of large scale mass media techniques is limited, whereas small group-oriented and network approaches seem more fruitful.

The performance of the environmental movement was mainly investigated from a new social movements perspective, including research into its societal basis, its strategies and its actual influence. Although research into the environmental movement always attracted only a few researchers, it is a constant theme in Dutch socio-scientific environmental research.

Environmental policy, its design, implementation and effectiveness has been the main topic since the mid 1980s. The approaches used can grossly be divided in an instrumentalist one and an organisational one. Within the latter, the policy network approach has been largely dominant. Both the volume and the content of environmental policy research are related to the knowledge interests of those funding it. Generally speaking, this policy research is mainly solution-oriented, neglecting among other aspects, questions of power, power relations and inequality.

Thus, twenty five years of social and policy research has resulted in elaborated theoretical insights and a lot of empirical studies. Some issues seem overemphasised whereas some others are neglected. As to the latter, we do restrict to two forgotten issues.

**Abstract – The social and policy approach of the environment in the Netherlands. A state of the art.**

This article provides a historical overview and a state of the art of the social and policy sciences of the environment in the Netherlands as they have been developing since the 1970s. The research efforts to date are structured into five categories: (1) the structural analysis of environmental problems; (2) environmental attitudes and behaviour; (3) environmental problems and communication; (4) the environmental movement, and (5) environmental policy. When relevant and illustrative, Dutch developments are compared to international issues and trends. The article concludes with some striking characteristics of 25 years of socio-scientific development, its key issues and its biases, indicating at the same time some neglected themes and possible future trends.

Firstly, hardly any attention has been paid to the cultural aspects of the environmental issue, the fundamental values of society both on an individual or a macro-level, being an inevitable aspect of a social change towards sustainability. Secondly, little attention has been paid so far to the power and inequality aspects of environmental problems, especially in terms of political participation and influence. The latter may reflect the consensus character of Dutch society.

## REFERENCES

- Aalders M.V.C. 1984. *Industrie, Milieu, en Wetgeving*, Amsterdam.
- Ajzen I., M. Fishbein 1980. *Understanding Attitudes and Predicting Social Behaviour*, Englewood Cliffs.
- Arentsen M.J. 1991. *Beleidsorganisatie en Beleidsuitvoering*, Enschede.
- Arts B.J.M. 1998. *The Political Influence of Global NGO's*, Utrecht.
- Baas L.W. et al. 1985. *Psychosociale Aspecten van Bodemverontreiniging*, The Hague.
- Baumol W.J., W.E. Oates 1975. *The Theory of Environmental Policy*, Englewood Cliffs.
- Beck U. 1992. *Risk Society: towards a new Modernity*, London.
- Blowers, A. 1984. *Something in the Air - Corporate Power and the Environment*, London.
- Blowers A., P. Leroy 1994. Power, Politics and Environmental Inequality. *Environmental Politics*, 3, 2, pp. 197-228.
- Blowers A. 1997. Environmental Policy: Ecological Modernisation or the Risk Society?, *Urban Studies*, 34, 5, pp. 845-871.
- Boender C. 1985. *Milieuoprotest in Rijnmond*, Rijswijk.
- Bressers J.T.A. 1983. *Beleidsdoelmatigheid en Waterkwaliteitsbeleid*, Enschede.
- Buttel F.H. 1987. New Directions in Environmental Sociology, *Annual Review of Sociology*, 13, pp. 465-488.
- Cramer J. 1989. *De Groene Golf*, Utrecht.
- Doorewaard M.E.M. 1991. *Milieuwetgeving en het Bedrijfsleven*, Zwolle.
- Dunlap R.E., W.R. Catton 1992. Toward an Ecological Sociology: the Development, Current Status and Probable Future of Environmental Sociology, *The Annals of the International Institute of Sociology*, 3, pp. 263-284.
- Duyvendak J.W., H.A. van der Heijden, R. Koopmans en L. Wijmans 1992. *Tussen Verbeelding en Macht - 25 jaar Nieuwe Sociale Bewegingen in Nederland*, Amsterdam.
- Eberg J. 1997. Waste Policy and Learning - Policy Dynamics of Waste Management and Waste Incineration in the Netherlands and Bavaria, Utrecht.
- Ester P. (ed.) 1979) *Sociale Aspecten van het Milieuvraagstuk*, Assen.
- Ester P., P. Leroy 1985. Sociologie en het Milieuvraagstuk, in A.B. Berends et alii (red.), *Sociologisch Jaarboek*, Deventer, pp. 112-131.
- Ester P., N. Nelissen 1992. Sociology and the Environment, *Special Issue Sociale Wetenschappen*, 4.
- Frouws J. 1993. *Mest en Macht*, Wageningen.
- Glasbergen P. 1989. *Beleidsnetwerken rond Milieuproblemen*, 's-Gravenhage.
- Glasbergen P. en P.P.J. Driessen (ed.) 1993. *Innovatie in het Gebiedsgerichte Beleid*, 's-Gravenhage.
- Glasbergen P. (red.) 1994. *Milieubeleid; een Beleidswetenschappelijke Inleiding*, The Hague.
- Hajer M.A. 1995. *The Politics of Environmental Discourse. Ecological Modernisation and the Policy Process*, Cambridge.
- Halman L.C.J.M., Maas J.M.A.G., N.J.M. Nelissen 1992. *Milieuedrag van Consumenten*, Tilburg.
- Hamm B. 1996. *Struktur moderne Gesellschaften*, Opladen.





- Hannigan J.A. 1995. *Environmental Sociology; a Social Constructionist Perspective*, London.
- Heijden H.A. van der 1992. Van kleinschalig Utopisme naar Postgiro-Activisme? De Milieubeweging 1970-1990, in Duyvendak, J.W. et alii 1992. *Tussen Verbeelding en Macht*, Amsterdam, pp. 77-98.
- Hoefnagels 1979. *Vooruitgang zonder Groei?*, Alphen aan den Rijn.
- Hofstee E.W. 1972. *Milieubedrijf en Milieubeheersing als Maatschappelijke Verschijnselen*, Amsterdam.
- Hoo S. de et alii 1991. *Kiezen voor Preventie is Winnen*, Den Haag.
- Huber J. 1982. *Die verlorene Unschuld der Ökologie*, Frankfurt am Main.
- Huberts L. 1988. *De Politieke Invloed van Protest en Pressie*, Leiden.
- Huitzing D. 1978. *Gids voor Natuur- en Milieu-Educatie*, Amsterdam.
- Humphrey C.R., F.R. Buttel 1982. *Environment, Energy and Society*, Belmont.
- Inglehart R. 1977. *The Silent Revolution*, New Jersey.
- Jamison A., R. Eyerman, J. Cramer 1991. The Making of the New Environmental Consciousness. A Comparative Study of the Environmental Movements in Sweden, Denmark and the Netherlands, Edinburgh.
- Jänicke M. 1993. Über Ökologische und Politische Modernisierungen. *Zeitschrift für Umweltpolitik und Umweltrecht*, 2, pp. 159-175.
- Kitschelt H. 1986. Political Opportunity Structure and Political Protest: Anti-Nuclear Movements in four Democracies, *British Journal of Political Science*, 16, pp. 57-85.
- Klinkers L., N. Nelissen 1995. Environmental Campaigning: How to Promote Employee Participation in Environmental Policies, in: *Greener Management International*, 10, pp. 96 - 109.
- Klok P.-J. 1991. *Een Instrumententheorie voor Milieubeleid*, Enschede.
- Kok G.J., Wilke, H.A.M., R.W. Meertens 1991. *Voorlichting en Verandering*, Groningen.
- Kriesi H., R. Koopmans, J.W. Duyvendak, M. Giugni 1995. *New Social Movements in Western Europe - A Comparative Analysis*, Minneapolis.
- Le Blansch K. 1996. *Milieuzorg in Bedrijven. Overheidssturing in het Perspectief van de Verinnerlijgingsbeleidslijn*, Amsterdam.
- Leroy P. 1983. *Herrie om de Heimat - Milieuproblemen, Ruimtelijke Organisatie en Milieubeleid*, Antwerpen.
- Leroy P. 1995. *Environmental Science as a Vocation*, Nijmegen.
- Loo H. van der, E. Snel en B. van Steenbergen 1984. Een Wenkend Perspectief? - Nieuwe Sociale Bewegingen en Culturele Veranderingen, Amersfoort.
- Lowe P.D., J.M. Goyder 1983. *Environmental Groups in Politics*, London.
- Lowe P.D., W. Rüdig 1986. Political Ecology and the Social Sciences - the State of Art, *British Journal of Political Science*, 16, pp. 513-550.
- Luhmann N. 1989. *Ecological Communication*, Cambridge.
- Majone G. 1976. Choice Among Policy Instruments for Pollution Control, *Policy Analysis*, pp. 589-613.
- McCarthy J.D., M.N. Zald 1977. Resource Mobilization and Social Movements: a Partial Theory, *American Journal of Sociology*, 82, pp. 1212 - 1241.
- Meegeren P. van 1989. *Milieuvoorlichting: Model voor een Planmatige Aanpak*, Amsterdam.
- Meegeren P. van 1997. *Communicatie en Maatschappelijke Acceptatie*, Wageningen.
- Meer F. van der, 1981. *Achtergronden van Milieuedrag*, Den Haag.
- Midden C.J.H., G.C. Bartels, 1994. *Consument en milieu*, Houten.
- Mol P.J. 1995. *The Refinement of Production. Ecological Modernization Theory and the Chemical Industry*, Utrecht.
- Nelissen N.J.M. 1979. Aanzetten tot een Sociologische Theorie over het Milieuvraagstuk, in Ester, P., *Sociale Aspecten van het Milieuvraagstuk*, Assen, pp. 5-20.
- Nelissen N.J.M., et al. 1987. *De Nederlanders en hun Milieu*, Zeist.
- Nelissen N., P. Scheepers 1992. *Business Strategy, the Environment, Business Strategy and the Environment*, part 2, p. 13 - 25, Nijmegen.
- Nieuwenhof R. van den 1996. *Verinnerlijking van Milieuzorg in Bedrijven*, Utrecht.
- Noort W.J. van 1988. *Bevlogen Bewegingen - een Vergelijking van de Anti-Kernenergie-, Kraak- en Milieubeweging*, Amsterdam.
- Offe C. 1986. Nieuwe Sociale Bewegingen als Meta-Politieke Uitdaging, *Folia*, 15, pp. 27-92.
- Peppel R.A. van de 1995. *Naleving van Milieurecht. Toepassing van Beleidsinstrumenten op de Nederlandse Verfindustrie*, Deventer.
- Raad voor het Milieu- en Natuuronderzoek RMNO 1994. *Inventarisatie Nederlands Gamma Milieu- en Natuuronderzoek*, Rijswijk.
- Redclift M., T. Benton (eds) 1994. *Social Theory and the Global Environment*, London.
- Redclift M., G. Woodgate 1995. *The Sociology of the Environment*, Aldershot.
- Rijn H.T.U., van (red.) 1983. *Milieuprobleemgericht Fundamenteel Sociaal-Wetenschappelijk Onderzoek*, Amsterdam
- Schreurs L. en N. Nelissen 1974. *Het Meten van Milieubesef*, Maastricht.
- Smits J. 1995. *Milieubeleid Gestuurd? Een Onderzoek naar de Invloed van het BUGM op het Gemeentelijke Milieubeleid in Noord-Brabant*, Amsterdam.
- Spaargaren G. 1992. *Sociology, Environment and Modernity; Ecological Modernization as a Theory of Social Change*, in: *Society & natural Resources*, 5, 4, pp. 323 - 344.
- Spaargaren G. 1997. *The Ecological Modernization of Production and Consumption*, Wageningen.
- Tak T. van der 1988. *Vergunning Verleend*, Delft.
- Tatenhove J. van 1993. *Milieubeleid Onder Dak?*, Wageningen.
- Tatenhove J. van en P. Leroy 1995. *Beleidsnetwerken: een Kritische Analyse*, *Beleidswetenschap*, 9, 2, pp. 128-145.
- Tellegen E. 1983. *Milieubeweging*, Utrecht.
- Tellegen E. en M. Wolsink 1992. *Milieu en Samenleving*, Leiden/Antwerpen.
- Termeer C.J.A.M. 1993. *Dynamiek en Inertie rondom Mestbeleid*, Den Haag.
- Touraine A. 1980. *La Prophétie Anti-Nucléaire*, Paris.
- Touraine A. 1994. *Critique de la modernité*, Paris.
- Vermeersch E. 1988. *De Ogen van de Panda*, Brugge.
- Vermeulen W.J.V. 1992. *De Vervuiler Betaald*, Utrecht.
- Vliet L.M. van 1992. *Communicatieve Besturing van het Milieuhandelen van Ondernemingen*, Delft.
- Weale A. 1992. *The New Politics of Pollution*, Manchester.
- Wetenschappelijke Raad voor het Regeringsbeleid (WRR) 1992. *Milieubeleid: Strategie, Instrumenten en Handhaafbaarheid*, The Hague.
- Woerkom C.M.J. van 1984. *Milieuvorlichting, Politieke Participatie en Milieubeleid, Massacommunicatie*, 12, pp. 174-184.