

IHS Reprint Series

Reprint Series No. 6

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Policy; The Rotterdam Rijnmond Case
Reviewed**

**Jos Frijns, Jerwin Tholen and Jan Paul van
Aken**

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**NEW CONCEPTS IN INTEGRATED REGION
ORIENTED POLICY; THE ROTTERDAM
RIJNSMOND CASE REVIEWED**

Jos Frijns, Jerwin Tholen & Jan Paul van Aken

Abstract

Like many other countries in Western Europe, the Netherlands are confronted with densely populated areas where different land uses give rise to conflicting situations. The Dutch government has identified 11 so-called "ROM" regions in which physical planning (Ruimtelijke Ordening) and environmental planning (Milieubeleid) should be integrated.

This paper argues the importance of collaborative strategies for environmental interventions to incorporate the specific economic and geographic context explicitly. Against this background, the regional urban development project in the Rotterdam-Rijnmond district is discussed. Being one of the most important economic zones of the Netherlands, the integration of environmental and physical planning in this district is seen as a major challenge. To retain its position as the leading transit harbour in the world, the expansion of and innovations in the port and industry of Rotterdam are considered to be crucial. However, it is recognized that this should meet both higher environmental standards and be accompanied by physical improvements.

In the ROM-regions, an innovative planning method is used, for which the point of departure is that government authorities and societal groups need each other to tackle regional policy problems effectively. Therefore, a strategy to accelerate the implementation of projects by combining resources should be developed. Subsequently these projects need to be translated into traditional sectoral policies and plans. Specific regional circumstances and environmental values play an active role in this planning method.

The essence of the decision-making process in the ROM-project Rijnmond is that a tailor made working method, based on consultations and negotiations, is applied to bridge the diverging interests and to formulate a joint strategy in a 'Plan of Approach'.

To develop Rotterdam's port and industry and to improve the environment, 47 projects have been approved to provide space for main port development, to improve access to the port and industry, to control and steer mobility, to improve the environment related to enterprises and to improve the spatial structure of urban and rural areas. Looking forward to the implementation of the 47 projects, an initial assessment found that the ROM-approach has already proven its value by providing consensus for a joint strategy, i.e., the Plan of Approach. However, it remains to be seen whether the implementation of the integrated Plan of Approach along traditional sectoral rules and procedures proves to be feasible.

The Dutch ROM-approach may be of interest to other countries as well, considering the Agenda 21 recommendations to adopt strategic frameworks that allow the integration of both physical land use and planning.

Jos Frijns

1 INTRODUCTION

Since 1989 environmental planning and physical planning have taken some important steps towards a more integrated policy in the Netherlands. As a result of this process, 11 so-called ROM-regions, in which physical planning (*Ruimtelijke Ordening*) and environmental planning (*Milieubeleid*) should be integrated at the regional level, have been designated by the Dutch Ministry of Housing, Physical Planning and the Environment (VROM). Rijnmond (Rotterdam and its surrounding municipalities) is one of these regions. The ROM-strategy has been developed to alleviate the poor environmental quality in severely polluted regions and to ensure or to improve the current environmental quality in "cleaner" regions. Besides this, a spatial structure suited for several functions should be created. The principle that the environment can be reconciled with the economy is the basis for an alternative planning strategy in which the parties involved, both public and private, seek opportunities to achieve consensus on integrated regional development.

This paper focuses on the recent experiences with this alternative environmental planning strategy in the Rijnmond area and argues that it could overcome serious shortcomings of traditional policy making by integration and coordination in a collaborative manner.

2 REGION-ORIENTED POLICY

The present structure of physical planning and environmental planning and management in the Netherlands is outlined below (see figure 1). The national law on physical planning provides general guidelines for provincial land use planning. The provincial land use plan (*Streekplan*) is the most important physical planning document issued by a province. These provincial land use plans form the framework for the only legally binding land use plans in the Netherlands: the municipal land use plan (*Bestemmingsplan*).

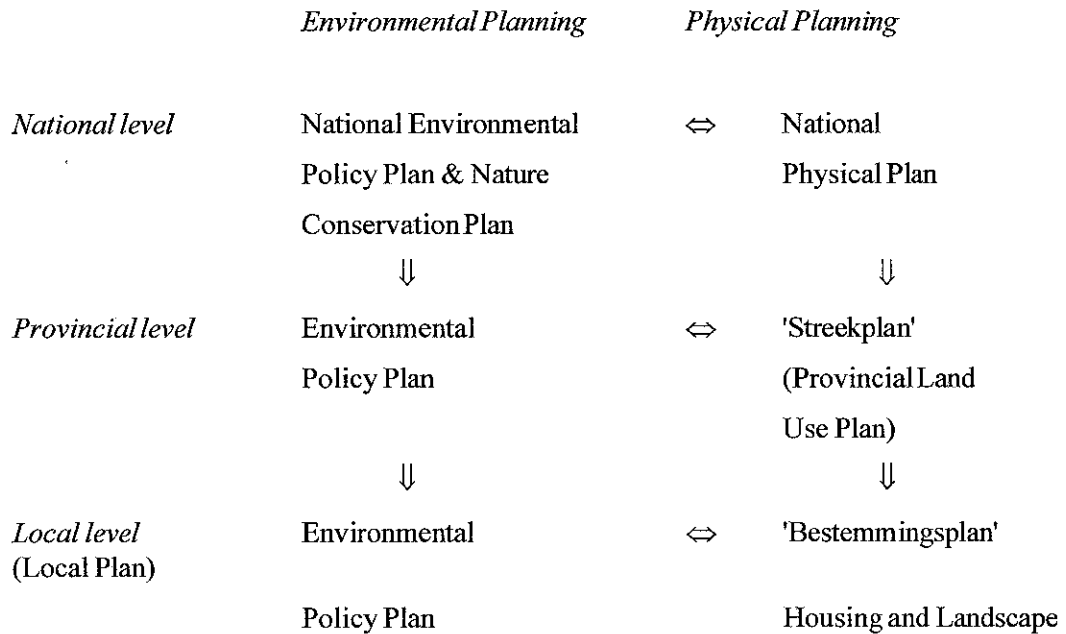


Figure 1. The structure of physical and environmental planning in the Netherlands
Source: Bouwer (1994)

The region-oriented policy is considered as the 'third track' for the execution of integrated environmental policy next to the first track of themes (e.g., acidification, eutrophication) and the second track of target groups (e.g. households, industry). As one of the classifications, regions should be selected for an experimental, integrated approach, the so-called ROM-regions. For these regions not only different environmental effects but also physical planning and economic claims are taken into consideration.

The VROM Ministry not only formulated the ROM-policy, but also designated the 11 regions where multiple environmental problems are at stake and which go beyond the current administrative structure of environmental planning. These regions are of national importance for physical planning. Moreover, the regions have economic potential related to the expected threats which basically stem from human activities within the boundaries of the selected regions¹.

The objectives of the VROM-Ministry in the 11 regions selected as ROM-regions (VROM, 1990) are:

- a) the development of integrated views on the environmental quality desired in the region, including a package of measures that will achieve that quality;
- b) the development of an effective strategy which accelerates the implementation of environmental policy by bringing together resources of the public authorities and the private actors involved;
- c) the consideration of specific regional circumstances (both possibilities and constraints);
- d) the active role environmental values must play in the regions in setting the conditions for economic development and;
- e) the strategy being applied is expected to incorporate a maximum number of people by involving all target groups in the discussion.

The VROM Ministry aims to control the structure of the different projects by participating in all projects. Initially, the Ministry starts the consultations in the region. The key regional actors then join the project and gradually take over. The official start of a project is a start covenant, in which the partners lay down the starting points and objectives for further negotiation. The challenge, then, is to structure the interactions between the participants. In practice, the partners (representatives of a multitude of administrative levels, social movements and private actors) are expected to issue a Plan of Approach within one and a half to two years. At the same time they are to enter into a covenant confirming this Plan of Approach. Rather than creating new policy, ROM-projects integrate existing plans and policy documents.

¹ Two other considerations have played an important role in the selection of the regions. First, different areas are selected to gain knowledge of the experimental approach. For this reason, clean, polluted, rural and urban areas are included. Second, in some of the polluted areas an impasse was threatening to occur. See: Glasbergen and Driessen (1993); Van Tatenhove, (1993).

3 THE RIJNMOND AREA IN PERSPECTIVE

The ROM-project Rijnmond, with a population estimated to be about one million, covers an area of 60.000 ha. in the Southern part of the Dutch metropolitan area 'Randstad'. The municipality of Rotterdam, with its reputation as the largest port city in the world forms the heart of this industrial, largely petrochemical, area². Although the region is often referred to as the engine of the Dutch economy the number of unemployed has risen to 35,000. To keep its leading position in the world, the port of Rotterdam has to innovate and expand (Municipality of Rotterdam, 1991).

An archipelago of docklands and industrial islands dominates the Western part of the core area. Container vessels have easy access to the Maasvlakte and Europoort because of the deep 'New Waterway'. Therefore, the transshipment of oil, bulk cargo and containers is found here. Chemical industries dominate the Botlek area. In the Eastern part of the core area petrochemical industries are located on Vondelingenplaat, and containers and smaller general cargo are handled in the Waalhaven and Eemhaven docks, located close to the city.

In comparison with other parts of the Netherlands, Rijnmond is faced with wide-ranging environmental pressures due to its large scale industry. The expected increase of transport, industry and other activities will increase the pressure on the environment. The local and regional environmental pollution is particularly high in Vlaardingen and Schiedam and the residential areas of Pernis, Rozenburg and Heyplaat. These residential areas are essentially islands in an extensive industrial area (Brasser and Kocken, 1994).

Located in the estuary of the important rivers the Rhine and the Waal, the industrial operations in the Rijnmond district contribute to serious water pollution. With regard to air pollution, the level of CO₂ exceeds the national average by 400%; high NO_x and C_xH_y levels are substantially caused by traffic and transport. Noise nuisance, stench, dust and the risk of explosions due to the high number of hazardous production processes and the transportation of dangerous fluids and gases affect the citizens' health and quality of life as well³.

² Besides Rotterdam, another 14 municipalities form the Rijnmond district (Albrandswaard, Barendrecht, Bemisse, Brielle, Cappelle aan den IJssel, Hellevoetsluis, Krimpen aan de IJssel, Maassluis, Ridderkerk, Rozenburg, Schiedam, Spijkenisse, Vlaardingen and Westvoorne).

³ For a comprehensive, 'quantitative' report on the environment in the Rijnmond district, see: DCMR (1994) *Het Milieu in Rijnmond*.

4 CAPACITY BUILDING FOR SUSTAINABLE DEVELOPMENT

In the Rijnmond area, spontaneous collaborative action can hardly be expected due to the different interests, in scale and extent, of the parties involved. The key problems of the ROM-project Rijnmond are complex and wide-ranging. As Dil (1991) argues:

1. problems of policy fragmentation have to be overcome;
2. the region has a complex spatial structure, is densely populated, and there is a shortage of land for enterprises, the construction industry and infrastructure.
3. the pressure on the environment has grown and the problems differ from one location to another and they generate from many, both point and diffuse, spread out over the area and;
4. another complicating factor is the large number of sectoral plans and projects already (being) developed in the Rijnmond area.

To overcome these problems, it is argued here, the following conditions, are necessary to build the capacity for sustainable development in an integral ROM-project.

First, to structure the project one actor has to take the initiative to start the consultations, and a temporary organizational framework (policy network) should be formed around the policy problem (Driessen and Glasbergen, 1995). The best solution seems to be to invite as many parties as possible, to form a sound base for implementation. To reduce the complexity, representatives of larger groups have to be found. At least the actors who are indispensable for the implementation phase should be involved in the planning process (Ten Heuvelhof and Termeer, 1991). In the Rijnmond area, the first discussions on the development of an integrated plan occurred in early 1989 and were limited to the VROM Ministry, the Ministry of Economic Affairs (EZ), the Ministry of Public Works and Water Management (V&W), the Province of South Holland and the municipality of Rotterdam. Soon it was recognised that they could not proceed without the cooperation of others in the area. The representatives of other municipalities (The Rijnmond Consultative Committee) were involved at a later stage, while the rest of the parties (representatives of the private sector and the environmental movement) followed the discussions at a distance.

Secondly, it should be emphasized that individual actors are not suited to address the problems by themselves and that all parties have eventually more to win than to lose by participating in the ROM-project, even if that may not be so at the start. Although the problems were evident in Rijnmond, the basis for cooperation was lacking, partly due to the fear of the other municipalities of the dominance of 'big brother' Rotterdam. A breakthrough in the process was achieved when the intended partners were able to themselves determine their position (Driessen and Glasbergen, 1995). Both Rotterdam and the Rijnmond Consultative

Committee individually presented a development perspective for the region, which recognized the mutual dependence of all parties⁴. By deciding to continue projects under progress a major obstacle was removed, as many of the participants feared that setting up a ROM-project would only delay current initiatives. The tremendous effort of the VROM Ministry to convince the region to join the discussions, resulted in an exchange of ideas and enthusiasm for the project gradually began to grow. It was remarkable that soon after the presentation of the 'individual' approaches, that the partners agreed on the official start of the ROM-project. In the beginning of 1992, a start covenant has been signed, stating a dual objective⁵: *the development of the main port function of Rotterdam and the improvement of environmental quality*. This covenant included the agreements on human and financial resources and the organization of the process of formulating an integral plan. The (temporary) project organization consists of a steering committee, in which decisions are taken, a project group preparing the policy proposals, and a main advisory team. The parties couldn't agree on a project leader from one of the parties; therefore, an independent mediator became the manager of the project group and the main advisory team.

A third condition for bringing environmental objectives into public policy planning is to structure the discussions and make use of creative working methods based on communication and participation. After the starting covenant was signed, the participants were given the opportunity to set targets for the development of the port and industry, the environment and the physical planning of the area. Given the friction between main port development and environmental improvements, it is not surprising that the sectoral objectives could not be reconciled automatically. In searching for opportunities for an integrated approach, special attention should be paid to the building of teams. In the Rijnmond case, the project leader acted as a mediator between the parties (Driessen and Glasbergen, 1995)⁶. The mediator approached the individual parties by organizing consultative rounds, and, in the meantime, the parties contacted each other bilaterally to negotiate. Several mediation techniques were demonstrated in this case. In several consultations and meetings, for instance, games were played in which the roles of the participants were completely reversed to bring the participants closer. Gradually, the parties reached consensus over the contents and budget of the Plan of Approach (see section 5 below). The draft Plan of Approach of December 1992 was presented in numerous public meetings. Eventually, the covenant was signed on 9 December 1993, after the plan was presented to political bodies such as Parliament, the Province and the municipal councils.

Concluding discussion of the planning process, all parties intended have endorsed the plan, except for the environmental movement which found the impact of the mainport development on nature and environment still unacceptable. At first glance, it appears that the choice for an independent project leader, 'the mediator', was relatively successful in the Rijnmond case. However, even when there is consensus amongst the parties involved, this does not guarantee a smooth execution of the measures to be taken; all projects have to be implemented by following normal rules and procedures.

⁴ Municipality of Rotterdam (1991) *Portplan 2010* (draft); Rijnmond Consultative Committee (1991) *The Region in Perspective*.

⁵ The following parties have signed the start covenant and Plan of Approach: The Ministry of Housing, Spatial Planning and the Environment (VROM), the Ministry of Transport, Public Works and Water Management (V&W), the Ministry of Economic Affairs (EZ), the Province of South Holland, the Rijnmond Consultancy Committee, the 15 municipalities, the Chambers of Commerce, and two representatives of port enterprises (Stichting Europort Bottek-Belangen and Haven Ondernemersvereniging SVZ).

⁶ See also: Susskind, L. and J. Cruickshank (1987) *Breaking the Impasse; Consensual Approaches to Resolving Public Disputes*.

5 PLAN OF APPROACH

The Plan of Approach is anything but a complete blueprint. It consists of a comprehensive perspective until 2010 and defines a number of projects to reach the combined objectives of a clean main port, whose products can be transported quickly and efficiently without obstructing urban and landscape development. The total budget amounts to about 8.5 billion guilders, of which 9 million guilders are allocated for starting the implementation. For the second phase (1994-1997), financial commitments are made and for the third phase (1998-2010), a statement of intent to contribute to the project has been issued.

To bring the objectives into effect a complex working method including a comprehensive monitoring system, has been developed to be able to make adjustments if necessary⁷. This should overcome the definite risk of disintegration of the wide variety of projects, in which project leaders (in practice the actor who could benefit the most from the project) are rather free to create their own projects. The implementation organization, set up when the Plan of Approach was signed, consists of an inter-authority policy group, a coordination group at directors level and a project manager supported by a project office responsible for preparing the progress reports. In addition, an extra negotiating body was created, in which the most important actors are able to discuss progress on a regular basis (ROM-project Rijnmond, 1993)⁸.

All 47 projects are intrinsically related and should, in principle, individually strengthen the main port function of Rotterdam and improve the quality of the environment⁹. The ROM-project Rijnmond could be characterized as a re-enforcement of and follow-up to initiatives already under development, and it has forged links with all important regional and national

⁷ROM-project Rijnmond (1994) "Doel-Middel-Hiërarchie-Programmaplan ROM Rijnmond". The following is intended: Creation of 1450 ha. space for main port activities; increase of employment and added value in the food, chemical and container business; increased investments; reduction of congestion; expansion of infrastructure; steer and control mobility; emission reduction of CO₂ (10%), Cx Hy (75%), and NO₂ (75%); a reduction of highway and railway line noise (no households within the 65 dB (A) zone); improved external safety of transport, improved local air and water quality; reduced industrial noise; dust and stench; improved external safety of industries; reconstruction of old dock-lands; residential building within the vicinity of the port; increased space for nature and reconstruction of the ecological structure.

⁸ In each project, the actors jointly prepare a project description, stating the objectives, approach and time planning. To make sure that the project leaders make a serious effort to realise their project, they are supported by a cluster-coordinator from the overall project-office, who is called upon to play a stimulative and facilitative role. If the progress is not sufficient, the directors in the coordination group stimulate their colleagues who work as project leaders. Until now, this has worked out fine, as the directors in the coordination group are highly convinced of the necessity of the ROM-project.

⁹ Officially, 47 projects are listed in the Plan of Approach. After signing the covenant, the number of projects may still change; projects could be added whilst others may be combined

developments. The projects aimed at reducing the major environmental problems due to an accumulation of causes and a concentration of functions in one area, are however new¹⁰. These projects strive to design activities in such a way that future emissions reach environmental goals. Most projects are initially focused on research and not directly changing the environmental conditions. Later on, when it turns out that the projects are politically and financially feasible, the actual implementation could start.

Six categories of projects respond to the objectives of the Plan of Approach:

First, the creation of the new, multipurpose 1,450 ha. docklands should be the way to *provide physical space for port and industry* and make it easier to attract new companies or to move others. 1,000 ha will be provided by land reclamation from the North Sea. The new areas are preliminary intended for sectors which are most likely to be successful; i.e., the chemical industry, container transfer and the food industry.

Second, the success of the Rotterdam container terminals and distribution centres will depend on the quality of the hinterland connections by water, road and rail. Therefore, *access to the port and industry* should be improved. The major infrastructure projects concern the corridor between the Maasvlakte and Ridderkerk envisaging new bridges, tunnels, doubling of railway tracks, the extension of highways, etc. One of the objectives is to shift the expected growth in freight transport to coastal and inland navigation, pipelines and railways. However an expansion of road haulage is expected due to an increase in short distance delivery and the growing importance of just-in-time delivery.

In order to accommodate the increase of transport, a third category of projects is to *steer and control mobility*, since the Rijnmond transport system is already overcrowded, and a major noise nuisance, air pollution and water pollution due to car traffic, shipment and railway lines are feared. Amongst others a traffic-environment map to identify bottlenecks of different options will be designed, projects to improve public and other collective transport systems are to be included and different projects to reduce environmental problems caused by moored ships will be set up.

These projects, together with the projects to improve the access to the port and industry, already form over half of the 47 projects, but an additional effort is expected from external developments such as national and European measures to promote cleaner engines and fuels.

A fourth way to enhance the main port of Rotterdam and to improve the environment will be to *improve the environment related to enterprises*. In this group of projects, much emphasis is put the confirmation of existing policies. While some additional projects will be set up to improve the environment, but 2,5 million guilders of the budget is reserved for this category. In addition, the individual enterprises need to invest in satisfying environmental requirements. Uniform guidelines for environmental policy in the region are being designed, energy conservation and co-generation projects are being set up and (corporate) environmental management systems for enterprises (e.g., transshipment businesses) are being stimulated.

¹⁰ In the Netherlands, normally, the accumulation of environmental pollution is not taken into consideration; there is a system of individual permits and no act providing the framework to alleviate cumulative effects.

Fifth, to *improve the spatial structure in urban areas* where outdated port-related activities move out, restructuring projects are planned for the old docklands¹¹. The space which comes available will be used for either residential purposes or for industries which do not generate unacceptable environmental pollution. These projects will start with comprehensive research. It is, therefore, not certain that the development outlined here, in fact, is feasible, especially considering the fact that the finances for the realisation of these projects still have to be allocated.

Lastly, the changes in the urban areas need to be accompanied by an *improvement of the spatial structure in the rural areas*, without obstructing the main port development. Creating space available for nature and open air recreation and the accessibility of these functions are major bottlenecks. Some of the projects are related to the restructuring of polders and river fronts whilst others alleviate the impacts of the main port development (e.g., open air recreation projects and an afforestation project).

¹¹ This will not only shift the problem, but it is expected to result in cleaner production methods. Moving and expanding enterprises only account for a part of environmental problems. The reason for this is that they have to meet the toughest environmental standards.

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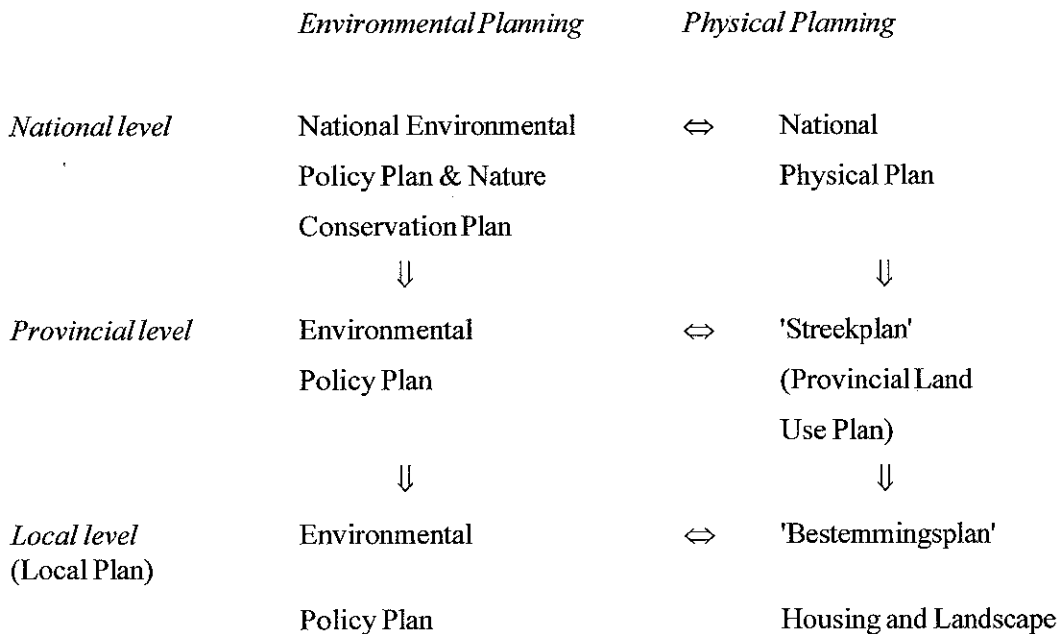


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- d) the active role environmental values must play in the regions in setting the conditions for economic development and;
- e) the strategy being applied is expected to incorporate a maximum number of people by involving all target groups in the discussion.

The VROM Ministry aims to control the structure of the different projects by participating in all projects. Initially, the Ministry starts the consultations in the region. The key regional actors then join the project and gradually take over. The official start of a project is a start covenant, in which the partners lay down the starting points and objectives for further negotiation. The challenge, then, is to structure the interactions between the participants. In practice, the partners (representatives of a multitude of administrative levels, social movements and private actors) are expected to issue a Plan of Approach within one and a half to two years. At the same time they are to enter into a covenant confirming this Plan of Approach. Rather than creating new policy, ROM-projects integrate existing plans and policy documents.

¹ Two other considerations have played an important role in the selection of the regions. First, different areas are selected to gain knowledge of the experimental approach. For this reason, clean, polluted, rural and urban areas are included. Second, in some of the polluted areas an impasse was threatening to occur. See: Glasbergen and Driessen (1993); Van Tatenhove, (1993).

3 THE RIJNMOND AREA IN PERSPECTIVE

The ROM-project Rijnmond, with a population estimated to be about one million, covers an area of 60.000 ha. in the Southern part of the Dutch metropolitan area 'Randstad'. The municipality of Rotterdam, with its reputation as the largest port city in the world forms the heart of this industrial, largely petrochemical, area². Although the region is often referred to as the engine of the Dutch economy the number of unemployed has risen to 35,000. To keep its leading position in the world, the port of Rotterdam has to innovate and expand (Municipality of Rotterdam, 1991).

An archipelago of docklands and industrial islands dominates the Western part of the core area. Container vessels have easy access to the Maasvlakte and Europoort because of the deep 'New Waterway'. Therefore, the transshipment of oil, bulk cargo and containers is found here. Chemical industries dominate the Botlek area. In the Eastern part of the core area petrochemical industries are located on Vondelingenplaat, and containers and smaller general cargo are handled in the Waalhaven and Eemhaven docks, located close to the city.

In comparison with other parts of the Netherlands, Rijnmond is faced with wide-ranging environmental pressures due to its large scale industry. The expected increase of transport, industry and other activities will increase the pressure on the environment. The local and regional environmental pollution is particularly high in Vlaardingen and Schiedam and the residential areas of Pernis, Rozenburg and Heyplaat. These residential areas are essentially islands in an extensive industrial area (Brasser and Kocken, 1994).

Located in the estuary of the important rivers the Rhine and the Waal, the industrial operations in the Rijnmond district contribute to serious water pollution. With regard to air pollution, the level of CO₂ exceeds the national average by 400%; high NO_x and C_xH_y levels are substantially caused by traffic and transport. Noise nuisance, stench, dust and the risk of explosions due to the high number of hazardous production processes and the transportation of dangerous fluids and gases affect the citizens' health and quality of life as well³.

² Besides Rotterdam, another 14 municipalities form the Rijnmond district (Albrandswaard, Barendrecht, Bernisse, Brielle, Cappelle aan den IJssel, Hellevoetsluis, Krimpen aan de IJssel, Maassluis, Ridderkerk, Rozenburg, Schiedam, Spijkenisse, Vlaardingen and Westvoorne).

³ For a comprehensive, 'quantitative' report on the environment in the Rijnmond district, see: DCMR (1994) *Het Milieu in Rijnmond*.

4 CAPACITY BUILDING FOR SUSTAINABLE DEVELOPMENT

In the Rijnmond area, spontaneous collaborative action can hardly be expected due to the different interests, in scale and extent, of the parties involved. The key problems of the ROM-project Rijnmond are complex and wide-ranging. As Dil (1991) argues:

1. problems of policy fragmentation have to be overcome;
2. the region has a complex spatial structure, is densely populated, and there is a shortage of land for enterprises, the construction industry and infrastructure.
3. the pressure on the environment has grown and the problems differ from one location to another and they generate from many, both point and diffuse, spread out over the area and;
4. another complicating factor is the large number of sectoral plans and projects already (being) developed in the Rijnmond area.

To overcome these problems, it is argued here, the following conditions, are necessary to build the capacity for sustainable development in an integral ROM-project.

First, to structure the project one actor has to take the initiative to start the consultations, and a temporary organizational framework (policy network) should be formed around the policy problem (Driessen and Glasbergen, 1995). The best solution seems to be to invite as many parties as possible, to form a sound base for implementation. To reduce the complexity, representatives of larger groups have to be found. At least the actors who are indispensable for the implementation phase should be involved in the planning process (Ten Heuvelhof and Termeer, 1991). In the Rijnmond area, the first discussions on the development of an integrated plan occurred in early 1989 and were limited to the VROM Ministry, the Ministry of Economic Affairs (EZ), the Ministry of Public Works and Water Management (V&W), the Province of South Holland and the municipality of Rotterdam. Soon it was recognised that they could not proceed without the cooperation of others in the area. The representatives of other municipalities (The Rijnmond Consultative Committee) were involved at a later stage, while the rest of the parties (representatives of the private sector and the environmental movement) followed the discussions at a distance.

Secondly, it should be emphasized that individual actors are not suited to address the problems by themselves and that all parties have eventually more to win than to lose by participating in the ROM-project, even if that may not be so at the start. Although the problems were evident in Rijnmond, the basis for cooperation was lacking, partly due to the fear of the other municipalities of the dominance of 'big brother' Rotterdam. A breakthrough in the process was achieved when the intended partners were able to themselves determine their position (Driessen and Glasbergen, 1995). Both Rotterdam and the Rijnmond Consultative

Committee individually presented a development perspective for the region, which recognized the mutual dependence of all parties⁴. By deciding to continue projects under progress a major obstacle was removed, as many of the participants feared that setting up a ROM-project would only delay current initiatives. The tremendous effort of the VROM Ministry to convince the region to join the discussions, resulted in an exchange of ideas and enthusiasm for the project gradually began to grow. It was remarkable that soon after the presentation of the 'individual' approaches, that the partners agreed on the official start of the ROM-project. In the beginning of 1992, a start covenant has been signed, stating a dual objective⁵: *the development of the main port function of Rotterdam and the improvement of environmental quality*. This covenant included the agreements on human and financial resources and the organization of the process of formulating an integral plan. The (temporary) project organization consists of a steering committee, in which decisions are taken, a project group preparing the policy proposals, and a main advisory team. The parties couldn't agree on a project leader from one of the parties; therefore, an independent mediator became the manager of the project group and the main advisory team.

A third condition for bringing environmental objectives into public policy planning is to structure the discussions and make use of creative working methods based on communication and participation. After the starting covenant was signed, the participants were given the opportunity to set targets for the development of the port and industry, the environment and the physical planning of the area. Given the friction between main port development and environmental improvements, it is not surprising that the sectoral objectives could not be reconciled automatically. In searching for opportunities for an integrated approach, special attention should be paid to the building of teams. In the Rijnmond case, the project leader acted as a mediator between the parties (Driessen and Glasbergen, 1995)⁶. The mediator approached the individual parties by organizing consultative rounds, and, in the meantime, the parties contacted each other bilaterally to negotiate. Several mediation techniques were demonstrated in this case. In several consultations and meetings, for instance, games were played in which the roles of the participants were completely reversed to bring the participants closer. Gradually, the parties reached consensus over the contents and budget of the Plan of Approach (see section 5 below). The draft Plan of Approach of December 1992 was presented in numerous public meetings. Eventually, the covenant was signed on 9 December 1993, after the plan was presented to political bodies such as Parliament, the Province and the municipal councils.

Concluding discussion of the planning process, all parties intended have endorsed the plan, except for the environmental movement which found the impact of the mainport development on nature and environment still unacceptable. At first glance, it appears that the choice for an independent project leader, 'the mediator', was relatively successful in the Rijnmond case. However, even when there is consensus amongst the parties involved, this does not guarantee a smooth execution of the measures to be taken; all projects have to be implemented by following normal rules and procedures.

⁴ Municipality of Rotterdam (1991) *Portplan 2010* (draft); Rijnmond Consultative Committee (1991) *The Region in Perspective*.

⁵ The following parties have signed the start covenant and Plan of Approach: The Ministry of Housing, Spatial Planning and the Environment (VROM), the Ministry of Transport, Public Works and Water Management (V&W), the Ministry of Economic Affairs (EZ), the Province of South Holland, the Rijnmond Consultancy Committee, the 15 municipalities, the Chambers of Commerce, and two representatives of port enterprises (Stichting Europoort Botlek-Belangen and Haven Ondernemersvereniging SVZ).

⁶ See also: Susskind, L. and J. Cruickshank (1987) *Breaking the Impasse; Consensual Approaches to Resolving Public Disputes*.

5 PLAN OF APPROACH

The Plan of Approach is anything but a complete blueprint. It consists of a comprehensive perspective until 2010 and defines a number of projects to reach the combined objectives of a clean main port, whose products can be transported quickly and efficiently without obstructing urban and landscape development. The total budget amounts to about 8.5 billion guilders, of which 9 million guilders are allocated for starting the implementation. For the second phase (1994-1997), financial commitments are made and for the third phase (1998-2010), a statement of intent to contribute to the project has been issued.

To bring the objectives into effect a complex working method including a comprehensive monitoring system, has been developed to be able to make adjustments if necessary⁷. This should overcome the definite risk of disintegration of the wide variety of projects, in which project leaders (in practice the actor who could benefit the most from the project) are rather free to create their own projects. The implementation organization, set up when the Plan of Approach was signed, consists of an inter-authority policy group, a coordination group at directors level and a project manager supported by a project office responsible for preparing the progress reports. In addition, an extra negotiating body was created, in which the most important actors are able to discuss progress on a regular basis (ROM-project Rijnmond, 1993)⁸.

All 47 projects are intrinsically related and should, in principle, individually strengthen the main port function of Rotterdam and improve the quality of the environment⁹. The ROM-project Rijnmond could be characterized as a re-enforcement of and follow-up to initiatives already under development, and it has forged links with all important regional and national

⁷ ROM-project Rijnmond (1994) "Doel-Middel-Hiërarchie-Programmaplan ROM Rijnmond". The following is intended: Creation of 1450 ha. space for main port activities; increase of employment and added value in the food, chemical and container business; increased investments; reduction of congestion; expansion of infrastructure; steer and control mobility; emission reduction of CO₂ (10%), Cx Hy (75%), and NO₂ (75%); a reduction of highway and railway line noise (no households within the 65 dB (A) zone); improved external safety of transport, improved local air and water quality; reduced industrial noise; dust and stench; improved external safety of industries; reconstruction of old dock-lands; residential building within the vicinity of the port; increased space for nature and reconstruction of the ecological structure.

⁸ In each project, the actors jointly prepare a project description, stating the objectives, approach and time planning. To make sure that the project leaders make a serious effort to realise their project, they are supported by a cluster-coordinator from the overall project-office, who is called upon to play a stimulative and facilitative role. If the progress is not sufficient, the directors in the coordination group stimulate their colleagues who work as project leaders. Until now, this has worked out fine, as the directors in the coordination group are highly convinced of the necessity of the ROM-project.

⁹ Officially, 47 projects are listed in the Plan of Approach. After signing the covenant, the number of projects may still change; projects could be added whilst others may be combined

developments. The projects aimed at reducing the major environmental problems due to an accumulation of causes and a concentration of functions in one area, are however new¹⁰. These projects strive to design activities in such a way that future emissions reach environmental goals. Most projects are initially focused on research and not directly changing the environmental conditions. Later on, when it turns out that the projects are politically and financially feasible, the actual implementation could start.

Six categories of projects respond to the objectives of the Plan of Approach:

First, the creation of the new, multipurpose 1,450 ha. docklands should be the way to *provide physical space for port and industry* and make it easier to attract new companies or to move others. 1,000 ha will be provided by land reclamation from the North Sea. The new areas are preliminary intended for sectors which are most likely to be successful; i.e., the chemical industry, container transfer and the food industry.

Second, the success of the Rotterdam container terminals and distribution centres will depend on the quality of the hinterland connections by water, road and rail. Therefore, *access to the port and industry* should be improved. The major infrastructure projects concern the corridor between the Maasvlakte and Ridderkerk envisaging new bridges, tunnels, doubling of railway tracks, the extension of highways, etc. One of the objectives is to shift the expected growth in freight transport to coastal and inland navigation, pipelines and railways. However an expansion of road haulage is expected due to an increase in short distance delivery and the growing importance of just-in-time delivery.

In order to accommodate the increase of transport, a third category of projects is to *steer and control mobility*, since the Rijnmond transport system is already overcrowded, and a major noise nuisance, air pollution and water pollution due to car traffic, shipment and railway lines are feared. Amongst others a traffic-environment map to identify bottlenecks of different options will be designed, projects to improve public and other collective transport systems are to be included and different projects to reduce environmental problems caused by moored ships will be set up.

These projects, together with the projects to improve the access to the port and industry, already form over half of the 47 projects, but an additional effort is expected from external developments such as national and European measures to promote cleaner engines and fuels.

A fourth way to enhance the main port of Rotterdam and to improve the environment will be to *improve the environment related to enterprises*. In this group of projects, much emphasis is put the confirmation of existing policies. While some additional projects will be set up to improve the environment, but 2,5 million guilders of the budget is reserved for this category. In addition, the individual enterprises need to invest in satisfying environmental requirements. Uniform guidelines for environmental policy in the region are being designed, energy conservation and co-generation projects are being set up and (corporate) environmental management systems for enterprises (e.g., transshipment businesses) are being stimulated.

¹⁰ In the Netherlands, normally, the accumulation of environmental pollution is not taken into consideration; there is a system of individual permits and no act providing the framework to alleviate cumulative effects.

Fifth, to *improve the spatial structure in urban areas* where outdated port-related activities move out, restructuring projects are planned for the old docklands¹¹. The space which comes available will be used for either residential purposes or for industries which do not generate unacceptable environmental pollution. These projects will start with comprehensive research. It is, therefore, not certain that the development outlined here, in fact, is feasible, especially considering the fact that the finances for the realisation of these projects still have to be allocated.

Lastly, the changes in the urban areas need to be accompanied by an *improvement of the spatial structure in the rural areas*, without obstructing the main port development. Creating space available for nature and open air recreation and the accessibility of these functions are major bottlenecks. Some of the projects are related to the restructuring of polders and river fronts whilst others alleviate the impacts of the main port development (e.g., open air recreation projects and an afforestation project).

¹¹ This will not only shift the problem, but it is expected to result in cleaner production methods. Moving and expanding enterprises only account for a part of environmental problems. The reason for this is that they have to meet the toughest environmental standards.

6 DISCUSSION AND CONCLUSION

In contradiction to many traditional forms of government control, ROM-projects integrate environmental, spatial and economic claims, taking regional circumstances into account. In the meanwhile, a sound basis is created for a joint effort to accelerate the implementation of policy. The Rijnmond case proves that this can be done in highly urbanized areas with diverging interest. Unfortunately, the results are not unambiguous. Therefore, some comments and suggestions are incorporated in this final section.

Positive effects with regard to the environment are expected. For the first time, comprehensive research is carried out to identify all aspects related to the proposed expansion of port activities and an unanimity among the parties to tackle the problems jointly has been reached. To implement the joint vision, creative projects have been formulated which otherwise would not be possible. Thus, the project could be considered quite promising as it brings environmental considerations into planning explicitly. However, since there are no legally binding environmental standards for the emissions of NO₂ and CO₂ at the regional level, the risk emerges that in balancing the various interests, economic aims have a fair change to predominate over environmental aims (Bouwer, 1994). In the Rijnmond case, the latter appears to happen in practice. In fact, the balance within the project has shifted towards main port development, in terms of the number of projects formulated, finances and obligations. Most projects related to environment focus on research. Surprisingly, no serious commitments in financial terms for the realization of a number of environmental projects have been made¹². It is estimated that the goals for NO₂, CO₂, C_xH_y will not be met due to increased mobility, and the CO₂ emissions will even rise due to an increase of industrial activities (ROM-project Rijnmond, 1993). Thus, it is hard to say to what extent environmental values play an active role in setting the conditions for economic development.

One way to enhance the prospects of setting conditions for economic activities is to introduce legally binding local or regional environmental standards for the emissions of NO₂ and CO₂. Secondly, it is recommended that, in addition to the monitoring system, multi-criteria analysis be used during the implementation of the Plan of Approach to assess the social, economic and environmental consequences of individual projects. Thirdly, it should state in the covenant that those actors who do not act according to the covenant should be sanctioned. In the ROM-concept, different social, economic and environmental problems are tackled together. Although this often implies that it is almost impossible to pursue the highest environmental standards required from the ecological perspective, ROM-projects can crucially contribute to breaking through a stalemate. Moreover it is rather naive to think that traditional, coercive measures could indeed lead to higher standards. Therefore, it is

¹² Besides the ROM-project a number of environmental measures for which companies will incur the costs exist in the Rijnmond. See: Port of Rotterdam Authority (1994) *Investing in Rotterdam-Rijnmond; A Guide to Environmental Legislation*.

evident that the integrated, consensual approach is an appropriate alternative in the Rijnmond case where regional cooperation along traditional policy lines could not bridge the discrepancy between the desired environmental quality and the strong economic claims. The ROM-project will definitely not solve all problems of regional (environmental) planning, but it will certainly have a positive effect on the development in the region. However, the translation of the Plan of Approach into measures and direct actions by following common sectoral regulations and procedures remains difficult.

Although, in principle, the ROM-concept may eventually replace traditional policy tracks, this is not yet preferable in the Netherlands. One could think of several ways to change the institutional setting or legal system of environmental policy and physical planning and replace the traditionated regional memoranda by a new integrated development perspective. Unfortunately, the added value of the ROM-concept in improving the environment and spatial quality has not yet been proven in practice.

As it turns out, the consensual approach of the ROM-project gives the actors in the Rijnmond area a tool to address spatial, economic, and environmental problems at a strategic level. To conclude, a consensual approach could be worthwhile in other urban areas, where an impasse is threatening to occur and where none of the actors is capable of solving the problems individually. The ROM-policy has several specific characteristics, which indicate that this strategy is a promising approach considering the Agenda 21 recommendations to adopt strategic frameworks that allow the integration of both physical land-use and environmental planning. First, the collaboration between actors permits breakthroughs in stagnation in the course of conducting policy. Second, tailor-made working methods can be employed, and moreover the planning method leads to greater creativity in finding directions for solutions (Driessen and Glasbergen, 1995). The challenge will be to match each environmental dispute in its particular setting with the most appropriate form of management. The effectiveness of the strategy, however, will depend on the willingness of the urban and regional actors to cooperate, the priority given to the project and the external factors that may challenge the project. More attempts should be made to institutionalize the mechanisms of this approach in urban development schemes as supplements to existing mechanisms in order to reconcile the economy with the environment.

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