

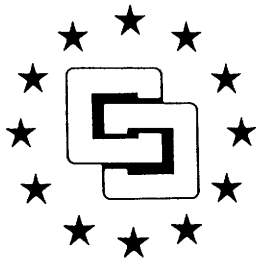


European Foundation
for the Improvement of Living and
Working Conditions

INDUSTRIAL RELATIONS AND THE ENVIRONMENT
Denmark

Working Paper No.: WP/93/06/EN

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Interdisciplinary Centre
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PREFACE

A new societal problem has emerged: environmental risks which directly threaten individual freedom and the quality of life. The problem presses for new solutions, as there is no central jurisdiction and the policies affected are inadequate for dealing with it. How do approaches for solving this problem emerge and how can they become institutionalized?

These are the general questions asked in the European research project "Industrial Relations and Environment in the EC" of which this country study forms a part.

The Danish part of the European project which besides the country study also comprises a case study, has been funded partly by The European Foundation for the Improvement or Living and Working Conditions and the Hans Böckler Stiftung and partly by the Danish Federation of Trade Unions.

The country study has been carried out by project leader Borge Lorentzen, assistant professor; Kim Christiansen, senior research fellow and Michael Sogaard Jorgensen, assistant professor, all from the Interdisciplinary Centre at the Technical University of Denmark.

The report has been discussed with Mette Rye Andersen from the National Union of Female Workers, Ib Maltesen from the Danish Federation of Trade Unions and Steen Mejlbye from the National Union of General Workers.

The conclusions of this report are made by the authors and are not necessarily shared by the trade unions or their representatives. It should be stressed that even though the research project is partly funded by the trade union movement and the results have been discussed with trade union representatives, the researchers have been under no restrictions as to write what they wanted.

Lyngby, 1992, October

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INTRODUCTION

About twenty years ago, when protection of the environment became an issue of public debate in Denmark, the trade union movement and the employer organizations opposed the "green" movements and organizations, almost as a united front against an enemy. Both employers and trade unionists often tried to ridicule those arguing for a stronger protection of the environment - the industrialists opposing the restraints on their possibilities of doing business, and the trade unionists defending the employment interests of trade union members. But both parties were defending the model of unlimited industrial growth which, at least partly, was to blame for the environmental problems.

Since then things have changed: The environmental issue has become a permanent, important and broadly accepted part of the political debate in Denmark- thanks to a strongly increased awareness of the seriousness of the environmental problems of today's and tomorrow's society. The "green" movements and organizations have developed their own independent expertise and they have for a long period been regarded by many industrialists and trade unionists as serious participants in the debate. Likewise, they have been drawn into hearings or even negotiation processes by the public environment protection authorities.

Furthermore, we see the employer organizations and the trade unions respectively in the process of developing environmental policies - not just to resist the "green" wave - but in fact they seem to take up the ecological challenge in order to contribute to the solution of our environmental problems.

This process has its starting point in a very long tradition of co-operative industrial relations in Denmark, based on a network of institutions established to regulate and protect this tradition. It therefore seems a very important question, whether this cooperative tradition is able to incorporate a new societal issue - the protection of the environment - without further turbulence, and to regulate the potential of conflicts inherent in this issue. Or whether we in the future will see adaptations, more or less significant, of these institutions of co-operation, or even changes, more or less fundamental, of the relationship between employers and trade unions - caused by the different approaches of the parties on the labour market to environmental problems.

We hope to contribute to this discussion by the present report - by showing a picture of the "Danish model" of external environmental regulation and regulation of the working environment, respectively - and by introducing and analyzing the environmental policies and activities in progress from Danish employers and from trade unions.

REGULATION OF THE EXTERNAL ENVIRONMENT AND OF THE WORKING ENVIRONMENT

This chapter contains an overview of the structure and regulation instruments used of the Danish legislation of the external environment and the working environment, respectively.

We especially focus on the new strategies evolving, e.g. agreements between national environmental authorities and industrial organizations as a very important supplement, politically speaking, to the more traditional control oriented regulation, and on the initiatives for integrating both the external and the working environment administration and control of the separate local, regional and national authorities.

The chapter presents examples of agreements and regulations as well as action plans for the implementation of cleaner technologies, including the substitution of hazardous chemicals.

1. The division of regulation between internal and external environment

In Denmark the regulation of working conditions on one hand and the use of the environment as both a resource and a waste disposal site on the other is traditionally divided between two separate ministries. Until the end of the eighties there was little co-operation between the authorities, causing many protests from both industrial and environmental organizations. There was a general agreement, although for different reasons, that many pollutants cause problems in both the internal and the external environment, and still more examples showed, that solving the problem without coordination, whether from the inside or from the outside, just removed it to the other part. The classical example is the discharge of solvents from the working environment to the external environment. Another example is the restriction to the use of CFC's due to ozone depletion, reintroducing some highly toxic organic solvents in the working environment.

Several political initiatives to integrate or just promote co-operation between the two authorities have been made. In 1988 the National Union of Metal Workers published a report on environmental regulation and economic growth listing a number of examples of unsuitable administration caused by the division of control (Dansk Metalarbejderforbund, 1988). In 1989 the possibilities for integrating the control of the internal and external environment was the subject of an official committee's work, but the representatives were not able to find a solution satisfactory to all parties: The municipalities and regional councils wanted the integrated control authority to be part of their system (which is under local and regional political supervision;

the decentralized model), whereas the representatives of the employers and the representatives of the employees wanted the authority to be part of a national organization divided into regional inspectorates (as is the case of the internal control today, and which is under the supervision of the industrial partners; the centralized model). The agricultural organizations and the Danish Foundation for Nature Conservation were in favour of the first model. (LOKE 1989, Politiken 29.9.89 og Borsen 8. marts 1990).

The attempt to integrate the two control authorities were officially part of the government programme to promote a less bureaucratic public sector; and an unofficial part of the government plan to cut the number of employees in the public sector.

In the spring of 1990, the government retreated on the proposal. One of the political parties of the opposition (The Socialist Peoples Party, SF) took over version 1 moving control of the internal environment from the regional labour inspectorates to the regional councils, but no results have evolved from this initiative. (Politiken 10.3.90).

Instead the two ministries agreed on a revised and consolidated version of their old agreement on co-operation; this is discussed in chapter I.5. Also, an initiative was made by the industrial and labour organizations, that has established and integrated organization for the iron and metal industry as discussed in II.6.

2. Environmental Regulation

Denmark was one of the first countries in the world to establish a Ministry of Environment in 1972. Since then, the organization as well as the legislative instruments have developed continuously.

Very briefly, the policies and regulations can be categorized as going through a series of stages:

- *"throw away" waste and emissions; nature is both an endless source of energy and material resources and a refuse dump (1960's).*

- *"we must clean up"; nature is not a garbage hole with unlimited capacity, so we must add-on cleaning measures to our smoke stacks and sewage pipes (1970's and on)*

- *"we must preserve our resources"; there is an (economic) limit to resources, and it is necessary to recycle materials and energy (1970's and on).*

- "we must prevent pollution"; add-on and cleaning-up will not ensure access to resources for future generations. It is necessary to preserve resources by reducing consumption, waste generation and emissions (1990's).

The last stages were most explicitly entered with national actions plans on sustainable development in energy, transport, and agriculture, and on (cleaner) industrial processes and products. Also at this stage, economic instruments were introduced as more than just fiscal means of raising revenue for the environmental administration; up till now, the charges in most cases have been too scanty to bring about a significant change in industrial or consumer behaviour.

Throughout all stages, the environmental policy has been (and still is) to set up a legislative framework to be filled out through negotiations both at the central level as a more up-to-date activity with agreements between industrial organizations and The Ministry of Environment, and at the local level in the permitting system for industries, in which the limits to pollution of water and air are established through negotiations between the company and the authorities.

The workers at company level and the trade unions at regional and national levels have not, in general, been officially involved in the regulations of the external environment until just recently, except for their membership of the Pesticide Council and the Chemical Council as well as participating in hearings on new legislation. With the revised Environmental Protection Act of June 1991, coming into force January 1, 1992, the employees and their organizations have been "named" more clearly in the regulations. (Lov om miljøbeskyttelse, 1991, 11).

2.1 Organization

The Government and the Danish Parliament, Folketinget, lay down the overall rules for environmental management in the form of laws and statutory orders. At the central level both the law-making process and the implementation is in the hands of the Ministry of Environment. The Ministry comprises a department and five agencies:

- National Agency of Environmental Protection
- National Agency for Physical Planning
- National Forest and Nature Agency
- National Environmental Research Institute
- Geological Survey of Denmark

The Department serves as secretariat for the Minister, and advises on the preparation of resolutions and setting of priorities (law-making) as well as on the management of the Ministry's overall activities.

The basic expert and administrative work is carried out by the individual agencies e.g. by advising the Minister on particular cases. They are in charge of the individual cases within their area, e.g. on appeals regarding decisions by local and regional authorities. The agencies collect and process data and draft legislative bills and statutory orders and draw up guidelines for the regional and local authorities.

Ever since the establishment of the environmental management system in Denmark a basic principle has been decentralization. Local environment problems must be solved at the local level, the siting of industry must be planned by the local and regional authorities responsible for infrastructure etc.

Denmark is divided into 277 municipalities and 14 counties, each of them having their own environmental administration. The municipalities are the basic part with the majority of the concrete decisions. They are responsible for the planning of waste water and solid waste treatment, for the permitting of many (small) industrial activities, and for the supervision of industrial and agricultural enterprises.

The regional councils deal with the identification and mapping of pollution sources and the status of water, land and air recipients, and prepare plans for water supply and water and air quality of the region, as well as permitting control of larger industrial activities and facilities owned by the municipality (National Agency for Environmental Protection, 1990).

2.2 Danish environmental strategy

The strategy for environmental protection in Denmark has developed into three main categories of instruments following the phases described above (ibid.) (Danmarks..., 1991):

1. Control of pollution by restricting discharges and emissions through the permit system and control (also with industrial and other activities not included in the permit system). Decisions at the local or regional level can be appealed by the person concerned or by others with individual and important interests in the actual case; the Labour Movement Council for Industry and Trade can appeal if substantial employment interests are affected.

2. Restoring already polluted soil and water areas on the basis of the "polluter must pay"-principle; mainly orientated towards soil pollution (waste dumping).

3. Preventing pollution through alterations at both process and product level reducing use of resources, increasing recycling and promoting better waste treatment techniques. The change of attitude is formulated as the

policy of cleaner technologies (or sustainable development).

The revised law on environmental protection is described below. Other examples of the change in attitude - although not so clear in practice - are the allocation of 550 million DKK for three years from 1992 in support of the development and implementation of recycling and cleaner technologies, and the governmental acceptance of a recycling plan aiming at a 50% reduction of the total amount of waste in Denmark before the year of 2000, (Miljøministeriets Handlingsplan...; 1989).

2.3 The Environmental Protection Act

The legislative framework for environmental management in Denmark has just been (partly) revised, and in a short while the final outcome will be four major environmental Acts (National Agency for Environmental Protection, 1990), namely:

- The Environmental Protection Act,
- The Act on Nature Conservation and Protection,
- The Planning Act, and
- The Water Streams Act

In addition it is intended to pass an Act on Environmental Charges and Taxes. The most important is the Environmental Protection Act, and in the following the basic principles and content is described. The objectives of the Act are (Forslag..., 1991):

- to prevent and limit pollution of air, water and soil, and nuisances from noise and vibrations,
- to establish health and environment regulations based on hygienic considerations,
- to limit the consumption and waste of raw materials and other resources,
- to promote the use of cleaner technologies, and
- to promote recycling and limit problems of waste treatment.

The basic principle of the Act is that pollution producing activities are forbidden unless distinctly permitted by the authorities. The environment authorities must explicitly state the conditions for the permission provided including allowed waste water discharges and air emissions (substance by substance) and waste handling. The permitting system are guided by three principles (National Agency for Environmental Protection, 1990):

- The polluting activity must be located where the discharges and emissions causes no, or only limited damage to the surroundings.

- The polluter must organize the activity in such a way as to reduce pollution as much as economically and technically achievable through source reduction (cleaner processes and recycling) and abatement technologies.

- The polluter must pay for any treatment or remedy needed. One example is the waste tax on household and industrial wastes collected through the municipal systems, which have just been raised from 40 DKK to 120 DKK per ton.

Viewed from the point of the industrial partners the following aspects of the Act are chosen (Forslag til..., 1991):

- The production (incl. import) and use of all products must be assessed throughout the full life-cycle for impacts on the environment (not including the working environment; this is regulated through other Legislation) from emissions, by spillage and use of materials and energy, and these impacts must be minimized e.g.

- embodying long life-time of the product

- embodying recyclability

- embodying waste treatment options with no (significant) pollution and after use, everybody is encouraged to promote recycling and prevent waste treatment problems. These principles also apply to transportation, agriculture etc.

- Through their purchases and consumption public authorities are obliged to promote the development and production of cleaner products.

- The minister has the possibility of introducing a demand to the authorities for a quantitative report of the use of raw materials and emissions to air, discharges to water and waste disposal for selected industrial branches. To fulfil this, the industries must do an environmental audit of the facility.

- The minister can furthermore introduce a statutory order, demanding waste water or hazardous waste treatment facilities or other industrial activities imposing substantial risk for damage to health or nature to introduce certified training activities for the employees. The costs must be paid by the facility as part of the normal work. This regulative demand is a result of an initiative from the trade unions.

- The minister can make agreements with industries or industrial organizations, establishing time-limits and reduction goals for pollution reduction or the use, discharge or disposal of certain defined products, substances or materials.

Examples of these agreements are discussed below. Prior to enforcing an agreement, negotiations (hearings) must be made with consumer, labour, and environmental organizations as well as with representatives of regional and local authorities and other ministries (10.3).

- Before adopting new rules, the minister is obliged to negotiate with the most gravely affected national industrial and environmental organizations, with the local and regional authority organizations, and other ministries e.g. the Ministry of Labour (11).

2.4 The Act on Chemical Substances and Products

The main purpose of this Act (Jorgensen, 1991, Lov om ændring..., 1989 or Bekendtgørelse..., 1989) is to protect human health and to prevent damage to the environment from production, storage, use and disposal of chemical substances and products. The Act constitutes the framework for the implementation of EEC Directives in the area.

Denmark has primarily focused on limiting the use of the heavy metals such as lead, cadmium and mercury and on CFC and PVC, although the latter can hardly be termed a chemical as such. The use of certain pesticides have also been prohibited or regulated.

Until the end of the eighties, actual prohibitions were seldom imposed, and if so, their scope were limited. Although the environmental movement began to call for bans on the most dangerous environmental toxins in 1969, very little actually happened. The ban on DDT was an exception, when Denmark as early as the seventies imposed strict regulations except for forestry use, which was not forbidden until 1984. The various uses of PCB were terminated at the same, or at a somewhat quicker pace, as in the other EEC countries.

Denmark pioneered a ban on pentachlorophenol - a widely used wood preservative which is contaminated with dioxin and generates large amounts of dioxin when burned. In 1977 a ban was introduced to all other uses than wood preservative, which was banned in 1981. Not until 1990 did Germany follow, and in the EEC a general prohibition was voted down in 1991.

In 1987 the Danish Parliament adopted an amendment of the Act, and among other options, the Minister can now demand substitution of hazardous chemical substances - and of products where these substances are used - where technically and economically feasible. This authority has, as is the case in the regulations of the working environment, only been used to a very limited extent. One reason for this is the extensive commercial influence in the Environmental Board of Appeal, which has overruled banning of the pesticide section in 1986, and recently of

some plant growth inhibitors which appeared to reduce the reproductive capacity of swine.

Labour legislation also provides opportunities for demanding the substitution of substances which endanger the health of employees (Arbejdsministeriet, 1982, see 6.4). As the same substances often also affect the external environment adversely, the authorities on labour protection and environmental protection ought to cooperate; up till now however, such collaboration has been rare.

3. Agreements with industry

With the new Environmental Protection Act, the Minister of environment can make agreements with industry to reduce pollution. Before the Act was adopted, three agreements exemplifying this new co-operation and the centralized approach to environmental policy making had already been introduced.

A common characteristic of the agreements is the central negotiations exclusively between the governmental authorities and the labour market organizations. Despite some modifications concerning hearings, these agreements are totally different from the normal decentralized system of permit and control. These agreements leave the decentralized authorities no essential influence, and it is usually not expected that a decentralized authority will/can make demands on a single industry if this industry belongs to a branch that in general complies with the national goals of the agreement. The organizations for the local and regional authorities have protested against this, and according to the final version of the Act, every agreement must state the terms for introducing any local or regional strengthening of the demands of the agreement. (Miljoministeriet, 1990).

Likewise, the supervision of the agreement is removed from the authorities to the organizations or industries involved. These are obliged to notify in writing to the central authority how e.g. a quota of allowed emissions is allocated. The local authorities are still in charge of the control of the company - including the fulfilment of the agreement, but they are not allowed to make claims on the company if violation occurs. Instead, they are to report to the ministry and to the industrial organization; the latter is expected to impose a fine on the violator or exclude the violator altogether. For companies not covered by the agreement - if for instance they are not members of the employer organization, - the Minister can issue statutory orders regulating emissions and discharges.

3.1 Chlorofluorocarbons

The protection of the ozone layer depends on reductions in the production and use of certain chemicals, and a series of international agreements have been made within the frame-work of the United Nations Environmental Programme (Hansen et al., 1990). The Montreal protocol, revised in 1990, has been the basis for Danish regulation. The regulation includes an Action Plan and an Act establishing a time schedule for the phasing out of the CFC-use before the year 2000. From January 1989, there is a charge of 30 DKK on each kg CFC used in products for the Danish market. Both the Act and the Action Plan, which includes economic support of 45 million DKK for the development and implementation of alternatives, were prepared in close co-operation between the industrial organizations (i.e. the Federation of Danish Industries) and the Ministry of Environment, whereas the trade unions, the environmental groups etc. had the opportunity to make comments.

Half the Danish CFC-consumption is used for the blowing-up of hard polyurethane foam for insulation and a quarter is used for heat transmission; all CFC is imported from UK, France, the Netherlands and Germany. Only 12% of the CFC used is emitted during production. Of the rest, around 50% is bound in the products and emitted during usage or disposal.

The CFC Act does not give local authorities the possibility of making conditions for the use of CFC's at local industries. An example of the consequences of this is that the production of district heating pipes with CFC-blown PUR is prohibited from 1995; until then it is impossible to impose local conditions on the production, although it is technically possible to reduce the use 10-15% immediately.

3.2 Sulphurdioxide from power production

50% of the emissions of SO₂ in Denmark originate from the production of electricity. In 1983, the Commission of the European Community made a directive proposal for cutting the 1980-emissions by 60% from 1986 to 1995 for the bigger power plants (50 MW). Denmark reacted quickly and in 1984 the "Act on Reduction of Sulphurdioxide Emissions from Power Plants" was passed. (Hansen et al., 1990). The Ministry's plan for the reduction is based on negotiations with the electricity and power companies leaving the latter to implement the goals for the individual power plants. A revision of the Act and the reduction plan was made in 1989, including nitrogenoxides as well. Every fourth year the producers are obliged to report the results to the Ministry.

On the newer power plants desulphurization methods were soon introduced, whereas emissions from the older

plants were not reduced. Furthermore, it is not possible for local authorities to make stricter demands on the power plants.

The sulphur and the nitrogen problem was solved through end-of-line technologies. Reductions in the demand for power was not part of the scheme. One reason for this was the aim of both industry and the Ministry at developing desulphurization and de-NOX equipment for export.

3.3 Emissions of volatile organic hydrocarbons

Inspired by the Dutch action plan for reduction of VOCs, the Ministry of Environment and the industrial organizations - but not the trade unions or environmental organizations - in 1989 agreed to set up an emission reduction plan (Miljostyrelsen, 1989 and Ingeniøren 16.6.89).

The industrial organizations emphasized that this form of co-operation was to be regarded as an alternative to normal regulations. As with the PVC agreement, the negotiations were made behind closed doors, and no results were made public until the end. The Danish Federation of Trade Unions is a member of the committee that followed.

Both parties hope to reduce the emissions of some 61.000 tons of VOCs from industrial processes by 40-60% before the year 2000. Other sources of VOC's are cars (75.000 tons) and private households (4.000 tons); the compulsory introduction of catalyzers to the cars will reduce their part to one fifth.

3.4 Reduction in use, and recycling of PVC

In 1988 the Minister of Environment set out a plan to phase out the use of PVC because of the major environmental problems involved in the production and disposal of PVC as well as the health and economic impact of fires in buildings etc. The primary argument was the dioxin problem from incineration of PVC. The Minister gave the industry the choice between a voluntary 50% reduction of the consumption in 4 years or a ban starting in 1993.

A series of investigations were launched by both industry and the authorities to analyse economic, environmental and technical aspects of reduction or substitution possibilities. The public funded studies showed that major reductions were technically and economically feasible for all three user sectors e.g. packaging, building industry and offices, hospitals etc.

All interest groups were represented in these projects and everybody expected to be involved in the more detailed negotiations launched by the new Minister

of Environment in May 1990. But only industrial and retail organizations have signed the agreement resulting from these negotiations; the Danish Federation of Trade Unions has participated and approved of the results, and the Council of Municipalities has been invited to observe the negotiations. Consumer and environmental groups were not invited. The PVC negotiations is one of the first examples of direct involvement of the trade unions in environmental agreements.

In the agreement (Aftale..., 1991), the 1987-use of PVC for packaging must be reduced by 52% in 1993, and by 85% in 1999; these goals are already nearly met by the voluntary actions taken by the retail chains in consequence of a consumer demand for PVC-free packaging. For the building sector, no reduction in use is planned; instead a recycling scheme for all existing and new products of PVC in buildings must be established aiming at a 41% recycling rate in 1995 and 77% in 2000 of the products discharged. In the office and hospital sector, a reduction of some 1000 tons is expected; a major reduction has voluntarily already taken place as regards office products.

Summarizing, the PVC agreement seems modest compared to the signals from the former Minister of Environment, although she has expressed great satisfaction with the results. The example shows that the pressure caused by the announcement of up-coming strict regulations starts industrial control activities and that the results are highly successful. By participating in this scheme of central negotiations, the trade unions emphasize the importance of the potential of industrial growth and employment. The Danish Federation of Trade Unions is also a member of the group supervising the implementation of the agreement; among other things, this group can initiate developing projects for recycling or substitution. These projects can be (partly) funded by the Action Programme on Cleaner Technologies or by the Ministry of Industry-programme on environmental technology.

4. Cleaner technologies

While it is very difficult to enforce bans on environmental toxins, state subsidies for recycling and cleaner technologies have obviously been given higher priority. Such funding has increased substantially since 1987 when a fee was imposed on delivery of municipal waste to incineration plants and controlled landfills. The revenue from this fee is used for subsidizing recycling and cleaner technologies.

Waste minimizing (prevention and reduction) has been the top political priority for some years, but the practical results are still limited. Industry fears, that the development of effective cleaner technologies will lead to more severe regulative demands, and consequently

do not commit themselves in general, although an increasing number of single examples can be found. As for the public authorities, only a few per cent of the environmental investments are directed towards cleaner technologies. More than 90% are still used for the end-of-line cleaning of air emissions, waste water discharges, soil clean-up or waste treatment.

A Danish development programme for cleaner technologies was launched for 1987-89, subsidizing industrial process development and implementation with 90 million DKK. Three industrial sectors were chosen for the programme: iron and metal, wood and furniture and food. These industries comprise the majority of workers and turnover, but the environmental background for this priority was never discussed (Kristoffersen+, 1990).

Around 100 projects have been subsidized. The allocation of funding for different groups of projects is as follows:

Activity:	No. of projects	Funds
Information	10%	0,5%
Collection of knowledge	29%	30,0%
Process development	61%	69%

The majority of the funding has been spent on the iron and metal industry; in electroplating nearly 15 million DKK have been spent. Most of the projects - especially on process technologies - have shown economic and environmental benefits, although this has seldom been quantified.

Apart from the directly involved industries, very few companies have introduced the technologies demonstrated, and a series of barriers are envisaged (Kristoffersen, 1990):

- Technical, "They do not fit my plant",
- economic, "What about product quality after changes etc.",
- institutional, "The authority which has asked for reductions knows that it can only be achieved through end-of-line solutions",
- knowledge, "I donot know any alternatives", and
- attitudes, "We don't cause any environmental problems" or "Nobody shall meddle with my planning"

Through the changes in the Environmental Protection Act, the legal or economic instruments have been strengthened. Even the old version obliged authorities as well as industries to implement cleaner technologies in the permit process, but knowledge of alternatives was limited or not yet commonly disseminated.

To support the continuous development and implementation of cleaner technologies, an action programme for 1990-92 has been introduced. The aim is to reduce resource consumption and to prevent pollution from nearly all sectors (Miljoministeriets..., 1989):

- Industrial processes	75 mio. DKK
- Production of energy etc.	32 -
- Traffic	9 -
- Building sector	28 -
- Agriculture, fish farms etc.	22 -
- Industrial and household products	54 -
- Public sewage and treatment plants	10 -

Beyond the direct funding of projects, the legislation mentions other instruments of regulation: Technical assistance programmes for sectors, environmental labelling, public purchase and consumption, agreement with sectors, and taxes on waste disposal. Other instruments like standards, specified technology demands, economic charges and taxes and information are also included.

The funds for development of recycling and cleaner technologies are administered by a council representing industrial, consumer, municipal, regional council, and labour organizations and other ministries; the National Agency for Environmental Protection serves as secretariat for the council, and many projects are started as part of council adopted action plans, and therefore not individually approved by the council.

The trade unions have one representative with the task of e.g. supplying members for the steering committees of the individual projects or action plans. The integration of working environment considerations have been discussed, and in recent years these considerations have become a matter of practice. This does not imply, however, that trade unions - as is the case with e.g. municipalities - are represented in all steering committees, or that working environment is considered in the individual projects; this is mainly decided by the Environmental Protection Agency; District Labour Inspection have no official role in the administration.

This biased administration has given rise to much criticism adding to the general discussion of the division of external and internal environmental protection in two separated ministries. One well-known example is the introduction of closed-loop water recycling systems in e.g. paper recovery plants or electroplating shops. Working environment problems with aerosols filled with microbiological or heavy metal dust are not solved by these "cleaner" technologies; and often the problems are increased.

5. Co-operation between the Labour Inspection Districts and the local and regional environmental authorities.

From the first of January 1991 a comprehensive co-operation between working environment and external environment authorities was introduced. The first agreement on a restricted co-operation was already made in 1974, including the hearing of the Labour Inspectorate in cases of environmental pollution from industries with permits (Cirkulære om..., 1990a and Cirkulære om..., 1990b).

The new co-operation agreement involves both central and local authorities. At the central level a coordination committee is established, with the task of supervising the conditions for local/regional co-operation. This includes coordination of planning and campaigns (aiming at specific branches, chemicals etc.), establishment of a series of working groups (on chemical questions, industries, regulations, genetic engineering, and on waste and recycling), and common training and job rotation possibilities.

On the local/regional level, the Labour Inspection Districts and the Regional Councils especially are expected to cooperate, whereas the contact with the local municipalities will be more informal. At the regional level the following activities will be coordinated through exchange of papers, common site inspection, meetings etc.:

1. High risk industries and polluting industries are included in the list of the Statutory Order on Permitting of Polluting Industries and must have a public permit to expand or start up. A more narrow list of industrial activities is included in the Statutory Order on the Performance of Work (Arbejdets udforelse, bkg. nr. 323 af 7. juli 1983) and the employers are obliged to present plans for new process layout, handling of substances etc. and to have these approved by the Labour Inspection before work is started up; these two control activities must be (more) coordinated. In the administration of the "Seveso-directive", a common guideline has been published jointly by the National Agency for Environmental Protection and the Labour Inspection Directorate (Pligter ved risikobetonede virksomheder, 1990).

2. Site inspection and control through exchange of administrative documents, and publications, mutual visits or control of items subject to the other authority, exchange of inspection reports, and regular contact meetings.

3. Mutual access to registration bases of companies for both authorities.

4. General training courses and development of methodologies. The co-operation between the Labour Inspection Districts and the municipalities runs along the same lines, but is mainly based on the exchange of written material e.g. technical descriptions, inspection reports, and measurement reports. Also site inspection must be coordinated, common training activities can be established and finally exchange of company information will be put into practice.

The agreement will be evaluated in 1992-93.

6. The working environment regulation

The following sections describe the parts of the Danish regulation of the working environment which are relevant for the regulation of the external environment and have an impact on industrial relations.

We especially focus on

- the organizing role of the employers and the employees at the company level, the branch level, and the national level in the regulation of the working environment, because this function can shape the role of the employers and the employees in case of an integration between the regulation of the external environment and the working environment,

- the working environment network around companies because it shapes the possibilities for getting assistance in making decisions on environmental problems,

- the possibilities for substitution of hazardous chemicals and materials, because this also may have an impact on the external environment.

6.1 The Danish Working Environment Act

The Act on the Working Environment of December 23, 1975 is the primary instrument establishing the legal framework for the organization of health and safety in the workplace in Denmark. (Arbejdsmiljøloven, 1981).

The Act is a framework Act stating the basic principles but contains only a few specific rules. A framework Act was preferred because it renders the possibility of an easy adaptation of specific rules easily to suit rapid developments in industry and society.

The Act covers all kinds of employment except pilots and cabin personnel, shipping, offshore industry and other installations at sea, and military services which are covered by some other Acts.

The detailed rules are formulated in a few Main Orders and in a larger number of Orders concerning

specific subjects. The Main Orders concern substances and materials, the design and use of technical equipment, the performance of work (e.g. work organization and working speed), health and safety activities of the companies, and the occupational health service. (Bekendtgørelse om virksomhedernes sikkerheds-og sundhedsarbejde, 1978; Bekendtgørelse om tekniske hjælpemidlers indretning og anvendelse, 1981; Bekendtgørelse om stoffer og materialer; 1982; Bekendtgørelse om arbejdets udførelse, 1983). A Main Order concerning the arrangement of the work site is being developed.

The formulation of detailed rules within the overall framework is made in close co-operation with a tripartite body, the Working Environment Council. Although the Act formally authorizes the Minister of Labour and the Directorate of the Labour Inspection Services to issue rules, the Act emphasizes that the Council shall participate in the drafting of the rules and that the opinion of the Council shall be obtained before rules are laid down. The Council consists of 11 representatives for the employees, 10 representatives for the employers, 1 representative for the supervisors, one physician, one specialist in technology, and the chairman.

An evaluation of this system reveals that the formulation of rules which should supplement the Act can be very slow as disagreements retard or delay the completion of the legislation. This has caused an almost total stop to the development of the working environment legislation in recent years. One reason for this is resistance from the public employers in the Working Environment Council against new demands to the working environment, raising the costs of the public working place. This resistance is due to the limits during recent years imposed by the government on the freedom of local authorities to raise municipal taxes. Therefore it is no longer possible for the labour representatives in the Council to cooperate with the public employers. This seems to have created more co-operation between the labour representatives and the representatives of the private employers.

Contrary to this, the external environment legislation has developed much more during recent years due to pressure from environmental organizations and a "green" majority in the Parliament.

The Act is also characterized by its objective formulated in Part 1 of the Act:

"The provisions of this Act shall have effect with a view to creating -

(a) safe and sound working environment which shall at any time be in accordance with the technical and social development of society; and

(b) the basis on which the undertakings themselves will be able to solve questions relating to safety and health under the guidance of the employers' and workers' organizations, and under the guidance and supervision of the Labour Inspection Service. "(Arbejdsmiljøloven) Earlier legislation was primarily directed towards industrial injuries and actions injurious to health. The aim of the present Act is to provide a broader framework for further development towards a safe and healthy working environment. This is also explicitly expressed in the preamble. Here a safe and healthy environment is described as a working environment free of any effects of the work that may in the long term or in combination be physically or psychologically injurious to health, although not directly causing accident or immediate illness (Arbejdsmiljøloven, 1981).

The psychological aspects of the working environment are also considered to be a part of the concept of a safe and sound working environment, but the government did not include it in the regulation; it was left to the partners of the labour market to complete this element through mutual bargaining.

It is notable that the Act put great emphasis on local health and safety activities, i.e. activities at the level of the individual workplace and not on e.g. authorities, labour market organizations or business organizations. However, it must be noted that the Act specifies the possibilities for the organizations of the labour market to guide the companies and for the Labour Inspection Service to guide and control the companies. Regarding psychological aspects of the working environment, the Labour Inspection Service has issued a number of Communications concerning monotony, stress, and mental tiredness. (Vejledning om monotonitilstand, 1984; Vejledning om psykisk træthed, 1984; Vejledning om stress, 1984; Ensiddigt, gentaget arbejde, 1988). The Labour Inspection Service tries in this way to progress the development of the framework between industrial relations and legislation.

6.2 The local working environment regulation

As mentioned the Act emphasizes the co-operation between the employer, the supervisors, and the employees. They are the central actors in the health and safety work and the worksites. The legislation specifies a number of tasks for these actors. Figure 1 shows performance of these tasks.

The figure reveals that the general obligation of the employer is to provide safe and sound working conditions and to ensure that co-operation concerning health and safety is possible. Supervisors and employees must participate in co-operation concerning health and safety.

The overall principle is that companies with more than 9 employees must establish safety groups. The safety group consists of a supervisor and a safety representative elected among and by the employees. Each department or part of the company has its own safety representative. The representative is elected for a period of 2 years according to the rules for election of shop stewards specified by the prevailing collective agreement. If there are 20 or more employees, the company has also to establish a safety committee. The safety committee consists of two safety representatives elected among and by the safety representatives and two employer representatives elected by and among the supervisors. The employer or his responsible representative is also a member of the safety committee. The safety groups and the safety committee together constitute the safety organization of the company.

Actors Type of task	The employer shall	The supervisor shall	The employees shall
superior aim	*ensure safe and healthy working conditions (Sec 15 of the Act)	*participate in the co- operation concerning safety and health and enter into the safety group (Sec 15 of the Order No 392)	*participate in the co-op eration concerning safety and health (Sec 27 of the Act)
Tasks aimed at employees	<p>*ensure by effective supervision that the work is performed safely and without risks to health (Sec 16 of the Act)</p> <p>*inform the employees of any risks of accidents and diseases which may exist in connection with their work (Sec 17 of the Act)</p> <p>*ensure that the employees receive the necessary training and instruction to perform their work in such a way as to avoid any danger or risk (Sec 17 of the Act)</p>		
Internal Coordination	<p>*inform other representatives and shop stewards on request of the directions (Sec 18 of the Act)</p> <p>*ensure that cooperation concerning</p>		

safety and health can take place and shall participate in such work (Sec 19 of the Act)
*ensure that tasks which normally is performed by the safety committee are performed effectively in cooperation with the safety group or groups if no safety committee is established in the under taking (Sec 24 of the Order No 392

External
Coordination

*cooperate to create safe and healthy working conditions for all employees with other employers who have work carried out at the same place of work and with all persons employed at the same place of work (sec 20 of the Act)

*give notification to the Labour Inspection Service and shall keep registers according to the rules

*comply with the rules applying to cooperation between undertakings, if they are working at a place of work carried out (Sec 29 of the Act)
*comply with with the rules on safety and health which apply to that undertaking as well as with the rules applying to the work which they perform if they are working on the premises of an undertaking other than their employers

which shall
be laid
down by the
Minister of
Labour (sec
22 of the Act)

undertaking
(Sec 29
of the Act)

Figure 1 A listing of the central actors tasks according to the legislation on working environment.

(Aldrich, 1991)

The Order on Safety and Health Activities in the Companies set the specific tasks for the safety group and the safety committee. The safety representative can complain to the safety committee if the safety representative and the supervisor do not agree to a certain problem or to the changes needed to solve the problem. The safety representatives in the safety committee has the right to get the reason in writing for a refusal to a demand from the safety committee. (Bekendtgørelse om virksomhedernes sikkerheds- og sundhedsarbejde, 1978). The tasks of the safety group and the safety committee are described in figure 2 and 3.

As described in figure 2, the safety group is entitled to stop production in case of immediate danger to the employees. If the supervisor and the safety representative however, are not present simultaneously, the person present may stop production. Afterwards the stop must immediately be reported and explained to the chairman of the safety committee or to the management.

Participating in the planning of safety and health activities of the department implies that the safety group must be involved in the planning of

- working process,
- working methods,
- working routines,
- purchase of and changes in equipment,
- purchase and use of substances and materials,
- changes and rebuilding of the department.

It is emphasized that the safety group must be involved prior to the final decision making of the management.

These tasks imply that the safety representatives are at least formally involved in decisions that may have major impact on the external environment. For example, the substitution of chemicals and substances and changes in methods, routines etc. which might prevent pollution of the external environment.

Type of task	The safety group shall
Superior aim	* work at the solution of the safety and health problems of the department or field of activity (Sec 9 of the Order No 392)
Tasks aimed at the technology and and the organisation of work.	<p>*supervise that the working conditions are safe and without risks to health and that the work the working process and the working methods are arranged completely securely (Sec 9 of the order No 392)</p> <p>*supervise that substances and materials are only used in working processes and methods which effectively protects the employees against accidents and diseases (Sec 9 of the Order No 392)</p> <p>*supervise that machines, tools and other technical equipment etc are organised in a way which is fully safe and without risks and without risks to health (Sec 9 of the Order No 392)</p> <p>*oppose risks in connection with questions concerning health and safety at work (Sec 10 of the order No 392).</p> <p>* report the case to the chairman of the safety committee or to the management if a danger or risk cannot be averted on the spot. (Sec 10 of the Order No 392)</p> <p>The safety group can halt the production as far as it is necessary to avert a danger which the group consider to be imminent and considerable and which it cannot avert itself. The halt shall immediately be reported to the chairman of the safety committee or to the or to the management (Sec 10 of the Order No 392).</p>
Tasks aimed at the employees	<p>*supervise that the work is performed safely and without risks to health (Sec 9 of the Order No 392)</p> <p>*supervise that an effective instruction is given and that machines, tools and other technical equipment etc. are used in a way which is completely safe</p>

and without risks to health (Sec 9 of the Order No 392)

Follow-up on injuries

*participate in the investigation of accidents, poisonings, occupational disease and signs of such and give notice to the employer or his representative (Sec 9 of the Order No 392)

Planning

*participate in the planning of the safety and health activities of the department (Sec 9 of the Order No 392)

Internal coordination

*act as a link between the employees and the safety committee and keep the committee informed on working environment problems and make proposals for improvements to the committee (Sec 9 of the Order No 392)

External coordination

*cooperate with the Occupational Health Service and keep the Service running informed on common subjects (Sec 11 of the Order No 392)

Figure 2 The tasks of the safety group according to the legislation on working environment.

(Aldrich, 1991)

Type of tasks	The safety committee shall
Superior aim	<ul style="list-style-type: none"> *plan direct and coordinate the health and safety activities (Sec 20 of the Order No 392) *give advice to the undertaking in connection with the solution of questions concerning health and safety at the workplace (Sec 20 of the Order No 392)
Tasks aimed at the technology and the organisation of work	<ul style="list-style-type: none"> *register the working environment problems of the undertaking and give advice in connection with the solution of questions concerning health and safety at the workplace. (Sec 20 of the Oder No 392) *keep itself informed on the rule concerning safety and health which is specified in order to protect the employees (Sec 20 of the Order No 392)
Tasks aimed at the employees	<ul style="list-style-type: none"> *establish the principles for the necessary training and instruction and ensure that the observance of the safety regulations is continuously supervised (Sec 20 of the Order No 392)
Follow-up on injuries	<ul style="list-style-type: none"> *ensure that the cause of accidents, ppoisonings and occupational diseases and signs of such are investigated and initiate that measures are taken to prevent repetitions. (Sec 20 of the Order 392) *prepare a complete overview of accidents, poisonings and occupational discease, which has occured in the undetaking, once a year. (Sec 20 of the Order No 392)
Planning	<ul style="list-style-type: none"> *participate in the company's planning (Sec21

	of the Order No 392)
Internal coordination	<p>*supervise the safety and health activities of the undertaking and ensure that the safety group are informed and instructed how to perform their work (Sec 20 of the Oder No 392)</p> <p>*ensure that the employees are informed who is the member of the committee and the safety group in question (Sec 20 of the Order No 392)</p>
External coordination	<p>*initiate a cooperation of activities concerning safety and health with other undertakings where work at the same place of work is done. (Sec 20 of the Order No 392)</p> <p>*cooperatye with the Occupational Health Service and keep the Service running informed on common subjects. (Sec 20 of the Oder No 392)</p> <p>*ensure that a diagram of the safety organisations showing who is the members of the committee is worked out and that this diagram is forwarded to the local Labour Inspection district. (Sec 20 of the Order No 392)</p>

Figure 3. The tasks of the safety committee according to the legislation on working environment.

The Order specifies the employer's obligation to offer the members of the safety organization the opportunity of obtaining the necessary information and training in matters concerning health and safety. A so-called "Section 9 Training" for the supervisors and the safety representatives has been established in order to fulfil this obligation. This training was established by the labour market organizations and the Directorate of the Labour Inspection in 1977. Section 9 training takes 32 hours, except for sectors such as retailing, office and administrative work and education where the training time has been reduced to 16 hours or replaced by private studies. This training is a political compromise. Trade unions, not satisfied with the training clause argue that the training period is too short in the first instance.

The Danish Federation of Trade Unions (LO) has established its own training system (FIU). The FIU system has a special series of courses on working environment. It has recently developed a first course on the external environment.

Within the last 2-3 years a number of research projects have analyzed the functioning of safety organizations (e.g. Sikkerhedsarbejdet - vilkår og muligheder, 1983 and Moller et al., 1988).

The research has shown that many employers do not give health and safety activities high priority. As a consequence, the members of the safety organization often lack knowledge about health and safety and safety representatives have limited resources as regards time, money, technical resources, knowledge, and access to expert services to perform their tasks.

It seems that the activity level concerning health and safety depends on the commitment of the employers, the employees, and members of the safety organizations, and on the solidarity of the workers more than on formalized rules.

Very often safety organizations do not plan their activities. This means that the safety groups work from case to case reacting to applications from employees. Thus health and safety activities have a reactive rather than preventive perspective. Furthermore, health and safety activities are only to a very limited extent integrated with other activities of the company. Although the employer has an explicit obligation to let the safety groups and the safety committee participate in the planning of technological changes, this happens very rarely.

6.3 The working environment network outside companies

As previously mentioned, the Act on Working Environment states that the Labour Inspection and labour market organizations should guide companies. The employer or the safety committee may consult the local Labour Inspection District or the Consultancy Service of the Trade Safety Council. Besides, companies in some branches are obliged to establish an Occupational Health Service (OHS) or to affiliate to an OHS centre.

The inspectors of the local Labour Inspection District guide, inform, and supervise companies in relation to working environment and health and safety activities. Anybody has the right to complain anonymously to the Labour Inspection Service of bad working environment or violation of the legislation. Inspectors are not allowed to tell the employer that an inspection is carried out as a result of a complaint. (Aldrich, 1991).

The Labour Inspection Service has performed some experiments with their procedures of control and inspection going from detailed inspections to system control. This is supposed to improve the use of resources. These experiments were inspired by Norwegian experiences from the offshore industry. (Aldrich, 1991). Today Norwegian companies are obligated by law to establish internal control systems.

The Act on Working Environment provides the basis of establishing Trade Safety Councils.

The objective of these councils is to participate in the solution of health and safety problems within one or more trades or industries. 12 councils have been established, covering industry, transportation, offices, retailing, public services, agriculture, the health and welfare sector, and education. Councils are joint bodies, the number of employee representatives equalling the total number of supervisor and employer representatives. The Councils draft the guidelines for the improvement of working environment of the individual branches in co-operation with the Directorate of the Labour Inspection Service.

A Consultancy Service is linked to the individual Council - most often a Workers Consultancy Service and an Employer Consultancy Service for each Council. Workers can consult the Consultancy Service directly.

The aim of The Occupational Health Service (OHS) is to prevent accidents, ailments and diseases at the workplace and to promote improvements in the working environment. The idea behind the OHS is that it is the workplace that is "sick" and needs curing and not the workers. It means that working environment problems must

be solved by technical or organizational changes within companies. Not all companies are yet compelled to establish or affiliate to OHS. The Minister of Labour determines on the basis of recommendations from the Working Environment Council which branches or trades are to be included within the OHS system. Recently the employers' organization within the metal industry have agreed to establish voluntary OHS. This happens as part of an agreement with the Central Organization of Metalworkers (CO- Metal) about the establishment of The Environmental Organization of the Industry covering both external environment and working environment. Thus these OHS cover both working environment and the external environment (discussed in II.6).

There are three basic types of OHS units:

- the company-internal OHS, which is normally established in large companies,
- the industrial OHS units which covers companies in a certain branch,
- the local OHS units, called OHS centres covering all kind of companies within a certain geographical area.

The company-internal units are managed as other departments in the companies, i.e. personnel of the units are appointed like other employees. The other types of OHS units are managed as joint bodies. A manager is responsible for the day-to-day activities. S/He is responsible to a board of an equal number of employer representatives and employee representatives. The board members are elected at an annual general assembly where all affiliated companies can send one employer representative and one employee representative.

It is important to stress that the OHS is only assigned a supportive function in relation to the affiliated companies. The OHS has no mandate to perform tasks without the approval of the safety organization, i.e. the safety committee or the employee. The employees are not allowed to contact the OHS unit on her/his own initiative. The companies are not obliged to consult the OHS or to follow the suggestions which have been forwarded by the OHS at the request of the company.

Research on the experience with OHS shows that companies rarely use the expertise of the OHS personnel in connection with the planning of technological changes (e.g. Aldrich, 1988; Bunnage and Norregaard, 1987; Elert and Jorgensen, 1988).

6.4 Banning or substitution of substances and materials

According to Section 19 of the Order on Substances and Materials a dangerous or hazardous substance or material must not be used if it is possible to substitute it by a non-dangerous, less dangerous or less hazardous substance or material. The employer is, however, allowed to balance the technical consequences and the considerations of health and safety, if the substitution cause "non-negligible differences in properties or expenses". (Bekendtgørelse om stoffer og materialer, 1982). This balancing weakens the obligation of substitution.

The principle of substitution is used in a number of specific Orders; e.g. concerning epoxy and isocyanates, carcinogens, volatile organic solvents, paintings, and genetic engineering. (Bekendtgørelse om Epoxyharpikser og isocyanater, 1985; Bekendtgørelse om visse stoffer..., 1987; Bekendtgørelse om materialer med indhold af..., 1988; Bekendtgørelse om erhvervsmæssigt malearbejde, 1982; Bekendtgørelsen om genteknologi og arbejdsmiljø, 1987). Substances and materials are directly prohibited in specific Orders concerning asbestos, certain solvent based adhesives in building, soldering flux with cadmium, and water soluble chromate in cement. (Bekendtgørelse om asbest, 1986; Bekendtgørelse om forbud mod visse..., 1974; Bekendtgørelse om forbud mod anvendelse..., 1975; Bekendtgørelse om vandoploseligt chromat i cement; 1983). Most of the substitutions will probably improve both the working environment and the external environment.

The trade unions representing painters, printers, workers in the construction sector, and workers in the metal industry in particular have fought actively for the substitution of organic solvents. The activities starting back in the 1970's were motivated by a large number of cases of brain damage. The external environment had not been considered as a potential link here. Contrary to this, the trade union representing gardeners, which is a part of The National Union of General Workers has fought against the use of pesticides on the grounds of potential damage to the working environment as well as to the external environment.

The Order concerning epoxy and isocyanates demanding education of the workers and safety equipment and banning spraying with these chemicals is a result of the workers' fight against the use of epoxy.

Lack of time, knowledge and influence, however, often prevent employees from fighting for substitution of hazardous chemicals and materials.

II. RELATIONS BETWEEN THE INDUSTRIAL ACTORS

1. Introduction

This chapter analyses the relations between the employers and the employees through agreements constituting the industrial relations in Denmark. The analysis focuses on

- possible employee influence on issues deciding the environmental strategy of the companies,
- the possibility of ceasing hazardous work,
- aspects of working environment and external environment in collective bargaining,
- the enlargement of industrial relations at company level to include aspects of external environment.

2. The General Agreement and the Agreement on Co-operation

Even though discussions and negotiations about how to move towards industry based unions are going on with increasing intensity, the trade union structure is still predominantly based on a general division and craft alignments. The largest federation of unions is the Danish Federation of Trade Unions (LO), with more than half of all Danish wage-earners. Within LO, eleven unions with members working in the metal industry are organized in the Central Organization of Metalworkers which is a co-operative organization negotiating the the employers. About 85% of all Danish wage earners are trade union members (Amoroso in: Baglioni & Crouch, 1990).

Danish employers are organized in three main types of organizations: The Danish Employers' Confederation (DA), Danish Industries Employers' Federation (IA) these two are in charge of collective bargaining concerning wages and industrial relations - and the Federation of Danish Industries (Industrirådet) which deals with industrial policy, sector problems, economic policy, educational and information activities etc. Not all Danish employers are members of an employer association - some are responsible for their own collective bargaining with the trade unions.

Denmark has a tradition of collective bargaining and collective agreements dating from the end of last century. In 1899 a general agreement between the Danish Employers' Confederation and the Danish Federation of Trade Unions was concluded. The agreement has been renewed several times since 1899, the last time in 1986, but is still in force and may be considered as the constitution of industrial relations of the private sector in Denmark. (Aldrich, 1991).

The General Agreement guarantees among other things the right of workers and employees to organize. It also forms the framework for collective bargaining and the rights of the trade union representatives. It also confirms the right of the employers to direct and distribute work in accordance with the collective agreements and in co-operation with the employees and their shop stewards. (Hovedaftalen mellem LO og DA, 1987).

The public sector has experienced a parallel development concurrently with the enlargement of the sector in the sixties and seventies, especially within the fields of social security, health, and education. Within the public sector, agreements on co-operation concerning institutions under the government and the municipal sector regulate relations between management and employees. (Aldrich, 1991).

These agreements in the private and the public sector allow employees to elect shop stewards. Shop stewards are supposed to act as intermediaries between the employees and the management on all matters relating to local working conditions. Shop stewards are active trade union members and also form an important link between their colleagues at the workplace and the union. Shop stewards do not play a formal role in safety organization, but on the other hand they negotiate many issues of central importance to working conditions, e.g. the wage system, working hours, and shift work schedules.

The General Agreement contains a "peace clause" by which the two sides are obliged to cooperate and avoid work stoppages. Any strike action requires a 75 per cent vote in favour and must be announced to the employer 14 days in advance of its preparation and 7 days before its start. In case of breach and disputes about interpretation of the agreement, the agreement dictates an arbitration by "joint meeting" of both sides at local and central levels, and finally at the Industrial Tribunal. (Hovedaftalen mellem LO og DA, 1987).

A collective agreement called the Co-operation Agreement (Co-operation Agreement, 1986) specifies that companies with more than 35 employees (in the private sector; 25 employees in the public sector) may establish a co-operation committee provided it is proposed either by the employer or by the majority of the employees.

A co-operation committee is a joint body within the company with equal management-employee representation. The employer appoints his representatives among the top management, the supervisors, and the specialists. The employees' representatives are elected by and among the employees with the exception that the shop stewards are "born" members of the committee.

The first part of the agreement describes the aim of co-operation this way:

"The central organizations agree that continued improvement of the corporate sector's competitiveness and the employees' job satisfaction are a prerequisite for the continued development of enterprises and for enhancing their employees' welfare and security."

Development and increased efficiency are joint aims for management and employees. The utilization and development of new technology are vital to competitiveness, employment, working environment and job satisfaction.

The parties agree to realize these aims through systematic co-operation between management and employees at all levels." (Co-operation Agreement, 1986). An important task of the committee is to observe and promote day-to-day co-operation. The parties have agreed that communication between management and employees is essential to co-operation in an enterprise. The committee must be kept currently informed of the affairs of the enterprise and its development. That is:

- "its (the enterprises) financial position and future prospects, including the volume of orders and market conditions, as well as production matters,"
- the employment outlook
- major changes and any reorganization contemplated, e.g. the application of new technology in production and administration, including the introduction of computer-aided technology and systems.

The employees' representative must likewise keep the co-operation committee informed about working conditions of relevance to human relations." (Co-operation Agreement, 1986). Apart from ensuring the employees a right to information, the agreement ensures a right of co-influence in some cases and consultation rights in some other cases. The agreement describes the objective of the committee as follows:

1. "Establishing principles for the local working environment and human relation, as well as principles for the personnel policy pursued by the enterprise towards the employees represented in group b. (the workers) of the co-operation committee.
2. Establishing principles for training and retraining of employees who are to work with new technology.
3. Establishing principles for in-house compilation, storage and use of personal data.
4. Exchanging viewpoints and considering proposals for guidelines on the planning of production and work and the implementation of major changes in the enterprise.

5. Assessing the technical, financial, staffing, educational and environmental consequences of the introduction of new technology, or changes made in existing technology, including computer-aided technology and systems, where there is an extensive introduction of such technology or such changes.

6. Informing employees about proposals for incentive systems of payment, including particulars about their basic structure, effect and application. and informing them about the possibility of setting up funds for educational and social security purposes." (Co-operation Agreement, 1986).

The public sector's technology agreements are characterized by the employees' right to contact external experts in connection with the evaluation of specific projects. The agreement on co-operation both in the private sector and the public sector imply that the parties do agree on the need for external experts. Thus the employees may consult external specialists without the management's permission. On the other hand, the employees have no right to take the external experts to the workplace without the management's permission.

As seen from the above, these agreements provide the framework for the employees to participate in the planning and assessment of a lot of questions which are essential to the impact of the enterprise on the external environment and essential to the way the enterprise reacts to the demands from the market and from the external environment authorities. E.g. the wage system might have an impact to the way the employees work. A wage system based on piece work might make the employee work so fast that s/he does not have time to take care of chemicals running into the drain. A big company in the metal-working and iron industry, Danfoss, has, in order to minimize pollution from galvanising department, introduced a wage system that raises the workers' wage if they minimize the use of water and the amount of chemical waste.

Employees may also demand a certain amount of education in order to be able to work under environmentally desirable conditions. No experiences have however been reported on the employees' use of the co-operation committees for making demands on the management with respect to the environmental strategy of the company.

Research reveals that in general employers very seldom give the employees the opportunity to participate in the planning and decision-making process in connection with technological changes (e.g. Clausen and Lorentzen, 1986; Elert and Jorgensen, 1988). When the employer involves the employees and/or their representatives it is

often so late in the planning process that the most important decisions have all been made.

3. The possibility to stop hazardous work

A collective agreement, Rules for the Regulation of Industrial Disputes (Norm for Regler for behandling af faglig strid, 1908) concluded between the Danish Federation of Trade Unions and the Danish Employers' Confederation in 1910, specified that workers could stop working if "considerations of (the workers') life, welfare or honour" makes it absolutely necessary, i.e. in case of imminent and serious danger. This rule gives the workers the possibility to stop a polluting production by claiming that performing such work threaten their welfare or honour. The trade unions, however, generally advise their members to be chary of using this right as it is uncertain under what circumstances it is possible to cease work pleading this provision. Consequently work stoppages for the reasons of imminent and serious danger are very rare. In recent years only a few examples relating to the working environment have been found. No examples relating to the external environment have been found.

4. Employees' representatives in company boards

An Order of January 12, 1989 issued under the Companies Act, (Bekendtgørelse om medarbejderes valg af bestyrelsesmedlemmer i aktieselskaber, 1989) contains rules which allow the employees (both wage-earning and salaried employees) to elect at least two and up to one third of the representatives of the board of the company. This legislation concerns companies with more than 35 employees. Employees' representatives function as the ordinary members of the board elected by the stockholders at the general assembly. Employees representatives are protected in the same way as the shop stewards against unjustified dismissals etc. (Aldrich, 1991). Another Order of January 12, 1989 contains rules which extend these rights to parent companies in company combines. (Bekendtgørelse om medarbejderes valg af bestyrelsesmedlemmer i moderselskaber, 1989). No experiences have been found where employees have used the seats on the board to make environmental demands on the company.

5. Aspects of working environment in collective bargaining

During the 1970's the contents of collective bargaining developed from wage-oriented negotiations to broader ones including e.g. economic policy measures, industrial and economic democracy, and the working environment. (Amoroso, 1990). Collective bargaining within the metal industry has, since 1977, included a paragraph concerning negotiations between labour market organizations in case of local disputes concerning working environment. (Organisationsbehandling af lokale arbejdsmiljøspørgsmål,

1991). This paragraph is intended as a summons to the employer and the employees at the workplace to solve problems in the working environment among themselves. If they cannot agree, they must present the problem to their own labour market organizations. According to a Guide explaining the paragraph, questions regulated in detail through legislation can never be negotiated. Negotiations may concern the solving of a working environment problem, time limits, and interpretation of a previous agreement. (Organisationsbehandling af lokale arbejds miljøspørgsmål, 1991).

Some trade unions within the Central Organization of Metal Workers do not think that the paragraph has improved the working environment but that questions concerning strategies for solutions to working environment problems ought not to be negotiated. Furthermore, they think that the paragraph makes it difficult for trade union consultants to get admittance to workplaces.

6. The Agreement on the Environmental Organization of the Industry (Metal Industry)

As mentioned in I.1., the proposal from 1989 of the Ministry of Labour to amalgamate the supervision of the working environment and the external environment was not implemented. The labour market organizations: the Danish Industries Employers' Federation and the Central Organization of Metalworkers have made an agreement concerning the establishment of an Environmental Organization for the Industry. (Retningslinjer for Industriens Miljøtjeneste, 1991 and Retningslinjer for virksomhedernes miljø-, sikkerheds- og sundhedsarbejde..., 1991). This agreement states that the metal industry must establish voluntarily an Occupational Health Service called the Environmental Service of the Industry and that this service shall guide the affiliated companies in the field of external environment as well as working environment. The agreement also implies that the safety organizations within this part of the industry shall become involved in pollution reduction and elimination activities of the companies. Members of safety organizations will therefore be offered a 16 hour training course on external environment problems as a supplement to the Section 9 Training. The agreement also implies that The Trade Safety Council for the Metal Industry is going to discuss questions about the external environment. The agreement came into force on February 1, 1991, but it is too early to say anything about the experience. The Directorate of Labour Inspection has announced that it will approve the agreement by making the necessary changes in the orders concerning the safety and health activities in companies, the Occupational Health Service and the Trade Safety Councils. These changes make it possible to make similar agreements in other trades.

The parties behind the agreement have agreed that disputes concerning the external environment shall be negotiated among the parties, just as disputes concerning the working environment according to collective bargaining have been negotiated since 1977 (as described in the above passages). (Organisationsbehandling af lokale arbejdsmljosporgsmål, 1991).

The agreement is limited to dealing with external environment problems concerning the so-called "close, external environment". The agreement does not explain what is meant by the this. It may imply that activities concerning global aspects of environment, such as reduction of the use of CFCs and other chlorinated solvents (because of the hole in the ozone layer), or the reduction in coal-burning power production (because of the greenhouse effect), are not to be a part of the work of this integrated organization. It may also imply that neither questions concerning product design nor the environmental effects of the products of a company when used by consumers or treated as waste will be part of the work in the organization. If so, the agreement only covers a part of the external environment activities in the companies.

Some trade unions within the Central Organization of Metalworkers think that 16 hours of training on external environmental problems is not enough to enable the workers to play an independent and offensive role in co-operation with the external environmental professionals of the companies. These unions also fear that the close co-operation between employer and employees at a company may create an internal alliance in the company against environmental demands from the local authorities, the local community and environmental organizations.

Since the 1970's, the big metal company Danfoss has had an integration of the organization for working environment and external environment. (Nielsen et al, 1991). The company has its own internal Occupational Health Service that deals both with the working environment and the external environment.

As previously mentioned, the company has introduced a wage system connecting the wages in a certain department to the amount of pollution and consumption of resources. This is due to the fact that the routines of the workers have major impact on the pollution and the water consumption.

The company has built up its own two-day course for members of the safety organization which they follow besides the obligated Section 9 training. This company internal course includes aspects of external environment like noise, waste and cleaner production. The training is, however, so limited that the members of the safety organization must also follow the 16 - hour training according to the above mentioned agreement of the metal

industry. The training strategy of the management concerning working environment and external environment only enables the safety groups to recognize environmental problems. They are not supposed to participate directly in the development of solutions. Safety groups though are to some extent involved in the planning of technological changes. They might ask the Occupational Health Service to investigate certain questions as part of the planning. The solutions are, however, developed by working groups with engineers, purchasers, and people from the Occupational Health Service. Safety groups in the affected sections can afterwards comment on the proposals and participate in the implementation of the proposals. Thus the company seems to have chosen a rather expert-based strategy.

In the debate on the proposal from the Minister of Labour concerning an integration of the supervision of the working environment and the external environment, researchers and people from different Occupational Health Services argued that an integration might imply that the non-chemical aspects of the working environment got less attention in health and safety activities. At Danfoss, however, the safety organization also works with job quality, job rotation and participates in the planning of changes in the organization of work. Thus, the work with the chemical aspects of the working environment has not prevented the safety groups within this company from working with the nonchemical aspects.

III. INDEPENDENT INITIATIVES OF THE INDUSTRIAL ACTORS

In the following we shall go on focussing on the labour market partners but we will look more closely on the independent environmental strategies and initiatives of trade unions as well as of employers and their organizations. We especially want to illustrate, how the organizations of the labour market meet the increasing demand for stronger protection of the environment - before we discuss the potential challenges to the "Danish model" of industrial relations.

1. Initiatives from the Trade union

1.1 Environment as part of the trade union movements political field of interest

In Denmark the recent involvment of the trade union movement in environmental issues raises the question whether it has created an enlargement of the political field of interest of the union movement?

Considering first of all the policy statements, the trade union movement's overall vision of social and economical equality in society seems to be enlarged to include the ecological challenge of finding a sustainable development of society.

This new environmental responsibility is clearly documented by the latest initiatives of The Danish Federation of Trade Unions (LO). In a pamphlet from 1990, "The union movement and the environment of the firms", it is declared that "...the trade union movement is ready to assume its share of responsibility for a new course - a sustainable development". (Landsorganisationen i Danmark, 1990).

The pamphlet presents the Brundtland Commission's definition of a sustainable development, introduces cleaner technology as a concept for industry for reducing pollution and discusses principles of a union based environmental effort in the companies, in society and on an international level. A nationwide campaign of meetings and discussions with worker representatives has followed the pamphlet. According to plans, the culmination of the campaign was to be the adoption of an environmental plan of action at the LO-congress in the autumn of 1991.

One of LO's largest member organizations, The National Union of General Workers (SiD), has initiated the discussion of environmental problems in the Danish trade union movement, for one thing by publishing a book in 1987. (Specialarbejderforbundet i Danmark, 1987). This initiative was followed up shortly afterwards by The National Union of Female Workers (KAD). (Kvindeligt Arbejderforbund, 1988).

The SiD has not yet adopted an integrated environmental programme but the resolutions from the congress in 1989 indicate a clear environmental "touch". SiD has, furthermore, in co-operation with KAD and The National Union of Workers in the Fish Industry in the Soviet Union in 1990 adopted an International Trade Union Plan of Action for the Sea Environment (Specialarbejderforbundet og Kvindeligt Arbejderforbund, 1991).

Another important initiative was taken by The National Union of Metalworkers, also at the end of the eighties. In 1986 the union appointed an environmental commission, charged, with the task to analyse the relationship between the external environment and the working environment, as well as the possibilities embodied in the technological development for contributing to the solution of environmental problems. (Jyllands-Posten, 2 Sept. 1987). In 1988 this commission published a report discussing, among other things, an integration between regulation of the external environment and the regulation of the working environment and arguing for positive prospects for the Danish economy from environmental regulation and investments in the production of environmental technology. (Danish Metal Workers Union, 1991). By appointing a former Minister of Environment as chairman of the commission and furthermore by inviting important industrial leaders to participate in the commission's work, The National Union of Metalworkers demonstrated it's characteristic union policy profile: that the development of an environmental policy should be based on co-operation between the centre parties in Parliament.

Obviously, important parts of the Danish trade union movement seem to include the ecological challenge in a redefinition of political fields of interests, at least at the programme level. This leads to the question whether the integration of environmental problems in trade union politics indicates a move from the classical perspective of the members' interests, mainly based on working life, to a perspective including the total context of life (working life, everyday life, public life)? In other words, are the trade unions about to develop a specific role in the fight for a better environment - similar to that of the green movements or the consumer organizations? Are the trade unions adopting a more holistic representation of member interests. Not just dealing with their interests as working individuals (employment, working environment) but also as consuming individuals (product quality) and involved citizens (general conditions of life, quality of life) ?

According to the LO's politically responsible representative on environmental policy, Niels-Jorgen Hilstrom, such an orientation should not be alien to the trade union movement:

"What happens outside "the factory gate" has always been of interest to trade union politics - indeed our members are total human beings. (...) The trade union movement cannot and should not defend shortsighted economic and occupational interests implying that its eyes are closed to pollution destroying nature, the environment or the health of the employees". (Nils-Jorgen Hilstrom, 1991).

But let us take a closer look on the opinions on the matter from some of the biggest trade unions in Denmark:

On one hand some trade union attitudes point in the direction of such a broader representation of interests: For example when the SiD and the KAD presents the future concept of worker representatives as "guardians of the environment" and declares their intention

"...to involve the members and their families in a deliberate effort for the environment, by means of changing the ways of producing and of living."
(Specialarbejderforbundet og Kvindeligt Arbejderforbund, 1989).

The same intention is found in a pamphlet published by The National Union of Commercial and Clerical Employees" (HK), calling for a change in life-style by creating a "green everyday life" and introducing a lot of specific advice for the promotion of a more environmentally desirable behaviour in working life but first of all in everyday life. (Handels- og kontorfunktionærforbundet, 1991).

On the other hand, it is obvious that the attitude to the ecological challenge in an important trade union like The National Union of Metalworkers is clearly based on the representation of the employment interests of this particular sector of the working class. The assumption that it is possible to combine industrial growth and a better environment, first and foremost by means of technological development. (Dansk Metalarbejderforbund, 1991 a 1991 b.

So, environmental policy is still a sensitive issue showing different approaches within the trade union movement itself which makes it difficult to handle for the LO . That is probably why the LO is of the opinion that the union movement should not interfere in the political setting of goals and in the framing of environmental priorities but should restrict itself to seeking influence on how companies develop the means to fulfil the politically decided environmental demands. (Hilstrom, Nils-Jorgen, 1991).

1.2 Trade union motives behind environmental involvement

How is this new involvement in environmental issues inside the union movement to be interpreted? Is it just a new way of representing th traditional and legitimate

employment interests of union members caused by pressure experienced by trade unions in environmental matters? Or are the unions taking up a new and genuine responsibility towards a threatening societal problem? Looking at the declared motives behind the new involvement, there is obviously no simple answer to the question:

There is absolutely no doubt that the interest in employment based on industrial growth is a very strong motivating force behind all trade unions' development of environmental strategies. During recent years, unions as well as the companies have experienced an increasing demand from environmental authorities, public opinion and consumers for profound changes in industrial production. Unions know that this may imply redundancies caused by shut down companies, company "escapes" and so on - unless the companies meet the environmental regulations with more proactive means and strategies.

LO is of the opinion that the discrepancy between competitiveness/employment and the environment is only apparent and that trade unions are able to demonstrate this by adopting a more offensive environmental strategy aiming at "sustainable work places":

"The union movement should take up the ecological challenge by contributing to the switch-over and development of sustainable work places which are competitive on the international market". (Hilstrom, Nils-Jorgen, 1991).

The SiD and the KAD has expressed a similar attitude to the question of employment versus environment:

"The trade union movement does not consider jobs and a clean environment as being a contradiction in terms. Though a concerted action plan for a change-over of production with the introduction of cleaner technologies, we are infact convinced that environment and jobs can be safeguarded at the same time...." (Specialarbejderforbundet og Kvindeligt Arbejderforbund)

The National Union of Metalworkers in contrast seems to rely more on the ability of market forces to promote an "ecological product development":

"Concurrently with rising prices on materials and on waste disposal, companies will switch over to ecological product development and will already at the time of construction of products ensure the possibility of disposing of the product in a sustainable way...". (Dansk Metalarbejderforbund, 1991).

Furthermore, the National Union of Metalworkers sees - as mentioned above - a challenge and a possibility for improving the position of Danish industry in the international competition by developing an industrial sector for environmental technologies.

Besides the concern for the employment of the members, the working environment is another traditional trade union interest that obviously exists as a motive behind union involvement in environmental problems. An effort to improve the impact on the external environment of industrial production is seen as a possibility to pay new attention to the working environment so far as the source of both types of problems is one and the same. That is why the LO argues for integrated solutions "killing two birds with one stone" by simultaneously preventing pollution in the working environment as well in the environment of the companies. Another indication of the unions' interest in including the working environment, when discussing environmental protection, is their insistence on avoiding "half clean" solutions "moving" pollution from the external environment of the companies to the internal (working) environment - and vice versa. (Landsorganisationen i Danmark, 1990).

In addition to these more traditional and legitimate trade union motives (employment, working environment) one finds, especially in the environmental programme statements of the SiD and the KAD, a broader representation of the union members' interests in the environment. Environment as a basic condition of human life and a driving force behind environmental involvement, for example:

"As unions we traditionally put forward demands for improved wages and working conditions, including working environment and the social welfare of our members.

All our demands for better living conditions for our members make no sense if the entire foundation for life is destroyed by pollution" (Specialarbejderforbundet og Kvindeligt Arbejderforbund, 1989).

The political secretary on environmental questions in the LO willingly admits that one of the motivations behind the involvement of the union movement has been a strong interest in environmental issues among union members. LO for example has noted that the development of an environmental consciousness has increased the member interest for the working environment. (Aktuelt, 1 May 1991).

Some of the working environment consultants in the trade unions (for example in the SiD and the KAD) express the same motive more strongly as an independent necessity for a trade union environmental commitment: They say that their contacts with the union members have convinced them of the necessity of an environmental commitment, if the trade unions are going to hold any attraction, especially for the young workers of today. This conviction was officially expressed by The Union of Danish Technicians introducing itself by a "green profile" in advertisement campaigns for recruiting new, young members.

In summary, the interests of the union members from a working life perspective are obviously strongly represented in the motives behind the environmental policy of the unions. At the same time motives representing member interests from outside working life can be found. All the motives mentioned seem to be active, but the concept of an environmental policy within the union movement is still not well-defined. The situation is complex, with different attitudes, and it is too early to predict the emphasis between the interests of the members as working individuals, as consumers and as involved citizens in a future trade union environmental commitment.

1.3 The status of the environmental policy inside the trade unions

A look at the translation of programme statements into more practical union activities gives us some hints as to whether this taking up of environmental issues in the trade unions is not just a way of political "profiling" involving a mere stating of opinions without any binding commitment:

Up till now, the most far-reaching practical union involvement was the so-called IMO-agreement on regulation of the environment of the companies which the Central Organization of Metalworkers has entered into together with the Federation of Danish Industries. (Aftalc om Industriens Miljet Organisation...). As mentioned earlier (II), this agreement increased the responsibility of companies safety organizations to deal also with environmental problems and granted the safety representative a possibility for further education.

Another important initiative that has been launched by the SiD enables the trade union to build up autonomous resources in the field of environmental issues. The background of the initiative were experiences of new and very serious working environment problems for workers working in waste sorting depots. This resulted in the concept of "the waste worker as the environmental guardian of society" and campaign based on this concept among waste workers and in local housing areas. A very interesting aspect of this concept is that the representation of the working environment interest of the waste workers is integrated into the idea of educating the waste worker for a new role: as supervisor of waste sorting at the source in local housing areas. (Busck, O., 1990) The initiative seems to be a practical implementation of the previously mentioned programme concept of the SiD for developing worker representatives into "guardians of the environment" and to "bring up" the members and their families to a more environmentally desirable behaviour. The SiD has also recently supported financially the publication of a handbook on environmentally protective working behaviour. (Nielsen, B.B, et al, 1991).

The National Union of Female Workers has, among other things, arranged seminars and conferences on environmental issues for all the safety representatives of the union. The same union has given priority to obtaining representation in steering groups for development projects initiated by the Ministry of Environment - but has only gained little influence, according to the KAD.

The trade unions within the food industry (among others the SiD, the KAD and the National Union of Food and Allied Workers (NNF)) has been involved in a project concerning preservation methods using irradiation. (SiD, KAD, NNF, 1989). The NNF has also been involved in a project aiming at the promotion of large-scale bread production and distribution based on ecological principles. (Forbrugerrådet, NOAH, NNF, 1989). Together with six other trade unions, the NNF has participated in a project for the purpose of developing worker representatives as initiators of a trade union discussion on new biotechnological methods used in the production process. (Mygind & Wiegman, 1990).

Some other examples worth mentioning are: The board of a local section of the National Union of Joiners, Cabinetmakers and Carpenters has made some attempts to transform a building and construction cooperative into a production and consultant company relating to initiatives for urban ecological building methods. Another example is The National Union of Electricians trying to introduce the concept of a "green electrician" as a supervisor of energy savings.

In summary, it seems reasonable to conclude that the unions are not just indulging in political "profiling" of themselves on the basis of a popular issue. Even if they do not quite live up to their policy statements, it is possible to find a number of trade union based practical environmental initiatives.

Another way of evaluating the recent status of environmental policy in the trade unions, is to consider the integration of this policy field compared to other fields of policy. At the outset it is worth noting that most trade unions who have given priority (in terms of personnel and economy) to an environmental effort, have placed it with the already existing departments for working environment. The positive effect of this might be an enforcement of the union's activities on working environment but it also involves the risk that the environmental problems of the companies might be looked upon only or primarily from a working environment point of view. Furthermore, an environmental union effort without integration with other union policy fields may give the environmental policy a relative weak status, similar to that of the working environment policy.

It is quite obvious that actual examples of trade union commitment to environmental questions are primarily decided at central levels of the trade unions. Local union activity in relation to environmental questions still seems very rare and is mostly visible in cases of conflict where the protection of the environment is the issue. In these cases, the primary concern of local unions is often not the protection of the environment, but employment security. In other cases union activity concerning environmental questions springs from a concern for the working environment aspects of the impact of the production process on the external environment. That said, some examples of genuine environmental action initiated by union members at a local level can be found:

At the Kemisk Værk Koge the plans for producing the herbicide Phenmedipham made the local trade union council insist that the production should not be allowed because of the potential danger to members of the local community, even if this meant redundancies. This attitude was in conflict with that of the workers at The Kemisk Værk Koge who insisted only that the production of Phenmedipham should not be connected with an unacceptable risk to the employees.

The same principled attitude was recently held by some of the local unions in the case of the Proms Kemiske Fabrik, when it became public that the company was responsible for illegal massive dumping of chemical wastes.

In some local areas clubs for retired members of the General Workers' Union (SiD) have taken an initiative to uncover hidden deposits of chemicals: The old workers act as "pathfinders" looking for deposits where they were ordered to dump chemicals 15-20 years ago.

The above mentioned initiative of an International Trade Union Plan of Action for the Sea, taken by the SiD and the KAD, actually sprang from the activities of members of these two unions who were working in the fishing industry. They were worried about the consequences of the increasing pollution of the sea environment for their employment prospects.

1.4 Industrial workers and environmental consciousness

The question of the character of the environmental consciousness among the mass of workers becomes urgent when the trade union policy concerning the environment is at stake. Not least because of the fact that many union initiatives in this field are taken at the central levels in the trade union movement.

Unfortunately, there are no empirical scientific studies on the environmental consciousness in the working class in Denmark. Which is not to say that we do not have widespread opinions or prejudices towards

environmental questions among industrial workers. They often refer to cases of environmental conflicts, where shop stewards in a company minimize environmental risks while defending production and occupation, or to previous trade union statements ridiculing green movements or organizations.

Anyway, we can get a hint from an opinion poll from 1990. The Gallup opinion poll institute has during 1990 asked a representative sample population of 13.000 Danish citizens the question whether they would be willing or not to accept deteriorations of the environment as a consequence of industrial growth. If we look at the distribution of answers on occupational categories (see table 4) we find no remarkable differences between craftsmen, general workers and white-collar workers: In every occupational category there is a great majority (over 80%) rejecting any environmental deterioration. Furthermore, there are no differences along gender lines in the category of general workers, but a slight tendency towards a stronger environmental consciousness among female workers than among male workers in the category of craftsmen. (Gallup Media- og Marketing Index. Helår 1990).

Acceptance of deteriorations of the environment as a consequence of industrial growth.

Table 4	Unskilled	Skilled	Salaried Workers/ civil servants %	Population
	%	%	%	%
Yes	10,9	15,9	11,1	15,1
No	87,4	81,2	87,5	82,0
Indifferent	1,7	2,8	1,3	2,8

	Unskilled male workers	Unskilled female workers	Skilled male workers	Skilled female workers
Yes	15,9	15,9	12,5	6,1
No	81,8	80,8	85,8	92,2
Indifferent	2,3	3,3	1,7	1,7

But still, there are no precise or generalized impressions of the actual level of environmental consciousness of workers, based on quantitative and scientific qualitative methods.

At a non-empirical level of analysis we can point out that the fundamental interest in preserving jobs implies some ambiguity or even contradictions as regards the interests of the external environment and of the working environment. This ambiguity or contradiction can be found, even in the consciousness of the single worker.

But as the environmental discussion is appearing more often on the agenda almost everywhere in society, it cannot seriously be concluded that the worker will first and foremost defend his job in situations of conflict between occupation and environment.

One may even advance the hypothesis that quite a few industrial workers working in environmentally harmful production process are exposed to a double strain compared to other social groups: strain from the external environment as well as strain from the working environment. But we are still talking about a hypothesis which needs thorough investigation. After all, trade union members and their children do actually experience the exploitation of the environment as well as other social groups!

Furthermore, it is possible to regard industrial workers as contributors to the development of more environmentally desirable production: workers possess knowledge and experience from the production process which can be utilized in new roles as "guardians of the environment" and in the switch-over of production to cleaner technologies. In this connection the question of a possible internal differentiation of prerequisites among workers becomes important:

Is it for example the case that workers with a formal education are better "equipped" as contributors to cleaner technology in their companies than workers without vocational training? The previously mentioned SiD project of developing waste workers into "environmental guardians of society" does not seem to support such an assumption.

Maybe some occupationally based differentiations do exist, especially among shop stewards, founded on the policy of the individual trade union more than on anything else. At least it is possible to find some differences between what you might call the "ecologic technology optimism" of The National Union of Metalworkers towards the solution of environmental problems, and the initiatives of the SiD and the HK which seem to be directed more towards social and organizational changes of production and of everyday life in general.

Does it not seem plausible that the concentration of "heavy" problems of the working environment occupies so many resources that it impedes the development of initiatives and trade union action on external environmental questions? Maybe this is the explanation of the fact that even though the KAD is one of the trade unions in Denmark with the strongest environmental profile on the level of policy statements - it is difficult to find any perceptible environmental union commitment at company level. This ambiguity becomes the more significant inasmuch as female workers - because of

their double role as workers and housewives (and consequently with an everyday life basis in a total life context) - are probably more environmentally conscious than their fellow male workers.

1.5 The trade unions and cleaner technology

The discussion of environmental protection among both politicians and industrialists, has for some years, been dealing with the idea of converting industrial production by means of "cleaner technology". The trade union movement has assumed a rather reluctant attitude in this discussion. This may be one of the reasons why the diffusion of a highly expert-based strategy for cleaner technology, apparently leaves just a minor role for employees or trade unions in companies.

Several trade unions have actually recommended cleaner technology as an environmental strategy but primarily in their policy statements. The LO has probably developed the most clearly pronounced union considerations on cleaner technology, but has not yet been able to influence the Danish debate. A trade union policy on strategies of cleaner technology is confronted by at least two urgent questions:

a) The choice of model for cleaner technology

The LO is probably more modest than industrialists in its evaluation of cleaner technology as an environmental strategy, underlining that the principle of cleaner technology can never substitute the need for traditional end-of-pipe cleaning but can guide the development of a more holistic and environmentally desirable policy. (Landsorganisationen i Danmark, 1990).

The LO-definition of cleaner technology involves the production process as well as the product and so corresponds with the definition introduced by the Ministry of Environment in "The Plan for Action for Cleaner Technology 1990-92". (Miljøministeriet, 1990). The problem is that the cleaner technology projects initiated by companies are often based on a narrower understanding of cleaner technology focusing primarily on the saving of energy and materials in the production process. Thus it is possible to demonstrate that "something is done for the environment" and at the same time reduce the companies' expenses on raw materials and environmental taxes. Compared to this, the cleaner technology projects that are started on a public funding basis, seem to have a broader perspective on the changes in industrial activities needed in order to protect the environment.

Consultancy firms market "environmental audits" as a tool to reduce waste emissions and discharges in order to sell "the happy message" of the profitable, cleaner technology solutions. It is difficult to find

One of the interesting aspects of this conflict was its challenge to the unions in developing a policy of an environmental regulation of production processes. To the National Union of General Workers (SiD) this conflict was part of the background of developing an environmental policy which included the interest of citizens. To the National Union of Metalworkers the outcome of the conflict resulted in a public statement, saying that this was the first and the last time it would be possible to close down such a production which they considered was one of the most secure in the world (Borsen, 19 May, 1987). This challenge led, as we shall see in the next case, to a trade union effort to implement security assurance systems in production processes with high potential risks.

This other case is that of the **Kemisk Værk Koge**, which also gave rise to public discussion, this time of the potential risk to the local community from a production of the herbicide Phenmedipham which the management were planning to start in the middle of the 1980's. (This case is treated more intensively in the case-study from Denmark in the project "*Industrial Relations and Environment in EC*"). (Aldrich, 1991). Again demands were made from the local community for a prohibition of the production of Phenmedipham, especially against the background of the Bhopal-catastrophe. The characteristic reaction from the worker representatives from the Kemisk Værk Koge as well as the reaction of the central levels of the trade unions involved was to put the focus on the security of the employees of the plant - and not very much on the security of the citizens of the local community. This latter interest was primarily handled by community initiatives but also by the local trade union council who declared that consideration for the environment should be given priority over that of the jobs of employees at the plant. But the initiative to focus on the broader question in an environmental sense of the societal utility value of the product did not come from the trade unions or the employees, but from a local citizen at a debate meeting. Still, it was the internal security on the plant that dominated discussions inside and between the unions. Compared to the case of Dansk Soyakage Fabrik, the conflict between the employees/the trade unions and the local citizens did not become very fierce, but it did not result in any real co-operation between them either.

This conflict became a matter of principle as to the question of environmental regulations of industrial production in more than one respect: Thanks first of all to the National Union of Metalworkers the discussions and negotiations between the management and the unions came to focus on a new quality assurance system, the purpose of which was to optimize the safety of the employees. As a matter of fact the outcome of the conflict was that the working environment and the external environmental authorities' accepted the start of new production of

Phenmedipham in 1989 on the basis of an agreement on the implementation of a QA-system.

The case is also interesting in another respect: The agreement on the QA-system demonstrates the potentialities of the agreement system between employers and trade unions which is the basis of the industrial relations in Denmark for enlarging the regulations of the authorities, if the parties agree to it. In this case they agreed on a QA-system and the training of the operators involved, expanding the legislative regulation of the working environment. Furthermore, the working environment authorities and the external environment authorities became parts of the steering group which meant an enlargement of the actors' system.

When looking retrospectively at these outcomes of the Kemisk Værk Koge conflict, it is possible to view them as sign posts in the road leading to the so-called IMO-agreement on regulation of the close external environment of the companies between the Central Organization of Metalworkers and the Danish Industries Employers' Federation. Furthermore, this retrospective look shows the continuity in the National Union of Metalworkers' development of a trade union answer to the challenge of environmental regulation.

The last example of the conflict between the interests of environmental protection and the interests of production and occupation is the ongoing case of Proms Kemiske Fabrik, which has been accused for many years of deliberate neglect of The Environmental Act. As in the case of Kemisk Værk Koge again we find the local departments of the trade unions going beyond the narrow focus of employment interests of the employees to include representing the interests of the local community by defending the environment before the jobs.

Another interesting feature is the Federation of Danish Industries threatening to expel Proms Kemiske Fabrik if the management did not take steps to improve the public image of the company. As a matter of fact this threat seems to have been sufficient to make the company's banker considered stopping further credits, thereby bringing the company into a deeper economic crisis. The reaction from The Federation of Danish Industries can be regarded as a warning that employers association themselves are willing to exercise self-discipline if individual companies try to ruin the public image of Danish employers.

2. External environment or working environment?

A number of Danish companies have, during the last few years, developed and implemented cleaner technology solutions in order to reduce the pollution of the external environment. But there have been some unfortunate examples of attempts from management in order

to save the company' expenditure on waste disposal and to improve the public image of the company without taking into consideration the effects of the changes on the working environment. In fact, there are cases in which the solution to an external environment problem has changed this into a new working environment problem.

The best known example of this inadequate management planning is the case of **Grenå Papfabrik** - a company producing cardboard from untreated recycled paper.

The primary impression was of a sympathetic production from an environmental point of view but only until it became known that the plant sent large amounts of organic waste water into the sea every day. During the last half of the 1980's the company developed and implemented a system of recycling the processing water, thereby saving the sea from an environmental strain - and at the same time saving great expense on the cleaning of the waste water. This solution of cleaner technology was financially supported by the National Agency of Environmental Protection in Denmark. It became known even outside the country - not least due to the fact that Grenå Papfabrik received The Environmental Award of the EEC. The cleaner technology solution at Grenå Papfabrik got even more publicity when employees became ill, at least one of them chronically, (diarrhoea, fever, nausea and vomiting, fungoid infections, eczema and arthralgia) due to the increased concentration of micro-organisms in the plant's internal environment as a result of the recirculating of the processing water.

The management's eagerness to reduce the use of water went to such lengths as to order the workers to clean the machines with the processing water, even after examination of the workers had shown various symptoms of illness. Obviously there was no integration of working environment and external environment in the company's management planning.

In Denmark this case became the example of the fact that the solving or reduction of an external environmental problem caused by industrial production might transform it into a working environment problem if precautions were not taken. Especially in the trade unions, this example gave rise to reflections on the integration of external environment and working environment perspectives in the conceptualization of cleaner technology. An example is the above mentioned demand of the LO for avoiding "half clean solutions" when introducing cleaner technology. Furthermore, this and other examples of the same kind seem to have been one of the motivating factors contributing to an enhanced awareness among Danish workers as to the obligations of the trade unions to get involved in environmental protection.

3. Environment or economical growth?

So far we have been dealing with cases of environmental conflicts that have been the source of debate, of new political considerations or of the development of new initiatives among the parties of the labour market. However when these initiatives begin questioning the more fundamental political paradigms or assumptions of the political economy the reactions of both the trade union movement and the employer associations are not quite so flexible and open to debate.

This becomes visible, especially when environmental conflicts seem to challenge the paradigm of economic growth. We shall confine ourselves to look at one of the most recent cases: The plan of a permanent link (bridge or tunnel) across the Strait of Presund between Sweden and Denmark. The discussion of the permanent link has assumed two fundamentally different positions: One in favour of a railway tunnel, arguing that it is the only one considering the maritime environment and protecting the population of Greater Copenhagen against the environmental risks and other impacts of a rapid increase of automobile traffic. The other position is in favour of a combined bridge for cars and trains planned in a way supposed to have minimum impact on the marine environment. This position argues that the future growth in the economy and thereby also in the welfare of the city of Copenhagen is deeply dependent on the possibility of developing Copenhagen into an economic and cultural centre of growth and a link between Scandinavia and the rest of Europe.

On the parliamentary level a broad political majority including the government as well as the Social Democratic Party has adopted the solution of a bridge. Not surprisingly, the employer associations support this solution which apparently opens new possibilities for the expansion of industry and trade.

As the trade union movement at national level have not opposed the bridge solution, the obvious conclusion is that the union movement in fact backs the plan. Actually, the union movement has not participated in the debate, but seems to have left the discussion with the parties opposing the bridge i.e. the Social Democratic Party. This also goes for the debate with the movement's internal opposition to the bridge. The local branch of the National Union of General Workers, SiD-Kastrup, in the community of Kastrup, where the bridge, according to the plans, is to be connected with the mainland, has been a very active part of the opposition to the bridge. SiD-Kastrup is arguing against a bridge and in favour of a tunnel based on worries of the impacts of a bridge on the sea environment, on the environment of the community of

Kastrup and on the occupational possibilities of the SiD-Kastrup members.

Remembering the above mentioned (see III) initiative, of among others, the SiD for an international Trade Union Plan of Action for the Sea Environment, it is surprising that the SiD nationally has not taken up the challenge of the SiD-Kastrup and interfered with the debate. Probably the weighing of interests in environmental protection as opposed to the possibilities for economic growth and employment is so precarious that an intervention in the debate is considered too risky. With the exception of the National Union of Metalworkers, clearly supporting the plan of a bridge, none of the unions have taken in a position on a national level in the debate.

The above example clearly demonstrates the lack of openness when the fundamental consensus-based paradigm of economic growth between employers and the trade unions is questioned by an environmental issue.

4. Global environmental problems

Turning to more global oriented environmental problems we find the same tendency: That the view-points and reactions of the social partners first and foremost are guided by considerations of the companies' competitiveness and of occupational interests. In short: the basic common concern to the parties is the prospects of the model of industrial and economic growth even if the parties declare their support for the environmental protection policy of the government.

In fact, neither the employer associations nor trade unions, seem very eager to make public statements that will commit them to an effort for global environmental issues as for example the Greenhouse effect, the ozone-layer etc.

Employer associations in particular often take a very firm stand against ideas of new plans for reducing global pollution. This was, for example, the case when central negotiations were started in order to reduce the use of PVC, CFC, SO₂ and CO₂. The starting point of view has often been that "we can not do without this or that product" - but modifications towards a more positive attitude have been regarded as a product, of for example, participation in developmental projects on substitution. An example of this attitude is the fact that even if the employer associations do not consider it possible to solve the problem of CFC emission by local regulation of the emission from single sources, they do not reject agreements at quota regulation on the national level.

Employer associations often vacillate between the attitude of leaving it to market forces and the demand of consumers to regulate the impact of production on the

environment - and the attitude that it is necessary with border crossing "joint steps" in the shape of an international regulation of the environment.

Recently (in the beginning of september 1991) one of the formerly important environmental debates in Denmark, on the use of nuclear power (which most people thought had ended years ago with a refusal of the use of this source of energy), showed signs of a revival. A commission from the National Union of Metalworkers has in a new report on the environment argued that a reevaluation of nuclear power was necessary in order to find means for reducing the Greenhouse effect caused by the emission of CO₂:

"All things considered, it has to be said, that from an environmental point of view we cannot justify that the nuclear power is not a part of Danish energy planning." (Dansk Metalarbejderforbund 1991a).

The commission concluded furthermore that even if the Chernobyl-accident had enormous human and economic costs then these costs were of "a local nature and can be overcome in the same way as the consequences of other human created accidents". The proposal from the National Union of Metalworkers has been received with "great pleasure" by The Danish Employers' Confederation which together with The Federation of Danish Industries took the opportunity to invite The Social Democratic Party to make a revision of their attitude of refusal toward the use of nuclear power.

V. CONCLUSIONS

Some conclusions and assumptions on the future development of the inter-relationship between environmental regulation and industrial relations in Denmark seem plausible on the basis first of, our presentation of the 'Danish model' of regulation of the external environment and the working environment respectively, and secondly, of our analyses of the environmental strategies and activities of the Danish trade unions and employers.

1. Potential and limits to co-operation and consensus

First of all, there is no categorical answer to the (in our context) overall question: whether environmental protection and regulation as a new societal issue will be an arena of co-operation or of conflict between the social actors of the labour market, or whether the environmental issue will cause significant changes in the existing system of industrial relations.

This said, it should be emphasised that, to date important potential for co-operation between the Danish employers and the trade union movement exists as regards the question of environmental regulation. The tradition of co-operation between employers and trade unions, on practically all labour market questions, and the network of institutions built up to regulate this co-operation is deeply rooted historically. It seems difficult to imagine that the issue of environmental regulation might be able to cause a radical change to this relationship - at least at first sight. A significant manifestation of this co-operation tradition was a joint comment to the draft revision of the Danish Environmental Protection Act, signed by The Danish Federation of Trade Unions, The Economic Council of the Labour Movement, The Danish Employers' Confederation and The Federation of Danish Industries. (Industriradets og Dansk Arbejdsgiverforenings synspunkter på forslag til Lov om Miljøbeskyttelse, 12 november 1990.

The basic consensus on the overall approach to the protection of the environment is another important indication that environmental regulation is seen as a joint effort of employers and trade unions. Both parties insist that environmental protection is not acceptable to a degree where it threatens the societal model of industrial and economic growth - the employers because this is their basis of making profit and the trade unions because economic growth is considered a precondition for employment and welfare.

But when all is said and done concerning the fundamental consensus on the model of societal development, a modification is apparent. While the employers' defence of growth is based on a liberalistic

ideology of non-regulation as regards the market, the trade unions demand⁶ that the model of societal development should embrace "qualitative growth". This implies a regulation of market forces in order to give economic and industrial development "a social dimension". It is still too early to predict whether these variations in the concepts of growth contain a significant potential for conflict, related to the issue of environmental protection.

The possibilities of co-operation are also related to the concept of cleaner technology. This seems to be accepted as the environmental strategy by the employers, the trade unions and the public authorities. To the employers and the trade unions cleaner technology is a strategy enabling industry to adapt to the expected future demands for the protection of the environment over a period of time, rather than being forced to react to traditional regulations that carry economic and occupational costs as a consequence.

Even if cleaner technology seems to be a consensus-strategy, important differences concerning the concepts should be mentioned. Trade unions stress that the strategy of cleaner technology must include consideration of chemical, ergonomic, biological as well as psychological aspects of the working environment in order to avoid transforming external environmental problems into working environment problems. Furthermore, the trade unions insist still more powerfully that employees and trade unions are considered as social actors and accordingly involved (with potential contributions and related interests) in the planning of cleaner technology solutions in companies. To date, employers have not shown positive reactions to such proposals preferring an expert-based concept of cleaner technology.

The employer associations as well as the trade unions seem willing - to some extent - "to keep their own house in order". That is, we have seen examples where trade union members of companies threatened by environmental regulation consider only their own particularistic employment interest, while the trade unions of the surrounding local area have focused on the more holistic interests of their members showing willingness to accept closure of production in order to avoid environmentally harmful effects. We have also seen an association of employers defend the image of industry by threatening a company disrespecting the orders of the public authorities with exclusion from the association. It seems likely we shall see more such initiatives from employer associations in the future because the strategy of cleaner technology is probably only a solution to the environmental problems of those sections of industry where it is technically as well as economically possible to switch over to cleaner technologies. The rest of the industry where cleaner technology is not a realistic solution to environment problems, at least not for any

relevant span of time, will be subject to heavy demands for environmental protection in the future.

Accordingly, it seems a plausible conclusion that the future will show us more clearly the existence of Sector specific preconditions for co-operation between employers and trade unions and a further, leading, consensus on new steps for environmental protection. Such an expanded consensus may primarily appear in Sectors that have to comply with environmental demands from consumers, investors and insurance companies, or for other reasons which force them to keep a watch on their environmental image.

The first substantial limits to co-operation between employers and trade unions on environmental regulation may appear, if trade unions - as in some cases - transgress the handling of employment interests or working environment interests of their members. If, for instance, demands exceed statutory regulations or when agreements are made on industrial production or products in order to defend the interests of their members as consumers or citizens affected by environmental strains. In such cases the various interests are often so interwoven and mingled that it is difficult to evaluate their fundamental impact on the overall relationship between Danish employers and trade unions.

2. Participation and influence

A closer look at the tradition and system of co-operation between Danish employers and trade unions shows, first that this system has had a very important influence on the Danish Act on Working Environment (1975), especially on the actual implementation of the intention behind the Act. Secondly, this cooperative political effort on a society level has created the framework for co-operation at company level in the form of a number of institutions (health and safety organizations, co-operation committees and so on). This system of co-operation gives the employees and the trade unions a formal opportunity to exert influence on technological and organizational changes in companies. These various joint bodies have the potential for creating a relevant forum for participation in the environmental strategy and planning companies.

But, the overall experience of technological changes in Danish industry shows that the employees and trade unions are not involved in the strategic discussions of management. They are not given a role as important social actors in the planning of new technology and therefore exert very limited influence on the changes in production and in working life (see among other Lorentzen, 1990). It is still the managerial right of the employers that define the content and extent of co-operation on technological and other changes in the companies.

If the institutions of co-operation on company level were to be a tool for employee and union influence on the environmental practice of the companies, for example regarding cleaner technology, an enforced effort from trade unions is evidently necessary together with a change in attitude from employers towards the role of employees.

From this perspective, the agreement on The Environmental Organizations of the Industry (IMO-aftalen), naming the safety organizations of the company as the principal actor in the regulation of the working environment as well as the external environment, is very important. The agreement can be considered as a pioneer work in several respects. First of all, the agreement confirms that the regulation of the companies' external environment must be based on the concept of co-operation between the employers and the trade unions. Even if the initiative has been taken by the parties of a particular trade, for example the metal industry, which probably has the strongest traditions for co-operation in the Danish labour market, it leaves little doubt that this agreement will be trend-setting for the future regulation of the external environment of companies in Denmark. Without this agreement it would not have been legitimate to raise discussions on the external environment in the safety organizations of companies.

Likewise the agreement confirms that safety representatives need education if they are to be able to deal with this new issue.

But the agreement also raises new questions and problems: When the agreement mentions the "immediate external environment of the company", and this informally is defined by representatives of employer association as a 100 meter zone, does this mean that only environmental impacts of production very close to the company can be treated by the safety organization - leaving many environmental problems caused by the production untouched? Is there a risk that this new focus on the external environment will imply a priority for chemical and biological aspects of the working environment and that ergonomic and psychological aspects of working environment not so directly linked with the external environmental problems will get a lower priority? Will safety representatives get enough qualifications to deal with environmental questions through a new, short education - given that the unions often criticize the existing education of the safety representatives for being insufficient? How will collaboration between the safety representatives and shop stewards be organized in order to secure an integrated union effort in the company - especially considering that the working environment activity has a relatively low status compared to other trade union activities in the companies? Is there a risk, as some trade unionists claim, that such a company-based co-operation on environmental regulation could lead to

alliances between employees and employer in order to resist environmental demands from social forces outside the companies? Such questions have been raised, but as yet there is still no practical experience of the implementation of the agreement, hence it is also impossible to come up with some answers.

3. Two traditions for political co-operation

When the traditional co-operation between employers and trade unions meet with the question of environmental regulation represented by the public authorities, it appears that the latter presents political traditions and conditions of co-operation that in fact modify significantly the co-operation model of the employers and the trade unions concerning the environmental issue.

First of all, the institutionalized split between the regulation of the external environment and the regulation of the working environment (the latter more accustomed to the political traditions of the labour market) causes a problem. The practice of the authorities for regulating the external environment is based on political co-operation with the local and regional authorities and seems to only have a limited understanding of the co-operation tradition between the parties of the labour market.

Until now this attitude has left room for quite offensive initiatives from employer associations, in fact giving these a substantial influence on environmental regulation initiatives. This tendency seems to be reinforced by an inclination of the environmental authorities during recent years to establish new regulative initiatives on negotiations and agreements with the organizations of trade and industry.

With two exceptions (the PVC-agreement and the VOC-agreement, see I), the trade union movement has not been directly involved in these negotiations, but - like the green organizations - have had the possibility of attending a hearing and making comment on propositions of environmental regulation. In fact, this means that the trade union movement has had little influence on environmental legislation.

If the environmental regulation at this political level were to live up to the traditions of co-operation between employers and trade unions on other issues in the labour market, public authorities ought to consider employees of the companies and trade unions as important and legitimate social actors in the societal regulation of the environment.

4. The environmental issue: Who has got the political initiative?

Finally, is it possible to identify the political initiative in the environmental issue in Denmark today? There is no doubt that the original initiative originated from a broad societal and international understanding of the seriousness of the environmental problems, which over quite a short span of years, increased the pressure for a more profound regulation of the environmental impact of the production process. Hitherto, on the formal level of environment regulation, that is, legislative initiatives as well as agreements between relevant parties, it can be concluded that employer associations have taken the lead up to the present time. The tendency has clearly been an attempt to work in favour of limited restrictions to the industry insisting that environmental initiatives are taken on an international level and with a long-term perspective. At company level, we also see some attempts at cleaner technology in order to adapt the production to future demands for environmentally desirable production.

However if we look for a development of policies compatible with a stronger protection of the environment, we find interesting debates, initiatives and new orientations - beside the contributions of the green movements and organizations - within the trade union movement. The trend in the trade union movement's development of an environmental policy is first and foremost based on the employment interests of their members in the long term but some trade union initiatives and reactions have also gone further than this. They have shown a tendency towards a more holistic representation of member interests, taking positions against a production process in order to defend the interests of the citizens involved. We also see trade unions starting campaigns with the purpose of "awakening" their members to the need for a more "green behaviour" in their jobs as well as at home.

The role of "green" organizations still play an important role in the environmental debate in Denmark. They have undoubtedly a stronger influence on the policy development of the trade unions and of the employer associations than they had 10 or 15 years ago. This means that the relationship between the "green" organizations on one side and the trade unions and employer associations on the other is not so hostile any longer - but it is still far from being anything like a co-operative relationship.

The discussion in the years to come on protection of the environment will probably accentuate the individual's interests as a worker, as consumer and as citizen affected by environmental problems. It seems therefore to be a crucial question whether or not future environmental protection can avoid creating serious conflicts between

these differing interests. This is an important challenge to the trade union movement as well as to the employers and their associations.

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