
INSTITUTIONAL STRENGTHENING AND CAPACITY BUILDING IN THE FIELD OF ENVIRONMENTAL INSPECTION AND ENFORCEMENT IN DENMARK

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SUMMARY

The enforcement framework and the development and organizing of the Danish inspection and control system is described from its beginning and up to the present situation where new challenges have appeared. Some statistical data on staffing, inspection frequency, penalties, etc. are provided. The changes of the environmental inspector's role, the call for further qualification of the inspection system and the general adoption of local environmental action plans for counties and municipalities illustrate the latest developments in institutional strengthening and capacity building in Denmark.

1 ENVIRONMENTAL ADMINISTRATION IN DENMARK

1.1 The physical and administrative framework

The Kingdom of Denmark is part of the Scandinavian area. It's land mass is 43,000 km² and consists of a peninsular, with border to the north of Germany, and approximately 500 islands. The total coastline is approximately 7,000 km. A population of 5.2 million gives an average population density of 120 inhabitants per km², but the number of inhabitants in the capital Copenhagen is approximately 1.5 million.

Denmark is administratively divided into 14 counties and 275 municipalities. The two decentralized administrative levels are politically managed by county councils and municipal councils respectively, who are elected by public elections every 4th year.

1.2 The legislative framework

The Danish Environmental Protection Act gives the State, the counties and the municipalities each their own responsibilities in relation to environmental protection. Nearly all inspection and enforcement tasks are delegated to the councils and the municipalities, the counties inspecting the most polluting enterprises. The decentralized authorities are also the permitting authorities, who grant permits and licences to potentially polluting enterprises. The State has practically no inspection role in the environmental field but prepares guidelines and generally supervises inspection carried out by the decentralized authorities.

The first Environmental Protection Act was adopted in Denmark in 1973, replacing the former health regulations and decisions concerning water pollution. The first Act was primarily aimed at industry. Since then the Act has been amended from time to time, and now comprises, besides industry and farming, all other potentially polluting activities and all kinds of pollution. This makes the Act an integrated pollution control legislation. The Act is a framework law which empowers the Minister to lay down specified rules and standards in statutory orders.¹

From the beginning the Act laid down that responsibility for the practical inspection and enforcement should be given to the decentralized public elected authorities. This principle of decentralization has since then been maintained during revisions of the Act.

Under the first Act it was implied that an effective administrative apparatus was built up, consisting of several hundreds of full-time employees: This comprised an Environmental Protection Agency as the national administrative element, and technical administrative divisions in the counties and municipalities as the implementary element. Without this apparatus, the rules would just be an ineffective gesture².

2 INSPECTION AND ENFORCEMENT

2.1 Why inspection and enforcement

The overall purpose of the Danish inspection and enforcement system is according to the legislation to achieve or maintain a satisfactory environmental quality in the surroundings. Through active and fieldwork inspection activities the environmental authority shall get an overview of the pollution and potential polluting activities inside the border of the municipality or county.

The decentralized authorities inspect and where necessary ensure that the Environmental Protection Act and decisions in statutory orders laid down under the Act are complied with. This includes check of compliance with conditions in permits and licences and with orders given by the authority itself. Besides it shall be checked if existing permits are up to date and that all activities which do not need permits or licences do not result in unacceptable pollution. Inspection also has an advising role in connection with information about the consequences of the environmental decisions for the single industry or activity.

Even if the decentralized authorities' obligations to supervise are specified in the Act, the authorities have freedom of choice in terms of inspection methods. The Act does not give instructions on how the inspection shall be organized and carried out. The Danish Environmental Protection Agency (DEPA), however, publishes and disseminates advisory instructions and examples of suitable inspection work.

Danish Environmental Protection Agency (DEPA) also keeps up with the inspection work done by the municipalities and counties through obligatory inspection reports, which the decentralized authorities forward to the Agency once a year. They summarize the reports into statistic overviews of staffing, inspection frequencies, enforcement reactions etc., and the overviews together with their overall evaluation of the inspection work done are published in an annual report to the public.³

2.2 The principle of decentralization

The delegation of the responsibility for the physical implementation of the Act to the decentralized authorities has a historical background as a continuation of Danish practice in similar areas. Other arguments in favour of this principle include the following:

- Above all, it can be expected that decentralized responsibility for environmental protection will encourage local engagement in environmental matters.
- Inside the frames of the Act there can be a number of different and suitable local solutions to the same problem.
- There is a general wish of giving local elected politicians influence in fields where the Act gives the municipal or county council the possibility of acting in the best of the council's judgement.

Inspection visits and enforcement reactions in Denmark 1993

	All municipalities (App. 190,000 enterprises or installations to inspect)	All counties (App. 4,000 enterprises or installations to inspect)	Total
Inspection visits	40,596	5,032	45,628
Requests	9,211	1,008	10,219
Orders	2,413	655	3,068
Prohibitions	153	14	167
Police reports	154	91	245

- By exercising judgements, the local politicians get the opportunity to weigh the local and relevant interests involved.
- Last but not least, it is of crucial importance for the translation of the Act's words into practice that technical administration of sufficient size is available, and who is familiar with the local industrial structure and other environmental conditions.

3 HISTORICAL BACKGROUND

3.1 The environmental events

In the middle of the 1980's some acute pollution problems brought environmental inspection and enforcement of especially the municipalities into focus. In the coastal areas of the sea around Denmark oxygen depletion in the bottom layer caused the death of fish and vertebral fauna.

These events could be traced back in particular to outlets of nitrogen, phosphorus and organic substances in wastewater from the cities and leaching from farming. The nutrients gave rise to extreme growth of plankton algae in the sea, and when the algae died they sank to the bottom using the available oxygen in the putrefaction processes.

3.2 Agreement on adequate staffing

These events made it evident that after the Environmental Protection Act has been into force for more than 10 years the Act's precondition of an active and fieldworking inspection left much to be desired, especially as regards inspection and enforcement done by the municipalities. A survey in 1984 showed that all the municipalities together employed an environmental inspection staff of approximately 190 man-year, corresponding to 0.37 man-year per 10,000 inhabitants.

The Ministry of Environment and the Danish Association of Municipalities agreed that to achieve an adequate inspection activity an average of one inspector for every 10,000 inhabitants was needed, corresponding to approximately 510 man-year for all the municipalities in Denmark. This figure implied an increase of 320 inspectors to reach the goal of 510 full-time inspectors. The goal was to be achieved during the 3 year period 1985-87.

3.3 Strengthening of inspection

Because of the oxygen depletion problems in the sea around Denmark, the Danish Parliament in 1985 adopted a plan for reducing nutrient leaching and organic substances to the sea. In connection with this it was decided that the environmental inspection by the decentralized authorities should be intensified.

By an amendment of the Environmental Protection Act the principle was adopted that the same authority which grants a permit to a plant or installation should also inspect the facility and enforce the conditions in the permit.

It was also laid down that the municipalities and counties every year before April 1 should submit to the Danish Environmental Protection Agency (DEPA) a report of the previous year's inspection efforts and of the employed man-years for inspection purposes.

All these initiatives together caused a boom in the employment of environmental inspectors. Danish Environmental Protection Agency's (DEPA's) first national survey of environmental inspection covered the year 1987. It was found that already then the municipalities altogether employed 459 full-time inspectors, and the counties employed a total of 321 full time inspectors.

Since then the number of environmental inspectors has been around 450 inspectors in the 275 municipalities and 320 inspectors in the 14 counties. For the municipalities, this gives an average of approximately 0.9 man-year per 10,000 inhabitants, but this figure covers considerable variations between individual municipalities. For all other environmental administration tasks, e.g. environmental planning, working out permits, advising of industry etc., the municipalities altogether employ approximately 450 man-years.

4 THE FUTURE INSPECTION

4.1 New challenges

The stagnation in the number of environmental inspectors and at the same time growing comprehensiveness in the inspection tasks have in recent years brought about growing interest in making the inspection system more effective and further qualify the inspection workforce. While in the first years after 1985 it was a matter of establishing an inspection workforce of sufficient size to ensure that the environmental legislation could be respected, i.e. to ensure that the minimum demands are complied with. The environmental administrations in many municipalities and counties are now well under way adapting to new conditions for environmental inspection.

These new challenges are the result of an amendment of the Environmental Protection Act, which came into force on January 1, 1992. Hereafter the environmental authorities shall by the administration of the Act involve such aspects as cleaner technology, cradle-to-grave principles and life cycle evaluations. In practice these circumstances have implied a change in inspection attitudes in relation to industry away from the police like attitude towards a much more dialogue oriented and co-operational approach.

4.2 Paradigm change

The development may be said to imply a paradigm change for environmental inspection. The former authoritative and controlling function is to a certain extent replaced by a role as catalyst, where the inspection encourages, stimulates and maybe even co-operates with the industry to change it to more environmentally friendly and natural resource saving production methods.

The number of man-years in municipal environmental administrations 1990-1993

	Year 1990	Year 1991	Year 1992	Year 1993
Inspection	450	460	440	440
Permitting	130	130	110	110
Mapping and planning	190	220	220	260
Advising	80	100	90	90
Total	850	910	860	900

As examples some municipalities and counties make voluntary co-operation agreements with selected enterprises about introduction of environmental management systems, prioritization of efforts and setting up of environmental targets and action plans for the enterprises. Other municipalities and counties employ a specialist in this field, who for a limited period is at an enterprise's disposal, provided that the enterprise similarly employ a corresponding person in the period it takes to work out environmental status, prioritize fields of effort and set up an environmental action plan for the enterprise. Some municipalities and counties co-operate with the industry about in-service training of the workers about environmental questions related to the single enterprise. The purpose is to involve the workers in environmental action plans, environmental improvements and savings of resources in the enterprises. And further some municipalities and counties have set up what is called Green Councils or Environmental Fora with the purpose of strengthening the dialogue between the environmental authority and the enterprises.

But the definitive breakthrough of the changed role of inspection is still ahead. The Danish Environmental Protection Agency (DEPA) has thus followed a long series of cleaner technology projects in the industry. An evaluation of the projects showed that the involvement of the decentralized authorities in such projects hitherto has been very limited.

4.3 The reserved decentralized authorities

The reserved decentralized municipalities are those municipalities which are not yet "playing." The Danish environmental legislation definitely expects that all municipalities do their job properly, but the legislation does not set precise requirements to how the new aspects as cleaner technology, cradle-to-grave principles and life cycle assessments should be physically implemented in the day-to-day inspection and enforcement work carried out by the single decentralized authority. The other mentioned aspects rely very much on dialogue, cooperation and confidence between the municipality and the single enterprise. The reasons for not "playing" are mentioned in 4.3 in the article. On a very rough estimate more than 75% of the municipalities are still not "playing," especially those municipalities which have a very small environmental administration.

There are probably several reasons for this reservation, especially found in the municipalities. Many municipalities have a very small environmental administration with only one or two environmental inspectors. Under these circumstances it can be very difficult to find time for other aspects than the traditional inspection and control function. Maybe also uncertainty of how to tackle the task in practice and especially the authoritative role in this connection can be a

reason for the reservation in the municipalities. Further lack of basic knowledge about cleaner technology, environmental management, life cycle assessments etc. at the environmental inspector level may contribute to the reservation. Finally, probably many environmental inspectors do not have a professional network in his or her geographical region, which can function as or can create a common basic reference for handling the new assignments.

4.4 Qualification for the catalyst role

To make the decentralized environmental authorities function as catalysts for the development in accordance with the intentions of the Act and to further stimulate the process, the environmental inspection in all decentralized authorities must be suitably qualified for this task.

Environmental inspectors naturally need not be experts in all industrial sectors and productions, but they need basic knowledge about environmental management systems, cleaner technologies etc., and ought to have suitable professional qualifications to be able to go into a dialogue about these questions in connection with inspection visits at the enterprises.

The qualification dilemma can probably be solved by means of goal-directed in-service training of the inspectors, both as regards the technical and administrative aspects and as regards the more dialogue oriented tools which are needed in connection with negotiations with the enterprises and co-operation with several participants about suitable solutions.

Parallel to this, inspector networks should be established about these topics, which can serve as a professional environment and create the necessary basic reference. Part of this could be done by means of a common data base where information about experts and relevant experience gained by other inspectors can be found and to which own experience with the single industrial branch can be reported.

This upgrading of the inspection system and the follow up of the scheme will be an important task for the Danish Environmental Protection Agency (DEPA) in the continuous effort to qualify the system to match the demands of the environmental legislation.

5 LOCAL ENVIRONMENTAL ACTION PLANS

5.1 A united plan for the local environmental initiatives

Still more municipalities and counties in Denmark collect all planned environmental initiatives into a local environmental action plan, which is adopted by the municipal council or county council. Instead of the former separate planning for each environmental sector, e.g. drinking water, wastewater, noise and air pollution, inspection of enterprises and animal farms, waste disposal and recycling, oil and chemical waste, polluted sites, nature conservation etc., all these activities are united in the local environmental action plan.

It is voluntary for the single municipality or county to work out such a plan, but the advantages involved become still more obvious. The DEPA has worked out a guideline for making local environmental action plans, because such plans among others strengthen the environmental inspection system⁴.

5.2 The basic idea of the environmental action plan

A local environmental action plan typically consists of a status part, an environmental strategy and prioritisation part and an action part. Further an annual revision part can be included.

Among the advantages of the local environmental action plan should be mentioned:

- The plan gives a general view of the conditions of the environment within the county or municipality;
- The plan gives a general view of the environmental tasks of the authority;
- The plan is very well suited as a political prioritization tool for optimal use of existing administrative and financial resources in the environmental field;
- When the local politicians have prioritized the plan and decided to carry it out, the technical administration has a precise guide for organization of environmental work.
- For the citizens of the county or municipality the environmental action plan is a clear source of environmental conditions.
- For the local politicians, the administrative managing director and the environmental staff the plan is besides being an excellent working tool an obvious way of visualizing the environmental tasks and efforts to the public.

The key point here is the commitment of the local politicians when the local environmental action plan has been approved by the municipal council. From the beginning the starting point for working out local environmental action plans was the inspection and enforcing activity in the municipality, and this item is still the core in most plans. The status part of the plan gives an overview of the number and types of polluting enterprises and other activities within the borders of the municipality. In the preparation of the plan the technical administration in the municipality lists all kinds of environmental requirements which are either demanded by law or otherwise desirable. This can e.g., be the number of enterprises, and — not least — the inspection staff needed for carrying out the single environmental activity. Concerning inspection and enforcement activities this means the number of environmental inspectors to check compliance with the environmental requirements.

When the local politicians prioritize the proposal for the plan and the plan has subsequently been approved by the municipal council, the council has both finally decided the municipal environmental activities for the coming year and at the same time set aside the necessary money in the municipal budget.

The experiences gained so far with the local environmental action plans are very promising. Nearly all decentralized authorities who have made such a plan can report that the plan has proved a success. Especially concerning the inspection aspects, the local administrations feel that the environmental action plan contributes to strengthening the inspection and enforcement administration. Further, the local environmental action plan can entirely, or partly, form the local Agenda 21 initiative in the municipality or county.

5.3 The inspectors and their new role

In general, environmental inspectors in Denmark are very enthusiastic in their work. If given sufficient opportunities — i.e., time, knowledge and training — they will undoubtedly throw themselves into the work with implementing the new “soft issues” of promoting pollution prevention and cleaner technology as mentioned above. The implementing phase will be a balance between the traditional inspector role and the role as guide. Naturally the inspector should never forget that his primary role is to check compliance and — if necessary — to enforce the environmental demands. Nor should the enterprises ever forget the inspectors’ basic authoritative role. But when the enterprise has shown its ability and will to go further along the environmentally friendly line, the relationship between the inspector and the new enterprise is ready for the dialogue about the mentioned new issues. And the experience hitherto — as mentioned in 4.2 — has proved very successful. Still more companies and enterprises are interested in a positive dialogue with the local environmental authorities about these “green issues.”

6 CONCLUSIONS

Institutional strengthening and capacity building in Denmark play on several strings. The number of environmental inspectors in counties and municipalities has stagnated and cannot be expected to increase in the near future. The new Danish Environmental Protection Act implies changed and more complicated inspection strategies because of the demand for inspection systems to promote cleaner technology solutions in the enterprises. The new challenges and the inspectors' new role as catalysts for this development calls for a change in inspection attitude and for further qualification of the inspection staff.

Local environmental action plans have — although voluntary — positively shown its value as institutional strengthening instruments. It can be expected that such plans will create permanent frameworks for environmental initiatives in the Danish counties and municipalities.

REFERENCES

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