

**Environmental aspects of  
Danish direct investment  
in developing countries.**

**Managing the environment  
in an open economy.**

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*Report as part of UNCTAD/DICM Project*

**Cross border environmental  
management in transnational  
corporations**



## **Background to paper**

The globalization of economic activity in general, and the growing role of transnational corporations (TNCs) in particular, have increasingly directed attention toward the environmental consequences of these developments. Increasingly, TNC activity in developing countries has become an issue for various normative initiatives at the international level, in the OECD and in the WTO. However, there remains a pertinent need to gain a better understanding of the environmental implications of TNC activity in developing countries. On this background, the United Nations Conference on Trade and Development (UNCTAD) and Department of Intercultural Communication and Management, Copenhagen Business School (DICM/CBS) in 1997 received a grant from the Danish International Development Agency (DANIDA) to conduct a study of environmental practices in TNCs. The project is called: "Cross border Environmental Management in Transnational Corporations". The project examines environmental aspects of foreign direct investment (FDI) in less developed countries by conducting case studies on environmental practices in Danish and German TNCs with operations in China, India and Malaysia. The project will produce a series of research reports on cross border environmental management seen from home country, host country as well as corporate perspectives. The reports will serve as input to a conference on Cross Border Environmental Management hosted by UNCTAD.

## **Abstract**

This occasional paper serves as an introducing part to the project 'Cross Border Environmental Management in TNCs'. The objective of the paper is to provide the reader with a general understanding of the interface between the internationalization of Danish industry and the environment. Historically, companies' environmental conduct outside Denmark's borders has not been a major issue in the Danish debate. Increasingly, however, companies, NGOs, politicians, and the media participate fiercely in the "game" of communicating this issue to the public. Consequently, the interface between internationalization of Danish industry and environmental responsibilities of firms has by the mid-nineties captured public attention, and led to the emergence of a new policy area. This paper sheds light on, how the Danish polity and Danish firms have sought to tackle this new challenge, and outlines how Denmark has reconciled this new policy area with the Danish liberal stance in international trade and investment negotiations.

***Please note that the views and opinions expressed in this paper reflect those of the authors and do not necessarily represent those of UNCTAD or CBS***

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## **Abbreviations**

DANIDA	Danish International Development Agency
DANCED	Danish Cooperation for Environment and Development
DEPA	Danish Environmental Protection Agency
DI	Confederation of Danish Industries
ECT	European Energy Charter Treaty
EEC	European Economic Community
EMAS	Eco-management and audit scheme
EU	European Union
FDI	Foreign Direct Investment
ICC	International Chamber of Commerce
IFU	The Danish Industrialization Fund for Developing Countries
ILO	International Labor Office
ISO	International Standard Organization
GATT	General Agreement on Tariffs and Trade
GEF	Global Environment Facility
GNP	Gross national product
LDCs	Less developed countries
LO	The National Danish Labor Union
MAI	Multilateral Agreement on Investment
NGOs	Non-governmental organizations
ODA	Official Development Assistance
OECD	Organization for Economic cooperation and Development
SMEs	Small and medium sized enterprises
TNCs	Transnational corporations
UNCED	United Nations Conference on Environment and Development
UNCTAD	United Nations Conference on Trade and Development
UNEP	United Nations Environment Program
WTO	World Trade Organization



# **Environmental aspects of Danish direct investment to developing countries**

Managing the environment in an open economy

*By Janne Eriksen and Michael W. Hansen<sup>1</sup>*

## **I. Introduction**

Denmark is generally considered a country with a high level of environmental consciousness, internationally and not least in Denmark. In recent years, environmental issues related to developing countries have increasingly entered the Danish political agenda. Being the world's largest contributor of development assistance relative to GNP, the Danish debate has historically concentrated on environmental initiatives through development assistance. However, in the late 1990s the Danish debate on environmental and development issues has increasingly focused on environmental and ethical responsibilities and opportunities in connection with Danish commercial links with developing countries. On the one hand, almost three decades of relative intense environmental regulation has created a sizable Danish environment industry within areas related to environmental protection and energy efficiency and helped the development of capabilities in Danish firms to address environmental problems. These capabilities open up export and investments opportunities in developing countries. On the other hand, politicians, NGOs and media have increasingly focussed on environmental problems related to commercial links with developing countries and criticized industry for not meeting Danish EH&S standards when operating in developing countries. In sum, there is a growing focus on the private sector's environmental performance and involvement in environmental protection in developing countries.

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This paper will examine how environmental issues became linked with Danish commercial activities in developing countries. This will be done with focus on one aspect of Danish commercial links with developing countries, namely FDI<sup>2</sup>. The paper will first describe the growing Danish investment links with these countries. Secondly, the paper will examine how environmental issues in connection with FDI are being debated in Denmark. Thirdly, the paper will outline how Denmark has addressed these issues through various policy and business initiatives.

## II. The internationalization of Danish industry

### a. Industry structure

Denmark - a country among the ten richest countries in the world measured in terms of GNP per capita – has an industry structure different of that of many other OECD countries. It consists of a relatively small manufacturing sector and relatively large agricultural and service sector. Hence, Denmark is characterized by having a very large public sector, accounting for more than 50% of GNP. The public sector is mainly geared to provide welfare services and state-owned enterprises are virtually non-existent. Apart from ship construction, little large-scale industrial activity exists and most Danish companies can be classified as small or medium sized. There are only a handful large companies and from an international perspective these even appear to be rather small; there are no Danish TNC among the world's 100 largest TNC's<sup>3</sup> and only 7 Danish companies make it to Financial Times' 1997 list of Europe's 500 largest companies<sup>4</sup>.

According to Lindholm (1994), Danish industry consists of companies and organizations, which across sectors form networks. Hence Lindholm argues that Danish industry traditionally has consisted of four major networks: foods-, construction, maritime and healthcare. More recently, an analysis of Denmark's international competitive situation lead to the identification of a fifth network – the so-called "welfare industrial" network, which includes environmental goods & services. These networks are characterized by having developed certain strengths and synergy effects, which gives them a comparative advantage over inward foreign investors (Lindholm, 1994; 23).

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<sup>2</sup> FDI is normally defined as investment made in another country with a view of getting control over foreign assets. Thus, UNCTAD defines FDI as "an investment involving a long-term relationship and reflecting a lasting interest and control of a resident entity in one economy in an enterprise resident in an economy other than that of the foreign direct investor" (UNCTAD, 1995). Typically, cross border investment is registered as FDI if the company contributes at least 10% of the investment capital in a project.

<sup>3</sup> Measured by foreign assests. Quoted from UNCTAD's World Investment Report 1997.

<sup>4</sup> Measured by market capitalization. The seven Danish companies are: 1. Novo Nordisk, a pharmaceutical company (rank no.186), 2. Carlsberg, a brewery (238), 3. Danisco, a sugar, food ingredients and beverage corporation (278), 4. Tele Danmark, the national telephone company (283), 5. Sophus Berendsen, a linnen-service company (284), and the two largest national banks; 6. Den Danske Bank (236) and 7. Uni Danmark (367). Thus, only the first three of them are manufacturing companies, and despite the fact that Novo Nordisk, Danisco and Carlsberg all have well-established international profiles, none of them are to be found among the global top 20 within their respective industries.

Despite the growing service sector (mainly public), industry remains the backbone of the Danish economy accounting for 18% of value added, 30% of private sector employment and 60% of total exports (DI (1),1997;15-18). It has been estimated that each employee within the manufacturing industry triggers demand for goods and services in other sectors almost equal to an extra job both domestically and internationally (ibid).

## **b. Historical overview of the internationalization of Danish industry**

### **1. Trade dependence of the Danish economy**

Denmark is a small open economy extremely susceptible to world market conditions and with a very high export proportion of GNP. While foreign trade for most OECD countries account for less than 10% of GNP, it has a much higher level in the Danish economy: Exports as percentage of total GNP was in 1970 21%, 29% in 1984 and accounted for approximately 35% in 1995. Denmark became member of the European Economic community (EEC)<sup>5</sup> in 1973, and in recent years the implementation of the European Single Market has further increased the trade orientation of the Danish economy. Denmark's main trading partners are its neighboring countries: Sweden, Norway, Germany and UK, and European countries in general. Almost 80% of all exports go to these neighboring countries.

### **2. Trends in outward FDI**

Direct export remains the preferred internationalization mode for Danish firms. Nevertheless, Danish outward FDI has, as is the case with other OECD countries, experienced a significant growth in recent decades and can be foreseen to become increasingly important in the future<sup>6</sup>. The recent surge in FDI does not imply that international production is an entirely new phenomenon in Danish industry. In the latter part of the 19<sup>th</sup> century Danish companies such as 'The East Asiatic Company' (a trading company), 'Store Nord' (a cable producer) and 'Chr. Hansens Laboratorium' (a pharmaceutical and ingredient producer) opened subsidiaries abroad. However, these early operations were rather sporadic and primarily driven by access to raw materials.

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<sup>5</sup> Before the formation of EEC, Denmark was a member of the European Free Trade Area; EFTA (England, Norway, Sweden, Lichenstein, Austria, Switzerland Portugal, Finland and Island). EFTA only covered industrial goods (not fisheries nor agriculture).

<sup>6</sup> Few studies regarding Danish outward FDI exist. Exceptions are Pedersen (1993), Hoffman (1996), Lindholm (1994) and Hansen (1996). Regarding FDI in developing countries only Hoffman and Hansen focuses on this relationship.

The evolution in the internationalization of Danish industry since then is described below, building on Strandskov (1987), Pedersen et al (1993), and Hansen (1996):

- Between 1900 and 1964 only around 70 Danish foreign subsidiaries were established.
- In the 1960s a concentration of Danish industry took place, and some of the large trading and shipping companies diversified. This development speeded up the internationalization of Danish industry.
- Between 1965-1983, 277 foreign subsidiaries were established,
- and between 1984-1989 344 subsidiaries were established.
- By 1987, it was estimated that there were around 1800 Danish subsidiaries held by 460 parents. On average each company had 3.9 foreign operations.
- In 1993 Pedersen et al. identified 709 Danish parents with 2326 foreign affiliates. On average each company now had 3.2 foreign affiliates. It was estimated that this latter survey included up to 95% of all Danish companies with foreign affiliates.
- The 1995 Foreign Subsidiaries Survey (FAS) by Hansen (1996) identified 2792 Danish subsidiaries held by 1079 companies, equal to 2.6 foreign operations per company on average.

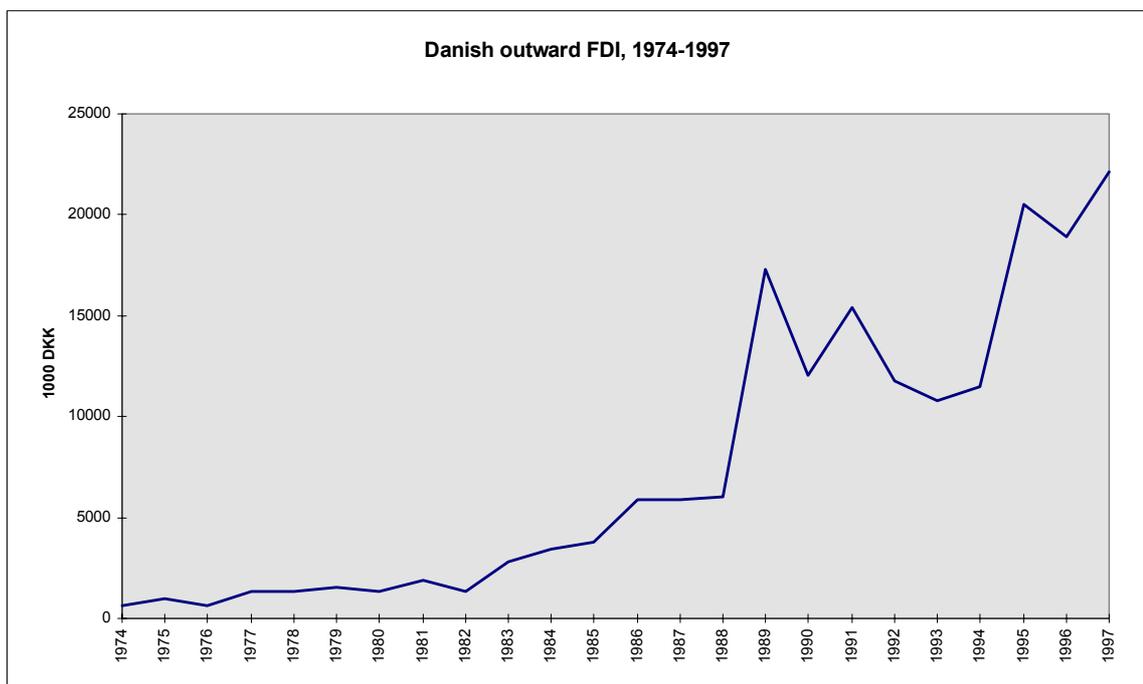


Figure Fejll Ukendt argument for parameter.

Looking at outward FDI flows as proportion of GNP it is clear that historically Danish FDI has been relatively modest compared to other European small and middle-sized countries. Between 1985 and 1991 FDI as a percentage of GNP was around 1% in Denmark compared to 4% in Sweden and Holland, and Denmark ranked only thirteenth among the OECD countries in terms of FDI as

share of GNP (Pedersen, 1994;25). The relatively low level of international production in Danish industry in the otherwise highly internationally oriented Danish industry is probably related to the fact that Denmark has only few large companies with sufficient market power to organize international production. Another explanation could be that internationally oriented sectors such as oil and electronics historically have been relatively absent in the Danish economy.

However, in recent years the internationalization of value-adding activities of Danish companies has speeded up, and the Danish internationalization pattern is converging with that of other small OECD countries. As demonstrated in figure 1, Danish FDI followed a relatively stable pattern up until the early eighties.

From 1974 and until 1976 Danish FDI was less than Dkr.1 billion per year, and between 1977 and 1982 FDI grew to a relatively stable level between Dkr.1 and 2 billion. However, in the early eighties an important change took place: From 1983 and onwards, outward FDI intensified; while Danish trade increased with an annual 5.6% from 1983 -1989, the annual growth in FDI was 40%. This surge in FDI made for the first time Denmark a net capital exporter in the direct investment field. Another indicator of the growing importance of international production is that while Danish companies increased their number of employees at foreign affiliates with 27% during 1986-90, the number of employees only increased with 7% in Denmark during the same period (Pedersen et al, 1993; 13).

The surge in Danish FDI does to some extent reflect domestic or regional factors, such as: a general improvement in the Danish economy during this period, a strengthening of the competitiveness of Danish industry vis-à-vis other OECD countries, and the establishment of the European Single Market, making it easier to undertake foreign operations in Europe.

**Expectations for future investment patterns in Danish industry**

A large survey\* carried out in 1996, offers insights into the future expectations of Danish foreign investors:

- The 1,000 companies participating in the survey estimate to account for the establishment of 50,000 new jobs abroad.
- The survey falsified the perception that SMEs primarily stay at home. The SMEs are becoming as global as the large TNCs.
- In the period up to year 2000, the 1.000 companies expect to invest almost 45 billion DKK in production sites abroad, which is equal to an increase of 127%. The textile industry alone will have moved 56% of their production abroad, of which 40% are to countries beyond western Europe.
- All in all, the survey concluded that the internationalization or globalization of the Danish industry has been driven at high speed in the early 1990s, but it is first now closer to year 2000 that the real surge forward will take place.

\*) Conducted by the political and economic analysis institute Mandag Morgen. 3.000 questionnaires were distributed to Danish companies with concentration on those with an international orientation. 1.000 responses were considered useful.

However, it should be noted that the surge in Danish FDI to a large extent parallels a broader international trend of the last decade. In this sense, the pattern of Danish FDI reflects the widespread liberalization of trade and investment that have taken place since the end of the Cold war, as well as various technological developments - e.g. the spread of communication

technologies and reduced transportation costs. All factors that make it easier to organize production across borders and disseminate technologies and know-how internationally.

### **3. The role of SMEs in Danish TNCs**

Normally, the literature on FDI describes how very large companies in the extractives and consumer goods industries have led foreign direct investments. Likewise, the internationalization of Danish industry was initially led by large companies. However, recently numerous small and medium sized companies have engaged in international production. It seems that these companies play a relatively central role in the internationalization of Danish industry: In 1987, the average foreign investor held 3.9 foreign subsidiaries, in 1991 it was 3.2, and in 1995 the number had fallen to 2.6 subsidiaries per company. Hence, the figures suggest that Danish industry is continuing a trend toward *'widespread, but thin internationalization'*<sup>7</sup> (Hansen, 1996;1).

A large proportion of Danish manufacturing firms work as suppliers to larger foreign companies. This is either as deliverers of machinery or as suppliers to large producers of durable or consumer products. Consequently, a substantial part of Danish FDI is explained by Danish TNCs following the internationalization patterns of their larger customers. There are only few examples of Danish TNCs possessing the market power to organize international production networks.

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<sup>7</sup> It seems that in an international perspective, Danish companies hold comparatively few foreign subsidiaries. Thus, UNCTAD (1995) estimates that there are more than 40.000 TNCs worldwide with 250.000 foreign subsidiaries. This is 6.25 subsidiaries per company on average. However, it is likely that UNCTAD grossly underestimates the number of TNCs.

#### 4. The largest Danish TNCs

Although companies holding one or two foreign subsidiaries play a prominent role in the internationalization of Danish industry, there is a small group of companies, which in terms of numbers of foreign subsidiaries are highly international in their orientation.

30 Danish Transnational Corporations			
	# sub		# sub
EAC A/S	48	Sophus Berendsen A/S	18
Novo Nordisk A/S	40	Danfoss A/S	14
Danisco A/S	36	Lego A/S	14
Chr. Hansens Labor	34	Schur International A/S	14
J.C. Hempel's	34	Coloplast A/S	13
Superfos	34	H. Lundbeck A/S	13
A.P. Møller	28	ISS-International A/S	13
SAS	28	Oticon Holding A/S	13
Niro A/S	27	A/S Foss Electric Holding	12
Grundfos International	24	Gram A/S	12
F.L. Schmidth & Co. A/S	23	S. Dyrup & Co. A/S	12
Wintherthur Schweizisk	22	A/S Eccolet Sko	11
Carlsberg A/S	20	Bestseller Wholesale A/S	11
Egmont	20	In Wear A/S	11
Royal Copenhagen	19	Louis Poulsen & Co. A/S	11

Source : Hansen (1996)

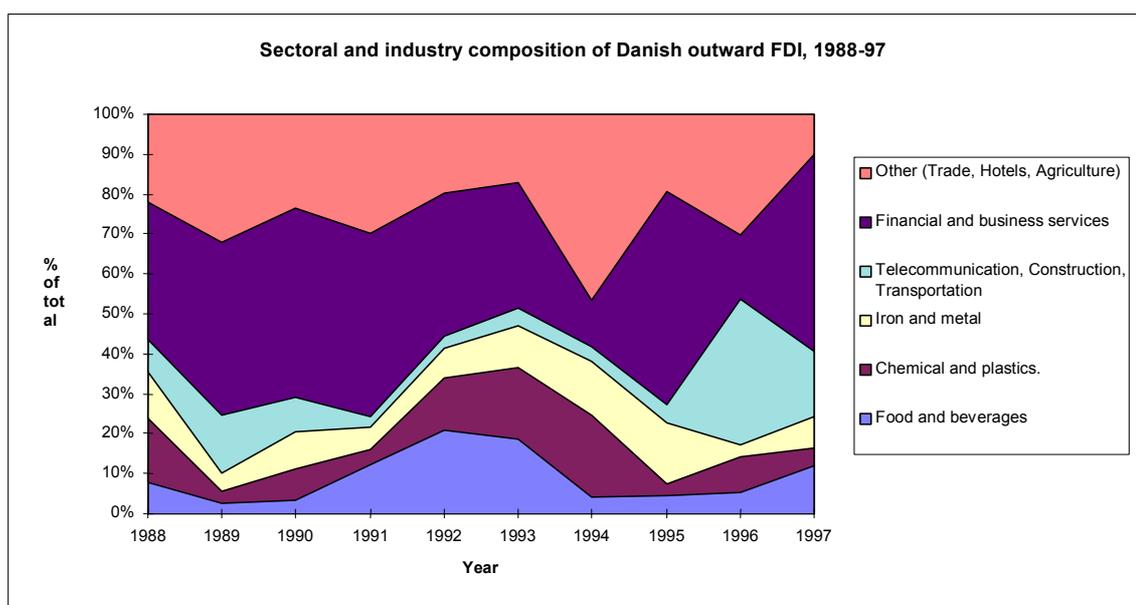
The thirty most internationalized Danish companies in 1995 in terms of number of foreign subsidiaries are displayed in the table. Well known large Danish TNCs are e.g. Novo Nordisk; the pharmaceutical company, Danisco; the food stuff company, Carlsberg; the brewery, A.P. Møller; the shipping and oil company, F.L. Smidth; specialized in building cement plants, Danfoss; the producer of pumps, and Rockwool; the producer of insulation materials. The East Asian Company (EAC) used to be the most internationalized Danish company, but since 1995 EAC experienced a spectacular down

turn. In 1998, EAC decided to move corporate headquarters to Singapore to be closer to its main market and thereby better positioned to ride off the crisis.

#### 5. Sectoral trends in Danish FDI

As is the case in other OECD countries, and reflecting the industry structure of advanced industrialized nations, the manufacturing sector in Denmark today represents less than 1/4 of value adding activity. Previously, Danish manufacturing companies were markedly more active in investing abroad both in terms of number of subsidiaries and size of investment compared to other main sectors (Pedersen et al, 1993; 25).

However, since 1993, manufacturing FDI has fallen as proportion of Danish FDI from almost 50% in 1993 to around 25% in 1997. In other words, the surge in Danish FDI in recent years is not lead by manufacturing firms, but rather carried forward by transport-telecommunication and financial service firms. A 1998 survey of 187 large Danish firm's investment plans abroad found that the responding companies expect to increase FDI activities steadily in the years to come. The growth is expected to derive mainly from investments in sales and R&D, whereas manufacturing FDI is expected to decrease (DI (3), 1998).



**Figure** Fejll Ukendt argument for parameter.

Looking more closely at manufacturing FDI (figure 2), three broad industries have over time become equally important: The chemical industry, food and beverage, and iron and metal. Whereas the iron and metal industry's share has been relatively stable over time, the other two has experienced larger variation. In 1984 chemical investments consisted of only 9% of total manufacturing FDI, by 1994 it had risen to 49%. This industry includes investment made by the significant Danish pharmaceutical industry. Since then this industry's FDI has decreased both in absolute and relative terms. FDI in food and beverages fell to less than half its 1984 share of total manufacturing FDI by 1994. However, between 1991 and 1993 and again in 1997, FDI in this sector grew rapidly, probably due to a couple of very large investments by the brewery Carlsberg and by Danisco Ingredients/Sugar. Regardless of the various fluctuations, it is evident that the growth in Danish manufacturing FDI has been relatively slow since 1992<sup>8</sup>.

### c. Danish FDI in developing countries

The regional orientation of Danish FDI is similar to that of Danish exports. More than half of total FDI stock was by 1991 placed in EU countries and 1/3 in non-EU OECD countries. The United Kingdom is within the EU the main location for Danish FDI, holding 22% of FDI stock placed within the EU in both 1991 and 1997<sup>9</sup>.

Danish FDI to LDCs<sup>10</sup> as proportion of total FDI is considerably smaller than that of other OECD countries. Global FDI to LDCs accounted for between 20%

<sup>8</sup> For additional insight in the Danish outward FDI patterns, see Annex 1 with data from the past 20 years of total Danish FDI listed by countries, regions and sectors.

<sup>9</sup> The size of FDI stock in UK is based on data from The Danish National Bank in "Beretning og regnskab 1997".

<sup>10</sup> In this paper, the term LDC is used in accordance with the World Bank definition for *less developed countries*. The term covers the least developed countries, the NICs as well as the Eastern European economies.

and 40% of total world FDI throughout the first half of the nineties and grew rapidly in this period. In contrast, Danish FDI to LDCs as proportion of total outward Danish FDI has been between 5% and 10% throughout the 1990s. Even though the LDC share of total Danish FDI has been on the rise since 1992, the increase to approximately 15% by 1997 is still modest compared to global patterns. An interesting observation is that while FDI net flows surpasses aid flows globally, Danish official development assistance accounts for more than 10 billion DKK whereas total Danish FDI flows to LDCs only account for 1.5 billion DDK.

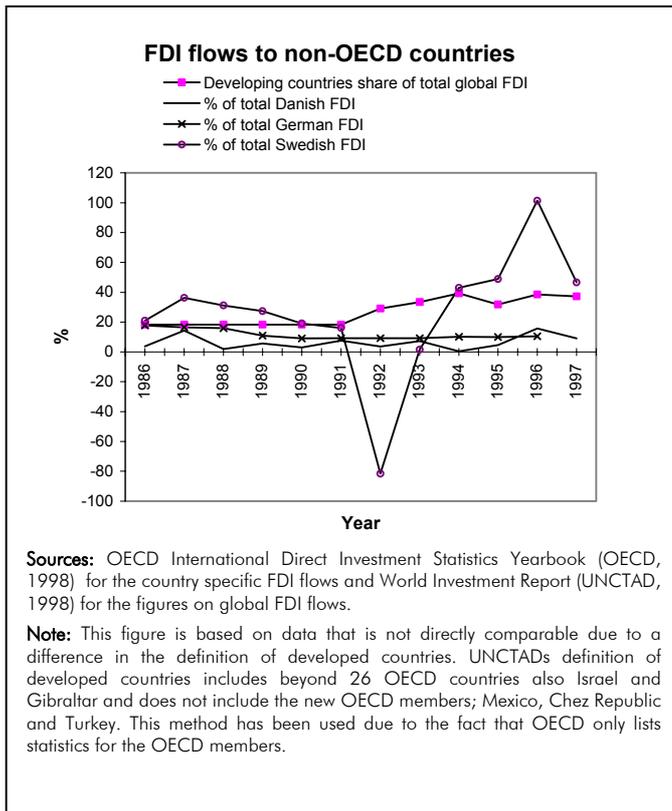


Figure Fejl! Ukendt argument for parameter.

It was not until the conjuncture of the 1973 recession in the OECD countries and the sudden explosion of demand in OPEC countries and NICs that Danish companies began to pay attention to LDC markets. The modest LDC orientation in Danish industry can be explained by several factors. Rasmussen (1990) has listed four such factors: First of all, Denmark has not had any colonial past of importance, and has therefore not been able to make use of established networks, as have the Dutch, the French, and the British. Second, the Danish industrialization process took off relatively late, which meant that especially investment relations with LDCs did not occur until the late 1960's. Third, as mentioned above, SMEs play a central role in Danish industry. Given SMEs less diversified character and small size, entry barriers to remote LDC markets might seem to be too high for such companies. Fourth, Danish companies have historically been relatively little involved in the production of standardized goods, which are the basis for most foreign investment in the manufacturing sector of the developing world. Instead, Danish industry's role in world markets has mainly been as producer of intermediate goods, often as specialized subcontractors for German or Swedish companies (Rasmussen, 1990; 96).

Whereas most of Danish FDI to LDCs in the 1970s and 1980s went to Latin America, in particular Brazil, Danish companies now prefer to invest in Asia and Eastern Europe - Poland being the most important emerging economy host<sup>11</sup>. Following the global trend, Danish investors turned towards India and China in

<sup>11</sup> By 1997 Poland was a member of OECD.

the early 1990s when these countries through economic liberalization became more open towards foreign investors. Hence, the significant increase of Danish FDI in LDCs in 1995 can to a large extent be explained by large investments in China e.g. the pharmaceutical company Novo Nordisk and the brewery Carlsberg (Hoffman, 1996)<sup>12</sup>.

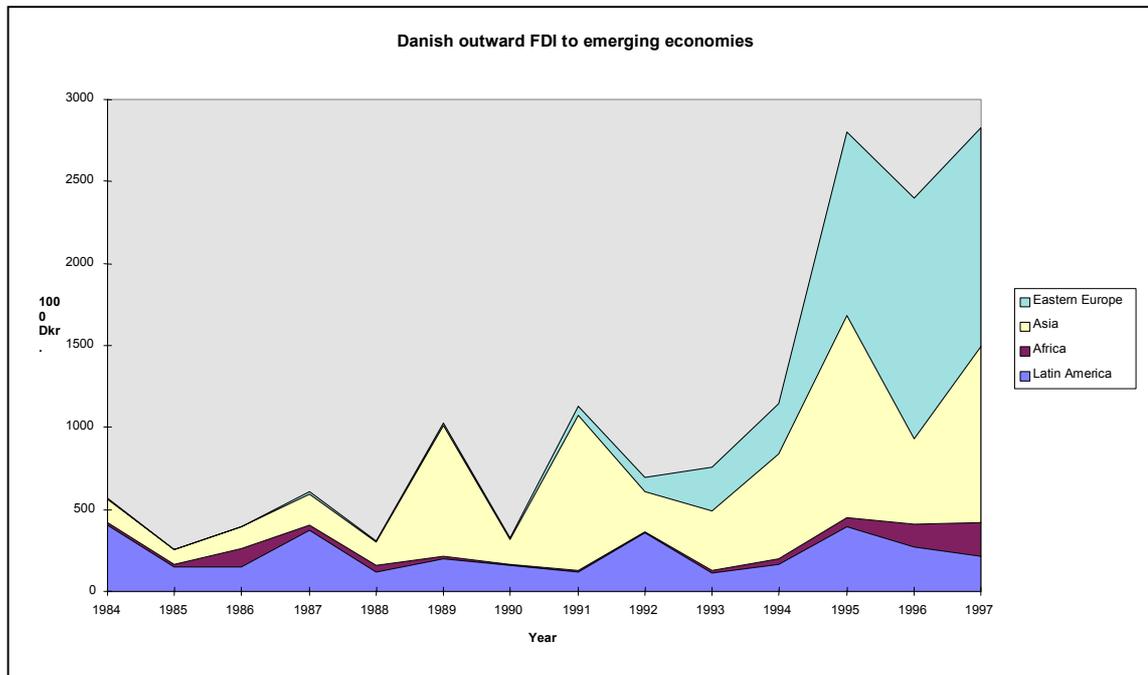


Figure Fejll Ukendt argument for parameter.

In the Danish debate there has been concern that Danish investments in developing countries of the South might be diverted to Eastern Europe. However, this concern is cautioned by the fact that the types of companies investing in the two regions are different. Where the investments in Eastern Europe are dominated by SMEs and companies in the service industry, textile and furniture industry, developing countries of the South, in contrast, mostly receive investments from large Danish companies within construction, food, and chemical industries (Hansen, 1996). Supporting this, FDI figures show that the growth in FDI to Eastern Europe has taken place simultaneously with a growth in FDI developing countries of the South, in particular in Asia. By 1998, a more cautious look towards Asia has become evident among investors due to the financial crisis in South East Asia. Also the economic sanctions imposed by several countries in the wake of Indian nuclear tests may reduce Danish FDI flows to India.

<sup>12</sup> The countries targeted for case studies - China, India and Malaysia - are among the countries, which have received much attention from Danish investors in the past few years. More detailed descriptions of the investment patterns, future prospects, and projects taking place in these three countries are outlined in Annex II.

## **d. Danish positions on trade and investment liberalization**

For a country like Denmark with a small home market it is extremely important to be able to freely do business abroad. Denmark has a particular strong interest in multilateral trade liberalization, because her bargaining power in bilateral agreements is relatively low. As a result of the paramount importance of trade, Denmark has been highly supportive of trade liberalization within the EEC, the GATT and the OECD. In particular, trade liberalization for agricultural products has been a prime objective for Denmark; in fact the main reason for Denmark joining the EEC in 1973 was to protect the export interests of Danish farmers.

Trade policy towards the developing world has always been linked to overall trade policy and thus reflected the fact that Denmark's main interests lay in Western Europe. Denmark has never had a public debate on trade policy parallel to the ongoing debate on official development assistance.

Before joining the EEC, Denmark tended consistently to support the South's pressure for the abolition of tariff and other trade restrictions hoping that liberalization towards developing countries would spill over to the European scene (Rasmussen, 1990). With accession to the EEC in 1973, trade policy was left to be a joint European issue, thus including trade policy towards developing countries. With the Maastricht Treaty in 1992, the EEC was expanded with a strengthened political cooperation and became the European Union (EU). In the age of EU common trade policy, Denmark has – at least formally - sought to push EU trade policy towards a position more in line with interests of developing countries. For instance, in relation to the MAI negotiations the Danish negotiators have declared that : *"Developing countries should have a transitional period to adapt their policies if they wish to be members of MAI"* (Danish delegation to MAI, 1998). The Government has also decided to make an effort, via the EU, to support a stronger voice for developing countries in the WTO. In particular, Denmark has argued that the least developed countries should be provided with better opportunities for exporting goods to the industrialized countries. Additionally, Denmark has in recent years eagerly supported Central - and East Europe's efforts to join existing and new international trade and investment frameworks. When considering these relatively liberal Danish positions towards LDCs, it should be noted that Denmark's liberal approach has been relatively affordable, as Danish trade with LDCs is only around 10% of imports and exports and furthermore only a small fraction of Danish industry is directly exposed to competition from LDCs<sup>13</sup>.

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<sup>13</sup> Despite verbal Danish support for liberalization, the liberal approach has not been extended to industries where LDC exports were a real threat; industries such as shipbuilding and textiles (Rasmussen, 1990;72).

Partly as a way to compensate for the historical and structural disadvantages of Danish industry, the Danish State has in various ways sought to facilitate Danish trade and investment relations to developing countries. Denmark, like other OECD countries, offer companies favorable loans called 'mixed credits'<sup>14</sup> for participation in large development projects in developing countries. The mixed

<b>The 24 most important emerging economy hosts to Danish investors</b>			
	# of projects		# of projects
Poland	128	China	19
Hong Kong	54	Russia	19
Singapore	46	Nigeria	16
Malaysia	45	Estonia	16
Brazil	41	Philippines	15
Czech Republic	38	Indonesia	13
Thailand	29	Korea	12
India	26	Lithuania	11
Hungary	25	Saudi Arabia	11
Turkey	21	Chile	11
Mexico	21	Latvia	10
Argentina	15	Venezuela	10
Source: Hansen(1996)			

credit scheme was introduced to Danish companies in 1994, and has become an important factor behind Danish trade and investment relations with developing countries<sup>15</sup>. In February 1998, the Parliament approved a revision of the scheme with the purpose of simplifying and improving the existing rules for achieving mixed credits. Thus, today a Danish mixed credit to LDCs is an interest free loan with up to 15 years maturity (formerly 10 years), granted to credit worthy developing countries. In addition, finance via mixed credits up to 100% of development projects will be possible, and the former demand of a minimum of 70% Danish

contractual supply to a project has been lowered to 50%. Furthermore, smaller local suppliers will be offered support via the mixed credits. All these more favorable conditions for the host developing country will be offered by the State when a project from a development point of view justifies it, in particular projects within the field of environment, water, health and renewable energy (Danida (2), 1998).

Secondly, Danish investors can obtain an insurance covering 90% of the invested capital and running for a maximum of 15 years, if losses are caused due to political turmoil and nationalization in the host countries. Normally, it is a pre-condition that a bilateral investment protection agreement is in place between the two parties' governments. To obtain the insurance guarantee it is furthermore required that the investment serves a developmental purpose and it is further expected that the Danish investor has a profound influence on the management of the company invested in (Danida (3), 1998).

<sup>14</sup> In the OECD Consensus Agreement on Export Credits, OECD requires that mixed credits imply an element of subsidies of minimum 50% to LDCs and 35% for other emerging economies.

<sup>15</sup> In 1995 credits to projects equivalent to 178 million DKK were approved. By 1997, this figure had increased to 826 million DDK (Danida(1), 1997;5).

**The Industrialization Fund for Developing Countries (IFU)**

IFU was established as a self-governing fund by Act of Parliament in 1967. Up to 1979 IFU received capital contribution from the Government. In the following years new investments could be financed by earnings from the investments, but when the level of activity since the end of the 1980's doubled, IFU could not alone match the need for capital for new investments. Therefore, the Government in 1996 decided to provide IFU with fresh capital with up to 150 million DKK a year over 5 years for use in low-income countries. The purpose of IFU is to promote economic activities in developing countries through investments in collaboration with Danish companies. IFU participates as a shareholder in joint venture companies, which also obtain loans or guarantees from IFU. IFU policy implies that it may operate in developing countries included in OECD's DAC list with a GNP per capita not exceeding USD 5,295 (1996). Normally IFU's total involvement in the project does not exceed 25 per cent of the total investment, and is always smaller than that of the Danish partner. Since its formation in 1967, IFU has participated in the establishment of 322 joint venture projects distributed across 66 developing countries (by 1996). IFU has Regional Offices in Zimbabwe and Mexico, a Representative Office in China and a Liaison Office in India. In 1996, IFU invested more in India than in any other developing country; it invested in 9 projects, a total of DKK 51 million, and in other Asian countries IFU participated in a total of 9 projects. Source: IFU, 1996.

Lastly, and most important in regard to FDI, the Danish State has sought to facilitate private sector investments in developing countries through the formation of the Industrialization Fund for Developing Countries (IFU) (see box). IFU supports Danish foreign investors in developing countries with equity capital, loans and technical assistance, and is estimated to participate in close to 50% of all Danish investment projects in LDCs (Hansen, 1996). Recently, sister funds to IFU have been established for investment in Central and Eastern Europe (the Investment Fund for Eastern Europe (IØ)) and for NIC countries<sup>16</sup> (The Investment Fund for Emerging Markets (IFV)).

## e. Summary

The internationalization profile of Danish industry differs from that of other OECD countries. Trade is the preferred mode of internationalization and Danish firms have generally concentrated on nearby markets where cultural, linguistic or regulatory barriers are relatively modest (Hansen, 1996;7). As a consequence, only a small share of Danish investments has been placed in developing countries. However, in recent years, Danish investments in developing countries have picked up, particularly in South and South East Asia. It does not seem that a recent surge in FDI to Eastern Europe in any significant way is diverting Danish FDI away from the developing countries of the South. For a country with such a high degree of dependence on trade, liberal trade and investment regimes are of paramount importance. Hence, Denmark has eagerly pushed for liberalization in multilateral trade and investment negotiations both in the EU and in the wider OECD and WTO context. Generally, Denmark has been supportive of the positions of developing countries in these negotiations - a position that has been affordable given the modest Danish trade and investment relations with these countries.

In the following sections we will examine how Denmark has handled environmental concerns in connection with FDI in developing countries. In part III, it will be described how Danish environmental politics increasingly has focussed on international environmental problems, including those related to Danish FDI.

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<sup>16</sup> In this context the term NICs covers the geographical area of investment limited to countries outside Europe, which are listed on OECD's list of recipients of aid, and which have a per capita income above the limit which the World Bank has set for obtaining new loans (IFU, March 1998).

Part IV will describe how Denmark has sought to reconcile her liberal approach to economic internationalization with her strong environmental profile.

### **III. The internationalization of Danish environmental politics**

In recent years the issue of environmental responsibilities in connection with economic internationalization arrived at the Danish political agenda in earnest. First, The East Asiatic Company's (EAC) sale of scrapped production equipment for chlorine production to Pakistan stirred intense political debate in 1994. Then the largest Danish chemical company Cheminova's sale in Nicaragua of pesticides not approved in Denmark created a public outrage in the spring of 1997; and shortly after, EAC's involvement in production and distribution of a pesticide in Thailand banned in Denmark stirred much critique from NGOs and politicians alike. Simultaneously, during negotiations of MAI, Danish NGOs vigorously criticized the draft agreement for not providing sufficient environmental guarantees. In short, by the late 1990s, the international environmental responsibilities of Danish industry reached the political agenda. This part will describe how this happened and how the Danish debate on these issues has evolved. But first, a brief account of the nature of Danish environmental legislation will be provided.

#### **a. The nature of environmental regulation in Denmark**

##### **1. The evolution of Danish environmental regulation**

Denmark established its first Environmental Protection Act in 1972. The main objective of this legislation was to deal with problems related to industrial pollution and was designed as a legislative framework with broad competencies delegated to the environmental administration at the state, regional, and local level. Since its inception, the legislation has evolved in several ways. First, the focus of the legislation has changed: The traditional focus on concentrated and often highly dangerous pollution has been replaced by a focus on diffuse and multi-source environmental problems. Thus, recent amendments to the legislation have focused on the environmental problems of households and agricultural production. Second, the nature of the means employed to reach environmental objectives have undergone a transformation: The original emphasis on end-of-pipe solutions and expensive environmental infrastructure projects has increasingly been supplemented by an emphasis on pollution prevention measures, clean technology programs, voluntary agreements, green taxation and incentives to corporate self-regulation.

**Major environmental initiatives launched by the government**

The present center left government has been in office since 1993, and the Ministry for the Environment and Energy has implemented among other the following national regulations that affect the industry:

All new legislation's, action plans etc. are required to be evaluated regarding its consequences for the environment (1993).

A green tax reform, which aims at moving taxation from manpower to consumption of resources in terms of green taxes. The reform is gradually implemented and finally in place in 1998 (1993-94).

Start of a four years program about environment- and health and safety standards in SMEs to strengthen their internal environmental capacities (1994).

Launch of mandatory green accounting reports for the largest companies, which gives the public access to information about how the heaviest polluters affect the environment (1995).

A "law and order package" was launched to increase auditing, control and penalty clauses for violation of the Environmental Protection Act (1996).

The criminal code is extended to include serious environmental felonies with a maximum sentence of four years imprisonment.

Source: www.folketinget.dk, 1997.

In general, the implementation and development of Danish environmental regulation in regard to industry have taken place in a rather co-operative and resilient climate, except for a few highly publicized accidents and pollution incidents in the late seventies and early eighties. The 1972 Environmental Protection Act institutionalized that the most important interest groups within industry should be consulted in matters regarding the law. Thus, the government consults industrial associations before new legislation is adopted and these have endorsed most amendments to the Environmental Protection Act<sup>17</sup>

(Miljøstyrelsen, 1997). Also at the level of implementation, the regulatory mode is rather cooperative. Industry is represented in the administrative courts deciding environmental disputes and the legislation is implemented through extensive consultation with the firms concerned (Hansen, 1997; 46). All in all, Danish environmental regulation is in many respects an illustration of the neo-corporatistic model that has often been employed to characterize Scandinavian politics. This model refers to the central position interest groups have in political decision processes (Schmitter, 1974)<sup>18</sup>.

This is not to claim that conflict does not exist. In fact, Danish industry has been increasingly concerned with some of the unilateral measures taken by the Danish authorities in recent years. Industry increasingly feels that politicians fail to protect business interests in their attempt to react quickly to public pressure. In particular, Danish industry has critically questioned national environmental regulation that go beyond pan-European regulations, worried that Danish

**Growing tensions around Danish environmental regulation**

CO2 tax: A major issue of tension has been the Danish CO2 tax scheme which imposes a tax on Danish firms based on their consumption of energy producing CO2 gases. The Danish Government passed a green tax reform in 1994 despite much opposition from the industry. Industry representatives and experts have ever since its adoption criticized the tax scheme and c<sup>17</sup> The Confederation of Danish Industries (DI) is the most influential interest group. DI is consulted, partners have when the subject is policy making affecting industry, and is always informed and invited to influence industry still fir the formation of new regulations. DI publishes on an annual basis a report, which provides implementatio recommendations of which policy areas the government ought to focus at and improve. Furthermore, Green account DI publishes discussion papers when an issue that might turn into a policy proposal and influence the to be the mos industry's latitude emerges.

This new initia and Austria a<sup>18</sup> To give a recent example of the close co-operation between companies and Danish authorities, a Business Forum was in 1996 established, with the purpose of bringing top ministers as well as top was skeptical a Business Forum was in 1996 established, with the purpose of bringing top ministers as well as top such a require business representatives together to discuss trends and interests of Danish industry. The forum essential point consists of 12 executive managers from some of the largest and most internationalized Danish forced upon b companies as well as the Prime Minister, the Minister of Finance, the Minister of Economics and the

\*) The DEPA Minister of Trade and Business. manufacturing companies will work out green accounting reports (Politiken, 97.08.20).

\*\*) DI has - in advance of a coming evaluation of the first two generations of the reports - emphasized that DEPA should not automatically link the environmental and ethical responsibility in future auditing procedures. DI is of the opinion that environmental measures are concrete and measurable, whereas ethics relies on softer, unpredictable and subjective decisions, which a company cannot give a budgetary account of (Politiken, 97.08.20).

environmental leadership can have a negative impact on industry's international competitiveness as well as cause unnecessary administrative burdens. The past few years two most contentious issues have been - and still are - green (CO<sub>2</sub>) taxation and mandatory Green Accounting Reports.

## **2. Danish environmental regulation in the age of EU integration**

Throughout the 1980s and 1990s, Danish environmental rules and regulations have increasingly been created in accordance with EU-directives. Approximately 50% of Danish environmental legislation today are EU initiated<sup>19</sup>. The growing importance of EU legislation has caused much concern and debate in Denmark because it is feared that EU procedures can work as a barrier to the evolution of the perceived progressive Danish environmental standards. In 1986, a heated debate took place in Denmark over the Single European Act, the treaties that stipulated the creation of an integrated European market with fewer non-tariff trade barriers. Many Danes feared that Denmark with the establishment of the European Market would lose its ability to implement higher environmental standards than those stipulated by EU-laws. In order to accommodate Danish concerns, the Single European Act included an exception in the treaty allowing countries to go beyond EU standards in national legislation as long as this was environmentally justified; an exception popularly called the "environmental guarantee" in Denmark. In connection with more recent amendments to the Rome Treaty - the Maastricht Treaty and the Amsterdam Treaty - Denmark has eagerly pushed for further guarantees on environmental matters. The Ministry of Environment and Energy now asserts that the basis for enforcing environmental policy across the EU has improved markedly with the ratification of the Maastricht Treaty.

In general, Denmark has pushed for EU environmental law to converge around the highest standards rather than the lowest common denominator, a position driven by fear of having to lower existing standards in Denmark. The Maastricht treaty from 1992 did eventually stipulate that environmental rules are to be shaped by a qualified majority, reducing the possibility that the slowest countries regarding environmental regulations set the pace for the evolution of environmental law in the EU<sup>20</sup>.

Nevertheless, the Danish wish to set goals beyond EU legislation continues to cause political conflict as illustrated by the current case of adapting Danish energy policy to the general European liberalization of the energy sector. According to some observers, the overriding problem is that the Danish goal of reduction of

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<sup>19</sup> The 50% estimate given by the Environmental Protection Agency, 'Miljøstyrelsen', includes all areas. In legislative areas such as plans for forestry and landscape are much more driven by domestic rules, and EU directives accounts for only 20%. Conversely, EU-directives influence more than 50% in other areas.

<sup>20</sup> The general Danish perception of Danish environmental legislation being more progressive than in the rest of Europe may sometimes rest on a misunderstanding. Most EU-rules are at the same level or fiercer than those of the 'greenest' countries. Danes are only beginning to realize this, which can be a source for irritation in other European countries (Berlingske Tidende, 98.05.28).

CO<sub>2</sub> emission with 20% by the year 2005 (the EU common goal is 8% from year 2008-12) will be jeopardized if the Danish power stations due to EU liberalization are provided the opportunity to export electricity freely. Thus, the Minister for the Environment has proposed to subjugate the power stations with CO<sub>2</sub>-taxes and CO<sub>2</sub>-quotas on exports at a level that would make exports unprofitable. Although a final Danish position on this issue yet has to emerge<sup>21</sup>, the case illustrates that Denmark potentially is willing to act unilaterally and bloc the integration process of the European market *if* environmental objectives are perceived to be threatened.

### 3. Self-regulation within industry

In recent years, new means of regulation have been introduced. One such mean is business self-regulation. Increasingly, regulators leave environmental initiatives to business, frequently encouraging these initiatives with incentive schemes or the threat of regulation. For instance, Danish companies are encouraged by government agencies to adopt the EMAS scheme<sup>22</sup>. If EMAS certified, a company can avoid the usual reporting and control procedures<sup>23</sup>. Furthermore, companies can obtain rather large financial grants from the Ministry of Environment and Energy for the development of cleaner technology and less polluting products (www.mem.dk).

In spite of these efforts, environmental management and reporting appears to be little formalized in Danish industry at present. By August 1997, 30 Danish companies had been certified according to EMAS, and this number had increased to 39 companies in February 1998. Approximately 100 companies were ISO 14000 certified by August 1997, and this number had increased to 122 companies in February 1998<sup>24</sup>. It is mainly the largest companies that go for ISO certification, in particular potential

#### Supply Chain Management in Danish Companies

Two of Denmark's largest TNCs, Novo Nordisk and Danfoss, encourages suppliers to only offer them environmentally sound products. Moreover, these have external, independent auditors and involve their critics in environmental reports. Novo Nordisk is involving a council for animal ethics in assessing its use of animal testing, is involving a council for animal ethics, and a British environmental research group, SustainAbility, is auditing the environmental report. Another example is Scandinavian Airlines (SAS) that involves an environmental NGO to review its reporting. SAS has furthermore begun to focus on reorganize in order to build up green supply chains.

<sup>21</sup> Critical voices within the economic ministries and the International Energy Agency have pointed out that if Denmark does not supply Norway and Sweden with energy, then it will be far less efficient energy producers from Germany or Poland

<sup>22</sup> The European Environmental Commissioner, Ms. Ritt Bjerregaard (who happens to be Danish), strongly favors public access to information on businesses environmental performance, but the issue about how much information should be available to the public is contentious within the European Union. Ms. Bjerregaard would eventually like to see the voluntary environmental management systems such as EMAS or ISO 14001 incorporated into EU legislation, but no concrete plans have been made to make either of the voluntary schemes binding (IER, 1996).

<sup>23</sup> The Danish Environmental Protection Agency (DEPA) is responsible for the registration and accreditation of companies. Certification and verification under the EMAS regulation is in the hands of a council under the National Agency for Development of Trade and Industry, 'Erhvervsfremmestyrelsen' (Miljøstyrelsen, 1996; 33).

<sup>24</sup> Source: 'Miljøkoordinatorforeningen'. The European EMAS does require that companies, which adopt the program, make their environmental statement available to the public (in contrast to the ISO 14001 certification).

large polluters from e.g. the chemical and graphical sectors. Thus, environmental management seems only to be in the initial process of formalization within Danish industry. This impression is supported by a survey of 153 Danish TNCs by Hansen (1996). This survey found that only 30% of Danish TNCs have a formal written environmental policy in place, and only 12% have been certified according to international environmental management standards. Although Danish companies maintain a decent ranking internationally regarding descriptions of environmental matters in annual reports, they rank far behind companies from the US according to an international analysis carried out by KPMG. The ranking is based on KPMG Consulting's analysis of 1995 annual/environmental reports from 885 companies in 13 countries.

This conclusion may evoke surprise among those observers, who thought the apparent tough Danish environmental regulations would serve as an engine for development of formalized corporate environmental management practices. However, the environmental management standards are rather new and it will take time to implement those throughout industry. But it could also be argued that the regulatory activism characterizing the Danish environmental administration may discourage companies from formalizing their environmental management systems through certification.

## **b. Summary**

For decades environmental issues have been highly salient on the Danish political agenda and the Danish government has adopted a highly activist approach to environmental problems. As a consequence, the Danish environmental legislation is considered to be among the advanced in Europe, and a major issue has been how to maintain Danish environmental standards in the age of European integration. While Danish industry generally has been supportive of Danish environmental regulation, attempts to go beyond EU standards have created growing concern in Danish industry. By the late nineties a new challenge to regulators as well as companies appeared on the agenda: The international environmental responsibilities of companies! How did these issues arrive at the agenda and how did authorities and companies address these issues? These questions will be examined in the following sections.

## **c. Environmental concerns related to FDI in developing countries**

The Danish debate on the interface between internationalization and the environment has taken two shapes. First, it has been feared that Danish firms will relocate to developing countries due to high Danish environmental standards. Secondly, it has been feared that Danish firms, investing for other reasons, may apply inferior technology and management practice at subsidiaries in LDCs.

### **1. Loss of competitiveness and industrial flight**

Like it is the case in other OECD countries, there is a widespread concern in Denmark that industry's competitiveness will be adversely affected by tough

environmental regulations and that industry ultimately may relocate production to countries with less intense environmental regulations. It is common in the Danish debate to hear the argument that industry will relocate to countries with less stringent regulations - e.g. LDCs - if Denmark insist on maintaining a leadership position in the environmental field. The following quotation from the 1996 annual report of one of the largest energy consumers in Danish industry, the steel manufacturer, 'Stålvalueværket', serves as a good illustration:

*"(Stålvalueværket) do not understand why the Danish government, at the same time as it imposes a series of environmental standards on the company, not as a natural thing ensures that the company" competitors should meet the same standards". As a consequence of this situation, the steel mill will "actively explore the options for establishing production abroad in order to allow for the future expansion which is prevented in Denmark because of environmental restrictions and costs". (Quoted from Hansen, 1997; 5)*

Another illustrative statement, was provided by the chairman of the Danish Manufactures Association quoted in 'The Financial Times' when the Danish CO2 tax was launched in 1995: *"It will certainly save energy but only because...industries will move abroad"* (Financial Times, 95.02.21).

Danish labor unions have played a leading role in relation to influencing the public opinion on this issue. In particular, unions organizing members in sectors threatened by relocation of production (such as the textile and ship building sectors) have been concerned that Danish companies may relocate production to escape stringent Danish EHS regulation. Paradoxically, what unions fiercely fought for throughout the 70s and 80s in terms of improving working conditions and obtaining special Danish regulations of hazardous work e.g. with asbestos, might put the Danish international competitiveness in these sectors at stake, and eventually cause export or outsourcing of hazardous production (Nielsen, 1996).

### **Evidence of industrial flight**

While discussions on industrial flight have generated much research in other OECD countries, little research on this issue has taken place in Denmark. Nielsen (1996) concludes that despite the attempts made to maintain production in Denmark, Danish textile industry has relocated primarily due to labor cost considerations, but he also suggests that increasingly stringent health and safety regulations in Denmark has been a contributing factor. This conclusion is based on anecdotal evidence.

Based on information on investment flows, Hofman (1996) concludes that fear of relocation of production due to lower labor costs and environmental regulations is exaggerated. He compares the import and export flows between Denmark and LDCs, and points to the fact that there are no signs of increasing imports from LDCs over the past decade whereas exports to LDCs on the contrary shows increasing tendencies. Furthermore, he points out that increasing international competition does not only result in job losses but also creates jobs in Denmark and prompts positive changes in the Danish employment structure.

Although Hansen (1998) detects a significant overrepresentation of industries with high pollution abatement costs among Danish investors in LDCs, he asserts that it is unlikely that these investments have been partly motivated by variations in environmental control costs. This conclusion is, among other things, based on a survey of investment motives in Danish TNCs.

153 Danish manufacturing companies with operations in Eastern Europe or developing countries were asked what motivated their investment there. No respondents cited variations in environmental control costs as a decisive or even contributing factor in their investment decision. Moreover, Hansen found - contrary to common wisdom holding that companies primarily invest to exploit favorable cost conditions - that more than 50% cited market access as the primary motive behind investment in LDCs, while only 18% cited cost considerations<sup>25</sup>. The conclusions of Hansen and Hofman are supported by studies from other OECD countries (see e.g. Dean, 1992, Pearson, 1984, UNCTC, 1992, Jaffe, 1995) where very few examples of TNCs relocating production for environmental reasons have been identified.

#### **Prom's flight to England**

In 1986, Proms Chemical Factory, a company that had been notorious for its repeated violations of Danish Environmental Law for almost two decades, was refused a permit to expand its production site in Denmark. Consequently, it announced that it moved part of its production to Teeside, England. Danish environmental legislation was cited as the main reason. Proms Ltd. was located in an area where it could obtain EU-grant as well as regional developmental funding. However, Proms poor environmental image from its past in Denmark led to heavy protesting from Greenpeace against the factory in Teeside. A delegation of local politicians and experts went to visit Proms in Denmark in 1991, and returned trusting that Proms Ltd. in England did not violate any environmental rules. Shortly after it was revealed in Denmark that Proms had carried out extensive swindling with the test results of its wastewater. The Danish member of the EU-parliament informed his British counterpart, and they made a joint effort to raise the question of industrial flight among countries within EU.

Regarding Proms Ltd. the suspension of payments of the mother company in Denmark meant the same fate for the UK subsidiary, and it was eventually sold in 1993 to the Danish TNC Lundbeck, which possess a much better image and attempts to comply with the chemical industry's standards for environmental responsibility; in fact, it was Lundbeck that took the lead in the exclusion of Proms from the Danish Chemical Manufacturers Association. In 1994 Proms went bankrupt. This provided the company with a judicial free ticket to escape from the numerous charges for breaking the environmental law. The case, which has been called the largest environmental case in Danish history, is not yet resolved. The two founders of Proms live in England and can not be extradited. In 1997, it appeared - based on company listings in England - that Mr. Claus Prom was planning to open a chemical factory in Kent, England, with equipment, which was removed from the plant closed by the authorities in Denmark (Nielsen, 1996, Politiken, 97.11.12, Jyllandsposten, 97.02.19).

Thus, the widespread fear of industrial flight to developing countries prevalent in Danish environmental debates appears to be largely unfounded; Danish FDI is probably only in exceptional cases motivated by variation in environmental control costs. Nevertheless, it is also clear that more research on this issue is required. In particular, it could be examined whether Danish TNCs with high pollution abatement costs are outsourcing those parts of production that are environmentally unwarranted in Denmark, and to what extent Danish environmental regulation affects competitiveness adversely.

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<sup>25</sup> Pedersen et al, 1993 reach similar conclusions in their analysis of the motives behind Danish foreign direct investment.

## 2. Corporate conduct in developing countries

Another and related issue that has entered the Danish political agenda in recent years is the environmental conduct of Danish firms operating in developing countries. Historically, companies' environmental conduct outside Denmark's borders has not been a major issue. Increasingly, however, companies, NGOs, politicians, and the media participate fiercely in the "game" of communicating this issue to the public. Stories of poor environmental and ethical corporate conduct in developing countries presented in the media stirs public debate at a growing speed. In short, international responsibility of firms is a rapidly developing policy area. The evolution of this policy area has been triggered by a series of highly publicized incidents involving Danish companies operating in developing countries:

### Cases of environmentally inappropriate business conduct in developing countries

Two examples illustrating the increasing amalgamation of political correct environmental behavior and business arrangements concerns the sale of used production equipment. In 1993, the diversified Danish TNC *DS industries* (part of the East Asiatic Company at that time) announced that it would sell the production equipment from a chlorine factory in Copenhagen. The authorities had closed down the factory because this extremely dangerous production was located in a densely populated area. The buyer of the equipment was a Pakistani consortium. The deal stirred a row in Denmark as well as in Pakistan because the production equipment sold was outdated and highly dangerous. It only fueled the controversy that the Danish Minister for the Environment during that period was lobbying for a total ban on the export of waste to developing countries in connection with the negotiations of the Basel Convention. Eventually, the sale was canceled, mainly because the Pakistani buyer withdrew. However, the case prompted the Government to propose an amendment to the Danish Environmental Protection Act requiring the most polluting Danish companies to notify countries receiving used production equipment of the permits and restrictions issued by Danish environmental authorities.

More recently, it was revealed that worn out Danish ferries were sailed to a beach in India, close to Bombay, where the ferries were chopped up in pieces for scrap. The Danish shipping company *Scandlines* sold the ferries through a British dealer to the Indian scrap industry. The cutting up is carried out under environmental and safety conditions, which are considered highly inappropriate in Denmark; four workers die per month and oil, chemicals and asbestos are led directly into the ocean. The story was at first just revealed and described by a local Danish newspaper without much public attention. But two months later a documentary titled "Operation White Wash" was shown on national television creating a public outrage<sup>26</sup>. In June 1997, the largest Danish chemical

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<sup>26</sup> The Minister for the Environment was interviewed on the radio's morning news to comment on the situation and give an evaluation of the documentary. The Minister publicly thanked the journalists for having brought the story out in light and announced a police investigation (TV and radio, 98.05.20).

manufacturer, *Cheminova*, became the focal point for debate in Denmark due to a televised documentary. This documentary produced by a team of Danish journalists revealed that *Cheminova* exports pesticides to Nicaragua and Guatemala that are not approved for sale in Denmark. The Minister for the Environment reacted immediately and declared that he wanted to get to the bottom of this case.

Consequently, DANIDA was appointed to carry out an investigation of the

#### **Cheminova's response to critical voices**

As a result of the row created by the public debate, *Cheminova* declared to change its environmental behavior. The company promised to withdraw the pesticide in liquid form from its markets in Nicaragua and Guatemala, and only sell these countries a new safer type in micro capsules. Furthermore, *Cheminova* promised in the future to make information public about how much poison is being sold in all foreign markets. The promise further entails a commitment to comply with the PIC-Convention\*, which included methylparathion on its list in September 1997. Moreover, *Cheminova* has decided that it no longer will cooperate with distributors, who can not accept full openness about the amounts of pesticides being sold. Finally, *Cheminova* pledged to use the same environmental standards all over the world.

In January 1998 it took over the Indian company, *Lupin Agrochemicals*, which is among the 10 largest manufacturers of agricultural pesticides in India. This will be its first production site abroad, and *Cheminova* has declared that it is looking for a company in South America to improve its market position in Argentina and Brazil. With reference to the newly acquired factory in India, the CEO has declared that *Cheminova* will use the EU's coming BAT-standard for the chemical industry hence setting higher standards than what the Indian government requires. This environmental effort will according to the company be very costly, and the investment will not show positive results the first couple of years (Børsen, 98.04.02).

\*) PIC stands for 'Prior Informed Consent'. The UN organization, FAO, is in charge of the PIC-list of dangerous chemicals, which have to meet certain demands of information, before exports of these are allowed. The idea of PIC is to give the receiving country's Government the highest possible information level about the chemical's characteristics, risk profile etc. In September 1998 50 countries from both developed and developing countries signed the PIC Convention (www.mem.dk, Politiken 98.03.08).

extension of and consequences of the use of methylparathion in Nicaragua and Guatemala. The case had serious consequences for *Cheminova's* image; despite alterations in corporate policy in accordance with the investigation's recommendations (see box), a 1998 survey rated *Cheminova* 'the most unethical' Danish company (Børsen, Guldnummeret, 1998). As an additional remark, the Minister for the Environment used the release of the DANIDA investigation as an opportunity to invite Danish managers to a meeting about the international environmental and moral responsibility of firms.

Almost simultaneously with the *Cheminova* debate, another case was revealed. Among its extensive activities in South East Asia, the *East Asiatic Company* produce and distribute the pesticide "Paraquat" in Thailand in cooperation with the British chemical concern Zeneca. The fact that the pesticide "Paraquat" is banned in Denmark amplified the already intense debate on corporate responsibilities in developing countries. It was revealed that farmers had died as a consequence of using the pesticide, and to make things worse, the pesticide was exported to Burma, despite the international boycott. The EAC reacted to the critique in public, and the CEO sought to defend EAC's conduct in television broadcasts. The CEO declared that the EAC regrets that people in Thailand are hurt because they do not follow the safety precautions provided in either writing or illustrations, but that "Paraquat" on balance does more good than bad. The CEO stated: "We can not control how farmers use the pesticide in

remote farming districts. *That is just the way it is*" (Politiken, 97.06.01, 97.06.04). Nevertheless, the EAC in the spring of 1998 announced changes in its business strategy to accommodate the critique raised by the public (see box).

**New co-operation between the Government, EAC and Zeneca**

The general pressure from the public in the wake of the Cheminova and EAC cases gave the Minister of Environment and Energy the opportunity to propose an arrangement between the British chemical giant, Zeneca, the EAC, and the Danish Ministry of Environment and Energy. To mediate the public outrage, EAC has offered to participate actively in a plan, which currently is being revised by the Thai government. The plan has been worked out under mutual understanding between the three parties, with the aim of reducing the amounts of pesticides being used in Thailand as well as ensuring greater safety for the farmers using it. Thus, Zeneca and EAC will be responsible for carrying out the first phase of the plan; an educational campaign to assure that the farmers using pesticides will use smaller amounts and under safer conditions. The Thai- and Danish government are responsible for the second phase; to make an effort to make more farmers convert to ecological production, which demands far less use of pesticides (Politiken & Information, 98,04,18).

After weeks of media storm against Cheminova and EAC, several Danish industry representatives countered the attacks presented in the documentary programs and newsprint as being manipulative. They expressed their disappointment with how the media seem to enjoy this way of searching for 'dirty' stories and how the public and politicians uncritically trust in what the media presents (Jyllands-Posten, 97.06.15). Nevertheless, the two main actors, Cheminova and EAC, almost a

year after (spring 1998), announced changes in their business strategies that reflects more ethical correct behavior in accordance with public pressure (see boxes).

One example stands in contrast to the other examples in terms of the fact that it was revealed by local authorities and not by a team of Danish journalists. In 1996 the Malaysian government exposed 50 foreign investors to public contempt in the media listing them as environmental sinners – among these the Danish brewery Carlsberg. According to a Malaysian expert many foreign investors try to get away with using lower environmental standards than in their respective home country. The government's method of exposing violators of environmental laws is very effective. The expert stated: "*Carlsberg did not meet the requirements for waste water, but after their name was listed in public they have got a hold of things*" (Børsen, 97.11.20).

Taken together, these and other cases have - justified or not - created an impression in the Danish public, that parts of Danish industry have not lived up to Danish environmental and ethical standards when operating in LDCs.

**Studies of Danish business conduct in developing countries**

While Danish companies' environmental performance in Denmark has been analyzed in numerous studies, very little research on the environmental conduct of Danish companies abroad exists. Nielsen (1996) has identified a few examples of Danish companies violating Danish EH&S standards when operating abroad. Hansen (1998) argues that cross border environmental management is a little developed policy area within Danish corporations. Among the 153 companies surveyed in 1995, only 17% had formalized cross border reporting and control procedures and a mediocre 12% pledged to employ Danish environmental

standards regardless of location (Hansen, 1998). These numbers suggests that cross border environmental management in Danish industry is significantly less developed than what has been found in similar international studies (see e.g. Rappaport, 1991 or UNCTAD, 1993). But the difference can largely be attributed to the fact that the Danish TNCs generally are comparably small in size. When the preliminary findings from this survey were described in a Danish newspaper under the heading "Weak environmental policy in developing countries", the Minister for the Environment called for companies to voluntarily include an informative description of the environmental conditions at their foreign subsidiaries in their green accounting reports (Berlingske Tidende, 97.12.06).

#### **d. Summary**

The international environmental responsibilities of firms has become a salient issue in the Danish political debate. By the mid-nineties, a series of highly publicized incidents have caught the attention of the public, firms and politicians, and it seems that a new policy area - and a highly "explosive" one - is evolving. Hitherto, the debate has mainly focussed on trade practices of Danish companies, but also concerns related to FDI are increasingly raised in the debate. In many ways, this debate evokes memories of the debate in the US in the wake of the Bhopal catastrophe. The late entry of this issue into the Danish environmental debate could be related to the fact that Danish industry relatively late engaged in international production. It might also be related to the fact that Danish TNCs are relatively small and thus do not carry a high profile in host countries.

## **IV. The political economy of TNCs and the environment**

By the late 1990s, the dynamic Danish environmental agenda had become increasingly internationalized. This debate was mainly concerned with Danish environmental regulation vis-a-vis EU regulation. However, also environmental issues outside Europe increasingly occupied the Danish debate. One such issue was the environmental responsibilities of Danish firms operating abroad. This section will assess how Danish polity and Danish firms so far have addressed this emerging challenge and what policy initiatives can be expected in the future.

### **a. Danish initiatives on environment and development issues in general**

It is probably fair to say that Denmark has taken the moral high ground in connection with environment and development issues. The Danish Government has eagerly pushed for the establishment of Multilateral Environmental Agreements (MEAs) and has dramatically increased environment assistance to developing countries.

## 1. Denmark and MEAs

Denmark has in various international fora advocated for the adoption of multilateral rules for the environment and has worked for the establishment of internationally binding regulations. In the UN, Denmark has suggested the establishment of a global environmental surveillance body; an initiative that suggests strong commitment to the idea of mandatory policies and measures. Denmark has supported the implementation of the provisions of global conventions on climate, biological diversity and protection of the ozone layer (the Montreal Protocol). Within the Basel Convention, it was originally a Danish initiative that led to a joint EU commitment in 1995 to push for a global agreement on prohibiting exports of dangerous waste from OECD countries to developing countries, and Danish initiatives in the field of trade in dangerous chemicals have contributed bringing the issue to the top of UNEP's agenda ([www.um.dk](http://www.um.dk)). The active line taken by Denmark in the Global Environment Facility, GEF<sup>27</sup>, is also worth mentioning. According to the Government, Denmark is dedicated to ensure that GEF-financed projects incorporate a major aspect of capacity development in those countries where projects are being implemented (*ibid*).

At Kyoto in December 1997, Denmark declared that she was prepared to reduce CO<sub>2</sub> emissions by 50% in the year 2030 if part of an international commitment. However, Denmark is strongly opposed to emission trading as proposed by the US negotiators. Denmark has in line with several other OECD countries argued that ambitious environmental targets spur technological innovation in rich and poor countries, and that environmental measures should not be perceived as a brake for economic development. The Danish Government has declared to maintain a close dialogue with Southern NGOs via the Danish resource base towards the UN Commission on Sustainable Development's 'CSD 9' in the year 2001 to assure their active participation. Denmark's primary aim of this meeting will be to reach a global agreement on the use of renewable energy ([www.folketinget](http://www.folketinget), 98.09.08).

## 2. Increasing environmental assistance to developing countries

Another indication of the Danish commitment to international environmental issues can be found in the significant environment and development aid that Denmark currently allocates. Denmark is the world's largest donor when development aid is measured as a percentage of the nation's GNP. In the wake of the 1992 United Nations Conference on Environment and Development (UNCED), the Danish government decided to establish a separate fund solely for the prevention of environmental and human catastrophes in developing countries. This fund is planned to grow steadily to reach a sum equal to 0.5% of GNP before the year 2005 in addition to the 1% of GNP already allocated for aid<sup>28</sup>. Thus,

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<sup>27</sup> The GEF is set up under the auspices of the World Bank, UNDP and UNEP. The most important task of GEF is to finance incremental costs by rendering development projects ecologically sustainable. GEF's areas of competence are: climate change, biological diversity, depletion of the ozone layer, international waters and soil erosion.

<sup>28</sup> When OECD countries met at Rio+5 in New York in June 1997 they did not reach an agreement to increase aid to developing countries for environmental protection; nevertheless,

almost 1,5% of Danish GNP will be spent on total official development assistance, an amount equal to approximately 15.5 Billion DKK. Danish official development assistance has thus in recent years become increasingly focused on environmental improvements in developing countries. This aid is channeled through two major agencies, DANIDA under the Foreign Affairs Department and DANCED under the Environment Department.

### **DANIDA**

The Danish development aid agency, DANIDA, administers assistance to developing countries through bilateral and multilateral programs. Multilateral aid is primarily channeled through the United Nations system. Previously, Danish aid was project oriented and individual projects all over the developing world was sporadically supported. In recent years bilateral aid efforts have been focussed to cover only 20 selected developing countries. In addition, DANIDA has taken a "Sector Program Approach", which means that DANIDA increasingly will support activities within an entire sector in one country. DANIDA is currently carrying out an environmental "rearmament" of all its activities, in coherence with the general policy priorities outlined by the Danish parliament. Thus, environmental sustainable development has become a key cross cutting priority for all DANIDA projects and a growing number of projects are directly aimed at improving environmental conditions in developing countries. For instance, DANIDA has bilateral projects that seek to improve the environmental effort within particular sectors in selected countries e.g. urban development and industry in Zimbabwe or environmental training programs in India. Multilaterally, the environmental "rearmament" means that UNEP, in many cases, has been able to act as a catalyst in channeling DANIDA funds into the promotion of activities in developing countries aimed at environmentally sustainable development ("Policy Issues and Danish Objectives", www.um.dk, 1998).

### **DANCED**

DANCED is an abbreviation for "Danish Cooperation for Environment and Development". DANCED was created in the aftermath of Rio to administer ODA earmarked for environmental problems and catastrophes in developing countries. DANCED is placed in the Ministry of Environment and Energy. Ideally, DANCED and DANIDA operate in close coordination, and has a mutual counseling commission, in which representatives from e.g. the private sector and NGO's participate. A division of labor has been established: DANIDA is responsible for channeling environmental aid assistance to the poorest developing countries in South East Asia and southern Africa and DANCED cooperates with developing countries that are "better off" and have reached development stages where environmental problems resembles those of Denmark <sup>29</sup>.

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Denmark decided to continuously increase its development aid in the coming years, particularly for the environmental purposes.

<sup>29</sup> The selected countries are Malaysia, Thailand, Botswana, Lesotho, Namibia, South Africa and Swaziland.

## **b. Initiatives directly targeting international activities of firms**

From being virtually a non-issue, the environmental responsibilities of Danish firms abroad has become a salient issue in recent years. The comparatively activist approach characterizing Danish environmental politics seems to have been extended to include this new policy area. Mainly four types of initiatives directed at improving environmental performance of the private sector can be identified: 1. Pushing for binding international environmental agreements on investment activity; 2. Calling for the integration of environment dimensions in international trade and investment agreements; 3. Emphasizing aid projects that improve environmental performance of the private sector; 4. Issuing rules and guidelines for foreign investors on an unilateral basis.

### **1. Promoting environmental agreements**

Many of the MEAs that Denmark support are directly relevant to activities of TNCs. In the negotiations on the Basel Convention, the Danish Government has pushed for larger openness about export of dangerous chemicals beyond the European level and furthermore suggested to improve the PIC-Convention (consult footnote 31). During negotiations in 1998 on the PIC-Convention Denmark advocated for including an additional goal in the convention: a commitment to help LDCs with removal of unwanted chemical stocks. Only few countries have supported this proposal so far. Another example where the Danish Government encouraged fellow EU countries to take action was in the wake of the initiative to avoid accidents due to improper use of pesticides (the result of the exposure of EAC's business conduct in Thailand described above). The Danish Minister for the Environment encouraged fellow Ministers to work out similar government-business initiatives with the purpose of protecting the environment and meet public demand for corporate social responsibility. It is believed that such multilateral initiatives can put aside never-ending discussions of regulation and instead encourage co-operation between TNCs and regulatory authorities.

### **2. Integrating the environment in trade and investment agreements**

#### **Trade**

An important feature of Danish participation in trade negotiations is her staunch support for integrating trade and investment agreements with environmental and social dimensions. At the WTO Ministerial Conference in Geneva in May 1998, Denmark supported an evaluation of existing agreements

including the possibility of expanding the work on new issues in coming negotiations - in particular the so-called soft issues such as environment, labor rights, and development. These are all areas that have a high priority for

#### **Toward more transparency in trade and investment negotiations**

Denmark has within the EU advocated for that the Ministerial Conference emphasizes more openness and transparency in WTO's work. In addition, to overcome the lack of interest or awareness from the public regarding MAI as well as to overcome negative critique of MAI, Denmark has been advocating more transparency and openness in the proceedings. Several Danish politicians see the postponement of the finalization of the MAI as an opportunity to create more debate and discussion in a more democratic manner.

Source: Representative from the Foreign Ministry, April 1998.

Denmark<sup>30</sup>. A particular important issue for Danish negotiators has been the potential conflict between MEAs such as the Basel Convention and the Montreal Protocol and free trade rules in the GATT and the MAI. In contrast to the position of many LDCs, Denmark argues that MEAs trade rules should have priority over free trade rules stipulated in trade and investment agreements.

## Investment

Denmark worked actively for including environmental provisions in the Energy Charter Treaty (ECT). The ECT is an EU initiative with the aim of that Western countries should have free access to invest in the energy sector in East European countries and the former members of the Sovietunion. In return, these countries should have free access to export their vast oil and gas resources to West European Countries<sup>31</sup>. At the OECD meeting held on April 2, 1998, the Danish Minister encouraged that OECD add environmental evaluations to their current publications of recommendations in policy areas within for example agriculture and developmental aid (Børsen, 98.04.02).

### The Parliament's debate on MAI

The following is a translation of parts of the Danish Parliament's final text, passed after Parliamentary vote April 23, 1998, setting the terms for the final MAI negotiations in April 1998:

*"While the Parliament refers to the importance for both industrialized and developing countries for clear, transparent international rules regarding the protection of foreign investments on the basis of the principle of non-discrimination, the Parliament encourages the Government to work for an agreement of MAI, which: respects the principle of sustainable development and international commitments within the environmental area, - does not exclude national environmental regulations and ensures, that this is not interpreted as expropriation, ...includes a binding decision about that it is not allowed specifically or generally to lower environmental and labor standards to attract foreign investments,..."*

Source: www.f<sup>30</sup>

At the WTO Ministerial Conference in Singapore in 1996, the Danish Minister for Development Co-operation, opened his address by expressing: "Denmark is among the staunchest supporters of liberalization in the framework of multilateral trading system" and also claimed: "The outcome of two years work in the WTO on trade and environment is disappointing". He further expressed that Denmark wish to push for the WTO to be forward-looking and maintain its pivotal role by focusing on two topics in the future: Trade and Developing Countries, and the Consumers role in International Trade. In relation to the second topic, the Minister claimed: "If the consumers feels that the WTO takes no interest in his main concerns, the WTO and the aim of liberalization of trade will lose public support. That is a key reason why Denmark urges the WTO to move ahead on environment and fundamental labor rights". He continued: "What I have said about environment and fundamental labor rights also applies to investment and competition: for the WTO to remain the leading force in trade liberalization (...) an operational response is required in relation to investment and competition" (www.um.dk, Speech, Singapore 1996).

<sup>30</sup> 52 countries have signed the ECT. Of these 33 countries have so far ratified the treaty.

<sup>31</sup> Originally, the MAI negotiations should have been concluded in May 1998. By April 1998 it was clear that the scheduled finalization of MAI in May 1998 would have to be postponed another year because the 29 OECD countries still dispute over several aspects.

<sup>32</sup> Before 1998 the MAI discussions had not caught any special political interest or public attention. Not even business had paid much attention and Danish NGO's only reacted as NGOs from other OECD countries launched a campaign against the MAI. They have pointed out that TNCs environmental and ethical behavior, in particular when investing in developing countries, ought to be taken into consideration when formulating the rights and obligations of TNCs in MAI. In general the NGOs fear the only ones benefiting from the MAI will be the world's 500 largest TNCs (Information, 98.04.21).

The environmental aspect of the negotiations of a Multilateral Agreement of Investments (MAI)<sup>32</sup> became an issue for debate in Denmark in the course of 1998<sup>33</sup>, and Denmark has advocated the inclusion of environmental issues in the negotiations. Thus, Denmark has strongly supported the

inclusion of a reference to sustainable development as reflected in Agenda 21 in the MAI agreement's preamble. Moreover, Denmark supports a binding obligation to "not lowering standards". Lastly Denmark supports that the OECD Guidelines on Multinational Enterprises should be annexed in the MAI text. In general, Denmark hopes that an integration of environmental issues in MAI can stand out as a role model for future upgrading of the environment in the WTO.

### 3. Using environmental development assistance to improve corporate performance

The gray zone between aid and FDI plays a growing role in relation to improving environmental performance of Danish investors in developing countries. Official Danish development assistance has always been closely linked to commercial interests. The objective is that for each 2 DKK that is spent by the State, 1 DDK should come back in return to the Danish economy through industry contracts and deliveries<sup>34</sup>. As environmental issues have become more prominent on the aid agenda, means to link aid and commercial activities in the field of the environment have been sought for. The aim is to support companies in improving their international environmental performance and to utilize the significant environmental expertise in Danish industry build up through 30 years of intense environmental regulation.

As part of the DANIDA Sector Program approach, a Private Sector (PS) Program was initiated in 1994. The PS program supports joint ventures between local industry and Danish investors with the aim of creating positive "spill -overs"

in terms of transfer of Danish technology, know-how and environmental standards to the host country as well as to improve local working conditions. Danish partners applying for DANIDA grants under the PS program have to comply with the following conditions listed by DANIDA: 1) As a minimum, the company must comply with national environmental standards in the respective country, and DANIDA encourages companies to implement environmental improvements which exceed these standards. 2) Grants from DANIDA will only be disbursed when a permit from the National Environmental Protection

#### Environmental aid to joint venture in Africa

In 1995 the Danish refrigeration manufacturer *Derby A/S* went into a joint venture established through DANIDA's Private Sector Program with the Zimbabwean company *Imperial*. Before the joint venture, *Imperial* produced approximately 9,000 refrigerators a year manually, causing much waste of chemical gasses and putting workers health at risk. The joint venture meant starting from scratch in new facilities with state-of-the-art technology which opened for the possibility to build in environmental precautions and sustainable production methods in the early design phase. Today 160 employees manufacture 35,000 CFC-free fridges/freezers a year. Hence, this project provides a practical example of private sector initiatives to implement the provisions of the Montreal Protocol on the phasing out of CFC products. The person in charge of project activities at *Derby*, states that *Derby* is a commercial business with focus on the bottom-line. "If DANIDA did not earmark money for specific environmental efforts, then we had most likely chosen a simple version rather than complying fully with Danish standards". Thus, environmental conditions was not initially highly prioritized by the Danish investor, but to obtain DANIDA's financial and organizational support, *Derby* had to comply with DANIDA's policy requirements (Erhverv & Ulande, Marts 1998).

Agency has been obtained. 3) DANIDA recommends the selection of processing

<sup>34</sup> The return percentage for the bilateral Danish development assistance was 60% in 1994 and 59% in 1995. If all NGO-assistance is included, it came up to 73% in 1994 and 71% in 1995 (Danida Nyt, www.um.dk).

technology guaranteed to result in the least possible amount of pollution and with regard to the working environment, solutions requiring minimum safety equipment are recommended. 4) ILO conventions have to be observed as part of conditions governing the working environment. 5) If the applicant intends to implement a project in an area where the soil is heavily polluted due to prior industrial activity, the soil must be decontaminated before the program can grant support. Support for decontamination projects can be considered. 6) The purchase of DANIDA supported equipment must meet Danish/international environmental rules and regulations. These conditions are by no means exhaustive, and DANIDA reserves the right to determine specific conditions for individual projects (DANIDA, 1997;6)<sup>35</sup>.

More recently, DANCED has build a parallel program to the PS program for pure environment projects, the so-called Partnership Facility (PF). The underlying

**An example of DANCED's Partnership Facility**

A Malaysian expert, cited in the Danish newsprint, accentuate the Malay-Dane palm oil manufacturer, Børge Bek-Nielsen, *United Plantation Group*, as setting the environmentally perfect example for other large companies. Børge Bek-Nielsen introduced the idea of using the waste from the palm oil industry as fuel. His company, *United Plantations*, is therefore considered being a role model for all industry in Malaysia. At present, the Malaysian Technological Institute, SIRIM, are negotiating with Børge Bek-Nielsen and a Malaysian company to carry out a project to build technological sophisticated kettles, to generate huge amounts of energy to the palm oil industry – a project financially supported by DANCED's Partner Facility Program (Børsen, 97.11.20).

aim of PF is to encourage Danish companies to participate in environmental projects that are conceived locally in Malaysia and Thailand. In other words, it is a requirement that the projects are demand driven. The project ideas outlined by the local partner are to be developed through a joint project design by drawing upon the knowledge and experience found within the Danish Ministry of Environment and Energy as well as

the Danish company's know-how (MiljøDanmark, 1997:6). At present, the project described in the box is under implementation, and DANCED is appraising several other applicants.

**4. Issuing rules and regulations for foreign investors**

Finally, various unilateral Danish initiatives aimed at improving the environmental performance of Danish foreign investors can be identified. These initiatives are only rarely in the form of binding regulation and

**Public opinion of international responsibilities of Danish firms**

There appears to be a strong willingness in the Danish public to ensure that Danish firms act responsibly abroad. In a large survey\* with the title "The Danes view of Industry", the range of questions regarding industry's involvement in the education system and its image were posed. Several questions about corporate environmental responsibility were presented in the form of dilemmas. A small majority of the respondents found it reasonable to move production to countries where production conditions are best. Breaking down the majority, it is noteworthy that it was industry's own employees that led this opinion, whereas many women and voters to the left disagreed. However, there was profound majority favoring that Denmark shall take the lead position as a

competitive program as well as the mixed credits scheme as two very promising examples of a dynamic co-operation between official development assistance and private investments. DI argued that after years of decline in Danish aid to the manufacturing sector, it was a positive change that commercial Denmark to interests now had become recognized as an important engine in development assistance (DI (4), 1996).  
majority of bo  
Danish indus  
companies. Source: DI (2), 1997.

\*) The survey is based on 1,102 telephone interviews with Danes of the age above 18 years and was carried out during November 19-26th, 1997. In addition, 100 politicians with various in central or local government were asked the same questions.

typically of a voluntarily or incentive based nature.

### **Binding regulation**

It should be noted that no binding provisions exist in Danish law requiring Danish corporations to meet certain environmental minimum standards in foreign investment projects. Nor does there exist examples of Danish companies being held liable at Danish courts for poor environmental performances abroad. The only exception to this is recent amendment to the Environmental Protection Law which requires highly polluting companies, in accordance with the Basel Convention and the EU regulation 259/93<sup>36</sup>, to inform the recipient country of production equipment permits and restrictions issued by Danish authorities. However, this regulation is aimed at trade of waste and equipment, *not* FDI. Clearly, the reluctance to regulate the conduct of foreign subsidiaries of Danish companies derives from the fact that legally binding extra-territorial measures may conflict with the liberal Danish position in trade and investment negotiations.

In 1998, the Danish Parliament requested an examination of the export of environmental hazards from Denmark to developing countries, *inter alia* those hazards that TNC subsidiaries may be responsible for. A working group under the Technology Council – an advisory body for the Parliament - was established to describe the extent of the problem and to make recommendations for possible future regulatory initiatives in the field

### **Guidelines**

Thus, unilateral regulation of firm's international environmental conduct is virtually non-existent, mainly because such measures would conflict with Danish

commitments to trade and investment liberalization. Instead, efforts have concentrated on voluntary and/or incentive based measures. The probably most important such effort is IFU's Environmental Guidelines. These guidelines – which are mandatory for all IFU partners – are important because IFU participates in around 50% of all Danish investment projects in developing countries (Hansen, 1997). Hence, IFU's activities regarding the environment may be of significant consequence for the international conduct of

#### **IFU's Environmental Policy: Best Judgement Declaration**

The first level is an indispensable requirement for compliance with the environmental rules and regulations of the host country.

The second level is based on the "Best Practice Declaration" submitted by the Danish partner, in which deviations from the Danish environmental regulations (critical environmental parameters) are identified and quantified.

The third level involves an assessment of these critical environmental parameters (deviations from Danish environmental regulations based on World Bank Environmental Guidelines, in order to establish whether IFU can accept participation in the project and in the affirmative agree to specific, time-limited improvement plans, control indicators, etc.

Post-investment procedure: continuous monitoring of environmental indicators is required of project companies, which according to the first three levels are described as particularly polluting, as well as the ones that deviate significantly from Danish rules and regulations and/or World Bank Environmental guidelines. Hence, IFU shall thereafter assist in making sure that management in the project companies is continuously assessing whether the above-mentioned indicators remain, under the circumstances, at an acceptable level through an annual environmental status report (IFU, 1998).

<sup>36</sup> Regulation 259/93 has been applicable in Denmark since 1994. It applies to all kinds of waste, and supersedes previous EU rules that only applied to hazardous waste, and includes principles that emanates from the Basel Convention ([www.mem.dk](http://www.mem.dk)).

Danish firms<sup>37</sup>. Reacting to the intensifying public debate on Danish companies environmental responsibility abroad as well as seeking to minimize elements of uncertainty, IFU worked out an Environmental Policy in 1996. IFU stresses that the Fund possesses neither the capacity nor the technical knowledge to function as an environmental inspector. Consequently, IFU's environmental policy is in practice based on a procedure under which the Danish partners are responsible for implementing environmental, health and safety standards in accordance with IFU guidelines. At present, IFU is conducting a detailed environmental review of internal and external environmental conditions in projects co-financed by IFU in India. One objective for this review, scheduled to last for two years, is to counter the media's critique of IFU's involvement in projects with environmental problems (IFU, 1997, Erhverv & Ulande, 1998).

### Industry initiatives

Apparently, the international responsibilities of Danish firms have not been an issue of major concern in Danish industry associations. In fact, it seems that

#### **Danish Industry and the ICC Business Charter for Sustainable Development**

In 1991, when the ICC Business Charter for Sustainable Development was first introduced, only 6 Danish companies signed the charter of which 3 were among the largest TNCs in Denmark and highly international: Danisco, Grundfos and Bang&Olufsen. (Børsen, 91.11.05). By March 1998, 83 Danish companies/organizations have signed the ICC Charter for Sustainable Development. Among these are several SMEs (and 7 municipalities), only operating in Denmark. Therefore the number of TNCs possibly operating abroad at a quick glance is reduced to approximately 50%. Moreover, a number of the leading Danish TNCs are not to be found on the list.

Danish industry has been rather reactive on these types of issues. In 1991, just 6 months before the Rio Conference, a majority in the Confederation of Danish Industry voted *no* to make a collective commitment to sign the ICC Charter on Sustainable Development. In particular, it was the so-called 3<sup>rd</sup> statement in the ICC Charter that requires a "commitment to use the same criteria all over the world", which

caused the critical hurdle in the confederation's negotiations (Børsen, 91.11.05). Eventually, it was recommended that members should independently decide whether they want to sign the ICC charter or not (see also box).

### Initiatives by labor unions

The Danish Textile and Garment Union has in co-operation with trade union counterparts abroad, developed health and safety guidelines and standards for international trade and investment. In 1993 an international agreement was reached in connection with the so-called 'Magna Charta' within the industry. Signing the 'Magna Charta' commits the sector to ban child labor, prevent accidents, use environmentally friendly production methods etc. The Danish Textile and Garment Union hopes that 'serious' companies as a consequence of the

<sup>37</sup> The potential effect of IFU's policy on the performance of Danish TNCs is comparable to what in an OECD overview of literature on FDI and the Environment is described as the "halo effect". This notion is meant to describe how performance requirements set by multilateral agencies such as the World Bank can effectively become a de facto requirement for all participants in a project (OECD, 1998).

agreement will maintain production in Denmark and reject to buy cheap sewing time abroad where working conditions are poor, instead prioritizing the well-being of the employees and the improvement of working conditions (Nielsen, 1996; 23).

The National Danish Labor Union (LO) expresses in its Environmental Action Plan from 1997 that a continued effort internationally to reach and enlarge agreements to use environmental minimum standards is of outmost importance. To assure that minimum standards are implemented, LO suggests that creating stronger ties between workers in different countries within the same sector or within the same multinational company could be an assuring tool. Furthermore, it suggests that collective agreements across national borders could be made in multinational companies to push for higher company internal standards. In addition, LO believes that co-operation between supervisory bodies in import and export countries must be strengthened to provide the supervisory authorities in the import countries greater insight to possible environmental and safety problems linked to a given product (LO, 1996; 56).

### **Initiatives by individual companies**

In the absence of clear industry association initiatives and standards, leadership in regard to tackling international environmental problems and developing standards for international environmental conduct has mainly been exercised by individual companies, as the following 3 examples will illustrate:

*Novo Nordisk*, a pharmaceutical company and one of Denmark's largest TNCs, was among the first companies in Denmark to develop a written environmental policy and has since 1975 adopted elaborate policies and procedures for environmental management. Around 200 corporations worldwide publish international environmental reports; having issued international reports since 1993, *Novo Nordisk* is to be found among those companies. In the 1994 report, the company announced a series of goals for the entire corporation. The report was verified by the British SustainAbility, and although largely positive SustainAbility e.g. pointed out the importance for *Novo Nordisk* in the future to involve all foreign subsidiaries in its reporting. To this *Novo Nordisk* responded that it aims at creating comparable standards for the entire corporation and to encourage the diffusion of *Novo Nordisk* standards to suppliers and subcontractors. In 1996 and 1997 SustainAbility again rated *Novo Nordisk*'s performance, this time against the 16 points of the ICC Charter, and all recommendations pointed to the need for a greater focus on the international coordination of its environmental performance. Consequently, *Novo Nordisk* will address this need by ensuring local commitment to environmental excellence and target-setting at site level. In addition, it has already devised a network of environmentally responsible managers from its nine largest sites, who will meet annually to discuss shared environmental challenges and how to ensure progress in environmental performance. In the future, the company will e.g. establish a system for the collection and comparison of data from foreign subsidiaries on workers health and safety issues. It will furthermore make an assessment of environmental training activities world-wide. Thus, the new 1998-2002 target is: *"Integrate environmental issues into our management systems. Environmental*

*issues will be audited*". (Novo Nordisk, 1994 & 1997, Politiken, 96.09.18). An example of Novo Nordisk's international environmental activities is its activities in China starting in 1995 through a joint venture with the Suzhou Hongda Group. At the plant starch-degrading enzymes for the alcohol industry is produced, and Novo Nordisk states that the environmental conditions at the plant goes far beyond compliance. Production capacity was increased and a number of investments were made to improve the environmental performance of the plant during the joint venture's first year. For example, untreated wastewater had previously been discharged directly into a local river. With the establishment of a biological wastewater treatment plant levels of organic material measured have been reduced by over 90%. At its new plants in Tiajin, which Novo Nordisk officially opened in 1997, operations will be state-of-the-art with regard to both technology and environmental performance. Furthermore, environmental protection measures developed at other Novo Nordisk enzyme plants are being built in from start. The Chinese Government has expressed much satisfaction with Novo Nordisk investments because of their contribution in terms of improving local environmental conditions as well as training local people to think more green (Novo Nordisk web page).

A growing number of companies are demanding suppliers including those in LDCs to meet certain environmental standards. An example is the relatively small Danish textile manufacturer, Novotex, which sets stringent standards for its suppliers. Novotex argues that its environmental policy is formulated with point of departure in the Brundtland Commission's definition of sustainable development. Recognizing the Earth's natural ecological and sociological systems, Novotex strive for maintaining its position as an innovative industrial producer of environmentally friendly textiles and additionally promote sustainable production for among other things 'Green Cotton' products. Novotex will continuously transform these objectives to practical action. The exploitation of natural resources will be based on the principle of minimizing resource consumption, limit pollution to a minimum and achieve the highest possible level of human well-being. Moreover, the company reports that this policy is not only applicable inside the Novotex framework, but applies to the product from cradle to grave. In selecting suppliers, environmental factors will be decisive. The evaluation of suppliers will focus on the environmental quality of the product as well as each supplier's management of its environmental impacts. Novotex has won several awards for its Green Cotton concept, including awards for its work with Third World cotton farmers changing to ecological cotton production (Novotex, 1994/95). As a consequence of Novotex's environmental screening, a Greek supplier decided to change its production methods to obtain the first ISO 14001 certification in Greece to assure its future co-operation with Novotex (Renere Teknologi, 1998; 3).

*Hydro-X* is a small Danish chemical manufacturer with only 17 employees in Denmark. Nevertheless, *Hydro-X* posses an impressive market share within its field due to its unique product for cleaning and protection the metal parts in various types of power plants. In 1994 *Hydro-X* established wholly owned production facilities in China similar to the facility in Denmark implying a corporate decision to use the same standards in China as in Denmark, meaning to obtain ISO

14001 certification in China and use state-of-the-art technology. This is done despite the fact that the neighboring company in China, a color manufacturer, colors the river blue and red, according to Hydro-X's Managing Director. The philosophy behind this is partly moral, but Hydro-X also want to position itself in relation to the growing number of foreign companies operating in China that demands environmentally friendly products. Hence, Hydro-X is up against large competitors such as Dow Chemicals and Analco in the race of capturing the market. Like e.g. Coca-Cola, Hydro-X has been exempt from all import and export restrictions, because the Chinese Government considers Hydro-X's products essential for the Chinese district heating supply. In Tianjin, where Hydro-X is located, the 9 million inhabitants are supplied through 10,000 damp kettles and 4,000 district heating kettles, that severely needs chemicals such as the ones Hydro-X produce (Kristeligt Dagblad, 98.03.17 & Børsen, 94.06.20).

### **c. Summary**

The comparatively activist Danish approach to environmental problems seems to be in the process of being extended to the international arena. Denmark has been an ardent proponent of MEAs and has allocated substantial funds for environmental development assistance. As the environmental problems of Danish firms operating abroad entered the political agenda by the mid-nineties, Danish firms and authorities have explored various ways to address these problems. It seems that the preferred approach materializing has two main ingredients: On the one hand to work for the adoption of international rules and to support the integration of environmental dimensions in multilateral trade and investment agreements. On the other hand, to adopt unilateral programs to support and subsidize high environmental performance of Danish firms operating abroad. Thus it seems that Denmark will target parts of the vast environmental development assistance funds for environmental upgrading of Danish investment projects. In a country where the internationalization process to a large extent is carried by SMEs, the support of state funds and agencies in addressing environmental problems associated with international production is vital as such support may compensate for the disadvantages that SME TNCs may experience in regard to managing the environment across borders.

By establishing schemes in close collaboration between the State and the private sector, it appears that the main actors in this emerging policy field are seeking to extend the Danish corporatistic approach of 'normal' environmental regulation to the types of problems generated by internationalization. Although Danish industry initially was rather reactive on these issues it seems that new cooperative constellations between the private and public sector at home and abroad are evolving, thereby extending the Danish tradition for close cooperation between the state and the private sector to this emerging policy field.

## **V. Conclusion**

Environmental problems have for more than two decades consistently had a high priority on the Danish political agenda. The focus of the debate has changed

from concentrated chemical pollution to diffuse multi-source problems; from problems related to industry to problems related to agriculture and households; from destruction of natural habitats to dangers to human health and safety. In the wake of the Rio conference, focus has increasingly been directed towards environmental problems outside Denmark's borders and efforts to assist in the solution of environmental problems in LDCs have been initiated. Simultaneously with the evolution of Danish environmental legislation Danish industry has become increasingly internationalized. Denmark has traditionally concentrated commercial activities in nearby countries and only relatively late did Danish industry engage in international production. In recent years, however, Danish firms have increasingly moved into developing country markets, South and South-East Asia being the most important locations. In this connection, the environmental responsibilities of Danish foreign investors have become an issue and a series of incidents involving Danish firms have opened a new chapter in Danish environmental debates.

While elaborate programs and regulations have been established to deal with industrial pollution and work place health and safety issues in Denmark, the environmental responsibilities of firms operating abroad remains an embryonic policy area. This might be related to a dilemma endemic to Danish international relations: On the one hand Denmark is a highly open economy extremely dependent on trade and investment relations with the world. Consequently, Denmark has historically been a staunch supporter of trade and investment liberalization. On the other hand, Denmark is a strong advocate for integrating environmental dimensions in international trade and investment agreements and reserves its right to protect high Danish standards, even if this may impede trade and investment. The search for measures to control firm's environmental conduct abroad has placed Danish policy makers in exactly this dilemma as environmental measures for foreign investors – be they unilateral or multilateral – are very likely to jeopardize free trade and investment flows.

Danish attempts to resolve this dilemma are still evolving. However, it seems that a modus for addressing environmental problems related to FDI and trade without jeopardizing Denmark's liberal stance in trade and investment negotiations is materializing. The key is on the one hand a strong advocacy for the integration of environmental dimensions in multilateral trade and investment agreements, and on the other hand the introduction of subsidies and other support schemes designed to unilaterally improve the international performance of Danish companies - without violating Danish commitments to liberal trade and investment regimes. In short, the action taken in Denmark to address environmental problems of Danish firms operating abroad provide an interesting case of a small open economy attempting to find a sustainable modus between economic openness and environmental activism.

## VI. Annexes

### a. Total Danish outward FDI listed by regions and countries

Year	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
<b>EU (EEC until 1992)</b>	244	332	229	684	564	676	510	708	646	1087	1180	1460
United Kingdom	71	114	39	199	122	328	212	141	151	286	710	560
Germany												
Sweden	58	93	79	177	86	73	28	133	53	213	246	219
Norway	58	65	18	116	25	51	72	52	51	60	94	82
Suisse/lichenstein	11	23	106	13	9	158	64	38	9	112	73	183
USA	102	85	18	32	213	218	209	338	229	552	1169	1331
Japan									0		8	9
<b>OECD (Non-EU)</b>	229	266	221	338	333	500	373	561	342	937	1590	1824
<b>OECD countries (- Poland&amp;S.Korea)</b>	544	712	489	1221	1019	1504	1095	1410	1139	2310	3480	3844
<b>Other (until 1983)</b>	165	380	165	342	422	344	447	631	355	767		
Mexico											7	18
Latin America											347	123
South America											45	7
Africa											20	21
NIC (Malaysia, Thailand, Singapore, H.K., S.Korea,Taiwan,Phillippines)											106	75
Rest of Asia											38	11
Asia (NIC & rest)											144	86
<b>Less developed countries</b>											563	255
<b>Eastern Europe</b>											7	0
<b>LDCs &amp; Eastern Europe (after 1983)</b>											570	255
<b>TOTAL</b>	638	978	615	1363	1319	1520	1330	1900	1342	2790	3456	3789

Year (continued)	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
<b>EU (EEC until 1992)</b>	2142	3232		12987	7806	8295	7317	4728	4699	9630	13980	14157
United Kingdom	942	1610	1253	3513	2220	2389	3466	2076	1157	861	1427	3060
Germany			1052	1267	1213	985	814	514	1371	2876	932	2887
Sweden	358	380	136	712	1344	2414	2089	1396	428	2247	4433	5044
Norway	327	182	354	325	273	294	342	409	896	328	369	706
Suisse/lichenstein	240	188	66	819	323	118	41	964	268	2260	756	1684
USA	2081	949	1428	802	1263	635	669	1511	3497	5264	1129	1871
Japan	71	48	178	33	187	173	167	172	104	78	188	n.a.
<b>OECD (Non-EU)</b>	3077	1747	2162	2691	3390	3634	3308	4452	5193	10177	6875	9305
<b>OECD countries (- Poland&amp;S.Korea)</b>	6161	6589	7663	20458	14629	15303	14905	11770	12420	23544	23214	29409
<b>Other (until 1983)</b>												
Mexico	6	54	13	105	85	45	0	16	21	262	98	144
Latin America	63	254	100	77	60	9	15	10	82	44	13	4
South America	79	60	7	12	9	61	340	81	63	91	161	63
Africa	115	33	34	21	10	9	7	17	33	55	140	209
NIC (Malaysia, Thailand, Singapore, H.K., S.Korea,Taiwan,Phillippines)	121	184	97	781	99	882	201	295	222	747	89	356
Rest of Asia	7	9	46	12	54	65	44	72	416	482	433	720
Asia (NIC & rest)	128	193	143	793	153	947	245	367	638	1229	522	1076
<b>Less developed countries</b>	391	594	297	1008	317	1071	607	491	837	1681	934	1496
<b>Eastern Europe</b>	1	17	9	20	10	60	91	265	308	1122	1465	1327
<b>LDCs &amp; Eastern Europe (after 1983)</b>	392	611	306	1028	327	1131	698	756	1145	2803	2399	2823
<b>TOTAL</b>	5865	5899	6022	17323	12014	15391	11740	10811	11480	20491	18935	22096

## b. Danish FDI in case countries - trends and figures.

### 1. Introduction

Figures from the past few years reveal a boom in Danish FDI in China and India, which reflects that Danish companies wish to participate in the global competition with regards to capturing market shares in these two immense future growth markets. In addition, the creation of more investor friendly environments in terms of opening up towards foreigners has encouraged Danish companies to invest in China and India. Denmark made bilateral investment protection agreements with China in 1987, India in 1994 and Malaysia 199x. Regarding environmental aspects, the agreement with India includes an exception for National Treatment due to the Bhopal catastrophe.

In relation to investors possessing environmental technology and know-how China and India are "green fields" for investors, whereas Malaysia in some sectors is demanding more advanced products and services.

According to registrations made by the Danish National Bank of total Danish FDI in millions of DDK, the development look as the following:

	1990	1991	1992	1993	1994	1995	1996	1997
China		-	-	-	118	174	264	524
India				6	84	58	47	144
Malaysia	54	585	32	128	61	-	21	9

Source: The Danish National Bank, June 1998.

In comparison to the figures for China, India and Malaysia, the 1997 FDI to NIC countries are 356 million DDK, and what is selected under one group as "the rest of Asia" comes up to 720 million DDK (Danmarks Nationalbank, June 1998).

### China

In continuation of the figures in the table above, the Danish foreign Ministry estimates that the total size of Danish FDI in China adds up to between 1-2 billion DKK (EXPORT, 21/1996).

By 1997, the Royal Danish Embassy had listed some 90 Danish companies present in China, of which the largest part are representation offices, 22 are joint ventures and 14 wholly owned subsidiaries. Many of these investments have been established in cooperation between the Danish company and the Industrialization Fund for Developing Countries, IFU, which function and operations is described in section II.d and IV.4. An example of IFU cooperation is *FLS Industries'* investments in China. FLS Industries has operated in China for many years and delivered half of the countries cement factories. Another large investor in China is the shipping company *A.P. Møller* (internationally known as *Maersk*), which was the first company to introduce containers in China in 1979. It is today the largest non-Chinese shipping-business in China – a position the company wants to maintain

by having increased its number of employees in China. (JP, 94.01.19). Despite a few dominant Danish investors, the number of Danish investments are very modest in comparison other large European investors such as Germany and France having around 1000 investment projects in China. Like other foreign investors, Danish investors also establish themselves in China's coastal areas. Sector wise, the Danish companies investing in China are mainly the industries, which traditionally invest in emerging economies. This implies several of the largest Danish TNCs, and covers the following sectors: construction and infrastructure, breweries, pharmaceuticals, chemicals, food ingredients and shipping.

The Danish Embassy in Beijing reports that Danish environmental is well recognized in China, and will continuously experience demand in particular because the Chinese Government increasingly gives the environment a high priority. In addition the Embassy foresees opportunities for Danish investors and exporters within the sectors: wind energy, infrastructure, food, farming and agro-industrial equipment & machinery. Since 1985 a bilateral agreement the Government of Denmark and the Chinese Government on the promotion and reciprocal protection of investments has been in place.

### **Mixed Credits**

China has been the far biggest receiver of projects financed with mixed credits, but the Chinese Trade Ministry froze Danish-Chinese relations in 1997 due to Denmark's lead role in criticizing China's level of human rights at the UN High Commission on Human Rights' Annual Meeting. This had severe consequences for several Danish companies as mixed credits projects simply went to foreign competitors. However, after Danish companies were left out in the cold for almost a year, an official visit by the Chinese Vice-Prime Minister to Denmark in February 1998, and a return visit by the Danish Development Minister two months later manifested a final break of the tense relations. Companies were relieved because their worst imaginable scenario was avoided, namely *if* Denmark again would have taken the lead on Chinese human rights at the annual meeting at UNHCR. The Danish government chose instead to follow business' plea for leading politics towards China in full harmony with EU politics in this case. Danish-Chinese mixed credit projects will resume in China within long, and experts foresee a promising future for Danish mixed credits projects. At the international level there has been put an end for mixed credit financing of telecommunications and large energy projects, which are sectors other OECD-countries to a large degree used their mixed credits for. New international agreements on mixed credits have resulted in a higher priority of water and environmental projects, which are sectors that match Danish capabilities much better and thus serves as explanation for the positive expectations (Børsen, 98.02.10).

### **India**

Danish companies were fast in reacting to the liberalization of access to the Indian market. As a consequence, the Danish Foreign Ministry could in 1994 announce that Danish industry invested more in India that year than ever seen

before in any other developing country. The same year The Government of Denmark and the Government of India signed a bilateral agreement on investment protection and promotion. Many companies had taken their time to analyze the market thoroughly and prepare projects, but waited particularly caused by fear of the Indian bureaucracy. The creation of a more attractive investment climate for foreigners therefore created a sudden boom in projects, and some of the investments even have an effect of pulling more investors from Denmark with them to India (EXPORT, 38/1994). By 1996 11 companies had invested in India through technical collaboration, and 31 companies through joint venture.

The new prospects for investing in India were quickly followed up by an export promotion tour to India for interested Danish investors in the spring of 1995, headed by the Danish Prime Minister. A second similar tour was scheduled to take place in November 1998, but due to India's nuclear tests in the spring of 1998, the tour was cancelled as a result of a political manifestation to show Denmark's disapproval of the act. Additionally, budgeted official aid assistance to India was reduced markedly as a reaction to the nuclear testing.

The Danish investments in India cover a wide area, however, several are related to large turnkey projects aimed at improving the infrastructure, environment and energy supply in India. The Danish Embassy in New Delhi foresees future opportunities for Danish companies supplying machinery and/or know how within the following sectors: alternative energy and environmental technology, IT, construction and infrastructure. These sectors include opportunities for Danish companies to invest with the aim of being supplier of high technological components or know how within e.g. the textile industry or the shipbuilding industry – both industries that India needs to upgrade to remain competitive internationally.

Geographically, Danish investors are located all over India, however most representative offices are to be found in Delhi. Danish development assistance to India has the past couple of years primarily been aimed at development projects (including the private sector) in the two southern states Karnataka and Tamil Nadu. This explains why several Danish investors, who have decided to operate through State funded development programs are located in or nearby these two states major cities; Bangalore and Madras.

## Malaysia

In 1992 a bilateral investment promotion and protection agreement between Malaysia and Denmark was in place. Despite the fact that the Danish FDI has been moderate in Malaysia the past few years, Danish export has grown steadily and reached 708 million DDK in 1996. Hence, exports grew 15% from 1994 to 1995 and increased again 20% in 1996. The actual export to Malaysia is however much larger, because a large amount of Danish exports, consisting mainly of machinery and various industrial equipment (37%) and food (30%), is sent via Singapore.

By 1998, approximately 80 Danish investors have established themselves in Malaysia, of which 20 have production sites in Malaysia. Regarding FDI (see table above) there were peaks in 1991 and 1993, most likely due to a few large investments by large TNCs e.g. *Carlsberg*. In addition, many Danish investors have chosen Malaysia as a base for controlling South East Asian operations as an alternative to placing regional offices in Singapore, where office space is much more expensive.

Due to the economic crisis in South East Asia, the Danish Embassy in Kuala Lumpur expects a decrease in exports in 1998. However, the Embassy still predicts favorable opportunities for potential Danish investors and exporters within the following sectors matching Danish industrial strengths: Environmental technology, Healthcare, IT & Telecommunication, Fisheries and the Food industry (EXPORT, 1/1998).

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### WEB-ADDRESSES

The Danish Government: [www.folketinget.dk](http://www.folketinget.dk)

Ministry of Foreign Affairs: [www.um.dk](http://www.um.dk)

The Ministry of Business and Industry, [www.em.dk](http://www.em.dk)

The Confederation of Danish Industry: [www.di.dk](http://www.di.dk)

The Ministry for Environment and Energy: [www.mem.dk](http://www.mem.dk)

National Agency for Development of Trade and Industry: [www.efs.dk](http://www.efs.dk)