Government financial transfers to the fish harvesting, processing and aquaculture industries Norway 1990 - 2002

by

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Abstract

This report investigates and quantifies Norwegian governmental financial transfers (GFT) to primarily the fish harvesting industry, but also the fish processing and aquaculture industries. Focus is on the period 1990 to 2002.

The data sources for this report are mainly public accounts of the Ministry of Fisheries, that channelled the bulk of support measures. We also rely heavily on a set of data on the transfer of funds from the Industrial and Regional Development Fund (SND). Finally, annual reports from the Norwegian Fisheries Bank (NFB) have been employed.

For fish harvesting, support has been divided in four categories, according to purpose: revenue enhancement, social measures, capital support and intermediate measures. In addition to these, tax exemptions on fuel oil and provision of general services to the industry is discussed.

The support for all four categories have shown a sharp decline, particularly from 1991 to 1993, but the trend has continued in the succeeding years. The main factors behind this development has been international obligations from the agreement on the European Economic Area (EEA), increased profitability and government strategy to make the industry self-sustained. Total support has gone down from about 1,100 million Norwegian kroner (NOK) in 1991 to about 250 million NOK in 2001. In 2002 it again fell sharply to about 140 million NOK. These figures exclude tax exemptions on fuel and the provision of general services.

Using the NFB annual reports and the SND database, capital support was investigated further, focusing on which vessel groups have received support for this purpose. The results clearly show the SNDs strategy to prioritize large, multi-purpose coastal vessels.

Data restricted the study on processing and aquaculture to the period 1994 to 2002. Support for aquaculture amounts to considerably less at about 47 million NOK in 2002, but has shown the opposite trend compared to fish harvesting. This probably corresponds to the continuous high growth of this sector during this period. Aquaculture support mainly consisted of investment grants, but also partial financing of development projects has been important.

Support for fish processing increased from about 76 million NOK in 1994 to about 170 million in 1998. This later fell to about 70 million NOK in 2002.

Table of content

1 Introduction

The main direct and indirect governmental financial transfers to the Norwegian fishing industries: harvesting, processing and aquaculture in the period 1990 – 2002 will be the focus of this overview.

The support schemes for the fishing fleet date back to 1889, when a fund[2] was established by the government to provide financing for the purchase and equipment of fishing vessels. Shortly after, two similar funds were also established, and more capital was provided to the funds for several years. In 1921, the government responsibility for financing fishing vessels was formalised through the establishment of the National Fisheries Bank. The bank offered loans at low interest rates for purchase of fishing vessels and processing equipment.

For a short period after the Second World War, Norwegian fisheries were highly profitable. The excess profits were placed in the Cod Reserve Fund, which was used to provide revenue enhancing support to fishermen until 1959, when the Fund itself ran out of funds. From 1959 to 1964, the government provided support for the industry on an annual basis, and in 1964, a general agreement was negotiated and signed by the Norwegian government and the Norwegian Fishermen's Association[3] (NFA). In this agreement, NFA was granted the right to request financial support when the expected profitability in the fisheries was low. In practice, this support measure has been in force every year since the agreement was signed.

Until 1987, when they were abandoned, price subsidies were the main element of support. Afterwards, other cost-reducing measures and transfers to social schemes have increased their importance. These subsidies were paid to the fishing fleet, but have obviously benefited the processors as well, as the cost of fish accounts for 60 – 70 % of the variable costs of the processing industry.

In addition to this support, the National Fishery Bank[4] (NFB) provided low-interest loans and grants when new vessels were commissioned or used vessels were rebuilt or bought. The funding for these schemes was administered through several sources - the Ministry of Fisheries, Ministry of Finance and the Ministry of Industry and Trade[5]. It is likely that some of this support was transferred to the shipbuilding industry the same way as raw fish price

[2] Det Ældre Havfiskefond

[3] Norges Fiskarlag

[4] Statens Fiskarbank

[5] Fiskeridepartementet, Finansdepartementet og Nærings- og energidepartementet (Næring og handel fra 1998)

support partially is transferred to the processing industry. Since January 1997, the NFB has been merged with the Norwegian Industrial and Regional Development Fund[6] (SND).

The support for the fish processing - and aquaculture industry has been administered mainly by the Regional Development Fund[7] (the precursor to the SND) and the counties. This support has been in the form of investment grants, project funding and low-interest loans. In addition, the processing industry has received some support from the annual agreement between the NFA and the government.

Section two of this report will focus on the support paid to the fish harvesting industry. Most figures here are based on nominal accounting figures presented in reports to the Storting, but information is also included from the annual reports of the NFB. Section three describes the support measures for the fish-processing industry, and Section four investigates the support measures applied to the aquaculture sector. Figures here are obtained from a database of recorded transfers from SND and its predecessors, but also from the annual support agreement between the NFA and the government. Conversions from nominal to real 2002 terms are done through the annual average consumer price index as reported by Statistics Norway.

2 Fish harvesting

2.1 Revenue enhancing support

As mentioned in the introduction, revenue-enhancing measures have been one of the major forms of support to the fishing fleet. The support consists of a number of different schemes, and all originate from the annual agreement between the NFA and the authorities[8]. These are aggregated into three main categories as shown in Table 1. Figure 1 presents the annual revenue enhancing support from 1990 – 2002 in nominal and real terms. Detailed figures are presented in the Annex, Table A1.

[6] Statens Nærings- og Distriktsutviklingsfond

[7] Distriktenes Utviklingsfond

[8] Information collected from accounting figures "Stortingsproposisjon nr. 1, Fiskeridepartementet utgiftskapittel 1040 Fiskeriavtalen."

Table 1 Revenue enhancing measures - percentages

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
1.	62	68	39	45	25	27	0	0	0	0	0	0	0
2.	26	15	26	21	30	21	36	13	20	17	38	28	35
3.	12	17	35	34	45	52	64	87	80	83	62	72	65

1. Price support: Direct price support, price regulation fund for herring and price support for fisheries in distant waters.
2. Price support low-income fisheries: Crab, coastal fish: prawn, sprat, herring, mackerel. Distinct price support and support to sealing.
3. Transportation support: Transportation support and support for long-term storage.

From 1994, the direct price support to major fisheries was effectively ruled out, but still maintained for fisheries of minor importance. From 1999 the only support measures in this category have been transportation support and support to sealing. The reasoning behind the transport support is to ease the pressure on the landing sites in seasonal fisheries and to maintain the processing industry in other regions. This category benefits the processing industry as well, but is for practical reasons recorded here. Sealing is not profitable on its own, and support measures are needed to regulate the large stocks through catch.

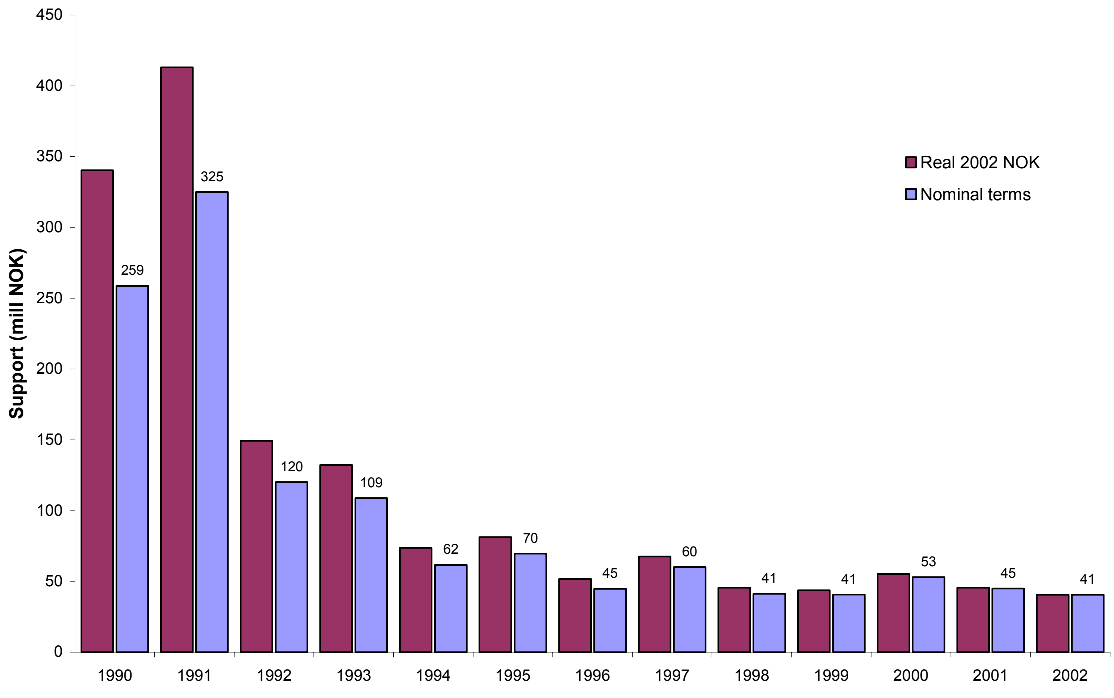

Figure 1 Revenue enhancing support 1990 – 2002, nominal and real (2002) terms

The dramatic decline in the support from 1991 is due to international obligations, mainly through the EFTA agreement and an agreement on the European Economic Area. By 1993 and 1994 these committed Norway to phase out all support that could distort the freedom of competition.

2.2 Social schemes

An important part of the general agreement between the authorities and fishermen are the social arrangements. The fishermen have been assured a minimum income when fisheries fail. Other support has been provided which include vacation and unemployment benefits and support for welfare agencies along the coast. These are funded through the annual agreement, except for the welfare agencies, which have their allocation from the expense chapter named "miscellaneous" in the budget for the Ministry of Fisheries[9]. It is important to be aware that these schemes cannot always be considered pure subsidies, as some other Norwegian industries have access to similar arrangements through the social security system. Gross support to social schemes from 1990 to 2002 is shown in Figure 2.

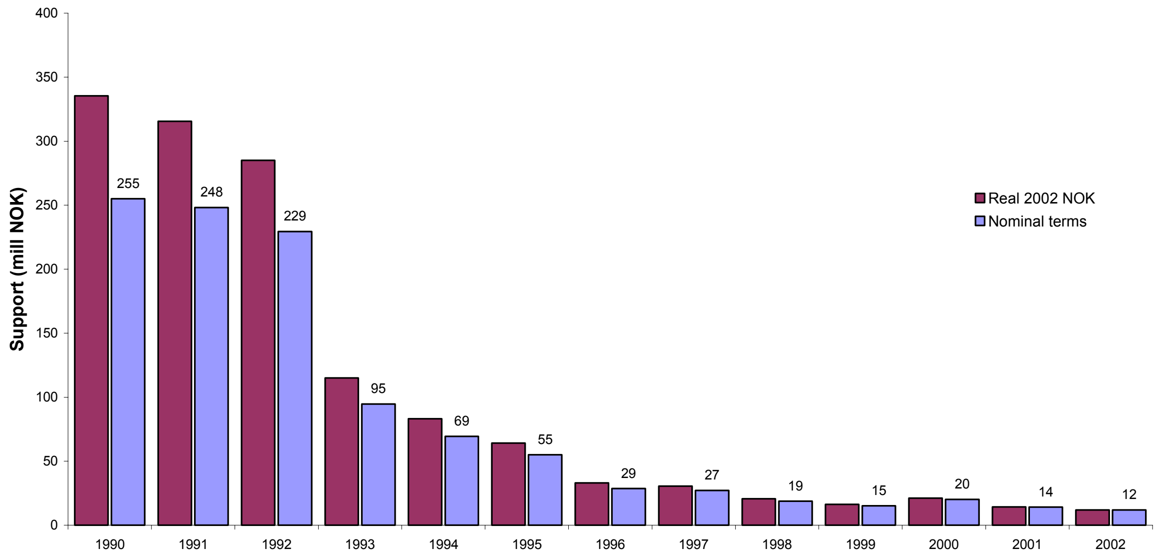

Figure 2 Social schemes 1990 – 2002, nominal and real (2002) terms

The "guaranteed income" arrangement is financed through an excise duty on the value of fish landed, called the product fee (produktavgiften). This could be considered a negative subsidy in this context, but as employees in other industries also are taxed for these purposes, it has not been deducted from Figure 2. The product fee for the same period is shown in Table 2. Comparing the values in Table 2 and Figure 2 demonstrates that the fishermen's contribution through the product fee has exceeded the social support for all years, except for 1990. Norwegian firms are taxed at 14.1 % for the wages they pay (employers' national insurance contribution). The product fee is also designed to collect this tax from fisheries.

Table 2 Product fee (million NOK) 1990 – 2002, nominal terms

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Fee	215	258	221	227	266	285	256	297	334	317	348	421	397

[9] Stortingsproposisjon nr 1 Fiskeridepartementet, utgiftskapittel 1040 Fiskeriavtalen og 1050 Diverse

2.3 Transfers to productive capital

Until 1997, the National Fishery Bank (NFB) administered the bulk of subsidies to capital items. This support has been a combination of investment grants and low-interest loans. Investment grants have been given under two denominations; "contract support" (kontraheringstilskudd) and "investment grants" (investeringstilskudd). The NFB's interest rates were lower than both the market interest and its own cost of capital until 1993, when more market based interest rates were employed. In addition, the owners were paid a direct "interest support" (rentestøtte). This component was paid over several years to the boat owners until 1990, when it was changed to a lump sum payment as an investment grant. However, the previously initiated agreements kept running.

Since the interest rates of the NFB for the years until 1993 were considerably lower than market interest rates, a subsidy component has been calculated for each year. The funds transferred to the NFB from the Ministry of Fisheries to cover the difference between the bank's lending and deposit rates are specified in the annual Proposition No. 1 to the Parliament. However, this item is not included in our support figures, as we calculate the support component of the low-interest loans as the difference between an average market interest rate[10] and the lending rates to the boat-owners. An estimation of the "market interest" is difficult, and the support component is sensitive to the value of this input. The average rate employed is only slightly higher than the same statistic's average interest rate for home mortgage loans. As loans to fishing vessels generally can be considered to be somewhat riskier than ordinary industry debt, this gives an estimate of the subsidy component in the lower end of the range.

In addition to the investment grants and interest support, various measures like liquidity support and clearing of debt have been administered through the NFB, especially in periods with low profitability. This category also includes support for improvement of the efficiency of fishing vessels. This support was funded through the annual agreement between the authorities and the Fishermen's Association. Finally, this category contains support paid out for the decommissioning of vessels. These funds have been administered through both the NFB and SND.

From 1997 the NFB's activities and obligations were transferred to the Norwegian Industrial and Regional Development Fund (SND). Due to international obligations, subsidised loans not regionally defined had to be phased out. Still, the vessel owners were now given access to all support arrangements within the SND. This organisational change results in difficulties

[10] Collected from the National Bank's average interest rate for commercial banks http://www.norges-bank.no/front/statistikk/no/renter_fininst/renter.xls

for the data collection, as the reporting routines of the SND are not as detailed as NFB. We were only able to obtain granted contract support for years 1997 and 1998. Lacking other reasonable indicators, it is assumed that all is paid out, with half the same year and the final half the following year.

In the calculation of transfers to productive capital, the various items are classified in five categories demonstrated in Table 3. Total support from 1990 to 2002 is shown in Figure 3. More detailed figures can be found in Table 10. From and including 1997, when SND administered the support, it is not differentiated between support going to vessel construction and support for decommissioning, and we therefore operate with one category where these are joined.

Transfers from the Ministry of Fisheries to cover the administrative expenses of NFB are specified as separate items some years, and included in the item "interest rate covers" the other years. These are not included in the calculation of support, as commercial banks have to cover these expenses through their interest margin. We have used a "market interest rate" to obtain an estimate of the interest subsidies, and the administrative expenses are assumed to be included here.

Table 3 Productive capital support - percentages

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
1.	0	6	4	2	0	0	0	0	0	0	0	0	0
2.	30	32	35	43	53	48	27	3	2	1	1	1	1
3.	35	35	49	50	39	45	71	97	98	51	34	42	74
4.	0	0	0	0	0	0	0	0	0	40	43	40	17
5.	35	27	13	5	7	7	2	0	0	8	22	17	7

1. Debt clearing
2. Interest support
3. Investment grants
4. Inv grants / Decommissioning
5. Decommissioning

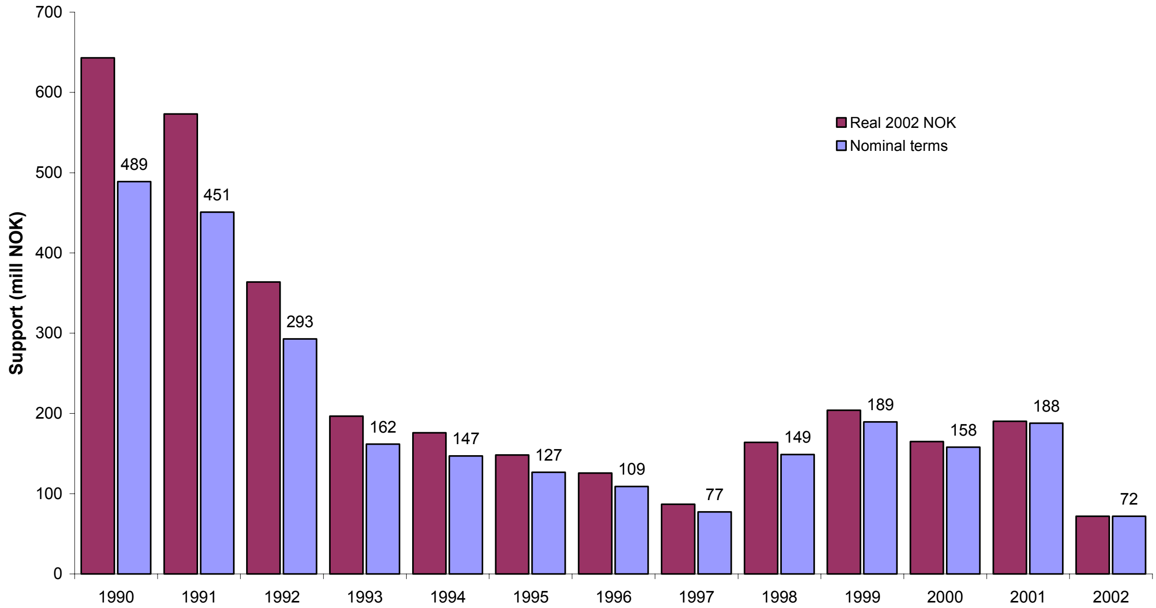

Figure 3 Support to productive capital 1990 – 2002, nominal and real (2002) terms

As a sub-study, we are interested in which vessel groups have received support for building new vessels. In the annual reports of NFB, the investment grants, both for new vessels and for rebuilding, are divided between vessel groups and counties. From 1997, SND took over these tasks from NFB in order to give fishing vessels access to the same means as other industries. From this period, no differentiated statistics are available. Therefore, files on individual grants were obtained from SND for this project and distributed across vessel groups.

Vessel groups are defined as follows:

Longliners: Includes longline vessels 28 m and above length with unit quotas for conventional fishing gears. Also support for transfer of unit quotas through decommission of a similar vessel is included here.

North Sea trawlers: Vessels with industry trawl licence, also vessels with a variety of trawl licences for pelagic fish like mackerel, capelin and herring.

Purse seiners: Purse seiners with purse seine unit quota (some also have pelagic trawl licences).

Factory trawl: Trawler vessels with licence for onboard processing.

Wet fish trawl: Trawlers with unit quotas for cod, haddock and saithe (some also have prawn licenses).

Prawn trawl: Trawlers with prawn licenses only

Coastal 21 – 28 m: Vessels between 21 and 28 m length fishing with conventional gears, purse seine or Danish seine.

Coastal 13 – 21 m: Same as above, between 13 and 21 m length
Coastal < 13 m: Same as above, below 13 m length

Figure 4 shows how the total contract support (kontraheringstilskudd) and investment grants (investeringstilskudd) for construction of new vessels have varied among vessel groups. NFB did not publish detailed statistics on the use of the former, hence we were unable to divide it between vessel groups. In the NFB period, it was only in effect between 1990 and 1992, both inclusive, and amounted to 13, 19 and 13.6 million NOK the respective years. Thus, Figure 4 underestimates the capital support for 1990 – 92.

The data from NFB (1990 through 1996) show grants given each year, however not necessary paid out (although most were). The data from SND from 1997 show paid out grants by the year they were granted. Payment year may vary from grant dates, especially for the larger vessels. Of the SND grants, we were unable to place nine paid grants totalling 673' NOK in the vessel categories.

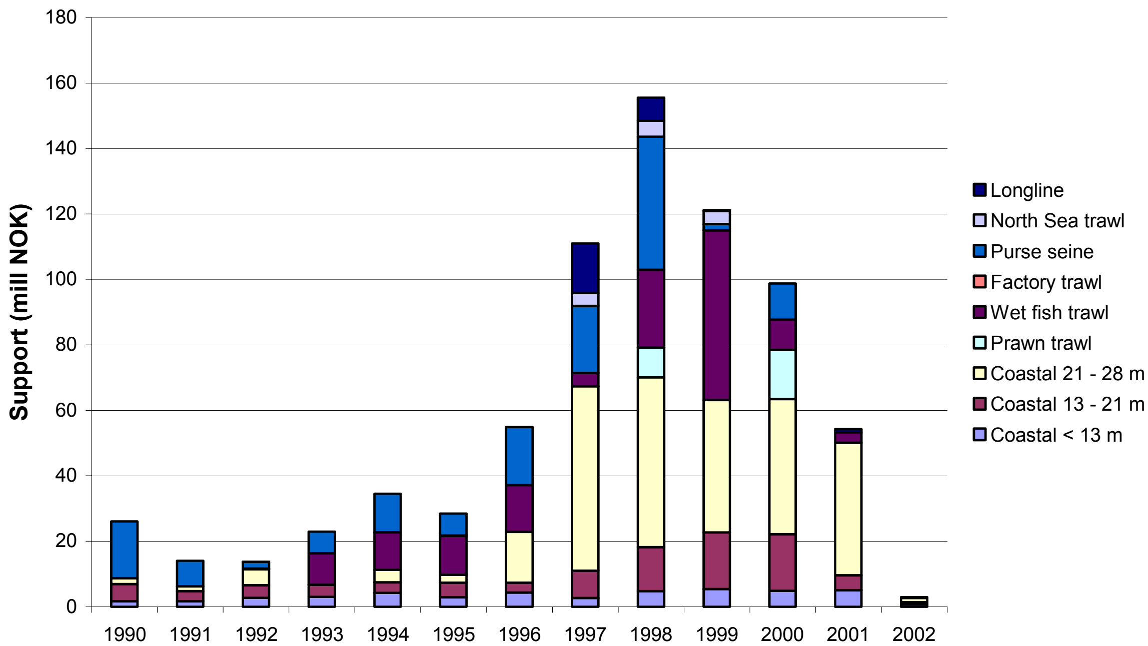

Figure 4 Investment grants and contract support to new vessels by vessel groups

SND´s strategy,politically approved, to concentrate on the bigger coastal vessels is clearly seen through the increasing support this group has received from 1997. The drastic decline in investment grants from over 120 million NOK in 2000 to 5 million NOK in 2002 is also noteworthy, and can be addressed to both the severe quota situation and the governmental strategy for capacity reduction.

We attempted to find the share of new vessels built with investment support through comparison of statistics over launched vessels from the Directorate of Fisheries and the support data. From 1990 to 1996, allocated grants from NFB are used. These are not necessarily paid out (if the project is not realized), and the launch date can be a later year, especially for large vessels. From 1997, launches with support are based on the SND database.

Table 4 Number of launched vessels per year grouped by length

Vessel length	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
8 - 12.9 m	42	37	46	38	43	46	46	41	42	54	52	61	68
13 - 20.9 m	14	9	6	7	12	14	14	9	7	12	8	16	3
21 - 28 m	2	4	1	3	0	1	1	3	9	8	7	13	7
> 28 m	2	2	3	2	2	2	7	6	12	21	15	15	8

Source: Directorate of Fisheries' fishing vessel database (http://www.fiskeridir.no/sider/registre/fartoy.html)

Table 5 Number of vessels granted support

Vessel length	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
0 - 12.9 m	18	20	27	28	41	29	37	7	24	13	16	12	8
13 - 20.9 m	11	9	13	10	2	16	8	4	12	9	9	15	3
21 - 28 m	1	1	1	1	2	2	5	6	8	10	7	11	8
> 28 m	2	2	2	2	4	3	6	2	6	7	11	7	3

Source: SND primary data

For some years, as Table 4 and Table 5 demonstrate, more launched vessels with support than launched vessels are reported, especially for the medium-sized vessels. For the period with NFB-data, some of the differences can be explained through the fact that some projects are granted support, but not realised. Differences can also stem from the realisation year being later than the grant year or erroneous inclusion of grants. Table 6 even demonstrates that the number of vessels between 21 and 28 m that received capital support exceeds the number of vessels built in the period 1990 – 2002.

Table 6 Relative share of vessels built with support, 1990 – 2002, percentages

Vessel length	Percentage
8 - 12.9 m	45 %
13 - 20.9 m	92 %
21 - 28 m	107 %
> 28 m	59 %

Even with their shortcomings, the previous three tables demonstrate that far from all vessel building and rebuilding receive financial support through subsidies. To shed some light on the importance of the support, gross investment is compared against total investment grants in Figure 5. Gross investments and investment grants include both modifications to existing vessels and building of new vessels. We have included only support for building and modification of vessels, and the figures include paid out investment grants gathered from the annual reports of the NFB and the SND database. As there probably is a low correlation between payment of support and registration at Statistics Norway, we find it reasonable to give only an average support to investment share over the period. This has been calculated at 6.1 % for 1994 - 2002.

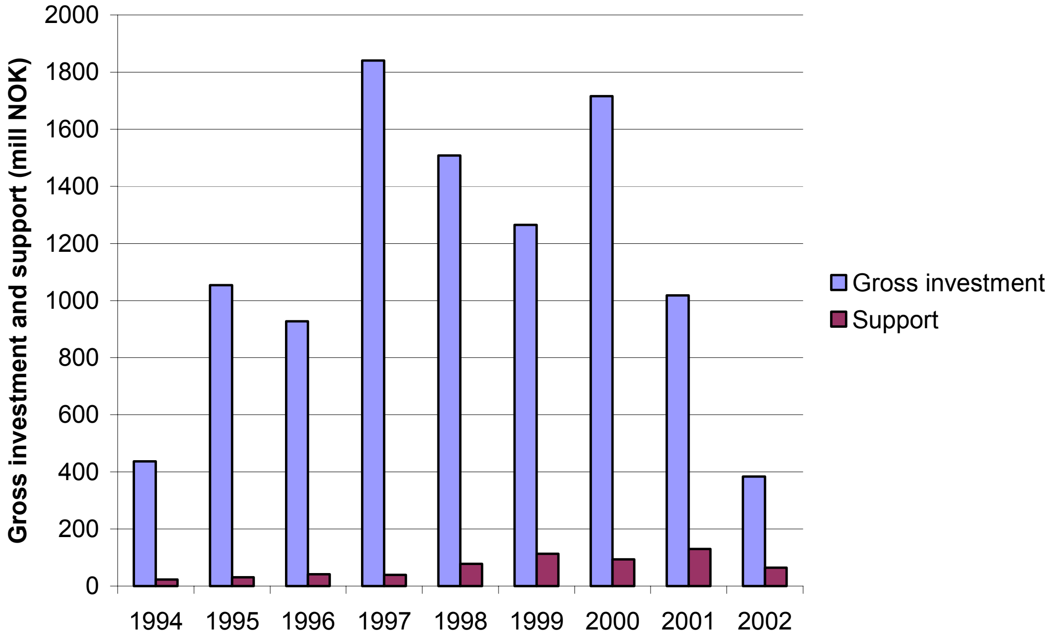

Figure 5 Gross investment[11] and investment grants fish harvesting

We also investigated the extent of decommissioning grants - a common capacity reducing measure. While the figures included in the calculations were taken from the Ministry of Fisheries accounts, we have for this purpose employed data from the administering organisations – stated in the NFB's annual reports and the SND database. There are some differences between these figures that we are unable to explain. The NFB administered several decommissioning schemes in this period. The main schemes were "support for decommission of old and unsuitable fishing vessels" and support for sale of vessels from licensed fisheries. Also in operation were separate arrangements for purse seiners. Table 7 demonstrates the decommissioning grants administered through NFB in the years 1990 – 95, and Table 8 demonstrates the decommissioning grants by SND in the period 1999 – 2002.

Table 7 Support for decommissioning administered by NFB (1000 NOK), 1990 - 1995

	1990	1991	1992	1993	1994	1995
Paid support	130 721	126 631	38 417	20 043	10 751	212
No of vessels	109	76	29	14	2	1

Source: Annual reports of the NFB

[11] Source: Statistics Norway various years. "Fishery statistics" (Fiskeristatistikk)

Table 8 Support for decommissioning administered by SND (1000 NOK), 1999 - 2002

	1999	2000	2001	2002
Paid support	14 007	23 185	24 434	4 836
No of vessels	26	45	50	10

Source: SND-database

While Table 7 presents paid out support, NFB only specified granted decommissioning support on vessel groups. This is shown in Figure 6. SND has not published statistics for these purposes.

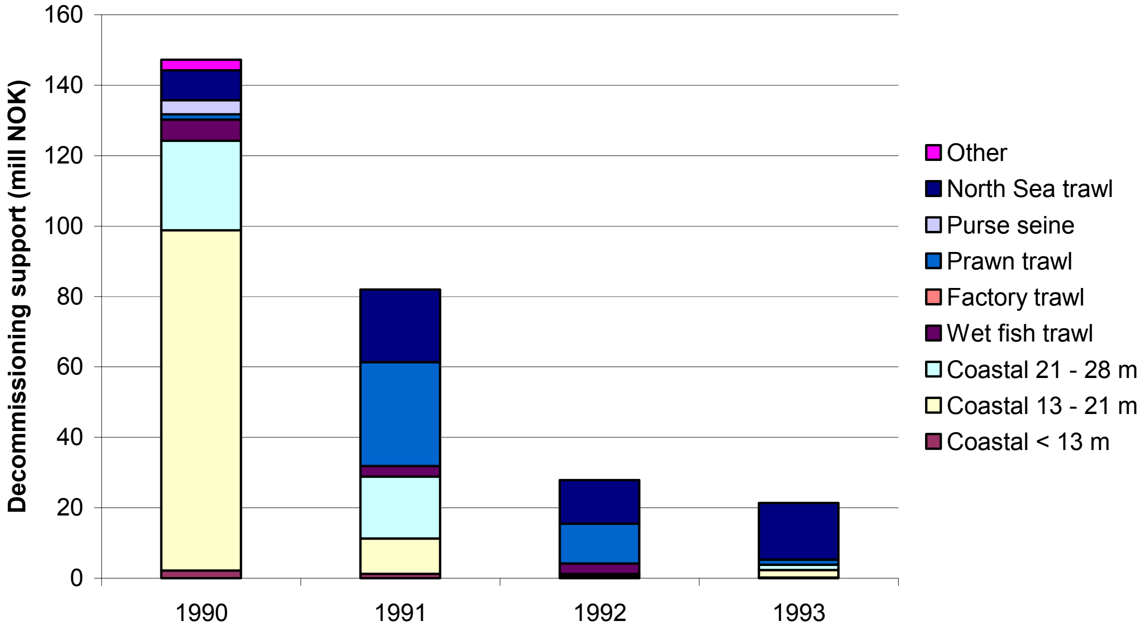

Figure 6 Granted support for different vessel groups[12]

2.4 *Support to intermediate inputs*

In addition to the categories above, various other support items have been paid out under the annual agreements. Examples are insurance support, support to reduce operational costs, compensations for petrol duties, support for both baiting stations and bait prices, fishing gear subsidies and compensations for damages caused by seals, storms and other factors. In 2002 what remained was only support for baiting stations and compensation for damaged fishing gear. In addition, SND and its precursors have contributed to finance various company development projects ("soft investments"). Categories and annual development are shown in Table 9 and Figure 7. Items included in the insurance and bait categories are collected from accounting figures of the annual agreement published in the yearly propositions to the

[12] Source: Annual reports of the NFB

Parliament[13], while compensations are, in addition to the aforementioned, also found in the chapter for miscellaneous support[14]. SND figures are collected from the database of grants.

Table 9 Relative shares - Intermediate inputs, percentages

	Type of support	90	91	92	93	94	95	96	97	98	99	00	01	02
1.	Insurance	44	45	40	37	0	0	0	0	0	0	0	0	0
2.	Bait	45	45	40	45	45	79	53	74	82	66	71	72	74
3.	Compensation	6	3	2	2	34	6	23	7	4	3	4	6	4
4.	Project finance	5	7	18	16	21	16	23	19	14	32	26	22	22

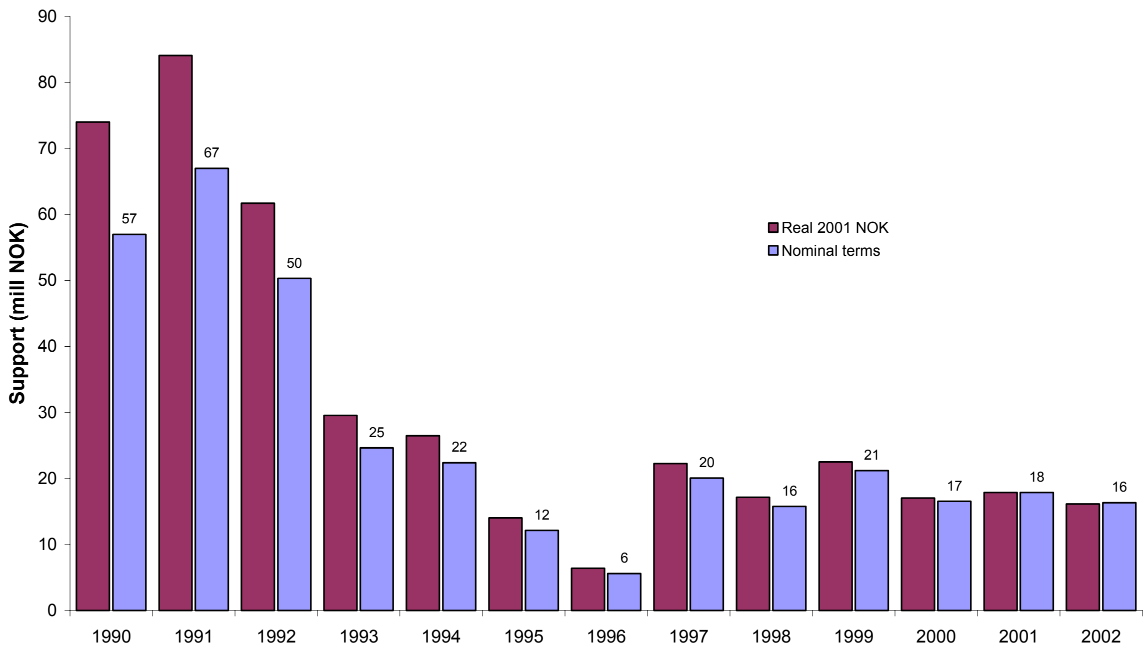

Figure 7 Support to intermediate inputs 1990 – 2002, nominal and real (2001) terms

2.5 Total support to fisheries

Support for revenue enhancement, social measures, productive capital and intermediate inputs for the fish harvesting industry are presented in the preceding sections. The total annual support, according to these four categories, is shown in Figure 8, whereas the detailed figures are presented in the Annex, Tables A1 – A4. In addition, funds have been allocated to various other purposes such as support for women in regional provinces, coastal development, competence improvement and information on resource management. These transfers cannot easily be associated with fish harvesting only, and are therefore not included

[13] White paper no. 1, Ministry of Fisheries, chapter 1040 the annual support agreement

[14] As footnote 13, but chapter 1050 Miscellaneous

as support items for the fleet. Accounting figures for these items are found in the yearly propositions to the Parliament[15].

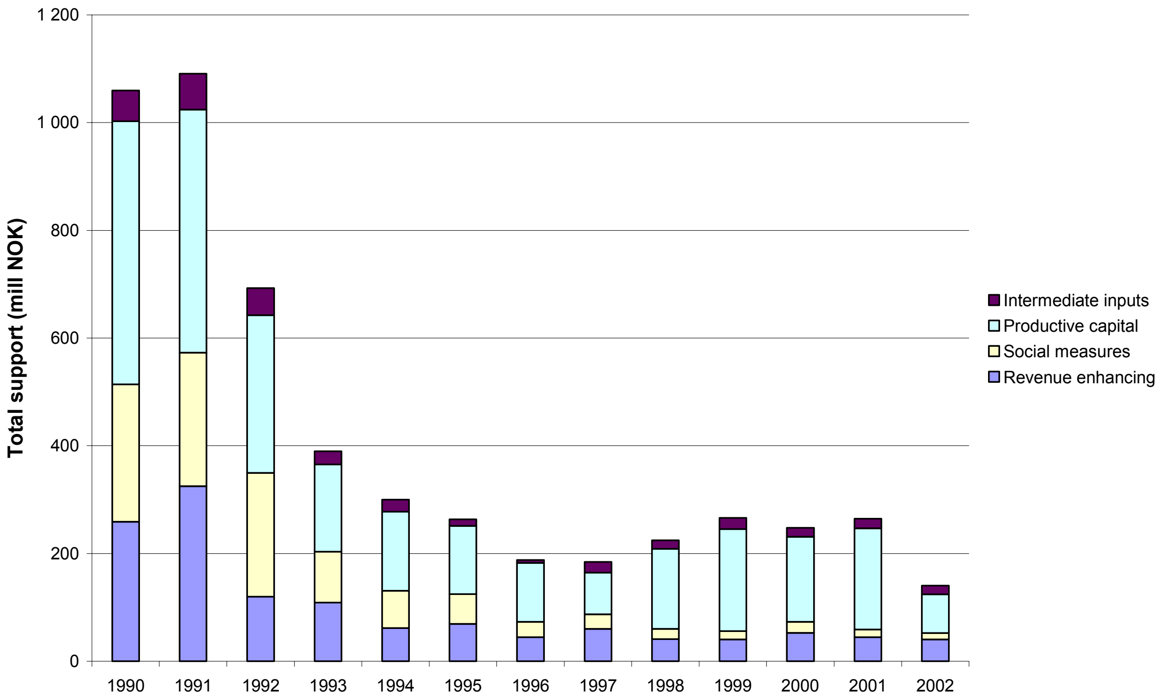

Figure 8 Support to fish harvesting across main schemes 1990 – 2002, nominal terms

2.6 Exemption of mineral oil tax and reduced VAT

In addition to the previously discussed support schemes, the Norwegian fishing fleet benefits from some arrangements that may be considered to contain elements of subsidizing. Consumption of mineral oil is taxed for its emissions of CO_2 and SO_2, but the fishing fleet has been exempted from these taxes. Industries like shipping and oil installations have also benefited from this exemption, while other industries such as wood-processing and fish-meal and fish-oil pay half taxes. Vessels fishing more than 250 nautical miles off the Norwegian coast are exempted from both the CO_2 and SO_2 taxes, while the coastal fisheries only get the CO_2 tax refunded[16]. For comparison, international commercial shipping to and from Norwegian ports does not pay fuel taxes.

Statistics on total oil consumption for the fishing fleet is obtained from Statistics Norway. The refund from "Garantikassen for fiskere" is used to divide consumption between coastal and off-shore fisheries. This is applied with the tax rates to obtain an estimate of tax losses. Table 10 shows the monetary effect of these tax exemptions.

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[15] White paper no. 1, Ministry of Fisheries, chapters 1040 – the annual support agreement and 1050 – miscellaneous.

[16] Reimbursed through "Garantikassen for Fiskere"

There are clearly subsidy components in this scheme, but to pin down their value is difficult. Other industries are also exempted and at least off-shore vessels have the option to avoid taxes by refuelling abroad or at sea. We therefore choose not to include these in the total subsidies, but present the calculated tax exemptions separately.

Table 10 Mineral oil tax exemption (mill NOK)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
SO_2 Off-shore	25.2	32.2	22.2	18.4	18.8	18.1	18.7	19.5	18.9	17.1	13.0	16.2
CO_2 Off-shore	125.0	235.6	165.2	103.0	107.4	104.8	109.9	120.0	120.1	112.6	122.4	199.3
CO_2 Coastal	36.9	61.0	79.5	72.2	80.1	88.0	110.3	116.3	129.3	142.0	183.0	216.0
Total	187.1	328.8	267.0	193.6	206.3	210.8	238.9	255.8	268.3	271.8	318.4	431.5

Source: Statistics Norway and Garantikassen for Fiskere and own calculations

Sale of fish is imposed by law at a reduced rate of VAT on the value of the catch[17]. This output VAT rate was set at 11.11 % when this tax scheme in 1970 was introduced in Norway. The rate for fish has not been changed since the introduction, although the ordinary rate has been changed three times[18]. VAT is intended as a tax on consumption, and hence will not be a cost for the fishermen. Therefore, we have not considered the reduced VAT rate a subsidy in this report.

2.7 General services

General services such as stock assessment, infrastructure, administration, monitoring and enforcement, are not considered subsidies by most countries. Coastal states are obliged to manage their resources through international agreements and these services could be considered as necessities for allowing a fishery to take place. However, if fishermen were to pay for these services, it is reasonable to assume that they would demand more influence on the use of these budget items, and direct the efforts more efficiently towards the services provided. From a trade perspective, it could be argued that free provision of these services constitute a subsidy when one country does not recover management costs whereas others do. On the other hand, fish supply effects of different management measures are often difficult to quantify (see OECD 2003).

The true cost of management in Norway is hard to pin down, as many different institutions and organisations participate, and fisheries management may only be part of their work. However, Table 11 presents the costs estimated on an activity basis by the Ministry of Fisheries and reported to the OECD[19].

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[17] § 39 Lov om merverdiavgift

[18] 20 % until Jan 1993, 22 % until Jan 1995, 23 % until Jan 2001, 24 % at present (12 % for food)

[19] Source: Ministry of Fisheries.

Table 11 Costs of general services (2002 preliminary figures)

Service	Comments	Cost (mill NOK)
Research services	Necessary for stock management	232
Management services	International organisations Ministry of Fisheries Directorate of Fisheries	182
Enforcement services	Coast Guard	438

Source: Ministry of Fisheries.

3 Fish processing industry and interim storages

3.1 Fish processing

While support for fishermen is mainly sourced from the General Agreement between the Fishermen´s Association and the government and the SND, the processing industry relies to a greater extent on support from only SND. SND was established in 1993 as a merger of four different support structures – the Regional Development Fund (DU), the Industry Fund, the Small Business Fund and the Norwegian Industrial Bank.

The data material available for this study is a database of the individual grants from SND to companies or persons in the industries in question. This database, however, is not complete as some of the support arrangements were recorded in their original databases, and not converted to the SND records during the mergers. However, after 1993, all arrangements except the grants from the NFB, are complete.

Support is defined as arrangements with a grant component. It is likely that there is an element of support contained in the loans from SND, especially the second priority loans, but interest rates are individual and changing often, so this element has been disregarded due to measurement problems.

As shown in Figure 9, support for the processing industry has been given through several arrangements, but investment grants dominate the picture.

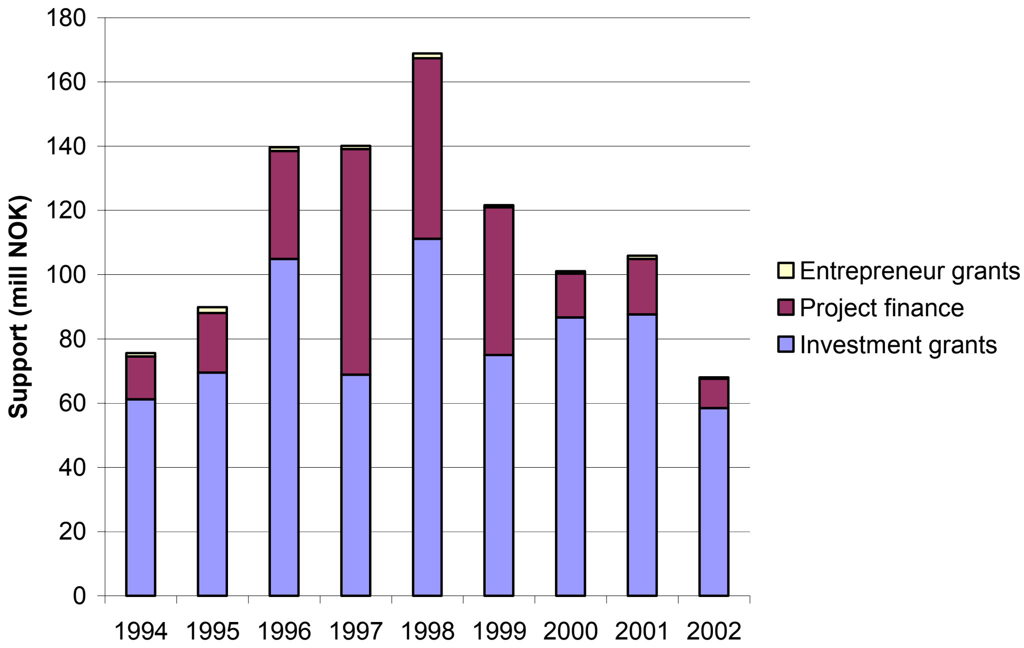

Figure 9 Support for fish processing, 1994-2000

In the database, each grant is given an industry code enabling us to divide the support across the following industries; conventional (salting and drying), filleting/freezing, canning, fish oil and a category for unidentifiable grants. According to the SND, the cataloguing had not been systematic until recently, so some care has to be taken when examining the results. A large proportion of the grants are recorded with unknown industry codes and are placed in the "various" category.

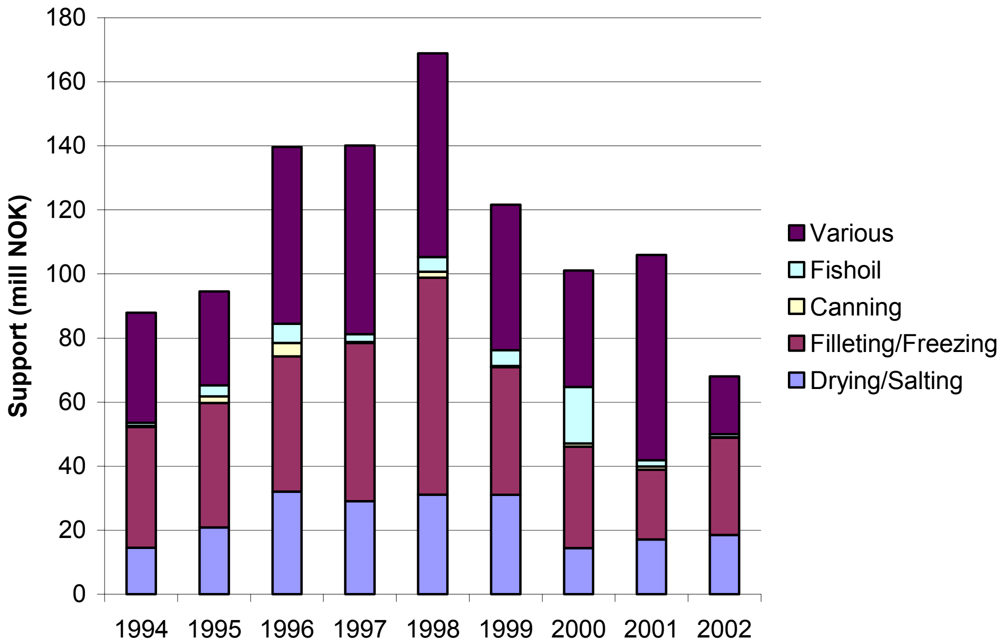

Figure 10 Support to fish processing sub-industries

In order to assess the impact of the support, a first step is to compare the dominating support item, investment grants, to the total investments in the industry. These figures include both modifications and new plants. Annual support and gross investment are shown in Figure 11, and on average the ratio of support to gross investment amounts to about 9.2 % for the period 1994 - 2001.

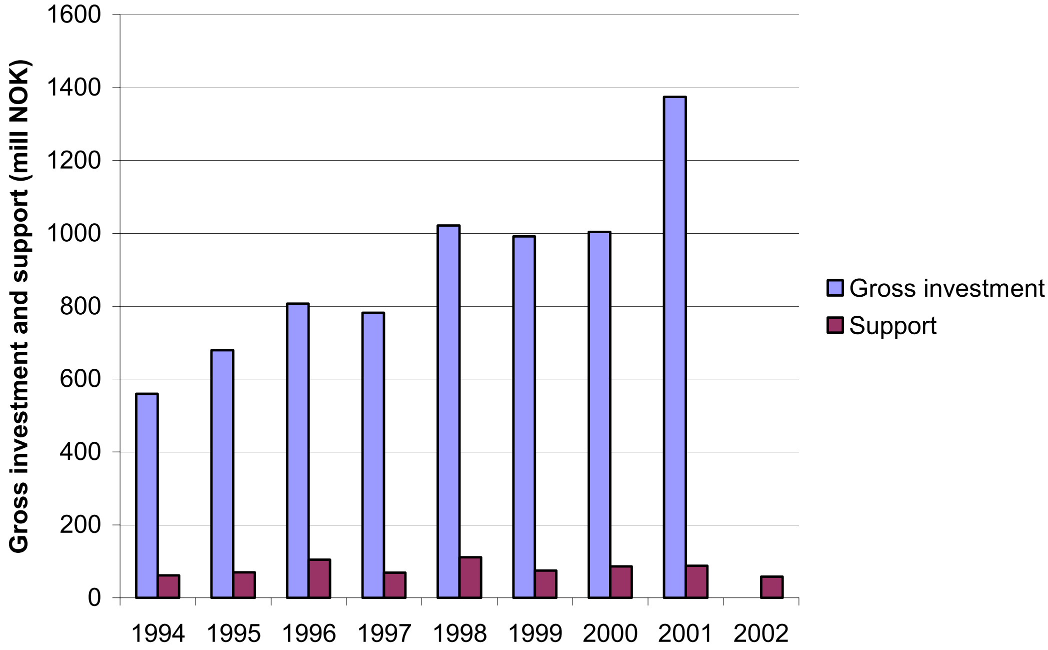

Figure 11 Gross investment and investment grants in fish processing[20]

3.2 Freezer storages

Along with the increased capacity for freezing catches at sea, a freezer storage industry has emerged in Norway. This allows the trawlers and large coastal vessels to store their catch temporarily while searching for buyers or waiting for transportation, either within Norway or for export to other countries. The opportunity to store their catches clearly increases the flexibility of the fishermen, and reduces their dependency on the processing plants. In particular, the increased export of unprocessed fish for processing in other countries has given rise to public debate on the freezer storages. In this study, we investigate to what extent the rise of this industry has been supported through SND-financing.

A list of the approved storage units was obtained from Norges Råfisklag. The SND-database was sorted for the municipalities in question, and the matching grants were retrieved. Of the current 26 storage units, 10 were found to have received grants in various forms. A total of 20.6 million NOK has been paid out in investment grants and 24.8 million NOK in loans from SND.

[20] Source: Statistics Norway various years. "Manufacturing industry statistics" (Industristatistikk)

4 Aquaculture

Support measures for the aquaculture industry have been administered by the SND and its predecessors, as well as for the fish processors. The support has to a greater extent been administered through different measures as shown in Figure 12. Until 1996, investment grants dominate, while funding for innovation and development projects increase after this. A special programme called NUMARIO was initiated by the Ministry of Fisheries in 1998 to promote commercialisation of marine species like halibut, cod and shellfish.

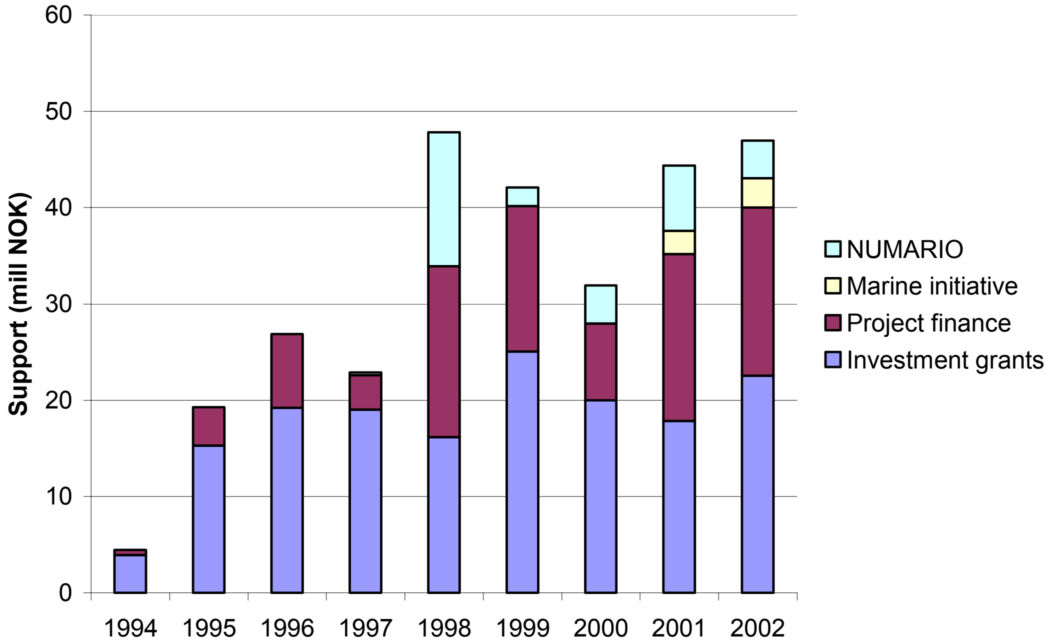

Figure 12 Support for aquaculture

Aquaculture support can be divided between the subindustries ongrowing (matfisk, including shellfish until 1997), juveniles (smolt og settefisk), shellfish and various unsortable grants.

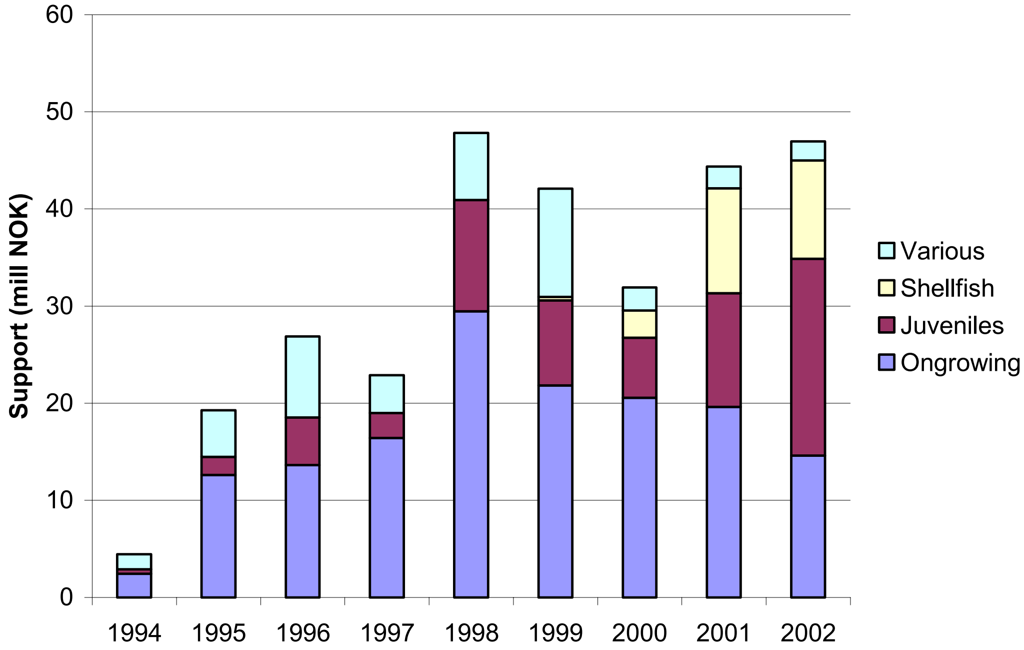

Figure 13 Support for aquaculture branches

Figure 14 demonstrates that annual gross investments in the aquaculture industry have risen substantially with a provisional high after the golden years of 1999 and 2000. The average ratio of grants to gross investments is about 2.6 % for 1994 - 2001.

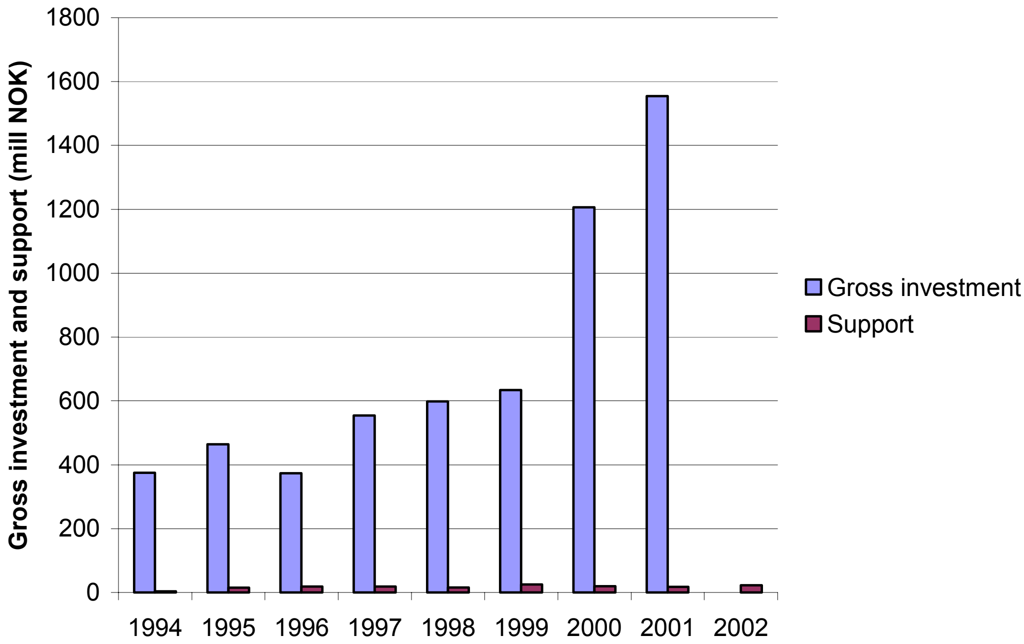

Figure 14 Gross investments[21] and investment grants in the aquaculture industry

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[21] Source: Statistics Norway several years. "Fish farming" (Fiskeoppdrett)

5 Discussion

The problems of government financial transfers often become international conflicts due to differing incentives among countries. So far, an agreement has not been reached on what a subsidy is and much less on how to measure them and their effects. This makes the issue very complex.

The purpose of this study is to map the extent of subsidizing in Norwegian fish harvesting, fish processing and aquaculture. Although the provision of such information is useful on its own, we should keep in mind that the most important aspect of subsidies is their effects. According to Schrank (2003)[22] the transfers can affect fisheries in at least two ways. First, they can distort fair trade through the provision of advantages for one exporter. Second, and perhaps most important, they may give incentive for increased output, thereby endangering the fish stocks and reducing the potential long-term profits from the fisheries.

The first to study the effects of subsidies on fisheries in Norway was Brochmann (1981)[23]. Several intergovernmental organizations such as the Organisation for Economic Cooperation and Development (OECD), the World Trade Organisation (WTO) and the Food and Agriculture Organisation of the United Nations (FAO) have taken an interest in subsidies. This has led to a number of papers discussing definitions and methods of measurement, as well as the background for and the likely effects of subsidies in fisheries. Informative background discussions can be found in Schrank (*op. cit.*). The reports by Milazzo (1998)[24], PricewaterhouseCoopers (2000)[25] and OECD (2000)[26] are examples of quantitative approaches to measuring subsidies in different regions. Effects of subsidies on both trade and

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[22] Schrank, W. (2003). Introducing Fisheries Subsidies, FAO Fisheries Technical Paper 437, Rome.

[23] Brochmann, B. (1981). "Virkninger paa lang sikt av statsstotte til fiskeriene" ("On the long run effects of government transfers to the fishing industry", in Norwegian), Sosialokonomen no.2.

[24] Milazzo, M. J. (1998). Subsidies in World Fisheries – A Re-examination, World Bank Technical Paper No 406, World Bank, Washington DC.

[25] PricewaterhouseCoopers (2000). Study into the Nature and Extent of Subsidies in the Fisheries Sector of APEC Member Economies. APEC Publication NO #00-FS-01.1, APEC Secretariat, Singapore.

[26] OECD (2000). Transition to responsible fisheries – economic and policy implications, OECD, Paris.

the ecosystems are discussed in Flaaten and Wallis (2000)[27], Hanneson (2001)[28] and Porter (2003)[29].

The effects of subsidies are, as mentioned in the introduction, hard to measure. Subsidizing affects company profits through either costs or income. But how is the fishermen's behaviour affected under the existing regulatory regime of the fishery? And what is the result for the stock? As an example, support for investments clearly influences the fleet size and real capacity. The degree of influence is unknown, however, as we rarely know if the support was decisive for the owner's decision to invest in a new vessel.

This study was preceded by two earlier studies, investigating Norwegian transfers to the fishing fleet between 1977 and 1996 (Flaaten & Isaksen 1998)[30] and an update covering the years 1997 - 1999 (Isaksen 2000)[31]. It is therefore possible to make a comparison of the results in these studies. The results are shown in Figure 15 and indicate a close relationship, at least until 1996. Only transfers over the General Agreement are included in the first study, while also transfers over another expense chapter of the Ministry of Fisheries are included in the later studies. Increased differences from 1997 are due to the SND being included in this study, while it was excluded from the previous two.

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[27] Flaaten, O. & P. Wallis (2000). Government financial transfers to the fishing industries in OECD countries. In Proceedings of the 10th biennial conference of the International Institute of Fisheries Economics and Trade, Oregon 10-14th July, Oregon State University.

[28] Hanneson, R. (2001). Effects of Liberalizing Trade in Fish, Fishing Services and Investment in Fishing Vessels, OECD Papers, Vol. 1, No. 1.

[29] Porter, G. (2003). Subsidies and the Environment: An Overview of the State of Knowledge. In OECD (2003). Environmentally Harmful Subsidies – Policy Issues and Challenges, OECD, Paris.

[30] Flaaten, O. & J. R. Isaksen (1998). Governmental Financial Transfers to the Norwegian Fishing Industry; 1977-1996. Report No. 7, Norwegian Institute of Fisheries and Aquaculture, Tromsø.

[31] Isaksen, J. R. (2000). Subsidies to the Norwegian Fishing Industry – An Update. Report No. 13, Norwegian Institute of Fisheries and Aquaculture, Tromsø.

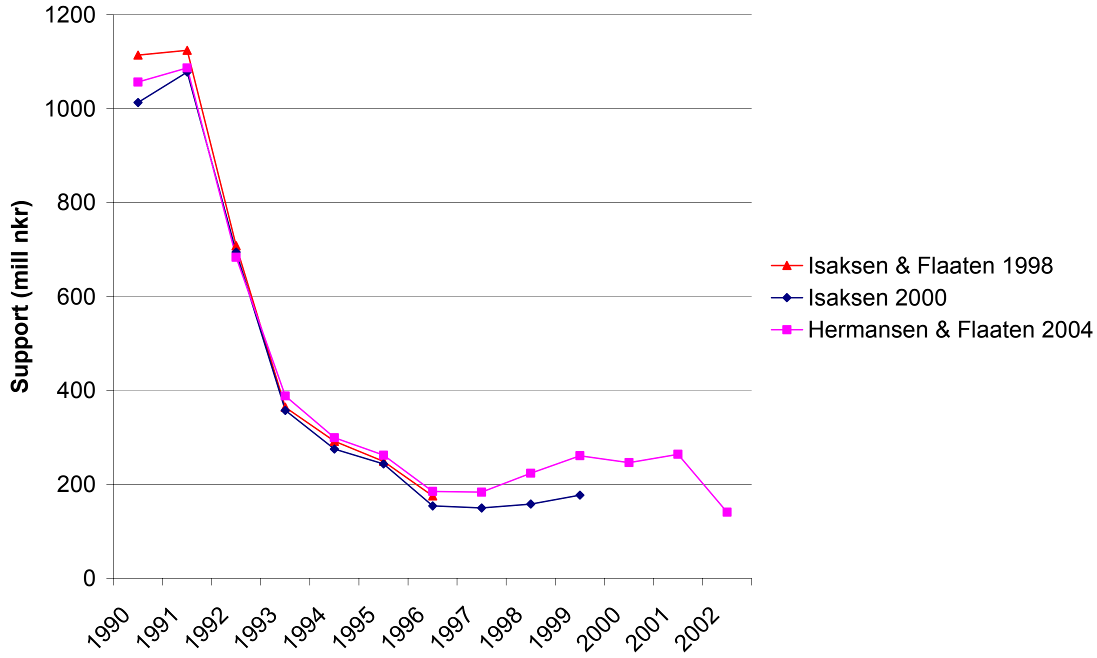

Figure 15 Comparison of total support to fleet (nominal terms)

6 Conclusion

Governmental financial transfers to the Norwegian fishing industry have shown a sharp decrease over the period investigated, 1990 – 2002. This development started already in the 1980s (Flaaten & Isaksen *op.cit*). However, data presented in this report indicates that in some segments of the industry, e. g. large coastal vessels, demersal trawl, purse seine and freezer storage units, governmental financial transfers have spurred capacity increase.

Several Norwegian governments have expressed intentions of reducing the overall harvesting and processing capacity, but the actual development demonstrates that this is a very difficult task[32]. It should not, however, come as a surprise that GFTs have worked in the wrong direction – contributing to capacity increase instead of decrease in parts of the fleet.

[32] Flaaten, O. (2003). Aktuell kommentar til Stortingsmelding om strukturtiltak i kystfiskeflåten (Comments on the White Paper on structural reform of the coastal fishing fleet, in Norwegian). Økonomisk forum, 57 (5).

7 Appendix

Table A12 Revenue enhancing transfers (1000 NOK)

Category		1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
	Fish price support *Pristilskudd*	153 144	199 570	41 949	20 439	1 175	1	0	0	0	0	0	0		Stprp 1, kap 1040 Hovedavtalen
1	Price support for herring *Prisregfondet for sild*	0	19 900	5 000	28 600	14 000	18 797	0	0	0	0	0	0		
	Support distant waters *Driftsgaranti fjerne farvann*	7 182	1 283	148	0	0	0	0	0	0	0	0	0		
	Special revenue support *Særlig inntektsstøtte*	27 257	0	0	0	0	0	0	0	0	0	0	0		
	Crab fisheries *Krabbe*	6 669	6 383	3 171	5 176	1 985	683	1 366	594	709	0	0	0		
2	Coastal shrimp *Kystreker*	12 384	8 508	8 103	1 890	1 311	2 907	1 799	0	0	0	0	0		
	Coastal sprat *Kystbrisling*	10 136	10 832	6 424	4 144	2 406	962	1 579	281	0	0	0	0		
	Coastal herring *Fjordsild*	1 157	963	619	950	743	816	631	0	0	0	0	0		
	Coastal mackerel *Kystmakrel*l	0	10 000	4 000	1 221	2 321	159	1 797	0	0	0	0	0		
	Raw fish transportation *Føringstilskudd*	31 169	54 448	41 628	36 796	27 858	36 359	28 820	51 996	33 067	33 724	32 933	32 443	26 377	
3	Long term storage *Langtidslagring*	1 067	486	0	0	0	0	0	0	0	0	0	0		
	Support for sealing *Tilskudd selfangst*	8 610	12 594	9 086	9 581	9 761	8 885	8 865	7 193	7 556	6 935	20 014	12 437	14 176	

Table A13 Social schemes (1000 NOK)

Category	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
Minimum wage														Stprp 1, kap 1040 Hovedavtalen
Garantilott/ Minstelott	141 200	78 800	85 000	75 000	63 000	51 000	25 400	25 600	17 200	12 600	17 200	11 100	8 900	
Vacation support														Stprp 1, kap 1040 Hovedavtalen
Ferieordning	50 000	51 000	19 000	16 000	0	0	0	0	0	0	0	0		
Unemployment benefits														Stprp 1, kap 1040 Hovedavtalen
Arbeidsledighetstrygd	61 321	115 900	122 900	0	0	0	0	0	0	0	0	0		
Safety measures														Stprp 1, kap 1040 Hovedavtalen
Trygghetstiltak fiskere	0	0	0	0	3 427	973	60	0	0	0	0	0		
Misc. social measures														Stprp 1, kap 1050 Diverse
Sosiale tiltak	2 468	2 461	2 455	3 601	2 976	3 002	3 125	1 515	1 500	2 500	2 998	3 002	3 000	

Table A14 Productive capital support (1000 NOK)

Category		1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
1	Debt reduction														Statens Fiskarbank, vedlegg til årsmeldinger
	Gjeldssanering	1 750	25 498	10 975	3 970										
	Liquidity and interest support														Statens Fiskarbank, vedlegg til årsmeldinger
	Likviditetstilskudd / rentedekning	49 524	42 222												
2	Interest supp. liquidity loans														Stprp 1, kap 1040 Hovedavtalen
	Rentestøtte likviditetslån		17 419												
	Interest supp 2nd priority loans														St.prp 1, kap 2414 og 2415
	Rentestøtte stønads- og 2.pr lån	32 600	32 000	54 000	57 900	78 450	60 900	28 800	2 625	2 848	2 664	1 850	1 247	626	
	Calculated interest support														Beregnet utlåns- og markedsrenter og lån SF
	Beregnet rentesubsidie	63 225	50 940	47 289	10 914										
	Support vessel construction														St.prp 1, kap 2414 og 2415
	Tilskudd fiskebåtkontrakter	5 000	10 000	12 355	0	1 680	5 000	17 749	30 084	75 372					
3	Support purchases in Finnmark														St.prp 1, kap 2414 og 2415
	Tillskudd nybygg/kjøp Finnmark	13 000	5 000								13 940	6 360			
	Interest support NFB														Statens Fiskarbank, årsmeldinger
	Rentestøtte Fiskarbanken	77 992	71 571	53 389	40 898	27 624	17 938	12 277							
	Bridging loans support														Statens Fiskarbank, årsmeldinger
	Byggelånssubsidier	12 407	2 109	3 712	3 968	2 542	3 014	2 791							
	Vessel building support														Statens Fiskarbank, årsmeldinger
	Kontraheringstilskudd	731	9 458	21 772	20 277	20 761	27 630								
	Investment grants														Statens Fiskarbank, årsmeldinger
	Investeringstilskudd	13 000	19 000	16 100			198	700	1 979	28 216	73 929	46 337	78 810	53 506	
	Productivity enhancement support *Effektiviseringstiltak*	50 715	42 491	36 228	15 342	5 247	2 689	6 909	5 361						Stprp 1, kap 1040 Hovedavtalen
4	Fleet renewal and capacity adjustm.														St.prp 1, kap 2414 og 2415
	Tilskudd fornyelse/kaptilpasning										74 387	67 111	75 382	12 386	
5	Structural adjustment *Omstillings-/stukturtiltak*	168 900	123 100	37 000	8 550	10 495	9 000	1 819			13 944	35 117	31 724	5 317	Stprp 1, kap 1040 Hovedavtalen

Table A15 Intermediate inputs support (1000 NOK)

Category		1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
1	Insurance support														Stprp 1 kap 1040
	Assuransepremie	25 000	30 000	20 000	9 000	0	0	0	0	0	0	0	0		
2	Baiting stations														Stprp 1 kap 1040
	Lineegnesentraler	9 153	10 913	12 701	8 925	10 002	9 551	3 000	14 788	12 982	13 900	11 679	12 886	12 109	
	Bait price support														Stprp 1 kap 1040
	Agntilskudd	16 627	19 315	7 335	2 216	0	0	0	0	0	0	0	0		
	Compensation storm damages														Stprp 1 kap 1050
	Erstatning storm	0	0	0	0	7 007	0	0	0	0	0	0	0		
3	Compensation seal damages														Stprp 1 kap 1040
	Erstatning sel	0	499	549	0	0	0	0	0	0	0	0	0		
	Other compensations														Stprp 1 kap 1050
	Erstatninger	3 208	1 826	683	506	623	716	1 311	1 441	598	560	603	1 129	620	
	Business development														SND-database
	Bedriftsutviklingstilskudd SND				2.562	3.969	1.170	410	1.673	1.193	4.343	1.983	1.797	3 339	
4	Project support														SND-database
	Utviklingstilskudd SND				0	0	0	375	1.014	0	536	1.329	1.008	100	
	Entrepreneurial scholarships														SND-database
	Etablererstipend SND				0	0	0	0	1.135	1.011	1.851	945	1.063	185	
	Joint ventures coastal fleet														Stprp 1 kap 1040
	Samarbeidsselskap kystflåte		440	1 325	646	796	724	516							
	Work environment improvement														Stprp 1 kap 1040
	Arbeidsmiljøinvest/-tiltak	3 000	4 000	7 700	788										