



IRELAND

PRODUCTIVE SECTOR

OPERATIONAL PROGRAMME

2000-2006

Department of Enterprise, Trade and Employment

December 2000

© Government of Ireland 2000

Contents

| | |
|---|-----------|
| SUMMARY INTRODUCTION | 1 |
| General | 1 |
| Structural Funds Intervention in the Productive Sector | 2 |
| 1 EX-ANTE EVALUATION AND CONTEXT FOR OPERATIONAL PROGRAMME | 9 |
| 1.0 Overview | 9 |
| 1.1 Summary of Strengths of Industry in Ireland | 12 |
| 1.1.1 Indigenous Industry – Structure | 12 |
| 1.1.2 Indigenous Industry – Strengths | 12 |
| 1.1.3 Foreign Direct Investment (FDI) | 13 |
| 1.2 Summary of Weaknesses of Industry in Ireland | 14 |
| 1.2.1 Indigenous Industry | 14 |
| 1.2.2 Foreign Direct Investment | 15 |
| 1.3 Food Industry | 15 |
| 1.4 Gaeltacht Areas | 17 |
| 1.5 Irish Film Sector | 18 |
| 1.6 Forestry | 19 |
| 1.7 Seafood Sector | 20 |
| 1.8 Tourism | 21 |
| 1.9 Horizontal Issues | 22 |
| 1.9.1 Environment | 22 |
| 1.9.2 Equality | 26 |
| 1.9.3 Poverty | 27 |
| 1.9.4 Rural Development | 28 |
| 2 OBJECTIVES/STRATEGIES OF THE PRODUCTIVE SECTOR | 30 |
| 2.0 Introduction | 30 |
| 2.1 Industry (Indigenous and Foreign Direct Investment) Priority | 32 |
| 2.1.1 Indigenous Industry | 32 |
| 2.1.2 Foreign Direct Investment | 35 |
| 2.1.3 Food Industry | 38 |
| 2.1.4 Seafood Processing | 39 |
| 2.1.5 Gaeltacht Areas | 40 |
| 2.1.6 Irish Film Sector | 41 |
| 2.1.7 Impact of the Industry Priority | 42 |

| | | |
|----------|--|-----------|
| 2.2 | Research, Technological Development and Innovation (RTDI) Priority | 42 |
| 2.2.1 | Higher Education | 45 |
| 2.2.2 | Industry | 46 |
| 2.2.3 | Agriculture | 48 |
| 2.2.4 | Food Industry | 49 |
| 2.2.5 | Marine | 50 |
| 2.2.6 | Forestry | 52 |
| 2.2.7 | Environment | 53 |
| 2.2.8 | Impact of the RTDI Priority | 55 |
| 2.3 | Marketing Priority | 56 |
| 2.3.1 | Industry | 56 |
| 2.3.2 | Food Industry | 57 |
| 2.3.3 | Seafood Sector | 57 |
| 2.3.4 | Tourism | 58 |
| 2.3.5 | Impact of the Marketing Priority | 59 |
| 2.4 | Sea Fisheries Development Priority | 60 |
| 3 | SUMMARY DESCRIPTION OF MEASURES | 63 |
| 3.1 | Industry (Indigenous and Foreign Direct Investment) Priority | 63 |
| 3.1.1 | Indigenous Industry | 64 |
| 3.1.2 | Foreign Direct Investment | 66 |
| 3.1.3 | Food Industry | 69 |
| 3.1.4 | Seafood Processing | 69 |
| 3.1.5 | Gaeltacht Areas | 69 |
| 3.1.6 | Irish Film Sector | 70 |
| 3.2 | Research, Technological Development and Innovation (RTDI) Priority | 70 |
| 3.2.1 | Higher Education | 70 |
| 3.2.2 | Industry | 72 |
| 3.2.3 | Agriculture | 76 |
| 3.2.4 | Food Industry | 78 |
| 3.2.5 | Marine | 78 |
| 3.2.6 | Forestry | 79 |
| 3.2.7 | Environment | 80 |
| 3.3 | Marketing Priority | 82 |
| 3.3.1 | Indigenous Industry | 82 |
| 3.3.2 | Food Industry | 82 |
| 3.3.3 | Seafood Sector | 82 |
| 3.3.4 | Tourism | 83 |
| 3.4 | Sea Fisheries Development Priority | 85 |
| 3.5 | Co-operation with Northern Ireland | 87 |
| 3.5.1 | Trade and Business Development Body | 88 |
| 3.5.2 | Education | 88 |
| 3.5.3 | Tourism | 88 |
| 3.5.4 | Environment | 89 |

| | | |
|----------------------------------|---|----------------|
| 4 | MONITORING, IMPLEMENTATION AND EVALUATION | 90 |
| 4.1 | Management and Monitoring Arrangements | 90 |
| 4.1.1 | Managing Authority | 90 |
| 4.1.2 | Monitoring Committee – Membership | 92 |
| 4.1.3 | Monitoring Committee – Responsibilities | 93 |
| 4.1.4 | Annual Implementation Report | 94 |
| 4.1.5 | Annual Implementation Review | 95 |
| 4.2 | Implementation | 96 |
| 4.2.1 | Programme Complement | 96 |
| 4.3 | Financial Management and Control Arrangements | 97 |
| 4.3.1 | Role of Paying Authorities | 97 |
| 4.3.2 | Role of Managing Authority | 98 |
| 4.3.3 | Role of Implementing Bodies | 98 |
| 4.3.4 | Independent Audits | 99 |
| 4.3.5 | Eligibility of Co-financed Expenditure | 102 |
| 4.3.6 | Final Beneficiaries | 102 |
| 4.3.7 | Irregularity Reporting | 102 |
| 4.3.8 | Use of euro | 102 |
| 4.4 | Electronic Data Transfer | 103 |
| 4.5 | Compliance with State Aid Rules | 103 |
| 4.6 | Evaluation | 104 |
| 4.6.1 | Mid-term Evaluation | 104 |
| 4.6.2 | Ongoing Evaluation | 104 |
| 4.6.3 | Ex-post Evaluation | 105 |
| 4.6.4 | Implementing Recommendations of Evaluation | 105 |
| 4.7 | Information and Publicity | 105 |
| 4.8 | Performance Reserve | 106 |
| | Annex A: Productive Sector OP – Position on State Aid | 107 |
| | Annex B: Indicative List of Indicators for Performance Reserve | 112 |
| APPENDICES | | |
| Appendix I | Commission Decision of 7 December 2000 approving Productive Sector OP | 113 |
| Appendix II | Environmental Assessment | 118 |
| Appendix III | Eco-audit Checklist | 138 |
| Appendix IV | Financial Tables | 145 |
| | • Tables for Co-financed Measures | 146 |
| | • Overall Tables for Productive Sector OP | 152 |
| LIST OF ABBREVIATIONS | | 170 |

Summary Introduction

General

The National Development Plan 2000-2006, submitted to the European Commission in November 1999, provides for three National (Inter-Regional) Operational Programmes, one of which is the Productive Sector Operational Programme.

This document, the Operational Programme for the Productive Sector, sets out in detail the context, objectives, strategy, measures, finances and management proposals for the Programme and is developed in line with Council Regulation (EC) No. 1260/1999 of 21 June 1999. The Programme will be supported later by a detailed Programme Complement adopted by the Monitoring Committee.

The Productive Sector Operational Programme investment, complemented by the other Operational Programmes, will aim to ensure that Ireland has a business environment and infrastructure that is as favourable as any other location worldwide. It will hence embed the existing base of foreign companies into the Irish economy and ensure that Ireland continues to be capable of attracting the best quality Foreign Direct Investment (FDI) projects. In addition, investment will be aimed at improving growth in output and employment in the indigenous sector through enhancing its competitiveness. Activity in the Productive Sector is essentially the driver of economic growth and as such is relied on to deliver jobs and wealth creation. The challenge ahead is to facilitate the conditions that allow for the further development of an indigenous enterprise culture which recognises the importance of high-tech, high value-added business and which has at its heart a deep commitment to the

roles of research and innovation and human resource development and a recognition of the strategic role of marketing in the global economy.

The Productive Sector includes manufacturing industry, natural-resource-based industries including agriculture¹, and internationally traded services. In relation to the natural-resource-based industries, agriculture, forestry and the marine industry are particularly important to rural communities and these sectors need support in order to face the challenges ahead. While tourism is expanding very rapidly in the country generally, many areas have yet to capitalise on the opportunities that this industry provides. In addition, current favoured centres/attractions for tourists need to ensure that their infrastructure is sufficient to cope with increasing numbers.

Support for the Productive Sector will reflect the specific needs of the sector and will be provided under Priorities covering Research, Technological Development and Innovation (RTDI), Industry (Indigenous and Foreign Direct Investment), Marketing, Forestry and Fisheries/Seafood Industry Development. The food sector will be covered under the RTDI, Industry and Marketing Priorities in a manner that addresses its developmental needs in a cohesive fashion.

Table 1 shows the level of funding for the Productive Sector and its composition by region – the Southern and Eastern (S&E) Region and the Border, Midland and Western (BMW) Region.

Structural Funds Intervention in the Productive Sector

The 1994-1999 Community Support Framework (CSF) strategy has been regarded as a notable success story with the structural funds being used effectively to support the long-term growth process. In terms of its specific objectives, productive capacity was increased, especially in the indigenous sector.

The Industrial Development Operational Programme accounted for a projected G1,020m or 18% of total EU aid under the CSF. Over the period 1994 to 1997, gross job creation averaged more than 26,000 jobs per annum, compared to a CSF target of 22,000. Net job creation (gross jobs created minus job losses) also performed significantly better than target, averaging over 11,000 jobs per annum compared to a target of just 5,000 per annum. Over the same time period the value of industrial exports also climbed significantly, reaching a total of £35bn in 1997. The 1999 target was £28.8bn. There was also a marked increase in expenditure on research and development (R&D). By 1996, business expenditure on R&D is estimated to have reached 1.11% of GDP, compared to a 1999 target of just 0.82%, and gross expenditure on R&D is estimated to have reached 1.59% of GDP, compared to a 1999 target of 1.3%.

1 General investment measures for agriculture and rural development are located in the two Regional Operational Programmes and in the CAP Rural Development Programme (which is outside the Community Support Framework). Research, Technological Development and Innovation (RTDI) is the only area covered in this OP.

| Table 1. Productive Sector Operational Programme (Gm) | | | | | | | | |
|--|--------------------|-----------------|---------------|----------------|------------------------|-----------------|----------------|----------------------|
| Priority | Co-financed | | | | Non-co-financed | | | Overall Total |
| | Total | National | EU | Private | Total | National | Private | |
| RTDI | | | | | | | | |
| Total | 868.08 | 200.00 | 290.59 | 377.49 | 2627.12 | 2120.66 | 506.46 | 3495.20 |
| of which BMW | 334.82 | 72.21 | 111.23 | 151.38 | 713.25 | 585.43 | 127.82 | 1048.07 |
| of which S&E | 533.25 | 127.78 | 179.36 | 226.11 | 1913.88 | 1535.23 | 378.65 | 2447.13 |
| Industry | | | | | | | | |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 3143.98 | 2690.59 | 453.39 | 3143.98 |
| of which BMW | 0.00 | 0.00 | 0.00 | 0.00 | 1389.57 | 1135.34 | 254.23 | 1389.57 |
| of which S&E | 0.00 | 0.00 | 0.00 | 0.00 | 1754.41 | 1555.25 | 199.16 | 1754.41 |
| Marketing | | | | | | | | |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 539.69 | 459.33 | 80.36 | 539.69 |
| of which BMW | 0.00 | 0.00 | 0.00 | 0.00 | 178.33 | 151.60 | 26.73 | 178.33 |
| of which S&E | 0.00 | 0.00 | 0.00 | 0.00 | 361.36 | 307.73 | 53.63 | 361.36 |
| Sea Fisheries Development | | | | | | | | |
| Total | 132.97 | 12.27 | 42.12 | 78.58 | 26.88 | 4.67 | 22.21 | 159.85 |
| of which BMW | 77.52 | 7.15 | 24.47 | 45.90 | 15.66 | 2.88 | 12.78 | 93.18 |
| of which S&E | 55.45 | 5.12 | 17.65 | 32.68 | 11.12 | 1.79 | 9.33 | 66.57 |
| Technical Assistance | | | | | | | | |
| Total | 1.00 | 0.50 | 0.50 | 0.00 | 0.90 | 0.90 | 0.00 | 1.90 |
| of which BMW | 0.60 | 0.30 | 0.30 | 0.00 | 0.15 | 0.15 | 0.00 | 0.75 |
| of which S&E | 0.40 | 0.20 | 0.20 | 0.00 | 0.75 | 0.75 | 0.00 | 1.15 |
| TOTAL | 1002.05 | 212.77 | 333.21 | 456.06 | 6338.58 | 5276.16 | 1062.42 | 7340.64 |
| of which BMW | 412.94 | 79.67 | 136.00 | 197.28 | 2296.97 | 1875.41 | 421.56 | 2709.91 |
| of which S&E | 589.10 | 133.10 | 197.21 | 258.79 | 4041.51 | 3400.75 | 640.77 | 4630.62 |

Note: These figures are rounded to two decimal places and may show some discrepancies in the totals. For exact figures please refer to Appendix IV – Financial Tables.

In addition to the Industrial Development Operational Programme there were further Productive Sector development components in other Operational Programmes (OPs): Agriculture, Forestry and Rural Development OP, which accounted for a projected G998m or 1.7% of total EU aid under the CSF; and the Tourism OP, which accounted for 8% of total EU aid under the CSF.

EU intervention in the Productive Sector Operational Programme 2000-2006 is provided through the European Regional Development Fund (ERDF) and through the Financial Instrument for Fisheries Guidance (FIFG).

European Regional Development Fund (ERDF)

In the period 1994-1999 the relative and absolute volume of ERDF financing available for the measures now covered by the Productive Sector Operational Programme was far greater than for the period 2000-2006. This is the result of, on the one hand, the larger volume of national funds being invested, and on the other hand, the lower absolute amount of ERDF funding available. As a result, many measures contained in the programme while eligible for ERDF co-financing are not supported in view of the limited funding available. ERDF funding will be focused on specific areas where there has been a spending gap in Irish policy compared to the EU average and/or where ERDF support has been invested in successful measures to be continued under the Productive Sector Operational Programme.

Research, Technological Development and Innovation (RTDI)

Total spending of G3.49bn is proposed for RTDI measures. Of which, G868.08m is co-financed with G290.59m being provided from the ERDF.

The funding provided by the ERDF will concentrate on three measures in RTDI:

- ◆ higher education sector/strategic research (capital)
- ◆ industry innovation initiative – competitive RTDI grants scheme
- ◆ technology innovation networks – collaboration for enterprise.

| Measure/Sub-measure | Total | National | EU | Private |
|--|--------------|-----------------|-----------|----------------|
| Education – Capital | | | | |
| Total | 104.31 | 43.72 | 60.59 | 0.00 |
| of which BMW | 33.70 | 8.41 | 25.29 | 0.00 |
| of which S&E | 70.61 | 35.31 | 35.30 | 0.00 |
| Industry – National Collaboration | | | | |
| Total | 232.33 | 136.80 | 76.12 | 19.41 |
| of which BMW | 92.85 | 56.03 | 29.03 | 7.79 |
| of which S&E | 139.48 | 80.77 | 47.09 | 11.62 |
| Industry – Competitive RTDI | | | | |
| Total | 531.43 | 19.48 | 153.88 | 358.07 |
| of which BMW | 208.28 | 7.77 | 56.92 | 143.59 |
| of which S&E | 323.15 | 11.71 | 96.96 | 214.48 |
| RTDI Priority | | | | |
| Total | 868.08 | 200.00 | 290.59 | 377.49 |
| of which BMW | 334.82 | 72.21 | 111.23 | 151.38 |
| of which S&E | 533.25 | 127.78 | 179.36 | 226.11 |

Note: These figures are rounded to two decimal places and may show some discrepancies in the totals. For exact figures please refer to Appendix IV – Financial Tables.

Education Sector

The aim of the RTDI in the higher education sector measure is to ensure that the appropriate supports are available to strengthen the research capacity and capability of the third-level sector. This measure will contribute to the overarching objective to achieve an environment of excellence in research, in an increasingly knowledge-based society.

This measure, through the various sub-measures, will engender a strategic view of research in higher education, will ensure that the fundamental sub-structure is in place and both renewed and enhanced, and will ensure that a sufficiency in both the number and quality of researchers is created. This measure is comprised of the following four sub-measures, all of which contain capital and current elements:

- ◆ basic support for research and electronic communications
- ◆ project-based and individual research
- ◆ technological sector research
- ◆ strategic research.

At an institutionally strategic level, the supports planned under the sub-measure for strategic research will augment investments already made under the Programme for Research in Third-Level Institutions (PRTLTI). This will develop a strategic and planned approach by third-level institutions to the long-term development of their research capabilities, consistent with their existing and developing research strengths and capabilities. An important element of the strategic research effort is to facilitate and encourage co-operation in research between third-level institutions north and south. The aim would be to encourage collaborative endeavours in research in a north/south context, including research into issues of relevance to north/south co-operation and the development of the whole island. The assistance provided from the ERDF will concentrate on the infrastructure capacity building component, of the strategic research element, of this measure.

For further details of this measure and its component sub-measures, refer to 2.2.1 and 3.2.1.

Industry Sector

The policy of the Irish Government for supporting the enterprise sector is underpinned by two broad approaches – the attraction of foreign direct investment and the development of Irish-owned firms. Irish-owned industry consists almost entirely of small and medium-sized enterprises – in fact over 90% of indigenous Irish firms are SMEs. Small and medium-sized enterprises account for 60% of exports and 70% of employment in internationally trading indigenous industry, amounting to G5.1bn exports each year and employment of about 90,000 people.

The development of Irish-owned SMEs, as a complement to the exceptional successes in the foreign direct investment sector, is essential to the economy as a whole. This is because locally owned businesses:

- ◆ form part of a balanced portfolio of economic activities, which prepare the economy against technology, sector or market-specific shocks
- ◆ generate a self-sustaining cycle of growth and reinvestment, since the full set of corporate and entrepreneurial competencies together with each company's profits are more likely to remain in Ireland
- ◆ promote spin-offs, as companies seek new investment and business opportunities within existing businesses or new start-ups
- ◆ provide opportunities for employee advancement and for the development of world-class locally owned companies
- ◆ provide and sustain a base of sub-supply and services companies to service the multinational company base, thereby enhancing Ireland's attractiveness as an investment location.

In addition, indigenous companies tend to be located throughout Ireland. About one-quarter of all employment in indigenous industry is in the Border, Midland and Western Region, which is important in the context of Government and EU regionalisation aims and objectives.

RTDI Competitive Measure

In the context of reduced EU funding availability, it is recognised that EU co-funding must be focused on those areas which achieve the greatest impact in terms of Ireland's overall industrial development. Under the Operational Programme for Industrial Development 1994-1999, the CSF contribution played a significant role in 'levering' substantial private-sector funding for in-company R&D activities, particularly in SMEs.

The In-company R&D Scheme, which was originally allocated EU co-funding of G132m in 1994, was an outstanding success to the extent that all of this money was committed by August 1997. In view of this level of demand, additional funding of G39m was allocated to the scheme as part of the CSF Mid-Term Review in 1997. The scheme was revamped and relaunched as the In-company RTDI Competitive Scheme, which operated on a competitive fixed tranche basis from November 1997. The two schemes were regarded as outstanding successes in that over 600 companies (some 95% of these being SMEs) were funded during the period 1994-1999.

Collaboration in RTDI (National) Measure

During the 1990s, the concept of the 'National System of Innovation' and its increasing role in economic development was generally accepted at national and

international levels. The key players in the National System of Innovation are researchers in industry and third-level colleges, national governments and private-sector financial institutions. Without the availability of this 'pump priming' finance from public finances, the process of collaboration between researchers in industry, State research institutes and third-level institutions is less likely to happen and, therefore, would not be facilitated.

Under the Operational Programme for Industrial Development 1994-1999, such collaborations took place through the Programmes in Advanced Technologies (PATs) and the Applied and Strategic Research Grants Schemes. It is considered that such collaboration schemes, which operated at national level, began a process of partnership between the key players in the Irish science and technology (S&T) system. Recent policy documents such as the *White Paper on Science and Technology* (published in 1996) recommended the creation of networks of researchers within the S&T community. The work of the Irish Council for Science, Technology and Innovation (ICSTI) has laid the foundations for important long-term economic developments in this area, particularly through the recommendations set out in the *Technology Foresight Ireland Reports*. However, it is considered that in the short to medium term, collaboration schemes (which operated centrally at national level under the RTDI Sub-Programme for Industrial Development 1994-1999) should continue to be co-financed in order to build on the successes achieved under the last CSF.

Further information on ERDF intervention is contained at 3.2.2: RTDI in Industry – (B) Competitive RTDI scheme, and RTDI Collaboration – (A) Collaborative Networks (National).

Financial Instrument for Fisheries Guidance (FIFG)

Sea Fisheries Development

In the period 1994-1999 the Fisheries Operational Programme accounted for a projected G81m or 1.4% of total EU aid under the CSF. There was a substantial increase in fish landings, with volumes increasing by more than 30% to 343,000 tonnes compared to a CSF target of only 18%. The value of landings increased by over 50% to G210m over the same period, again exceeding the target set. Under the Programme, 1,450 gross registered tonnage was removed from the Irish fishing fleet, facilitating the achievement of EU fleet reduction targets. The Operational Programme assisted with the improvement and renewal of fishing vessels and facilities for processing/marketing of fisheries products.

G42m will be provided from the FIFG for the co-financed sub-measures of the Sea Fisheries Development Priority where the total co-financing is G132m. The Sea Fisheries Development Priority funding will be provided primarily to meet the strategic objectives of enhanced safety, quality and competitiveness of the fishing fleet.

Table 3. Costs of FIFG Co-financed Priority (Gm)

| Priority | Total | National | EU | Private |
|----------------------------------|--------------|-----------------|-----------|----------------|
| Sea Fisheries Development | | | | |
| Total | 132.97 | 12.27 | 42.12 | 78.58 |
| of which BMW | 77.52 | 7.15 | 24.47 | 45.90 |
| of which S&E | 55.45 | 5.12 | 17.65 | 32.68 |

The Sea Fisheries Development Priority of the Programme will be mostly co-funded. There will be a continued focus on the modernisation of the whitefish fleet within the framework of the Community fleet development guidelines. The revitalisation of the inshore fleet will be addressed. Strategic initiatives will critically focus on enhancing the handling, storage and presentation of raw material so as to maximise the value generated by the catching sector. Measures to adjust fleet capacity to fleet targets in line with EU requirements will continue with a view to reaching capacity reduction targets, thereby contributing to an overall improvement in the balance of catching capacity to available fish stocks.

In the peripheral coastal communities there are still particular challenges to overcome and the challenge of restructuring and diversification will be addressed through supporting new sustainable activities, increasing efficiency, supporting innovation and skills development.

More detailed information on the Sea Fisheries Development Priority is contained at 2.4 and 3.4.

1

Ex-Ante Evaluation and Context for Operational Programme

1.0 Overview

The overall conclusion from the mid-term external evaluation of the Operational Programme for Industrial Development 1994-1999 was that the Programme was successful and valuable in the development of Irish industry. A key recommendation suggested by the review was that the special circumstances of different regions such as major cities, border areas and less-developed regions should be considered in preparing for the period after 1999. A number of key issues also arose from the macro-performance of Irish industry:

- ◆ the significant achievement of employment creation by both Irish-owned and foreign-owned industry, but particularly foreign-owned industry
- ◆ the current and increasingly high level of dependence on FDI for employment creates a significant challenge to Irish-owned industry
- ◆ the dependence on the UK market for exports by Irish-owned industry.

The review concluded, however, that the issues had wider implications which should be considered in a longer term strategic policy context.

The ESRI ex-ante assessment of 'National Investment Priorities' for the period 2000-2006 concluded that there should be a scaling back of public investment in the Productive Sector to reflect the rapid economic growth experienced in Ireland. However, it acknowledged that there is a requirement to achieve a better regional

and spatial spread of economic activity and for this reason recommended continuation of limited grant aid to the enterprise sector in the less-developed regions. The report recommended a major increase in the provision for research and development to take the form of a single priority. The ESRI also recommended a move away from traditional grant assistance to assistance in the form of access to seed and venture capital, equity investment in early-stage business and initiatives to promote more competitive credit finance to smaller companies.

The CSF Evaluation Unit ex-ante report of the NDP concluded that the plan has the potential to make a significant contribution to the overall objectives set down. In general the broad balance of investment proposed is appropriate to the needs of the economy but, reflecting some of the ESRI's concerns, the report expressed concern at the risk of dead weight, particularly in the productive sector area. The report welcomed the commitment to greater competition in the delivery of services and in this regard welcomed the commitment to introduce a competitive process for the RTDI budget. It considered that the formulation of strategy is a related aspect which could be improved in various Operational Programmes. It concluded that the OP strategies should endeavour to outline clearly how the various priorities and measures will contribute to the achievement of objectives.

Relative to other sectors the NDP 2000-2006 provides for less investment in the productive sector. This Operational Programme's response to the conclusions and recommendations is to focus the priorities and measures more on balanced regional development and increased competitiveness and less on job creation. Concerns in relation to dead weight will be minimised through appropriate targeting. The strategies and measures outlined in Chapters 2 and 3 elaborate on this approach. In line with the importance attached to RTDI by the external evaluators and Community Policy there will be a substantial increase in RTDI, which will be co-financed by ERDF support under the Productive Sector Programme. A standardisation of the selection criteria will be continued and funding will be provided, as appropriate, on a competitive basis. The 'Agency Management' approach, i.e. division of responsibilities between policy makers and implementing agencies, has been viewed as one of the strong points of the Irish RTDI system. This is in line with the recommendations in the guidelines on effective policy management. Only RTDI will be co-financed by the ERDF and will especially focus on SMEs.

Sustained development of fisheries in Ireland faces major challenges both in production and in marketing of products. There is a need to renew and modernise the fleet but this will not be at the expense of any agreed reductions in capacity. In line with Community Policy Aquaculture, fish processing and marketing of fish products will remain priority elements in the growth of the Irish fishing sector. Emphasis will be placed on marketing of product quality and of surplus or under-exploited species.

Analysis from the NDP and CSF shows that while manufacturing industry in Ireland has performed well – by attracting large-scale, high-tech, high value-added FDI projects – Irish-owned industry still has some major structural deficiencies such as

scale and low productivity, low export propensity, low R&D spend, low profitability and poor training records. Low productivity is illustrated in Table 4.

| Ownership | No. of Units | | Employees (000s) | | Output (£m) | | Exports* (%) | |
|-----------|--------------|-------|------------------|-------|-------------|--------|--------------|------|
| | 1987 | 1996 | 1987 | 1996 | 1987 | 1996 | 1987 | 1996 |
| Irish | 3,935 | 3,871 | 106.6 | 120.2 | 7,364 | 12,188 | 31.9 | 34.0 |
| Foreign | 795 | 728 | 78.4 | 106.4 | 8,028 | 24,108 | 84.7 | 89.3 |
| Total | 4,730 | 4,599 | 183.0 | 226.6 | 15,391 | 36,296 | 59.4 | 70.7 |

* Gross output exported as a percentage of gross output.

Source: *National Development Plan 2000-2006*

When further regional analysis is considered, a divergence in the spread of high-tech manufacturing between the Southern and Eastern (S&E) Region and the Border, Midland and Western (BMW) Region is evident (see Table 5).

| | BMW Region | | | S&E Region | | |
|-------------------------------------|-------------|---------------|----------|-------------|---------------|-----------|
| | Irish-owned | Foreign-owned | Total | Irish-owned | Foreign-owned | Total |
| Units | 68 | 74 | 142 | 309 | 249 | 558 |
| Employees | 2,453 | 15,861 | 18,314 | 10,812 | 43,095 | 53,907 |
| Net output (£000s) | 113,791 | 1,334,421 | 1,448,21 | 414,686 | 8,623,349 | 9,038,034 |
| Net output per employee (£) | 46,400 | 84,100 | 79,100 | 38,400 | 200,100 | 167,700 |
| Wages and salaries (£000s) | 29,500 | 237,600 | 267,000 | 162,800 | 808,200 | 971,000 |
| Wages and salaries per employee (£) | 12,000 | 15,000 | 14,600 | 15,100 | 18,800 | 18,000 |

Source: *National Development Plan 2000-2006*

While the BMW Region has 27% of all foreign-owned high-tech manufacturing employment, the region only produces 13.8% of the State's foreign high-tech output. This means that net output per employee in the foreign-owned high-tech sector of the S&E Region is over twice that for the BMW Region. This fact is reflected in the higher salaries per employee in the S&E Region, where a pay premium of 25% is evident.

While the BMW Region's manufacturing presence has increased in recent years, it appears that the most productive firms within the most productive and profitable sectors have a larger presence, on a per capita basis, in the S&E Region. The high-tech sector in the BMW Region is heavily concentrated in the larger urban centres, especially Galway, an important issue to be addressed within the BMW Region.

1.1 Summary of Strengths of Industry in Ireland

1.1.1 Indigenous Industry – Structure

The indigenous sector comprises manufacturing and internationally traded service industries and natural resource firms. It includes a wide range of sectors and activities. It has undergone a major revival in the 1990s and is now characterised by considerable structural change. Within indigenous industry:

- ◆ over 90% of companies are SMEs
- ◆ the biggest employers by sector are food, metals and engineering and internationally traded services
- ◆ 35% of all sales are exported
- ◆ 25% of all employment is in the BMW Region
- ◆ annual gross job gains of 12,000 (average) were achieved since 1995 accompanied by gross job losses of 9,000 (average).

Industrial policy aims to anticipate, facilitate, incentivise and accelerate, as necessary, ongoing and rapid industrial change, so that indigenous industry is continually repositioned within the higher-valued segments of the global economy. This process contributes to maintaining and increasing high levels of income and must generate new jobs to replace jobs lost in the restructuring process.

1.1.2 Indigenous Industry – Strengths

After a prolonged period of major decline and restructuring, indigenous industry experienced a substantial recovery over the period of the last Operational Programme and is now in a stronger position to respond to significant challenges including those outlined below. In terms of sales, exports and profitability, there have been improvements in performance and indicators show substantial real growth compared to the poor position in the late 1980s and early 1990s. As outlined by O'Malley in *The Revival of Irish Indigenous Industry (1987-1997)*, the record of Irish indigenous industry has changed from one of relatively weak growth trends to one of relatively strong growth trends by international standards. Much of this improved competitiveness has reflected the impact of EU co-financed interventions both directly with firms and indirectly with infrastructure.

Statistics for sales, employment, exports, profitability, productivity and R&D clearly demonstrate this improved position:

- ◆ outside the food sector, sales by Irish-owned industry grew by 50% in real terms between 1993 and 1997

- ◆ positive net change was achieved in employment each year since 1993
- ◆ while Irish-owned manufacturing companies are still dependent on the UK market for a large proportion of their exports (49% in 1998), exports to the wider EU stood at 31% in 1998 (*Irish Economy Expenditure Survey 1999*)
- ◆ between 1993 and 1997 average profit margins in indigenous firms rose from 5.5% to over 9%
- ◆ productivity has also improved: the average annual growth in real net output per person in the Irish-owned segment has been 2.5% over the period 1994 to 1999
- ◆ R&D spend and intensity have increased in indigenous industry. R&D intensity of indigenous manufacturing industry has doubled during the 1990s from 0.5% of gross output in 1991 to an estimated 1.1% in 1997 (Forfás, 1999)
- ◆ world-class companies have emerged in fast-growth sectors such as software and electronics; for example, in 1993 the Irish-owned software sector consisted of 336 companies, employed 4,500 people, and had sales of £236m – by 1997, it had grown to 561 companies, employed 9,200 people, and had sales of £528m.

1.1.3 Foreign Direct Investment (FDI)

There are approximately 1,200 non-indigenous manufacturing and internationally traded services companies in Ireland, employing over 159,000 people full-time and part-time in 1999. They account for about 50% of total full-time and part-time manufacturing and internationally traded services employment. A high proportion of these companies are in relatively low-technology sectors by today's standards, and are therefore vulnerable. Non-indigenous manufacturing firms account for over 80% of manufacturing exports, and close to 70% of manufacturing output. Companies encompass a wide range of sectors and activities but the strongest performing sectors in job creation terms continue to be international services, electronics/engineering and healthcare/pharmaceuticals.

In international services, growth continued at a strong pace following the trend of more recent years, and with over 8,000 new jobs created the sector recorded over 22% growth in employment during 1999. The sector now accounts for nearly 34,000 of all IDA-supported jobs.

While nearly 7,000 jobs were created in electronics in 1999 the volatility rate continues to be high, so that overall growth in employment was 4.5% for the year. Nearly 62,000 people are now directly employed in this sector.

The healthcare/pharmaceuticals sector continued its consistently steady development. With over 2,000 new jobs created during 1999, growth in employment was more than 9% for the year bringing the total employed in the sector to over 18,000 people.

Companies in general tend to have the following characteristics:

- ◆ large multinational organisation with very strong global market position
- ◆ proprietary technology and expertise sufficient to give it technological leadership in its served market
- ◆ concentrated in high growth sector.

1.2 Summary of Weaknesses of Industry in Ireland

Notwithstanding the progress achieved over the period of the last Operational Programme, a number of fundamental weaknesses and constraints persist:

1.2.1 Indigenous Industry

- ◆ Irish companies are small by comparison with their competitors (90% are SMEs)
- ◆ productivity is low by international standards
- ◆ a significant number of firms are located in sectors facing increased cost competition
- ◆ export propensity is low in SMEs and concentrated on the UK market
- ◆ only 1 in 10 internationally trading firms can be considered a high R&D performer
- ◆ companies have a poor training record
- ◆ Irish manufacturing has a relatively low take-up of best practice
- ◆ there are high attrition rates in indigenous industry, particularly in sectors undergoing adjustment: almost 10,000 jobs were lost in indigenous industry as a whole in 1999
- ◆ firms in less-developed regions suffer from poor accessibility to markets, lack key infrastructure, and have fewer opportunities to build capability networks.

Addressing these weaknesses, together with key challenges arising from rapidly accelerating IT-driven technological change, the impact of economic and monetary union (particularly in the sterling area) and competition in an increasingly globalised market, will be priorities during the period of this Operational Programme.

1.2.2 Foreign Direct Investment (FDI)

- ◆ a significant number of companies are producing product for which Ireland is gradually becoming an uncompetitive location. Despite the best efforts of the development agencies a certain level of job losses are inevitable, and will have to be replaced with higher technology operations; for example, in 1999 there were 9,000 job losses in foreign-owned companies, these were mainly in lower value jobs
- ◆ in many instances the Irish operation is engaged only in producing product; the number also encompassing higher order functions such as R&D needs to be increased if the long-term strategic importance of the Irish operation is to be secured
- ◆ a very high and growing proportion of inward investment is located in Dublin and adjacent counties (49% in 1999)
- ◆ a high proportion of the lower technology and therefore more vulnerable companies are located in the Objective 1 Region.

1.3 Food Industry

The food industry and its component sectors have been the subject of recent analyses. The position as set out below reflects those analyses and, in particular, the views/recommendations of the Food Industry Development Group and the Agri-Food 2010 Committee.

The industry accounts for two-thirds of total indigenous industry. It has an output value of £10bn and its exports in 1999 amounted to some £5.2bn. The industry provides direct employment for 40,000 people. It uses almost exclusively indigenous raw materials and its annual purchases of raw materials, labour and services represent over 70% of its total sales. The industry comprises over 700 companies of which 71% have less than 50 employees. Its main components are dairy products/ingredients, beef, other meats, prepared consumer foods and drinks.

Despite the BSE-related difficulties and difficult market situations in some sectors, the overall performance of the industry in recent years has been satisfactory. Since 1993 output has increased by £2.2bn and exports by £1bn. A particular feature has

been the strong growth in the high-value prepared consumer food and food ingredients sectors. The recent progress has been assisted by the public funding made available under the Food Sub-Programme of the Operational Programme for Industrial Development 1994-1999. The Sub-Programme has also, inter alia, made a significant contribution to food safety and quality enhancement.

Future Opportunities/Challenges

The factors that will influence the industry's future environment are many and varied. The following summarises the more significant:

- ◆ Global food demand will increase over the next decade but the developing countries and the mature markets display different patterns. Volume growth is the feature of the former, while a shift in demand is the main trend in the latter. That shift reflects changing consumer preferences, for example increased emphasis on convenience and innovation. It indicates that the main potential for growth in the mature markets is in the prepared consumer foods and food ingredients areas.
- ◆ Greater trade liberalisation, the continuing concentration/globalisation of purchasing power at retail level, the growth in the food services sector, EU enlargement and the advent of the euro will present both opportunities and threats. These factors will increase the competitive pressures on the industry.
- ◆ The consumer's concerns in relation to food safety and quality will continue to be of paramount importance. The emergence of modern biotechnology poses another and a particular challenge. As the Agri-Food 2010 Committee indicates, there is a need to strike the right balance between ensuring that the food industry is to the forefront of emerging trends and sensible precaution in embarking on a new process with an uncertain outcome.
- ◆ Information technology will increase in importance as a means of discerning market trends and in serving the food industry's sophisticated customer base.

Strengths/Weaknesses

The industry's strengths are:

- ◆ a strong indigenous base both in terms of company ownership and usage of raw materials
- ◆ growing investment in dynamic sectors (consumer foods, ingredients, drinks)

- ◆ dynamic niche producers who, in addition to carving out niche markets, provide the potential for further more large-scale developments
- ◆ a resilient character, as exemplified by the industry's progress in recent years despite many unfavourable conditions
- ◆ a favourable food safety and quality image (which must be retained and built upon if markets are to be maintained/expanded).

Its main weaknesses are:

- ◆ an over-reliance on commodity products: despite recent progress, the value-added sectors still account for less than 20% of output
- ◆ a lack of scale compared to world-class competitors – this has inhibited cost competitiveness and market access
- ◆ under-investment in terms of marketing and innovation. In the latter context, the Food Industry Development Group pointed out that, due to an historically low level of R&D expenditure, even our major companies compare unfavourably with their international competitors in the scale and depth of their R&D capability
- ◆ particular sectoral problems such as the over-capacity difficulties in the beef sector
- ◆ human resources difficulties both in the context of the recruitment/retention of employees and skill levels.

1.4 Gaeltacht Areas

Gaeltacht areas are almost entirely in remote and rural parts of the country and funding towards the development of industry in these areas is consistent with the priority in the NDP and the CSF afforded to balanced regional development. Support provided under the Operational Programme will aim at increasing the competitiveness of existing Gaeltacht industry, thereby enabling the industries already in operation not only to survive, but to change and position themselves further along the added value chain.

The development of modern industry and a services-based economy within the Gaeltacht represents a huge developmental challenge for Údarás na Gaeltachta, comparable to the challenge faced over thirty years ago of the development of a manufacturing base within the Gaeltacht. Now approximately 28% of the workforce are employed in industry. This represents a major achievement in a rural society and sets a benchmark for the development of a modern economy in the years ahead.

The main weaknesses of the Gaeltacht are the inevitable consequences of its peripherality and rurality. In this context the area is characterised by:

- ◆ a long history of population decline and emigration, particularly in the areas outside the immediate vicinity of Galway city
- ◆ higher levels of unemployment in remote areas allied to a lack of suitable skills
- ◆ low per capita incomes
- ◆ the lack of major urban centres and a deficient services sector
- ◆ a lack of social amenities and modern lifestyles for the younger generation
- ◆ a relatively high dependence on marginal farming and small-scale fishing
- ◆ poor infrastructure and access to services allied to a deficient public transport system
- ◆ difficulty in attracting back third-level graduates (there are no third-level institutions in the Gaeltacht), due to lack of social amenities and suitable job opportunities.

The Gaeltacht has a number of resources upon which a strategy to continue the revitalisation of the region can be based. They include:

- ◆ the rich cultural and linguistic heritage which, while of particular value for tourism development, will also continue to foster a regional identity
- ◆ the high quality of the physical environment
- ◆ the opportunities for the development of fishing, aquaculture and other natural-resource-based industries
- ◆ the unique potential for the development of cultural tourism
- ◆ the long tradition of community development actively encouraged by the assistance of An tÚdarás and its parent Government Department.

1.5 Irish Film Sector

At the beginning of the 1990s the level of film production in Ireland was very low, at two to three feature films per year. A concerted commitment of State and EU Structural Fund support for film production commenced from 1994. This has resulted in:

- ◆ a large (fourfold) increase in the levels of employment in film and independent television production (in 1993, some 4,191 employment placements, amounting to 480 full-time equivalents, were provided by the industry. In 1998, this had risen to 21,299 and 1,690 respectively. The full-time equivalents substantially understate the impact, since employment in this industry is project-based)
- ◆ an across-the-board upskilling and increased professionalism in the sector
- ◆ a large increase in the output of film and television productions
- ◆ the consolidation and growth of a number of Irish production companies, which place Ireland in an excellent position to build for the future.

The Film Industry Strategy Group, which reported in August 1999, has identified weaknesses and key areas for the concentration of efforts and resources. These include a strengthened and properly resourced Film Board, continued investment in training and opportunities offered by technological advances, business planning and a stronger commercial orientation and discipline in the development of stronger companies and the encouragement of collaboration between companies. The investment since 1994 has placed Ireland in a strong position to optimise the opportunities presented by the application of new digital production and distribution technologies in the audiovisual sector.

1.6 Forestry

Until the late 1980s the country was heavily reliant on public forestry to achieve afforestation objectives. However in the early 1990s the level of afforestation expanded dramatically, boosted by greatly increased private and particularly farmer forestry. In the period 1994-99 the forestry sector achieved additional planting of over 100,000 hectares, increased wood production by 2m cubic metres and created 1,600 jobs in planting and harvesting.

The industry offers considerable scope for expansion given the very low level of afforestation in Ireland with only 9% (up from 7% in 1993) of land used for this purpose compared to an EU average of more than 30%. The development of forestry, on a certain scale and in a particular manner, can contribute to national, economic and social wellbeing on a sustainable basis compatible with the protection of the environment. For instance, afforestation has the potential to convey a substantial environmental benefit to society by ultimately reducing CO₂ emissions. This is of particular importance in the context of Ireland's commitment under the Kyoto Protocol. The exact methodology for accounting for forestry sequestration of CO₂ under the Kyoto Protocol has not yet been agreed, but forestry sequestration will be a necessary element in the overall action by Ireland to achieve its target.

The BMW and S&E Regions have broadly the same percentage of afforestation with the levels of planting peaking around 1995/1996. The downturn in afforestation since 1996 has been largely attributed to the increased participation of farmers in the REPS scheme and a closer synchronisation of policies in this area is required. They include a need for substantial training allied to a need to have access to the most cost-efficient and up-to-date techniques if the State is to obtain a return on its investment. Furthermore, the Irish forest industry is at a very early stage of development compared with the mature forest economies of Finland and other European countries.

While some technology already exists that can be applied in Ireland there will be a need for indigenous innovation and R&D to cater for specific Irish conditions.

1.7 Seafood Sector

The Irish seafood sector, comprising fishing, aquaculture, processing and ancillary sectors, employs 16,000 people directly and an additional 9,000 in supporting sectors. Including family dependants, nearly 60,000 people rely on the seafood industry. The sector is worth £330m per annum (at final point of sale) to the national economy and Irish seafood exports are now valued at some £240m.

Recent years have seen strong growth in consumer demand for seafood within the EU and worldwide. Very significant changes are taking place in traditional markets around the world. Patterns of consumption for whitefish, salmon and shellfish are changing rapidly, with a huge potential market for a wide variety of high value seafood as well as for fresh product. Consumption will continue to follow an upward trend creating the opportunity to develop new products to satisfy market needs and allowing the industry to move along the value chain. Competition is intensifying in pelagic markets, which are characterised by significant fluctuations in both demand and supply.

The strengths of the seafood sector include:

- ◆ an indigenous resource-based industry located in peripheral coastal communities where the sector makes a significant contribution to the economy of the communities in terms of exports, jobs and regional and local development
- ◆ a buoyant market for seafood and an increasingly free market situation ensure that the economic fundamentals of the industry are market driven
- ◆ proximity to the fishing grounds makes it attractive to land high-quality product into Irish ports.

Significant progress has been achieved since 1994 in upgrading the seafood processing sector. Fish processing output amounts to 145,000 tonnes, valued at £220m. There remains a lot to do to realise the full potential of the seafood processing sector, particularly in terms of quality, value added and scale. New products, increased added value, first-class quality and improved continuity of supply are the key challenges facing the industry.

The sea fisheries sector faces many challenges which must be addressed to ensure the realisation of the full potential of the sector. The age-profile of the fleet shows that many of the vessels, particularly in the inshore fleet, are over 30 years old. The availability of fishing opportunities and the declining state of many stocks have consequences for fleet productivity. This will require a strategic approach within a sustainable framework which maximises the quality and value of output from the available resources coupled with diversification into under-utilised and new fishing opportunities in order to maintain and increase economic returns to the sector.

1.8 Tourism

Over the period 1990 to 1999, with the help of considerable expansion in product and public investment including substantial support under two EU Operational Programmes for Tourism, visitor numbers to Ireland have doubled to almost six million and foreign-exchange earnings have trebled to £2.5bn. Tourism is now a major sector of the Irish economy with associated employment of 135,000 or one in twelve of the workforce.

Regional breakdowns up to 1996 are included in Table 6 and show that the BMW Region has seen a slippage in its market share of national tourism revenue over this growth period.

| Table 6. Overseas Tourism Revenue by Region 1986, 1991 and 1996 | | | | |
|--|-----------------------|-------------------|-----------------|----------------------------|
| Year | S&E Region | BMW Region | National | National Growth (%) |
| 1986: | | | | |
| £m | 321 | 115 | 436 | |
| % of total | 74% | 26% | | |
| 1991: | | | | 1986-1991: |
| £m | 646 | 210 | 856 | 96.3% |
| % of total | 75% | 25% | | |
| 1996: | | | | 1991-1996: |
| £m | 1,114 | 337 | 1,451 | 69.5% |
| % of total | 77% | 23% | | |

Note: Overseas Tourism Revenue excludes income from Northern Ireland, same day overseas visitors and carrier receipts.

Source: *National Development Plan 2000-2006*

As international tourist arrivals are forecast to grow by more than 4% per annum over the next decade, further considerable growth in market share by Ireland is achievable. Appropriate investment decisions, both in marketing and product development, have the potential to achieve significant economic gains for regions which have not yet realised their full tourism development potential. Traditionally, because of the diversified nature of the Irish tourism sector and the proliferation of small firms, the level of industry investment in marketing has been low.

While the industry has in recent years begun investing in the marketing of its own individual products, there still remains a reliance on public investment to take the lead in promoting a strong overall image for Ireland overseas, and in broad-based destination or niche tourism marketing programmes. Such programmes must have sufficient scale to make the necessary impact in Ireland's key international markets and to meet growing competition for new business. The importance of sustaining marketing investment is underpinned by the fact that two-thirds of visitors from North America and mainland Europe each year are coming to Ireland for the first time.

1.9 Horizontal Issues

1.9.1 Environment

The Government recognises that there is a considerable challenge in ensuring that the greater level of activity in the Productive Sector of the economy does not have a detrimental effect on the environment. Consequently, all expenditure decisions will be dependent on the actions being consistent with the goal of maintaining the environment. The National Strategy for Sustainable Development, (*Sustainable Development: A Strategy for Ireland*, published in 1997), recognised that integrating the environment needed to be brought centre stage in economic sectoral performance. To reinforce and deepen environmental integration, it defined an agenda with specific objectives and measures to be included in a series of action programmes for sustainable industrial development, agriculture, forestry, use of marine resources, energy policy, transport and tourism. Furthermore Ireland's commitment to the Kyoto² and Gothenburg³ Protocols will in turn have a significant impact on future policy development. Each sector will be required to play its part and bear its share of the burden in achieving these targets.

Manufacturing industry support generally will be linked to firms' commitments to environmentally friendly production and adequate waste management, water discharge, and air emissions practices. Manufacturers now operate under strong

2 In Kyoto, in December 1997, developed countries agreed legally binding targets to achieve overall reductions of over 5% in net emissions of a basket of six greenhouse gases in the period from 1990 to 2012. Ireland's target under the Kyoto Protocol is to limit the increase in greenhouse gas emissions to 13% above 1990 levels by the period 2008-2012.

3 The Gothenburg Protocol requires national emission ceilings of 42,000 tonnes of SO₂, 65,000 tonnes of NO_x, 55,000 tonnes of VOCs and 116,000 tonnes of NH₃ by 2010.

regulatory constraints and more modern manufacturing technologies moderate environmental effects.

In the indigenous sector, in order to ensure the protection of the environment, all projects must conform to national and EU environmental legislation. These strong regulatory constraints, together with more modern, efficient and cleaner technologies, alleviate environmental impacts. In addition, all proposals to Enterprise Ireland are audited by the Enterprise Ireland Environment Department for possible environmental effects and must conform with best environmental practice before approval is given. Enterprise Ireland also provides assistance, both financial and non-financial, in helping companies to respond to current and future environmental regulations – whether from the State, the EU or from clients.

Enterprise Ireland will continue to encourage companies to use clean production as a tool for competitive advantage. Companies will be assisted in identifying and exploiting the opportunities that will arise from change driven by environmental considerations and will also be encouraged to take a long-term strategic view of future legislative and market trends in environmental issues so as to encourage a sensible response to challenges and encourage innovation in new or modified products.

The policy in relation to attracting FDI projects, currently and for many years past, has been to avoid the more traditional heavy industry sectors which generally cause more environmental problems. This is even more the case today, where the emphasis is on attracting high technology industry, particularly electronics and healthcare, and the promotion of knowledge-based projects such as shared services and call centres. The regional development strategy, which is focused on developing a more limited number of 'gateway' locations will serve to reduce environmental impact nationally. The industrial regionalisation strategy will be consistent with the National Spatial Strategy currently being developed.

At the level of the individual project, all relevant manufacturing projects must complete an environmental profile form that identifies any possible environmental impacts. In addition, all relevant projects must comply with the licensing requirements of the Environmental Protection Agency, which will serve to identify environmental impacts and how these are to be addressed via the project. All projects, of whatever type, must apply for and receive planning permission from the relevant Local Authority (or the Planning Appeals Board) before proceeding. As part of this process significant projects have to complete an environmental impact statement.

This combined approach at both the policy and project levels will ensure that, as the economy continues to grow, advances in living standards will take place without compromising the environment for future generations.

Moreover, in making decisions on enterprise proposals development agencies are conscious of Ireland's obligation under the Kyoto Protocol. The National Climate

Change Strategy – Ireland, launched by the Department of the Environment and Local Government in November 2000, will pose a significant challenge for industry as well as other sectors and this will further influence enterprise policy. The implementation, monitoring and review mechanisms for the National Climate Change Strategy – Ireland and the arrangements for ongoing review of the Operational Programme will be co-ordinated so as to maximise mutual complementarity.

Direct support for environmental research will assist in monitoring and achieving environmental objectives and will underpin and complement investment in economic and social development. It will also assist integration of environmental considerations through collaborative work, into all sections of the economy. The application of research funding and improved process is expected to have a positive impact. In the tourism sector, the future success of the industry in Ireland will be effectively interdependent on its ability to manage its growth on an eco-friendly basis.

The marine environment represents a major natural resource with significant social and economic aspects. Environmental quality is an essential element in planning new or extended uses of marine areas and resources and the maintenance (and where possible improvement) of good environmental quality underpins marine resource development activities (e.g. fisheries, aquaculture, tourism). The programme of investment support for Sea Fisheries Development will improve the environmental efficiency of the fleet, develop improved gear technology to protect juvenile fish stocks and support more environmentally friendly and more efficient waste disposal systems onboard vessels. The Marine Institute will ensure that all Marine RTDI projects and other supported activities fully comply with the principle of sustainable resource development (Rio Declaration, 1992). At the proposal stage, projects are asked to identify the environmental benefits and any potential negative impacts which accrue from the work to be undertaken. As part of the monitoring process, data in respect to these environmental impacts will be collected and reported annually.

The RTDI measure in the higher education sector is focused on basic research in third-level institutions and aimed at improving the research capacity and capability of the sector to increase knowledge. Many of the projects selected to date under the Programme for Research in Third-Level Institutions (PRTL) sub-measure will have a positive environmental impact. For further details refer to Appendix II – Environmental Assessment.

In addition the linkages between research and teaching in third-level institutions will mean that the teaching effort will be enhanced by the research being carried out. In this regard, the research effort will have a positive effect by raising the level of awareness of environmental issues through enhanced course content and a greater number of options.

With regard to the environmental policy of the Department of Education and Science in relation to its programme of investment in educational infrastructure,

all capital projects comply in full with the Building Regulations of the Department of the Environment and Local Government and conditions laid down by the relevant Local Authority. Where environmental impact assessments (EIAs) are required as part of the planning process, these are undertaken and the relevant conditions are complied with. The Department is also rising to the challenge of sustainability, developing designs for a number of educational facilities of varying sizes, exploring aspects of sustainability in a way that can be applied to newer models easily and in a cost-effective manner. For further details refer to Appendix II – Environmental Assessment.

In relation to agriculture, there has been a significant policy response to addressing many of the commitments made in *Sustainable Development: A Strategy for Ireland*, namely a reduction in application rates of fertilisers, introduction of nutrient management planning and reduction in stocking densities in overgrazed areas. However, much work still needs to be done, and the integration of the environment into all elements of the NDP 2000-2006 will be central to the achievement of sustainable development. Agriculture will play its role in that process. In this regard the Agenda 2000 Agreement stipulates that all farmers receiving EU aid must practice farming in accordance with minimum EU and national environmental requirements. Furthermore, common indicators are being developed at EU level to measure the effects, on improving the environmental situation in the agricultural sector, of the various policy measures now being put in place. In relation to RTDI and agriculture, the overall impact on the environment should be very positive, as some of the proposed activities specifically seek to assess the environmental implications of a range of farming systems, including quantifying emissions and identifying strategies to reduce them.

The forestry sector in particular can make a specific contribution to environmental quality. If properly managed it can have a positive effect on the environment at local level and at national level. It has an important role to play in achieving Ireland's CO₂ targets under the Kyoto Protocol. Protection of the environment is a basic principal of the forestry programme. A National Forestry Standard is being developed, which is essentially a code of best practice, embracing forestry guidelines and criteria for sustainable forest management.

The Operational Programme was forwarded to Comhar – The National Sustainable Development Partnership, for their consideration. The views received from Comhar were strategic issues which cut across all of the Operational Programmes. Comhar welcomed representation on the Monitoring Committee.

An Environmental Assessment of the Productive Sector Operational Programme is attached at Appendix II.

Pilot Eco-audit

As indicated in the CSF, the pilot eco-audit element of the process will involve implementing agencies reporting on:

- ◆ significant positive or negative environmental impacts, whether direct or indirect. In identifying these impacts, the eco-audit will, in particular, quantify as far as possible the environmental effects and their significance for the state of the environment
- ◆ the means by which the programmes shall contribute to the protection and improvement of the environment and a description of measures to eliminate/mitigate any harmful environmental impacts likely to arise
- ◆ identification of environmental policies, standards and licensing requirements with which the programme and/or projects will comply and provision for assessment of impact following implementation.

An eco-audit checklist is presented in tabular form at Appendix III.

Environmental Integration

In addition to the examples described above, environmental integration has been given effect in this Operational Programme as follows:

- ◆ use of environmental criteria in project selection
- ◆ use of appropriate environmental indicators and the inclusion of the environmental dimension in OP evaluations; environmental indicators will be incorporated in the Programme Complement in order to quantify, as far as possible, the environmental impact of the measures contained in the OP
- ◆ inclusion of environmental representation on the Monitoring Committee
- ◆ implementation of project-level EIAs where appropriate
- ◆ provision of additional information on environmental matters for all bodies involved in project selection and in programme management.

1.9.2 Equality

As stated in the NDP and in support of EU initiatives in this area, it is the policy of the Government that the increased employment opportunities on foot of investment in the Productive Sector are open to all and that, in particular, female involvement in the workplace, especially in management positions, continues to grow.

The imbalance between men and women in running businesses and in senior management positions together with the under-representation of women in careers in science and technology suggest opportunities exist for specific positive action initiatives for women. To this end, a number of initiatives to support indigenous industry will have individual elements for women and/or are tailored to the needs of women in industry, for example through the development of workshops, networks and mentoring and participation in the European Network to Promote Women's Entrepreneurship (WES). The State-funded higher education institutions have statutory obligations with regard to gender equity and equality. Additionally, the Research Directorate of the European Commission, through its Women in Science Initiative, is developing policy aimed at mainstreaming gender equality in research.

The job opportunities created by the activities of the industrial development agencies are required by law to be gender-neutral. This requirement is facilitated by the change in industrial policies towards services-type activities and away from manufacturing and also by the move towards knowledge-intensive activities which are, of their nature, equally suitable for both sexes. In addition, the increased emphasis in the inward investment programme on regional development will create substantial additional job opportunities in areas away from the main cities and this too will create additional employment opportunities for women in the regions.

Throughout the Productive Sector, where appropriate and practical and as part of the monitoring process, data in respect of gender balance and participation will be collected. To this end a methodology for preparing baseline statistics against which progress can be measured will be developed. Indicators will be collected regarding the number of women and men trained, and balanced representation of women and men will be sought on panels of trainers and mentors.

1.9.3 Poverty

The key element in the eradication of poverty is the creation of employment. Expenditure under the Productive Sector will be aimed at maintaining growth through securing a favourable business environment and enhancing the enterprise culture. The creation and retention of employment, together with the raising of incomes, are critical elements in combating poverty. Enhancing the competitiveness of indigenous industry, helping to secure jobs and contributing to low unemployment and long-term unemployment rates are key outcomes of the development process. Specific initiatives will be aimed at generating social and economic activities in areas of multiple deprivation. In addition, initiatives to enhance the capabilities of the existing workforce will assist those in employment to increase incomes.

More specifically the objective of promoting industrial development on a more regionally balanced basis will encourage the economic development of lagging behind regions. The food industry, in particular with its strong linkage with agricultural/

rural communities, has a critical role to play in tackling rural deprivation. The development of the seafood sector will provide increased and better-paid job opportunities, both full-time and part-time, in the coastal peripheral areas. Part-time employment in fisheries provides an essential contribution to income to supplement seasonal incomes from farming and tourism. Furthermore the whole thrust of the mandate of Údarás na Gaeltachta is to promote economic development in the Gaeltacht and in fulfilling its mandate the elimination of poverty is a direct consequence of this strategy.

Tourism too will have a positive impact on poverty through its aim to increase tourism earnings, which will lead to the creation and maintenance of more sustainable jobs. The tourism industry offers employment potential, in particular for disadvantaged groups such as the long-term unemployed and early school leavers. In rural areas tourism can provide an additional source of income to families on low incomes who might otherwise have to relocate. Extending the tourist season will lead to more secure employment and better regional distribution can contribute to the regeneration of depressed areas and aid regional economic development.

1.9.4 Rural Development

All investment in the NDP is underpinned by the stated objective of balanced regional development. The problems faced by rural areas will be tackled through a concerted investment package in the transport and educational infrastructure under the Productive Sector. The strong regional development focus of policy with regard to inward investment promotion by increased emphasis on attracting high quality, value-added FDI to the regions, will concentrate on medium-sized urban areas in the less-developed regions, particularly the Objective 1 Region. This will impact positively on the surrounding rural hinterland of these towns by creating opportunities for service-type industries to develop.

There is also a high priority afforded to agriculture and other natural-resource-based industries which are of critical importance to rural communities. The *White Paper on Rural Development* (published in August 1999) is a comprehensive and integrated expression of Government policy on many elements pertinent to the needs of rural communities. The White Paper acknowledges that Government intervention is required in order to ensure balanced regional development and to provide a particular focus on addressing social inclusion needs. A strategy which aims to redress imbalances that may exist between urban and rural areas must also aim to tackle imbalances between and within rural areas in a targeted manner, based on the principles of equity. The strategy set out in the White Paper endorses and supports the objectives contained in the National Anti-Poverty Strategy and will ensure that the overall strategy for rural development is underpinned by a socially inclusive dimension. The food industry's significance was also acknowledged in the White Paper, which pointed out that, allied to overall economic and social objectives, the strategy of the food sector would seek to maximise its contribution to the

generation of wealth and employment in rural areas. The Food Industry Development Group also indicated that the food industry makes a positive contribution to the agricultural sector and the overall rural economy through its purchase of raw materials and the provision of direct and indirect employment.

The development of the fisheries/seafood sector will significantly increase economic activity in rural economies where alternative opportunities for employment are limited. The sector complements other economic activities in rural communities such as farming and tourism. The development of the industry will contribute to a more balanced socio-economic development, a more equitable distribution of economic activity throughout Ireland and an avoidance of further rural depopulation and deprivation.

Objectives/Strategies of the Productive Sector

2.0 Introduction

Objectives

The Productive Sector Operational Programme will contribute to the NDP and CSF objectives of:

- ◆ continuing sustainable national economic and employment growth
- ◆ consolidating and improving Ireland's international competitiveness
- ◆ fostering balanced regional development
- ◆ promoting sustainable development throughout the sector through increased social inclusion, more environmentally friendly development and improved economic growth overall.

These objectives will be achieved through:

- ◆ ensuring that the favourable business environment in Ireland is maintained and enhanced
- ◆ building the RTDI capacity of the country
- ◆ improving sustainable growth in output of the indigenous sector through enhancing its productivity and capability and through the encouragement

of increased participation of indigenous enterprises in the fastest growing, knowledge-based industries

- ◆ promoting the location of high value-added FDI in regions which have previously not been successful in attracting FDI (particularly the BMW Region)
- ◆ maximising the potential of the food industry through attention to competitiveness and market orientation and by providing for quality and food safety assurance at all stages of the food chain and to respond to changing consumer requirements
- ◆ ensuring sustainable agricultural development in harmony with the environment
- ◆ creating a sustainable, competitive, quality-driven seafood industry which will maximise its contribution to exports
- ◆ developing forestry to a scale and in a manner which maximises its contribution to national economic and social wellbeing on a sustainable basis and which is compatible with the protection of the environment
- ◆ investment in marketing capability in order to increase the export growth of indigenous enterprises particularly from the BMW Region
- ◆ continued development of the tourism industry with special focus on exploiting the untapped potential of tourism in many counties through increased marketing.

Strategy

The strategy aimed at achieving the objectives for the Productive Sector Operational Programme will be delivered by a broad range of investments throughout the NDP and not just under this Operational Programme. Achievement of the objectives for the Productive Sector during the NDP period will be contingent on timely implementation of the Economic and Social Infrastructure Priorities. In this regard, the Productive Sector will directly benefit from large-scale investment under the Economic and Social Infrastructure Operational Programme, which will remove bottlenecks and ease up pressures on distribution. The perceived tightening of the labour market will be addressed by investment under the Employment and Human Resources Development Operational Programme.

Under the Productive Sector Operational Programme, four specific Priorities have been highlighted for investment.

- 1 Industry (Indigenous and FDI):** sectors include the food industry, seafood processing, Gaeltacht areas and the Irish film sector.
- 2 Research, Technological Development and Innovation (RTDI):** sectors include industry, education, agriculture/food, marine, forestry and the environment.

3 Marketing: indigenous industry including the food industry, seafood and tourism sectors.

4 Sea Fisheries Development.

Structural Funds support will be provided in respect of investment in Sea Fisheries Development and in RTDI for industry, in particular SMEs, and for third-level capacity building in RTDI.

2.1 Industry (Indigenous and Foreign Direct Investment) Priority

| <i>Table 7. Industry Priority (G000s)</i> | | | | |
|--|-------------------------|-----------------------|-------------------|--------------------|
| Measure | Total Investment | S&E Region | BMW Region | Co-financed |
| Indigenous Industry | 953,900.000 | 675,300.000 | 278,600.000 | 0 |
| Foreign Direct Investment | 1,271,596.000 | 707,479.000 | 564,117.000 | 0 |
| Food Industry | 391,458.000 | 195,729.000 | 195,729.000 | 0 |
| Seafood Processing | 86,658.179 | 39,027.954 | 47,630.225 | 0 |
| Irish Film Sector | 78,340.000 | 62,670.000 | 15,670.000 | 0 |
| Gaeltacht Areas | 361,530.000 | 73,700.000 | 287,830.000 | 0 |

2.1.1 Indigenous Industry

Successive administrations over recent years have facilitated the creation of a positive business environment for industry in Ireland which is attracting an increasing level of private investment. It is therefore Government policy that support for the tradable sector of the economy should be limited to measures designed to overcome identified market failures, which have the capacity to significantly impair further growth and expansion of the enterprise sector, particularly in less-developed regions. Nevertheless targeted aid, consistent with the EU's State Aid Guidelines, will be necessary under the Operational Programme to consolidate and further develop Ireland's industrial sector. These supports will underpin Government policy for strong regional development and more regionally balanced economic growth.

It is also important to consider that indigenous industry, having such a central role in driving economic growth and delivering jobs and wealth creation, has a significant contribution to make to the key national objectives underpinning the strategy of the NDP and of the CSF. It contributes to continuing sustainable national economic and employment growth by continuous sustainable extra output, jobs, extra sales, value added and incomes. It consolidates and improves Ireland's international competitiveness by achieving improved productivity, developing capabilities and enterprise. It fosters balanced regional development by contributing to economic growth and employment in the BMW Region.

At a horizontal level, the achievement of these objectives also contributes to the objective of promoting social inclusion.

While indigenous industry improved its performance in the 1990s, the sector still faces a number of growth and competitiveness issues which need to be addressed. The strategy underpinning NDP investment in indigenous industry will be aimed at addressing the following constraints on sustainable growth:

- ◆ insufficient investment in RTDI
- ◆ insufficient spending on human resources
- ◆ proliferation of small-scale operations
- ◆ low productivity by international standards
- ◆ low profitability by international standards
- ◆ limited export growth outside the UK market
- ◆ continued reliance on many traditional products.

Key Elements for Future Development

The thrust of past public intervention, particularly through the CSF, has been to compensate for the market failures which constrain Irish industry and/or to directly reduce their impact on the performance of Irish-owned industry. Over the CSF 1994-1999, some major advances have been made in relation to such development constraints. However, various market failures remain deep-rooted constraints on the growth and development of locally controlled industry, especially SMEs, and reflect Ireland's past patterns of industrial development. This is especially important in the context of ambitious and challenging targets being set for the sector.

Four key operating fundamentals underpin the approach to the development of indigenous industry over the period of the NDP.

- ◆ If Ireland's recent economic performance is to be maintained, development must continue in a sustainable way. This implies a continued move away from low value-added, low productivity sectors towards sectors characterised by high levels of innovation, quality, productivity and value added. Traditional sectors will have to create niches of competitive advantage relative to low cost competitors. This may involve outsourcing some parts of the production process to lower cost countries.
- ◆ If Ireland is to achieve this shift, it must be strongly market led and export driven. Growth and survival make it imperative that firms reduce their dependence on the domestic market.

- ◆ Key development weaknesses such as R&D, marketing, human resources, profitability, productivity, competitiveness, sectoral positioning and low propensity to export must be addressed.
- ◆ The focus must be on those firms which display both the willingness and the potential to grow. Interventions must address and ultimately aim to reduce or remove market failures.

Strategy and Impact

The NDP outlines a range of measures to address the constraints at firm level of scale, productivity, export levels, innovation and human resource development. These focus on a number of key strategic business functions, namely:

- ◆ strategy assessment and formulation
- ◆ marketing
- ◆ research and development
- ◆ human resource development
- ◆ production and operations
- ◆ finance
- ◆ regional networks.

These themes largely reflect an analytical tool termed the Business Development Model (BDM), which has been developed to provide an integrated analysis and firm-centred solution package to support indigenous industry in responding to development challenges⁴. The BDM will underpin the approach to supporting indigenous industry over the Operational Programme. This will result in a more structured and holistic method of assessing company development needs and will act as a catalyst in sharing information and influencing and benchmarking company behaviour.

Tools

Three broad tools will be used to help indigenous industry overcome identified market failures and address development challenges:

- ◆ financial support for developing capability
- ◆ support for capacity as needed
- ◆ building knowledge networks.

⁴ Research and development is discussed in more detail in the RTDI Priority (see 2.2), while human resources development is discussed in greater detail in the Employment and Human Resources Development Operational Programme. Marketing, which is treated separately in the NDP, is included in the Business Development Model, while the Regional Network measure does not fall within the Business Development Model framework.

Activities at company level will be augmented at a horizontal level by the development of key networks at sectoral, international and technological levels as a means of enhancing the knowledge and information processes of indigenous industry. In addition to the mechanisms to developing indigenous industry outlined above, a number of dedicated support organisations deliver priority services on a contract basis to industry at a sectoral/cross-sectoral level. These dedicated organisations include the Crafts Council of Ireland, which is the main champion and driver of the crafts industry in Ireland; the Business Innovation Centres, which were established as an EU initiative to provide a hands-on planning and consultancy service to first-time entrepreneurs with innovative projects; and the National Institute for Transport and Logistics, which was established in 1997 to address logistical weaknesses in Irish companies.

Targets

The targets set for the period of the Programme are:

- ◆ sales are projected to increase by an annual rate of 7%
- ◆ annual export growth to reach 9-10%
- ◆ annual productivity growth to reach 5%
- ◆ net new jobs to increase by 1.5% per annum
- ◆ high-potential start-ups to increase by 70%
- ◆ companies spending more than £100,000 per annum on R&D to increase from 350 to 600
- ◆ training costs as a percentage of payroll to increase from 1.5% to over 2.5%
- ◆ capability as a percentage of total funds committed to reach 65% or more by 2003.

2.1.2 Foreign Direct Investment

New Goals and Objectives for Inward Investment

The focus of policy has now shifted decisively away from the simple objective of job creation towards the following interrelated objectives.

- 1** Achieve a more even geographic distribution of employment, where a substantial level of net job creation remains a necessity.
- 2** Increase job quality.

3 Increase foreign-owned companies' embeddedness in the economy.

In pursuing these objectives, areas of both physical infrastructure and human capital development will be identified and progressed in a direction that will optimise Ireland's competitiveness as a location for high technology/high value-added foreign investment into the future. These objectives seek to:

- ◆ maintain wealth creation by focusing on attracting investment where the skills required are very high and hence the salary levels are also high
- ◆ focus on getting existing clients to move up the value chain to produce more sophisticated products, to acquire more strategic importance to the multinational corporation, or to add skill-intensive functions to their existing operations
- ◆ recognise that as the country develops it will inevitably become a less competitive location for low value-added/low skill-based investment
- ◆ ensure that the environment, physical infrastructure, human capital and overall competitiveness of the economy continue to make Ireland an attractive location for both existing and new foreign investment
- ◆ focus net employment creation on the less-developed and poorer regions of the country – for reasons of equality, but also to avoid the economic costs of continued growth in pressure on infrastructure in the Dublin region – in particular taking account of unemployment blackspots and areas of social deprivation.

Programmes to achieve Objectives

In order to implement the new policy objectives for inward investment the focus has shifted towards three key programmes:

- ◆ regional development
- ◆ embedding the existing base of overseas companies in the economy and increasing job quality rather than job numbers
- ◆ sectoral development.

These three areas will form the primary programmes that will operate over the 2000-2006 period.

Regional Development

Inward investment policy is intensifying the emphasis on regional development in order to achieve a more even spread of employment, economic activity and wealth

throughout the country, and to alleviate the inefficiencies of an over-concentration of development in a limited number of locations. Fundamental to this strategy is a move away from a simple regional dispersal approach to an explicit recognition that each region has different needs and potential that need to be built on. The best strategy for promoting regional development is to prioritise investment in a series of geographic nodes, which will provide a developmental focus for their surrounding hinterlands.

Embedding of Companies

The embedding programme involves encouraging and working with local management of overseas companies to secure a wider corporate mandate and become a vital part of the corporate value chain, thus helping to ensure the long-term survival and growth of the company in Ireland. Irish subsidiaries can improve their strategic position within the parent corporation by becoming a reference site or centre of excellence for any function of or product manufactured by the group.

Sectoral Development

Inward investment policy will continue to focus on identifying and developing activities and sectors that are high growth, high technology, strategically important, meet the country's development needs and have the right characteristics to allow Ireland to compete successfully for inward investment. With technology developing at a faster pace than ever, it is essential that Ireland continues to attract leading-edge international companies in strategic sectors such as information and communications technology and biotechnology. If we fail to do this, we will quickly lose our prominent position as a leading producer and exporter of products and services. In addition, electronic commerce is driving fundamental changes in business and will be a significant and strategic area of industrial development focus in the coming years.

Targets

The quantitative targets during the period of the Programme are:

- ◆ 50% of new greenfield employment to be located in the Objective 1 (BMW) Region
- ◆ number of companies spending at least £100,000 per annum on R&D to increase from 260 to 400
- ◆ R&D expenditure by the foreign-owned sector to reach £700m per annum
- ◆ annual productivity growth to be at 9%
- ◆ average net change in employment (job creation less job losses) to be 5,000 per annum
- ◆ quantified investment by companies in environmental infrastructure.

2.1.3 Food Industry

Objective

As indicated in the NDP, the aim is to maximise the potential of the food industry through attention to competitiveness and market orientation and by providing for quality and food safety assurances at all stages of the food chain and to respond to changing consumer requirements.

Strategy

The primary onus is on the industry itself to maximise its potential. The indicative public funding of £282m provided for the industry in the NDP is designed to assist it in this task. In line with the views of the Food Industry Development Group – as endorsed by the Agri-Food 2010 Committee – the priority areas for public funding are food safety/quality, market access and competitiveness. The particular requirements in each of these areas are:

Food Safety/Quality: these issues demand ongoing capital investment and initiatives in the human resources and research areas.

Market Access: efficient consumer response demands investment in information technology, RTDI, management development and marketing development and promotion.

Competitiveness: the initiatives required range from specific sectoral action such as rationalisation/restructuring in the beef sector to general measures covering increased efficiencies, improved productivity and enhanced innovative and marketing capabilities.

The specific support measures for the industry provided for in the NDP take account of these requirements and allow for initiatives in capital investment, RTDI, marketing/promotion and human resources areas. The positions in relation to RTDI and marketing/promotion are dealt with separately at 2.2.4 and 2.3.2 respectively, while the food-related human resources initiatives are set out in the Employment and Human Resources Development Operational Programme. In the case of capital investment, the emphasis is on improved efficiencies at primary slaughtering and processing level and increased progress along the value-added chain.

Expected Impact

The strategy and priorities will assist the industry to maximise its potential. They will enhance competitiveness and market-orientation through greater efficiencies, increased productivity and improved innovative and marketing capabilities. They will also help to ensure that food safety and quality issues continue to command priority. The strategy and priorities will address the industry's main weaknesses.

Table 8. Food Industry Impact Indicators (£bn)

| | 1999 (estimate) | 2006 |
|----------------------|-----------------|------|
| Output | 10.7 | 12.7 |
| Export | 5.2 | 7.0 |
| Consumer Food Output | 1.6 | 2.6 |

2.1.4 Seafood Processing

Objectives/Strategy

The strategic objective of the seafood processing measure is to develop a growing and sustainable seafood processing sector which maximises its economic contribution. The strategy will be to assist the industry to develop a competitive and sustainable sector and to secure the opportunities which will exist from a buoyant market for seafood in the EU and in other countries. The particular aims will be to:

- ◆ add value at early stages of the production/distribution chain with a strong emphasis on promoting quality
- ◆ bring about the optimum utilisation of raw material supplies and in particular introduce new products, based on market research, to satisfy market requirements allowing the industry to move along the value chain and to maximise secondary and tertiary processing
- ◆ develop companies with strengths in marketing to meet economies of scale and specialisation in processing to become internationally competitive in supplying the national and international retail and catering sectors.

The actions proposed will increase competitiveness through focused development of modern, large-scale processing units. They will lead to increased output and a higher degree of value-added processing. Support will also be targeted at maximising quality and value in primary, secondary and tertiary processing.

It is envisaged that the achievement of scale and international competitiveness will require concentration and rationalisation within certain sub-sectors of the processing industry and the actions proposed will seek to support the pursuit of scale and competitiveness.

Expected Impact

| Table 9. Seafood Processing Sector Impact Indicators | | |
|---|-------------|-------------|
| | 1997 | 2006 |
| Processed Output (000 tonnes) | 145 | 207 |
| Exports (000 tonnes) | 255 | 310 |
| Value (£m) | 228 | 370 |

2.1.5 Gaeltacht Areas

Objectives/Strategy

The overall aim of Údarás na Gaeltachta's strategy for the development of the Gaeltacht is the creation of strong, self-sufficient communities where people can reach their full potential and enjoy a high quality of life.

Quality job creation and maintenance is the central objective of the economic development strategy for the Gaeltacht. The strategy for new job creation has two related elements: the development of new projects by existing companies and local entrepreneurs and the attraction of mobile modern industry to the region.

There is a shortage of people with modern management expertise and other skills shortages in the Gaeltacht. The human resources development strategy, which has a significant role in the overall plan for the Gaeltacht, will address these issues as well as designing actions to help the disadvantaged. Despite the very significant progress made in recent years, the region is still relatively fragile, economically and industrially. The objective of An tÚdarás is to use its incentive measures, in line with the new EU Regional Aid Guidelines, to secure individual quality projects at least cost to the State and, in doing so, to respect all relevant national policy guidelines.

The general economic development strategy for the Gaeltacht has a number of core elements:

- ◆ new technology services
- ◆ development of new quality businesses
- ◆ development of cultural tourism
- ◆ development of long-established companies and the marine industry.

The main aims, in line with strategy of the NDP and CSF over the period of 2000-2006, are to attract and develop new industries that will provide additional employment over the period. Emphasis will be put on the following sectors:

- ◆ information-based services and new media
- ◆ electronics and engineering
- ◆ manufacturing of medical products
- ◆ cultural tourism
- ◆ food processing
- ◆ fish farming and processing and related industries.

The strategies outlined above, in conjunction with the strategies under the Employment and Human Resources Development Operational Programme and the Economic and Social Infrastructure Operational Programme, will take advantage of the strengths of the Gaeltacht and will seek to ameliorate the weaknesses.

2.1.6 Irish Film Sector

Objectives/Strategy

The priorities at this stage of the development of the sector are to develop an increased level of business orientation, business skills and strategic business planning in the sector. This will be done by placing greater emphasis and investment by way of development loans in the development of creatively and commercially strong projects. The Film Board will also provide production loans for strong projects, while also fostering the emergence of new, promising talent by supporting short film/television productions and first feature films.

Expected Impact

At the end of the period, the sector will have progressed to a more commercial and self-sustaining basis. Companies will have expanded the scale of their operations and there will be greater collaboration between companies. Employment will have grown and the pool of skills will have increased.

Regional Breakdown

Given the location and project-based nature of the creative audio-visual production industry, it is difficult to predict in advance the distribution of activity and expenditure. This is recognised by the European Commission, which allows a net State-aid contribution of up to 50% for film and television content across the EU without differentiation, on the basis of the cultural provision of the Treaties. Nevertheless, there is a growing focus of film-making activity in the BMW Region, and it is to be expected that some 20% of activity will take place there over the period of the programme. Production in the Irish language is largely focused in that region.

2.1.7 Impact of the Industry Priority

Detailed indicators of impact for each measure will be developed in the Operational Programme Complement. Table 10 sets out indicators for the industry sector.

| Indicator | State/ Region | Baseline Year | Data | 2006 Forecast/Target | Data Source |
|--|--------------------------|--------------------------|-------------|--|--------------------------------|
| Net output per employee in manufacturing | | | | | |
| All firms | State | 1997 | £88,200 | £120,711 | Census of |
| Irish-owned firms | State | 1997 | £35,200 | £52,309 | Industrial |
| All firms | BMW | 1997 | £58,600 | £90,908 | Production |
| Employment in foreign-owned, BMW State-assisted companies | | 1999 | 32,504 | 50% of all greenfield jobs to the Objective 1 Region | Forfás Employment Survey |

2.2 Research, Technological Development and Innovation (RTDI) Priority

| Measure | Co-financed | | | | Non-co-financed | | | Overall Total |
|--------------------|--------------------|-----------------|-----------|----------------|------------------------|-----------------|----------------|--------------------------|
| | Total | National | EU | Private | Total | National | Private | |
| Education | | | | | | | | |
| Total | 104.30 | 43.71 | 60.59 | 0.00 | 706.08 | 706.08 | 0.00 | 810.38 |
| of which BMW | 33.70 | 8.42 | 25.29 | 0.00 | 179.77 | 179.77 | 0.00 | 213.47 |
| of which S&E | 70.61 | 35.31 | 35.30 | 0.00 | 526.35 | 526.35 | 0.00 | 596.96 |
| Industry | | | | | | | | |
| Total | 763.76 | 156.27 | 230.06 | 377.48 | 1667.49 | 1173.72 | 493.77 | 2431.25 |
| of which BMW | 301.12 | 63.80 | 85.94 | 151.38 | 419.90 | 294.62 | 125.28 | 721.02 |
| of which S&E | 462.63 | 92.47 | 144.06 | 226.10 | 1247.59 | 879.10 | 368.49 | 1710.22 |
| Agriculture | | | | | | | | |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 61.90 | 61.90 | 0.00 | 61.90 |
| of which BMW | 0.00 | 0.00 | 0.00 | 0.00 | 25.04 | 25.04 | 0.00 | 25.04 |
| of which S&E | 0.00 | 0.00 | 0.00 | 0.00 | 36.86 | 36.86 | 0.00 | 36.86 |

| Table 11. RTDI Priority (Gm) cont'd | | | | | | | | |
|--|--------------------|-----------------|---------------|----------------|------------------------|-----------------|----------------|----------------------|
| Measure | Co-financed | | | | Non-co-financed | | | Overall Total |
| | Total | National | EU | Private | Total | National | Private | |
| Food | | | | | | | | |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 76.71 | 76.71 | 0.00 | 76.71 |
| of which BMW | 0.00 | 0.00 | 0.00 | 0.00 | 36.33 | 36.33 | 0.00 | 36.33 |
| of which S&E | 0.00 | 0.00 | 0.00 | 0.00 | 40.38 | 40.38 | 0.00 | 40.38 |
| Marine | | | | | | | | |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 52.60 | 52.60 | 0.00 | 52.60 |
| of which BMW | 0.00 | 0.00 | 0.00 | 0.00 | 33.36 | 33.36 | 0.00 | 33.36 |
| of which S&E | 0.00 | 0.00 | 0.00 | 0.00 | 19.24 | 19.24 | 0.00 | 19.24 |
| Forestry | | | | | | | | |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 17.29 | 17.29 | 0.00 | 17.29 |
| of which BMW | 0.00 | 0.00 | 0.00 | 0.00 | 8.29 | 8.29 | 0.00 | 8.29 |
| of which S&E | 0.00 | 0.00 | 0.00 | 0.00 | 9.00 | 9.00 | 0.00 | 9.00 |
| Environment | | | | | | | | |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 45.06 | 32.36 | 12.70 | 45.06 |
| of which BMW | 0.00 | 0.00 | 0.00 | 0.00 | 10.57 | 8.03 | 2.54 | 10.57 |
| of which S&E | 0.00 | 0.00 | 0.00 | 0.00 | 34.49 | 24.33 | 10.16 | 34.49 |
| TOTAL | 868.07 | 200.00 | 290.59 | 377.49 | 2627.12 | 2120.66 | 506.46 | 3495.20 |
| of which BMW | 334.82 | 72.21 | 111.23 | 151.38 | 713.25 | 585.43 | 127.82 | 1048.07 |
| of which S&E | 533.25 | 127.78 | 179.36 | 226.11 | 1913.88 | 1535.23 | 378.65 | 2446.13 |

Note: These figures are rounded to two decimal places and may show some discrepancies in the totals.

In light of the high priority granted to RTDI in the context of the NDP, G3.49bn has been allocated over the period 2000-2006. This priority will build on the investment made under the Community Support Framework 1994-1999. It aims to continue and develop the support in key areas where public investment remains fundamentally necessary to sustainable economic growth and to encourage the transition to an economy based on knowledge and new technologies. The Structural Funds contribution will be G290.59m, which will co-finance expenditure of G868m in respect of three measures:

- ◆ higher education sector/strategic research (capital)
- ◆ industry innovation initiative – competitive RTDI grants scheme
- ◆ technology innovation networks – collaboration for enterprise.

These are described in more detail at 2.2.1 and 2.2.2 and measure details are outlined at 3.2.

Rationale for investing in RTDI

The NDP and CSF outline the strong link between investment in the research and innovation base of the economy and sustained economic growth. In recognition of the evolution of the knowledge-based economy, where intellect and innovation will determine competitive advantage, the NDP is committed to significant investment in RTDI. This investment will:

- ◆ develop intellectual infrastructure to 'root' overseas companies here through more extensive use of research based in Ireland
- ◆ persuade and encourage companies to develop their own research activities
- ◆ develop a world-class research environment in our higher education institutions and State research institutions
- ◆ ensure a vibrant and dynamic pool of high quality, technically literate graduates from graduate to postdoctoral levels to service the needs of these companies and to start their own companies.

In addition, investment in RTDI in areas such as agriculture/food, forestry and marine will also have a major impact on sustainability and innovation particularly in the regions. In the interest of ensuring that development is of a sustainable nature, investment in the area of environmental RTDI is also entirely appropriate.

Strategy

The Programme will aim to invest substantially in the RTDI base of the country, as a means of enhancing innovation and competitiveness by:

- ◆ strengthening the research capability in the third-level and State research institutions, in particular to meet the RTDI and skills needs of the economy
- ◆ strengthening the supports available to research students and to researchers in third-level and State research institutions in order to encourage students into careers as researchers
- ◆ increasing the quantity and quality of the RTDI linkages between institutions and companies
- ◆ helping firms to develop innovative products, services and processes
- ◆ increasing the number of companies performing effective R&D in Ireland
- ◆ increasing the scale of RTDI investment by companies in Ireland
- ◆ encouraging firms to access and exploit R&D and technology from international sources

- ◆ embedding the culture of R&D in SMEs, through upskilling the RTDI capability of employees via training in RTDI management and other appropriate training courses
- ◆ providing substantial public investment in niche technologies
- ◆ promoting balanced regional development while at the same time having due regard to the excellence of proposals funded
- ◆ improving the environmental database and developing new strategies to assist policy makers and industry to address the horizontal impacts of development.

2.2.1 Higher Education

Objective

Support for the development of a culture of RTDI in the industry and services sectors of the economy must be mirrored in the higher education sector to enable the development of a world-class research environment by:

- ◆ strengthening the research capability in the third-level and State research institutions, in particular to meet the RTDI Priority and skills needs of the economy
- ◆ strengthening the supports available to research students and to researchers in third-level and State research institutions in order to encourage students into careers as researchers.

The high-level strategic objective of the measure is to achieve a world-class research environment in higher education in Ireland through strengthening the capacity and capability of the sector, thereby acknowledging that a supportive research environment is a vital component of a knowledge-based society and essential for the overall social and economic development of the country.

Strategy and Impact

The increased funding of R&D in the education sector will boost human potential in research, science and technology and will strengthen the research and science capability of our higher education institutions. In addition, such enhanced research will feed back into the teaching and learning activities of the sector. Arising from this measure, it is planned that there will be an increased availability of highly qualified researchers to help to meet the skills needs of the economy. One of the important areas where skills needs are developing in the economy is in SMEs in high skills areas. The supply of skilled researchers will help to develop the R&D capabilities of such SMEs. Furthermore, the technological sector intervention will

link in specifically with the skills needs of the regions where the institutes of technology are located.

The RTDI measure in the higher education sector is comprised of the following four sub-measures, all of which contain capital and current elements:

- (a) basic support for research and electronic communications
- (b) project-based and individual research
- (c) technological sector research
- (d) strategic research.

The strategic research sub-measure is broken into two further sub-measures:

- ◆ Programme for Research in Third-Level Institutions (PRTLII)
There is an allocation of G58.3m from the ERDF (co-financed amount G100.5m) towards the capital element of this sub-measure. The objective of this aid is to ensure that the research community in the higher education sector is appropriately equipped at infrastructural level; thereby ensuring that there is an appropriate physical base for research activities in order to ensure the optimum development of core research strengths and research strategies of the various institutions.
- ◆ North/South Co-operation
This sub-measure includes a total provision of G15.2m (G11.4m current and G3.8m capital) for co-operation on a north/south basis, in order to support cross-border research initiatives on a collaborative basis between institutions. There is an allocation of G2.3m from the ERDF (co-financed amount G3.8m) towards the capital element of this sub-measure.

For further details of this measure and its component sub-measures refer to 3.2.1.

2.2.2 Industry

Objectives

Ireland is in the process of becoming an advanced and high-waged economy. Continuing and increasing investment in innovation through enlightened public and private partnerships will be crucial to ensure that we can continue this advance. The objective for the industry element of the RTDI Priority is to build the RTDI capability of the country and to strengthen Irish industrial performance so that Ireland makes a major contribution to European economic development.

Strategy and Expected Impact

To achieve this objective, it is intended to invest substantially in the RTDI base of the country, as a means of enhancing innovation and competitiveness and in order to increase output and employment. This will be achieved through focused support for in-company R&D, the networking of companies with the wider S&T infrastructure, the better use of technology in balanced regional development and the preparation for future technological opportunities through the mechanism of The Science Foundation Ireland, specifically by:

- ◆ helping firms to develop innovative products, services and processes
- ◆ increasing the number of companies performing effective R&D in Ireland as well as the scale of that investment
- ◆ embedding the culture of R&D in companies by upskilling their RTDI capability through a series of appropriate interventions
- ◆ encouraging firms to access and exploit R&D and technology from international sources
- ◆ strengthening the research capability in the third-level and State research institutions, in particular by networking them to meet the R&D and skills needs of the economy
- ◆ increasing the quantity and quality of the R&D linkages between companies and between State research institutions, third-level institutions and companies
- ◆ increasing the numbers of researchers and other research personnel employed in Irish industry
- ◆ building the long-term national research capability in niche technologies to underpin the long-term development of industry
- ◆ commercialising research leading to the introduction of new knowledge-based products and services into industry and to the creation of new technology-based firms
- ◆ promoting private investment in R&D and in new technology-based firms
- ◆ contributing to balanced regional development by strengthening the technological infrastructure of the regions and matching them to the needs of enterprise
- ◆ in the case of the food industry, complementing the institutional (public good) R&D measure provided for in the NDP by providing support for technology transfer projects linked to the outputs of institutional research
- ◆ encouraging firms to participate in collaborative R&D on cross-cutting issues such as waste minimisation and environmental management systems.

2.2.3 Agriculture

Objectives

To underpin the overall objectives set for agriculture and related rural development under the NDP, RTDI, in relation to agriculture, aims to:

- ◆ develop livestock and crop production systems designed to reduce production costs and produce food of assured safety and consistent quality in a way that is compatible with environmental protection and animal welfare
- ◆ provide the strategic knowledge-base and the comprehensive databases that will ensure a greater understanding of what is happening in rural areas and support the continuation of rural development
- ◆ develop farming systems that allow farmers to optimise production efficiencies while minimising the impact on the environment.

Strategy

These objectives will be achieved by:

- ◆ implementing comprehensive programmes of research in priority areas of competitive and sustainable agriculture, rural development and the rural environment
- ◆ strengthening internal technology transfer mechanisms to ensure effective take-up of research information and new technology by the Teagasc advisory and training services.

Expected Impact

The expected impact will be:

- ◆ improved competitiveness of Irish agriculture, both for farmers who are expected to remain in full-time commercial farming and for part-time farmers who will have to significantly supplement their farm incomes by other farm diversification activities or by off-farm income
- ◆ enhanced protection of the environment by farmers engaged in all types of enterprises and not just those practising in an extensive manner
- ◆ a strategic knowledge-base will be built up which will enable policy to be formulated that can focus on viability problems for many farmers and other rural dwellers.

2.2.4 Food Industry

Objectives

The primary aim is to enhance the innovative capability of the Irish food industry. This will contribute to the overall aim for the industry, which is to maximise its competitiveness and market orientation. As indicated in Chapter 1, the industry has suffered from a lack of investment in RTDI. This militates against the development of alternative product strategies and inhibits the industry's ability to respond to changing requirements at market level.

In the context of food safety/quality, RTDI has a critical role to play in assuring consumer protection and in ensuring that developments are underpinned by application of the highest possible standards. The continuation/enhancement of that role constitutes another important objective of the food-related RTDI initiatives.

Strategy

The strategy will address the competitive weakness resulting from the historically low expenditure in RTDI and will assist improved market orientation.

- ◆ In the case of SMEs, the focus will be on exploiting opportunities based on incremental technical developments. This approach recognises that the scope for innovation in the smaller and medium enterprises is limited by scale.
- ◆ In the case of larger companies, public support will aim to lever increased corporate expenditure on RTDI and will be linked to corporate plans for R&D expenditure, structures and personnel. It will seek to stimulate more ambitious innovation goals.
- ◆ Institutional public research will complement the industry's own RTDI activities. It will underpin product development and innovation and provide an essential scientific base for the exploitation of new opportunities. Such research will continue its vital role in the area of food safety/quality – both in assuring consumer protection and in providing that developments are underscored by attention to the highest possible standards.
- ◆ The important linkage between institutional and in-company RTDI will be recognised and facilitated by the provision of support for technology transfer and for the funding of company projects linked to the outputs of institutional research.

Expected Impact

- ◆ Improved competitiveness of the Irish food industry. The support that will be provided in the areas of product and process development will assist

efficiencies and help the industry to reduce its scale-related difficulties. The institutional public research initiative will assist the industry to keep abreast of new growth areas (e.g. functional foods) and new technologies that will confer a competitive edge.

- ◆ Enhanced market-orientation. As indicated in Chapter 1, the factors that will influence the industry's future environment are many and varied. The RTDI initiatives will assist it to adapt and respond to the ever-increasing rate of change. These initiatives will also help the industry to meet the increasing demands from its customers for innovative products that anticipate future trends and that allow for differentiation at retail level.
- ◆ Increased focus on value added. The industry's traditional low expenditure in the RTDI area has hindered its progress along the value-added chain and, consequently, its ability to avail of new market opportunities. The RTDI initiatives will have a vital role in building on the recent strong growth in the high value consumer foods and food ingredients areas.
- ◆ Continued attention to food safety and quality issues. It is essential that the industry's development be based on the application of the highest possible standards. RTDI has a significant contribution to make in this respect and, in particular, institutional public research can provide the necessary assurances in relation to consumer protection.

2.2.5 Marine

Objectives/Strategy

The primary objectives of the Marine RTDI Measure, to be implemented by the Marine Institute, are consistent with national (White Paper on Science, Technology and Innovation 1996; ICSTI – Technology Foresight Initiative, 1999) and international (EU Agenda 2000) thinking and are to:

- ◆ enhance and consolidate the performance of the marine sector in Ireland through support for R&D and technology transfer activities
- ◆ provide the RTDI capacity and infrastructure to enable Ireland to fully utilise its marine resource potential in a sustainable manner.

These objectives will be achieved through the following measures:

- ◆ provision of enhanced research vessel capacity to cover outer continental shelf activities
- ◆ upgrade of key national marine laboratories and facilities to provide necessary capacity and infrastructure to support planned activities

- ◆ establishment of a Marine RTDI Fund to support project-based RTDI in identified priority areas.

Equal opportunities will be incorporated into these measures, specifically in efforts to encourage an appropriate gender balance in the number of researchers employed.

Specific marine RTDI objectives and targets are fully outlined in the Marine Institute's 1998 strategy document, *A Marine Research, Technology, Development and Innovation Strategy for Ireland – A National Team Approach*. Following a comprehensive consultation process the strategy proposes a 'national team approach', which will provide a framework to ensure that Ireland's marine resources make a significant contribution to the economic and social life of the country over the next decade.

In the context of marine RTDI, the totality of the marine sector includes:

- ◆ marine food (including fisheries, aquaculture, and food processing)
- ◆ marine tourism and leisure (boating, angling, water-sports and coastal recreation)
- ◆ seaweed-based industry (including food-based and chemical/pharmaceutical-based activities)
- ◆ marine technology and instrumentation
- ◆ ocean energy (including wind and wave energy)
- ◆ seabed resources
- ◆ ports and intermodal marine transport
- ◆ offshore industries and ocean engineering.

Most of the above marine development areas have primary (extraction), secondary (processing and manufacturing) and tertiary (service-based) business opportunities. In addition there are R&D areas (e.g. environmental and natural resource management, coastal zone management and hydrography) which will support the management of resources to allow sustainable economic development. These areas are also important as they offer opportunities for enterprise development.

Expected Impact

In the light of a strong international demand for specialised high-tech and valued marine products and services it is estimated that the marine sector could contribute an additional £400m per annum, secure existing employment particularly in peripheral areas and create an additional 7,000 new jobs during the period of the programme. A focused and supportive RTDI programme will be essential to realising these targets, as such growth and expansion is increasingly dependent on innovative technologies and techniques.

The benefits to be derived from implementing this strategy are real and tangible: dynamic, internationally competitive companies will establish and develop, providing jobs and wealth; coastal communities will be strengthened and re-invigorated by the creation of viable and sustainable employment; regional development and innovation will be stimulated and highly trained young graduates will find job opportunities in innovative SMEs employing advanced and appropriate technologies.

2.2.6 Forestry

Objectives/Strategy

The overall aim of the programme is to support the R&D priorities outlined in *Growing for the Future*, the Government's Strategic Plan for the Development of the Forestry Sector and in COFORD – the National Council for Forest Research and Development's programmes for R&D. The emphasis will be on ensuring that the forest industry remains viable, internationally competitive and environmentally compatible within the context of sustainable development. It will also develop further state-of-the-art competence and a critical mass of forest research in Ireland to encourage both innovation and market development. The specific objectives⁵ will focus on:

- ◆ improving the share of home-grown wood products in the home and export markets and developing innovative wood products and conversion technologies in line with market requirements and quality systems
- ◆ improving the cost competitiveness and underpinning the economic and environmental sustainability of the forest industry through the investigation of silvicultural techniques, wood harvesting and transport systems, forest health and vitality, and environmental interactions of forests and forest operations
- ◆ determining the impacts of the afforestation programme on rural development, community stability and the national economy
- ◆ investigating and developing forest products that have a local use and application
- ◆ developing silvicultural systems, harvesting techniques and information and communications technology appropriate to farm forestry in order to foster rural development and environmental compliance
- ◆ investigating and developing the genetic resource of indigenous and exotic tree species to ensure that forest plantations are diverse ecosystems
- ◆ developing cost-effective plant production and handling techniques in line with best environmental practice.

⁵ These objectives and the issues highlighted elsewhere in this document are further elaborated in the *Costed, Phased and Prioritised Programme for Forest R&D*, COFORD, 1998. The programme was developed following wide-scale, structured consultation with the forestry sector.

All research contracts will be awarded strictly on merit, however equal opportunities will be incorporated into these measures, specifically in efforts to have a gender balance in the number of researchers employed in this area and in the awarding of post-graduate and post-doctoral awards.

Irish forest research must be of the highest international standard. The most effective techniques and approaches must be used in conducting research. The strategy used will be to foster the research competence of young researchers and to develop Irish involvement in COST – European Cooperation in Science and Technology and the EU Framework Programme as follows:

- ◆ research competence will be developed through the part-funding of researcher training and short-term research missions. The latter initiative will enable young researchers to visit institutions abroad to develop specific skills and will also foster collaboration between institutions in Ireland and abroad
- ◆ linkages will be established through Irish scientists' continuing involvement in the various actions of COST.

2.2.7 Environment

Environmental research will be concerned in particular with the need to address major gaps in environmental data, measure the impact of economic development and contribute to sustainable development of natural resources using the highest environmental standards. The environmental research measure will complement research work that will be carried out in other sectors (e.g. marine, forestry, agriculture) and will act as a focus for the integration of environmental concerns in other policy sectors.

Sustainable development is now an explicit objective at national and EU levels and is reflected in both policy and legislation. The Government's commitment to sustainable development is set out in the national strategy, *Sustainable Development: A Strategy for Ireland* (1997), and subsequent policy documents. In pursuing sustainable development, it is essential that the environmental impacts of economic growth and social development be minimised by implementing policies which promote economic efficiency with less intensive natural resource use and lower environmental stress.

The European Commission will prepare a new environment action programme for the EU in 2000, against a background of the 1999 European Environment Agency report, *Environment in the European Union at the Turn of the Century*, which found that 'general environmental quality in the EU is not recovering significantly and in some areas is worsening'. A comprehensive Environmental and Sustainable Development Programme is included in the 5th Framework Programme for European R&D to address European and global environmental issues.

A comprehensive analysis of existing evaluation reports on the range of R&D measures was carried out by the Industry Evaluation Unit at the Department of Enterprise, Trade and Employment. The report, *Meta-Evaluation of R&D Policies and Interventions: Modelling the Future – An Evaluator's Perspective*, was published in 1999. It recommended that the objectives for the next CSF should include promotion of sustainable development and good environmental practice and integrate these with R&D strategy; the report referred to the need to focus expenditure on research in relation to environment and sustainable development.

The objectives for environmental research 2000-2006 to be implemented by the Environmental Protection Agency (EPA) on behalf of the Department of Environment and Local Government are to:

- ◆ undertake risk assessment and prediction of future scenarios to avoid environmental problems and conflicts
- ◆ carry out integrated assessments of sectoral development impacts and of key national environmental challenges
- ◆ encourage protection of the quality of the main environmental media (i.e. air, water, soil) and towards this end to promote the development of systems, models, instruments and techniques for environmental monitoring, management and protection
- ◆ ensure delivery of practical research results based on high quality science and innovative technology and supply research results to a central data warehouse
- ◆ contribute to sustainable economic activity by incorporating environmental considerations into natural resource and infrastructure development and specifically to act as a conduit for the integration of environmental concerns to the main economic sectors
- ◆ engage in development of cross-border linkages/projects and in transnational (generally European) projects as appropriate
- ◆ encourage environmental knowledge transfer
- ◆ contribute data, information and assessments to assist policy and decision making
- ◆ encourage skills development/capacity building.

A National Environmental Research Centre of Excellence will be established within the EPA. The priority programme for the centre will include:

- ◆ information systems development
- ◆ integrated environmental assessment
- ◆ environmental management systems.

2.2.8 Impact of the RTDI Priority

Detailed indicators for each measure will be developed in the Operational Programme Complement. Table 12 sets out indicators for Research, Technological Development and Innovation.

| Table 12. RTDI Impact Indicators | | | | | | |
|---|--------------------------|---------------|--------------------------|-------------|---------------------------------|--|
| Indicator | State/ Region | Gender | Baseline Year | Data | 2006 Forecast/Target | Data Source |
| Higher education plus government sector expenditure on R&D (% of GDP) | State | n/a | 1997 | 0.38% | 0.8% | Forfás Survey on Higher Education Research (1996) and Government Expenditure on S&T (1999) |
| | BMW | | | 0.03% | 0.1% | Forfás |
| | S&E | | | 0.35% | 0.7% | Survey of R&D in the Business Sector (1997) |
| Business expenditure on R&D (% of GDP) | State | n/a | 1997 | 1.11% | 2% | Forfás Survey on Higher Education Research (1996) and Government Expenditure on S&T (1999) |
| | BMW | | | 0.31% | 0.6% | Forfás |
| | S&E | | | 0.8% | 1.4% | Survey of R&D in the Business Sector (1997) |

2.3 Marketing Priority

| Measure | Total Investment | S&E Region | BMW Region | Co-financed |
|----------------|-------------------------|-----------------------|-------------------|--------------------|
| Industry | 177,100.000 | 120,800.000 | 56,300.000 | 0 |
| Food Industry | 133,168.000 | 88,778.000 | 44,390.000 | 0 |
| Seafood Sector | 8,242.687 | 3,715.654 | 4,527.033 | 0 |
| Tourism | 221,186.658 | 148,073.693 | 73,112.965 | 0 |

The strategy underpinning NDP investment in marketing will focus on:

- ◆ increasing the level of exports in the indigenous sector – with an emphasis on SMEs and market diversification
- ◆ assisting the marketing function of firms disadvantaged by their peripheral location
- ◆ assisting sectors that have yet to fully embrace marketing
- ◆ promoting Ireland as a world-class tourist location and specific marketing of activity-based holidays with a view to regional development.

Under this Priority, resources will be directed to marketing in industry and the food, seafood and tourism sectors.

2.3.1 Industry

Marketing support will be focused towards SMEs as they often fail to undertake market development on their own due to lack of expertise, financial resources and the perceived risks involved. Just over one-third of sales by SMEs are exported. Irish-owned manufacturing companies retain a high dependency on the UK market for almost one-half of their exports, while 29% of exports are to the rest of the EU. Exports as a percentage of sales of indigenous manufacturing companies actually fell from 40.7% in 1993 to 40.2% in 1998. The development of marketing capability in SMEs will be a high priority and supports will be directed to the following:

- ◆ market information/research including market trends, competition, logistics, market strategy options, product development and design upgrading of skills
- ◆ sectoral and company promotional activities including trade fairs, advertising, literature and public relations
- ◆ internationalisation including market development personnel, training (customer care skills, language skills etc.), overseas offices, strategic alliances/partnerships, acquisition and sourcing.

2.3.2 Food Industry

Marketing development and promotion have an essential role to play in maximising the food industry's competitiveness and market orientation. In this context, the objective is to enhance the industry's marketing capabilities and its access to existing and new markets. The required marketing strategy reflects that advocated by the Food Industry Development Group and expanded upon by the Agri-Food 2010 Committee and comprises the following elements:

- ◆ a comprehensive market research and intelligence service focusing on consumer trends, competitive benchmarking etc.
- ◆ increased marketing capabilities within individual companies in recognition of the need for closer relationships with their client base
- ◆ trade marketing initiatives to assist companies enhance existing markets and target new markets
- ◆ an increased focus on the opportunities arising from the growth in the food service sector and the developments in retail formats.

In regard to impact, the strategy outlined above will assist the industry to meet its future opportunities and challenges. In particular, it will promote the maintenance of a market-focused approach and will help the industry to overcome the market access difficulties resulting from its lack of scale and its peripheral location.

2.3.3 Seafood Sector

The objective of the seafood marketing programme will be to capitalise on the buoyant international seafood market for quality, value-added fish products by developing vital supply chain linkages with distributors and retailers. In line with this strategy, the following priority areas will be pursued:

- ◆ increasing domestic per capita consumption and unit value of product sold
- ◆ targeted market research and promotional trade consumer programmes
- ◆ development of the marketing capabilities of seafood companies
- ◆ addressing competitive pressures for the sector.

The actions proposed will maximise the value of Irish seafood on the home and export markets to the benefit of the sector. The programme will contribute to a market-led approach to development by identifying and helping to exploit product/market opportunities, by promoting demand for quality seafood at home and abroad and by supporting improvements in marketing of fish and fish products.

2.3.4 Tourism

Objectives/Strategy

Ireland's key tourism marketing objectives over the period 2000 to 2006 are to increase tourism revenue and per diem visitor yield, and to help industry achieve a wider seasonal and regional distribution of tourist business thereby contributing to sustainable development goals. The tourism marketing measure is designed to facilitate industry achievement of the following targets by 2006:

- ◆ a foreign exchange annual earnings figure of £3.5bn⁶ (equivalent to average annual growth of 5%), with a clearer focus on higher-spending market segments and an increased per diem visitor yield
- ◆ the creation of 50,000⁷ net new full-time job equivalents in the economy
- ◆ an increased proportion of tourism growth over the plan period in the shoulder and off-peak periods
- ◆ a more diversified international market spread for Irish tourism.

These are challenging targets given the current level of foreign earnings arising from the substantial tourism growth of recent years and poor international experience of successfully spreading business throughout the year. The tourism marketing measure (in particular the niche marketing theme), coupled with product development initiatives, will also aim to deliver a disproportionate level of growth to developing and undeveloped tourist areas, thereby contributing to a wider geographical distribution of tourism revenues in line with regional dispersal and sustainable development priorities. The aim is to increase the proportion of out-of-state tourism revenue accruing to the BMW Region as a percentage of the national total from 25% in 1999 to 28% by 2006.

The strategy to achieve the objectives outlined above is to continue to market Ireland internationally as a tourism destination. This will be complemented by a series of targeted training and product development measures outlined elsewhere under the CSF to ensure maximum effectiveness and a greater degree of co-ordination of tourism-related activities generally.

The measure consists of two themes, a destination marketing theme and a niche marketing theme, to be funded from Ireland's first-ever dedicated Multi-Annual Tourism Marketing Fund. The Fund will incorporate a public/private partnership arrangement, to ensure adequate marketing funding through public and industry sources to meet the targets set for tourism over the seven years of the Programme.

⁶ These figures do not include any allowance for inflation or increase in productivity.

⁷ These figures do not include any allowance for inflation or increase in productivity.

In order to meet more intensified international competition, it is essential that the focus of future marketing be on best practice, innovation and quality in marketing communications. These entail sophisticated usage of technology, benchmarking to establish best practice and further investment in tourism brand development. The primary focus of marketing must be on the 'promotable segments' which are best suited to fulfilling regional, seasonal and yield objectives.

2.3.5 Impact of the Marketing Priority

Detailed indicators for each measure will be developed in the Operational Programme Complement. Table 14 shows impact indicators for marketing in the industry sector.

| Table 14. Industry Marketing Impact Indicators | | | | | | |
|---|--------------------------|---------------|--------------------------|----------------------|---------------------------------|---------------------------------|
| Indicator | State/ Region | Gender | Baseline Year | Data | 2006 Forecast/Target | Data Source |
| Export of Irish-owned companies | State | n/a | 1997 | 34.3% of total sales | 41.6% | Census of Industrial Production |
| | BMW | | | 39.6% | 46.6% | |
| | S&E | | | 32.5% | 39.2% | |

Table 15 shows impact indicators for tourism marketing.

| Table 15. Tourism Marketing Impact Indicators | | | | | | |
|--|--------------------------|---------------|--------------------------|-------------|---------------------------------|---------------------------------------|
| Indicator | State/ Region | Gender | Baseline Year | Data | 2006 Forecast/Target | Data Source |
| Out-of-state tourism revenue | State | n/a | 1999 | G2,456m | G3,379m | Central Statistics Office/Bord Fáilte |
| Proportion accruing to the BMW Region | BMW | | | 25% | 28% | |

Note: Out-of-state tourism revenue includes revenue from overseas and Northern Ireland visitors but excludes overseas same-day visits and carrier receipts.

2.4 Sea Fisheries Development Priority

| Table 16. Sea Fisheries Development Priority (Gm) | | | | | | | | |
|--|--------------------|-----------------|-----------|----------------|------------------------|-----------------|----------------|--------------------------|
| Priority | Co-financed | | | | Non-co-financed | | | Overall Total |
| | Total | National | EU | Private | Total | National | Private | |
| Sea Fisheries Development | | | | | | | | |
| Total | 132.97 | 12.27 | 42.12 | 78.58 | 26.88 | 4.67 | 22.21 | 159.85 |
| of which BMW | 77.52 | 7.15 | 24.47 | 45.90 | 15.76 | 2.88 | 12.88 | 93.28 |
| of which S&E | 55.45 | 5.12 | 17.65 | 32.68 | 11.12 | 1.79 | 9.33 | 66.57 |

FIFG Structural Funds will be provided in this Priority.

Objectives

The Irish seafood industry is an important indigenous economic sector and has the ability to generate income and employment in remote and coastal regions and is of fundamental importance to sustaining communities in these areas. The general objective for the period of the Programme will be to maximise the value of output by increasing quality and efficiency at each point of the distribution chain, thus ensuring a sustainable future for the Irish fishing industry as a whole and its contribution to the wellbeing of coastal communities.

Strategy

The strategic perspective under the Priority will be to enhance the safety, quality and competitiveness of the Irish fishing fleet. There will be a continued focus on the modernisation of the whitefish fleet within the framework of the Community fleet development guidelines. The revitalisation of the inshore fleet will be addressed. Strategic initiatives will critically focus on enhancing the handling, storage and presentation of raw material. Particular aims include:

- ◆ to encourage the continued restructuring and modernisation of the whitefish fleet in conformity with Multi-Annual Guidance Programme (MGP) targets in order to enhance safety, working conditions and quality
- ◆ to facilitate the selective entry of modern whitefish vessels into the fleet subject to a review of the impact of the current Whitefish Fleet Renewal Programme, the state of resources and in line with relevant EU requirements
- ◆ the adjustment of fishing effort to maintain fleet capacity in balance with resources available to it within the context of MGP targets

- ◆ to sustain and develop the inshore fisheries sector
- ◆ the application of quality systems to enhance the handling, storage and presentation of raw material to ensure the delivery of a high quality product
- ◆ to develop a more commercial approach to the organisation of the market for fisheries products including maintaining the continuity of supply
- ◆ to improve conservation of fish stocks, including through more selective fishing techniques and the protection and development of aquatic resources
- ◆ to promote the entry of young fishermen into the industry
- ◆ to increase the participation of women in the sea fisheries sector
- ◆ to support coastal communities to restructure and diversify into sustainable activities.

Expected Impact

The investment under this measure will be key to the improved safety, efficiency and competitiveness of the fleet and will ensure that employment is maintained. Maintenance and development of the industry can contribute uniquely to a more balanced socio-economic development, a more equitable distribution of economic activity throughout Ireland and the avoidance of further rural depopulation and deprivation, particularly along the western seaboard.

These actions, by contributing to the modernisation and renewal of the fishing fleet, will bring about improved continuity and quality of raw material supplies. Enhanced quality and efficiency will lead to better prices and more economic operations. The measure will have a significant impact on enhancing the safety and crew facilities of fishing vessels. The achievement of balance between fleet capacity and available resources will ensure the conservation of fish stocks and the long-term overall viability of the seafood sector. The commercial approach to organisation of the market, which will involve a strong emphasis on e-commerce, will strengthen marketing expertise and increase the producer's awareness and response to market needs. The restructuring and diversification of fishing operations will revitalise the inshore fisheries sector and ensure a sustainable future for local fishing communities.

Table 17. Sea Fisheries Development Impact Indicators

| | 1997 | 2006 |
|---|-------------------------|----------|
| Seafish landings: | | |
| Volume (000 tonnes) | 130 | 163 |
| Value (£m) | 285 | 334 |
| Change in age profile of whitefish fleet | 30 years | 25 years |
| % of vessels supported for essential safety equipment | 47% (end 1999 position) | 75% |

Table 18. Indicators for Adjustments to the Fishing Effort

| Segment | Situation 1.1.1997 | | Objective 31.12.96 | | | | Objective 31.12.2001 | | | |
|--|-----------------------|---------|-----------------------|---------|-----------------------|--------------------|-------------------------|---------|-----------------------|--------------------|
| | GT(*) | kW | GT(*) | kW | GT(*) x t (000) | KW x t (000) | GT(*) | kW | GT(*) x t (000) | kW x t (000) |
| Polyvalent ^{(1) (2)} | 41,879 | 161,232 | 48,769 | 173,027 | | | 46,185 | 163,857 | | |
| Pelagic Trawl & Purse Seines ⁽²⁾ | 20,254 | 38,893 | 22,308 | 29,039 | 6,001 | 7,405 | 22,308 | 29,039 | 5,683 | 7,013 |
| Beam Trawl ⁽³⁾ | 1,130 | 5,129 | 1,156 | 6,113 | 330 | 1,786 | 1,156 | 6,113 | 295 | 1,597 |

* Includes estimated GT values in accordance with Article 4 of the present decision. The objectives will be revised as real GT values become available.

- (1) The objectives of the polyvalent segment for 31 December 1996 have been increased by 5,473 GT and 28,447 kW to take into account the capacity of previous unregistered vessels. These figures will be revised by the end of 1998 at the latest when all remaining licence applications have been processed. An inventory of vessels using exclusively active gears with this segment will be established. Those vessels will be subject to an effort reduction only. The capacity and effort objectives will be adjusted accordingly. The Commission may approve following the procedures of Article 18 of Regulation (EEC) No. 3760/92, on request of the Irish authorities and in the light of all relevant elements, further adjustment of the capacity of this segment aiming at exploiting additional fishing opportunities in areas VI and VII.
- (2) 6,297 GT and 15,320 kW have been transferred from the pelagic objectives to the polyvalent objectives following the reclassification of dry-hold pelagic vessels at the time mid-term review of the MAGP III.
- (3) Up to 285 GT and 906 kW from the polyvalent segment objective may be transferred to the beam trawl segment objective during MAGP IV in order to update existing vessels in that segment.

Note: Targets for the period after MAGP IV will be set in the context of future Council Decisions on structural issues. MAGP IV targets for 31.12.2001 have already been reached globally although there is need for further reductions in the pelagic segment to meet the targets for the segment in accordance with Commission Decision 98/125/EC of 16 December 1997.

3

Summary Description of Measures

This chapter provides a summary description of measures under each Priority together with information on compliance with State aid rules and on the rationale for public intervention. Where State aid is involved, the measures operate in compliance with the relevant EU State aid guidelines or framework, notably those on regional, training and R&D aid, as well as those relating to agricultural products. Each of these guideline/framework documents contains an analysis of the rationale for approving and providing the type of aid concerned, including an outline of the challenges to be addressed, the benefits to be derived and an explanation of the reasons why the European Commission regards these aids as compatible with the common market. Structural Funds will be provided in the Sea Fisheries Development Priority (see 3.4) and in three areas of the RTDI Priority (see 3.2): competitive RTDI grant scheme, collaboration for enterprise and in higher education sector/ strategic research (capital). Full details of the measures will be given in the Operational Programme Complement as required under the General Structural Funds Regulations.

3.1 Industry (Indigenous and Foreign Direct Investment) Priority

This Priority comprises six measures: indigenous industry, foreign direct investment, food industry, seafood processing, Gaeltacht areas, and the Irish film sector.

3.1.1 Indigenous Industry

Sub-measures within indigenous industry are structured according to the BDM, together with additional initiatives under regional networks and dedicated support organisations.

Strategy Assessment and Formulation

Strategy assessment and formulation will help companies to improve their in-company strategic planning capabilities. This sub-measure will facilitate companies to review operations, formulate plans for future growth including e-business initiatives, explore e-working arrangements, and address issues of lack of managerial expertise and relative problems of accessing finance for SMEs.

Aid to support this will be delivered under the R&D Capability Scheme, the Training Grants Scheme and the Consultancy Services to SMEs Scheme.

The existing R&D Capability Scheme was discussed with the DG for Competition on 26 November 1999, and it was agreed that it can continue to operate. The Training Grants Scheme was notified to the DG for Competition and approved as State aid No. N 109/2000 in Commission letter SG(2000) D/103183 of 17 April 2000. The Consultancy Services to SMEs Scheme is an amendment of an existing scheme and is being notified to the DG for Competition.

Rationale for public intervention: targeted/corrective subsidy.

Marketing

The marketing capability of SMEs for both new and existing products, services and e-business will be developed. Initiatives include market information/research, sectoral and company promotional activities such as trade fairs, advertising, literature and public relations, training (customer care skills, language skills etc.), overseas offices, strategic alliances/partnerships, acquisition and sourcing. Enterprises will be helped to overcome the disadvantages of a peripheral location, thereby contributing to balanced regional development within Ireland.

Aid to enterprises will be delivered under the Consultancy Services to SMEs Scheme, the Trade Fair Participation by SMEs Scheme and the Marketing Capability for SMEs Scheme, each of which is being notified to the DG for Competition.

Rationale for public intervention: targeted/corrective subsidy.

Research and Development

R&D initiatives are outlined in the RTDI Priority (see 3.2).

Production and Operations

The aims for production and operations are to enhance the competitiveness and ensure the survival of Irish companies by moving firms up the 'competitiveness staircase'. The competitiveness and productivity of enterprises will be promoted to acceptable international levels by implementing best-practice skills and world-class manufacturing approaches within enterprises. These will incorporate key operations areas such as supply chain management, logistics, production, purchasing and environmental control. Objective benchmarking will be integrated into this approach. The measure will support the development of new investment/job creation projects by participating in the funding of such projects, which are unable to attract private sector investment because of perceived risk. The regional dimension will be implemented through differential levels of support, with more favourable levels available in the BMW Region and the least favourable levels in Dublin city and county.

Aid to support new investment/job creation projects will be delivered through a continuation of existing regional aid schemes in the form of capital grants, employment grants and/or equity participation. A review of these schemes to establish their compatibility with the Commission's Guidelines on National Regional Aid is currently being finalised by the Irish authorities and the DG for Competition. The development of capability in production and operations will be delivered under the Training Grants Scheme and will include support for the enhancement of transport logistics and supply chain management.

Rationale for public intervention: targeted/corrective subsidy.

Finance

This will facilitate the continued development of a vibrant venture capital market by addressing issues of the relative problems of access to finance, primarily by SMEs. Difficulties arise especially in the context of globalising financial markets in which financial intermediaries face higher penalties for failure and where more sophisticated financial expertise is required. Support will also be given under this heading to enterprises, primarily SMEs, in the form of equity participation, as indicated in the previous heading.

The Seed and Venture Capital Funds are not regarded as State aid, but a notification has been made to the DG for Competition to confirm the position. A review of the equity participation scheme to establish compatibility with the Commission's Guidelines on National Regional Aid is being finalised by the Irish authorities and the DG for Competition.

Rationale for public intervention: public good/targeted scheme.

Regional Networks

This measure will focus on building the capability of firms at a regional level through thematic networking activities such as human resources best-practice workshops and world-class manufacturing focusing on operations. Enterprise support systems at a regional level will be enhanced through the development of dedicated infrastructure such as incubation centres which could include intelligent office space and specialist food units/other facilities. Support will also be provided for community enterprise centres.

Aid to support capability networks is delivered through the Training Grants Scheme. Aid to support incubation centres will be delivered through the Sites and Premises Scheme.

Rationale for public intervention: targeted/corrective subsidy.

Dedicated Support Organisations

In addition to the mechanisms to develop indigenous industry outlined above, a number of dedicated support organisations will deliver priority services on a contract basis to industry at a sectoral/cross-sectoral level. These dedicated organisations include:

- ◆ The Crafts Council of Ireland
- ◆ Business Innovation Centres (BICs)
- ◆ National Institute for Transport and Logistics (NITL).

Funding provided by the Crafts Council of Ireland directly to firms concerns human resources development and is delivered through the Training Grants Scheme. The BICs and the NITL do not provide funding directly to firms, therefore State aid rules do not apply.

3.1.2 Foreign Direct Investment

Measure to achieve Objectives for Inward Investment

Inward investment objectives will be pursued using targeted incentive schemes, which are designed to be both effective and transparent. These schemes are also designed to be fully in line with the EU Guidelines on Regional or Horizontal Aids as appropriate.

Aid to support new investment/job creation projects will be delivered through a continuation of existing regional aid schemes in the form of capital grants, employment grants or equity participation. A review of these schemes to establish their compatibility with the Commission's Guidelines on National Regional Aid is currently being finalised by the Irish authorities and the DG for Competition.

Aid to encourage private sector provision of industrial sites and premises for renting to industrial undertakings will be available in locations where market provision in this regard has not yet developed. This aid will be delivered under the Sites and Premises Scheme, which is being notified to the DG for Competition.

Capital Grants

Capital grants will operate under all three programmes, i.e. regional, embedding and sectoral, as a regional aid. Grant assistance will be provided, in accordance with EU Regional Aid Guidelines, towards the purchase of buildings or the purchase or lease of equipment by an industrial undertaking.

Grants will be used subject to regional aid limits in both the Objective 1 and Objective 1 in Transition Regions to attract new mobile investment. The types of mobile investment that will be targeted will be strong companies in high growth sectors. The focus will be on investment which meets Ireland's development needs and for which the country is a competitive location. Capital grants will also be used to support expansions of existing foreign-owned companies.

The focus in the Objective 1 Region will be on bringing in new inward investment to help accelerate regional development. In the Objective 1 in Transition Region the key focus will be on promoting the weaker localities and towns within the overall region, addressing the remaining unemployment blackspots and areas of social deprivation, and finding replacement industries where an important employer has closed down or substantially reduced its employment levels.

Employment Grants

Employment grants will operate under all three programmes, i.e. regional, embedding and sectoral, as a regional aid. They will be used subject to regional aid limits in both the Objective 1 and Objective 1 in Transition Regions to attract new mobile investment and expansions.

The increasing proportion of internationally traded services projects has resulted in a greater use of employment grants in recent years. Employment grants are more relevant to the attraction of such projects, which generally have a much lower investment in buildings, machinery and equipment than manufacturing projects do. As the proportion of services projects is likely to increase further in the knowledge economy, the need for employment grants will be greater.

Equity Participation

Equity participation will be used where appropriate under the sectoral development programme. It is intended to take equity on a purely commercial basis, with the State negotiating market coupons/rates of return and full rights to benefit from holding shares in client companies that prove to be successful.

The scheme was covered by measure 3 (sub-section 8.2) of the indigenous industry development sub-programme of the 1994-1999 Operational Programme for Industry.

The capacity to take equity needs to be retained for developing new sectors which are likely to be strategically important for the Irish economy in the future, but which may be too risky for private capital to fund in full. It is envisaged that this is most likely in new high growth sectors such as e-commerce.

R&D Capability Grants

The scheme will be used to assist existing companies to add higher order functions to their operations in terms of their capability and strategic importance and will therefore form a central and important role in delivering on the embedding and sectoral programmes, as a horizontal aid.

The scheme, which existed prior to Ireland's accession to the European Communities in 1973, operates under sections 29 and 30 of the Industrial Development Act, 1986 and its terms are in accordance with the current EU guidelines for R&D grants. The scheme was discussed with the DG for Competition on 26 November 1999 and it was agreed that it can continue to operate.

Training Grants

Training grants will operate under the embedding and sectoral programmes as a horizontal aid. Support for in-company training will be delivered under the Training Grants Scheme, which was notified to the DG for Competition and approved as State aid No. N 109/2000 in Commission letter SG(2000) D/103183 of 17 April 2000.

Training grants have traditionally been used as part of the package of incentives to attract new inward investment. However, in the future they will not be applied to attract new inward investment but focused on addressing the training needs of existing clients. As such they will play a central role, along with R&D grants, in embedding clients and raising the overall quality of employment and longevity of projects in Ireland.

3.1.3 Food Industry

A specific measure within the industry sub-programme will cater for capital investment relating to agricultural products, covered by Annex 1 to the EU Treaty, and will also cover investments in the livestock marketing area. This targeted/corrective measure is being notified to the Agricultural Directorate and will comply with the relevant provisions of the Community Guidelines for State Aids in the Agricultural Sector. In the case of products not covered by Annex 1 to the EU Treaty, capital investment projects will be eligible under the production and operations measure of the indigenous industry measure (see 3.1.1). Assistance towards capital investment in the food sector will target increased competitiveness and added value.

3.1.4 Seafood Processing

The measure proposed to achieve the objectives of the programme for seafood processing will involve:

Quality and Value Enhancement

Assistance will be provided to primary, secondary and tertiary processing projects which enhance quality and value and which lead to improved competitiveness through movement along the value chain.

Scale and Competitiveness

Assistance may also be provided to assist necessary industry restructuring in the pursuit of scale and international competitiveness and which leads to value enhancement and improved potential for secondary and tertiary processing.

These actions involve a corrective subsidy which will improve the sector's international competitiveness. The actions are designed to comply with the provisions of Council regulation 2792/1999 and the Guidelines for the Examination of State Aid to Fisheries and Aquaculture (97/C 100/05).

3.1.5 Gaeltacht Areas

The Údarás na Gaeltachta strategy for achieving its objectives under the Productive Sector Operational Programme has two measures: finance for industry, and land and buildings.

The objective of both measures is to enable An tÚdarás to further its aims of economic development of the Gaeltacht as mandated under the Údarás na Gaeltachta Act, 1979.

Finance for Industry

An tÚdarás will use the measures in 3.1.1 above, including the Sites and Premises Scheme, in respect of indigenous industry projects, and the measures in 3.1.2 above in respect of inward investment projects.

Land and Buildings

This is comprised of three areas of activity: site acquisition/development, buildings construction, and upgrading/modification of buildings (all carried out by An tÚdarás). This is not a State-aid measure as it is operated in compliance with the terms of the European Commission communication on State-aid elements in sales of land and buildings by public authorities (OJ C 209, 10.7.1997, page 3).

3.1.6 Irish Film Sector

This measure provides loans for the development and production of creative film and television productions. The statutory basis is The Irish Film Board Act, 1980, as amended.

The Development Loan Scheme was recognised in 1996 by the DG for Competition as being de minimis and the Production Loan Scheme was approved at the same time. An extension of the approval for the period of the Programme was sought and Commission approval has been given (N 217/2000 in approval letter SG (2000) D/430125).

3.2 Research, Technological Development and Innovation (RTDI) Priority

This Priority comprises seven measures covering RTDI in the education, industry, agriculture, food industry, marine, forestry and environmental sectors. The EU contribution amounts to G60.59m for third-level capacity building in RTDI in the higher education sector (see 3.2.1.) and G230m for RTDI and industry under the competitive RTDI and National Collaboration Schemes (see 3.2.2).

3.2.1 Higher Education

The focus of research in this measure is primarily on basic research in the generally understood meaning of the term. Fundamental research of the highest quality is critical in promoting the new approaches necessary for the increasingly know-

ledge-based economies of the information age. The economic case for public sector investment in research, and particularly basic research, derives in part from what could be described as the public good character of many research activities and outcomes.

The measure aims at strengthening the capacity and capability of research in higher education by addressing it with four complementary sub-measures, listed below, all of which contain capital and current elements. This measure will, through the various sub-measures, engender a strategic view of research in higher education, ensure that the fundamental sub-structure is in place and both renewed and enhanced, and ensure that a sufficiency in both number and quality of researchers is created.

Basic Support for Research and Electronic Communications

Through the provision of basic support for research and electronic communications, the necessary infrastructural supports for research in the higher education sector will be maintained and enhanced. This will provide the foundations on which to build a critical mass of high quality researchers.

Project-based and Individual Research

By providing support for these researchers at project and at individual level, the capability of the sector and the researchers themselves will be enhanced and the numbers increased. The education and training of top-level researchers and their retention in Ireland are as important a return from the investment in research as the specific knowledge and application 'outputs' are.

Technological Sector Research

The technological sector has a particular role given the wide geographical spread of the institutions and their regional focus. The strengthening of the research capability of this sector will complement, for example by a closer focus on enterprise-related research, the broad strengthening of the overall research capability.

Strategic Research

This sub-measure is broken into two further sub-measures:

Programme for Research in Third-Level Institutions (PRTLII)

Note: The capital element of the above will be supported by an allocation of €58.3m (co-financed amount €100.5m) from EU Structural Funds (ERDF) over the period 2000-2006.

At an institutionally strategic level, the supports planned under the measure for research at this level will augment investments already made under the PRTLII. This

will develop a strategic and planned approach by third-level institutions to the long-term development of their research capabilities, consistent with their existing and developing research strengths and capabilities.

The objective of ERDF support for the capital element of this sub-measure is to ensure that the research community in the higher education sector is appropriately equipped at infrastructural level; thereby ensuring that there is an appropriate physical base for research activities in order to ensure the optimum development of core research strengths and research strategies of the various institutions.

North/South Co-operation

Note: The capital element of the above will be supported by an allocation of €2.3m (co-financed amount €3.8m) from EU Structural Funds (ERDF) over the period 2000-2006.

An important element of the strategic research effort is to facilitate and encourage co-operation in research between third-level institutions north and south. The aim would be to encourage collaborative endeavours in research in a north/south context, including research into issues of relevance to north/south co-operation and the development of the whole island.

This sub-measure includes a total provision of €15.2m (€11.4m current and €3.8m capital) for co-operation on a north/south basis, in order to support cross-border research initiatives on a collaborative basis between institutions. This would serve to support the objectives of the Common Chapter in the NDP.

Compliance with State Aid Regime

The building of infrastructure (basic support for research and electronic communications) does not fall within the scope of State aid rules. (Vade mecum: Community Rules on State Aid, Section 5). Aid for R&D is subject to the Community Framework for State Aid for Research and Development (OJ C 45, 17.2.1996, page 5). The supports proposed under the RTDI measure in the education sector do not constitute State aid as they constitute public financing of R&D activities by public, non-profit-making, higher education institutions. Consequently, none of the aid for RTDI activities covered by the education sector's RTDI measure come within the terms of a notifiable State aid.

3.2.2 Industry

The CSF recognises that RTDI and industry is a key focus area of the Productive Sector. The funding provided from the ERDF will concentrate on two measures:

- ◆ industry innovation – competitive RTDI scheme (see RTDI in Industry (B))
- ◆ collaborative networks – national (see RTDI Collaboration (A)).

The RTDI industry measures will prioritise:

- ◆ the immediate need of addressing directly R&D issues such as the development of capability in firms and the sustained increase in business expenditure on R&D
- ◆ the short to medium term need of creating new and effective systems of collaboration between firms and sources of expertise in the State research institutions, third-level sector and elsewhere
- ◆ the longer term need of preparing for the future through the Technology Foresight Fund.

This will involve a three strand approach:

- ◆ RTDI in industry
- ◆ RTDI collaboration between companies and researchers in the third-level institutions
- ◆ RTDI infrastructure.

RTDI in Industry

The following measures, which will be open to all firms regardless of size, will create a cadre of strong and efficient R&D performing companies, capable of developing and growing quickly through the effective use of technology, thereby reaching significant scale. Particular attention will be given to the promotion of participation by SMEs in these measures.

(A) R&D Capability Scheme

This scheme provides assistance for large-scale investment aimed at building up the R&D infrastructure/capability (human and capital) within new and existing firms. Grants are awarded on a non-competitive basis to companies who are making a large-scale strategic step-up in their R&D function in terms of facilities/capability and strategic importance.

The scheme existed prior to Ireland's accession to the European Communities in 1973 and its terms are in accordance with the current EU guidelines for R&D grants. The scheme was discussed with the DG for Competition on 26 November 1999 and it was agreed that it can continue to operate.

(B) Competitive RTDI Scheme

This scheme will be supported by EU Structural Funds (ERDF) over the period 2000-2006. Total co-financed expenditure will be G531m, out of which G154m will be provided by ERDF. Grant support will be awarded on a competitive basis to high

quality, high risk R&D projects within firms leading to sustained R&D investment. The scheme will respond to the failure of the majority of SMEs to commit sufficient resources to R&D to allow them to become and remain globally competitive. This scheme will focus on project-based R&D expenditure as distinct from building up the strategic R&D function within a firm and will be offered on a competitive basis in order to minimise dead weight.

This scheme is being notified to the DG for Competition, under the Community Framework for State Aid for Research and Development (OJ C 45, 17.2.1996, page 5).

(C) Innovation Management Capability Scheme

This scheme will provide support for firms to achieve greater returns on their R&D investment by the provision of training in R&D management.

This scheme is an element of the Training Grants Scheme and was notified to the DG for Competition and approved as State aid No. N 109/2000 in Commission letter SG(2000) D/103183 of 17 April 2000.

RTDI Collaboration

Under RTDI Collaboration there will be an emphasis on collaborative research networks which will:

- ◆ build partnerships that enhance company capability and competitiveness in firms, particularly SMEs, through collaboration networks nationally
- ◆ help firms, particularly SMEs, to exploit technology effectively by improving access to appropriate technology available internationally.

(A) Collaborative Networks (National)

This scheme will be supported by EU Structural Funds (ERDF) over the period 2000-2006. Total co-financed expenditure will be G232m with a contribution of G76m from the ERDF. The aim of this scheme is to enhance the links between companies in Ireland and the research infrastructure at national level by creating networks involving companies and researchers in the third-level sector. Funding will be provided largely on a competitive basis for collaborative strategic and applied research proposals. This will bring a flow of technology opportunities into firms, particularly SMEs, in the short to medium term and will be achieved by the provision of:

- ◆ *Strategic Research Grants*
Grants are paid directly to the third-level sector to carry out fundamental research of industrial relevance and the results of the research are widely available to all. No funds or benefits are available to specific firms.

This activity is covered by paragraph 2.4 of the Community Framework for State Aid for Research and Development (OJ C 45, 17.2.1996, page 5), and, as such, is not State aid.

◆ *Applied Research Grants*

Grants are paid to the third-level sector and the project involves collaboration with a specific firm. In some instances there will be further collaboration with cross-border institutions or firms. This is defined as collaborative industrial research.

The Applied Research Grants Scheme is being notified to the DG for Competition under the Community Framework for State Aid for Research and Development (OJ C 45, 17.2.1996, page 5).

(B) Collaborative Networks (International)

By networking knowledge resources, it will be possible to encourage the development of technologies that will be relevant to industry in Ireland and to deliver them in a manner which addresses company needs. The focus will be on identifying emerging technology trends in the short to medium term and preparing firms, particularly SMEs, for the threats and opportunities that will arise from these trends. Assistance will be made available to provide information to firms and research worldwide technology databases through 'Technology Watch', technology road maps and business partnership opportunities.

This scheme will not involve direct financial aid to firms. It will involve technical advice aimed at improving individual firms' knowledge of new technologies. Such advice will be widely available and disseminated on a non-discriminatory basis. Such assistance is in accordance with paragraph 2.4 of the Community Framework for State Aid for Research and Development of 17 February 1996 and does not constitute State aid.

RTDI Infrastructure

The RTDI infrastructure measures will harness the regional and national technological infrastructure in order to help existing firms to grow, and influence the rate at which new enterprises are set up. This will include upskilling in enterprises through research training and the implementation of the recommendations of the *Technology Foresight Ireland Report* (1999).

(A) Research Capability and Training

Under this sub-measure, funds will be provided on a competitive basis to individual researchers in third-level colleges to carry out fundamental research, which, by its nature, is far from the marketplace. The results will be made available widely for dissemination on a non-discriminatory basis.

Such assistance is in accordance with paragraph 2.4 of the Community Framework for State Aid for Research and Development of 17 February 1996 and does not constitute State aid.

(B) Technology Foresight Fund

This sub-measure provides for the creation of a new public RTDI infrastructure through the establishment of a Technology Foresight Fund which will invest in the research and technologies required to underpin future long-term economic growth and living standards. Under the Fund, assistance will be provided on a competitive basis to research proposals in identified niche areas of biotechnologies and information communication technologies, which will underpin Ireland's long-term economic development in the context of increasing competition and more globalised markets.

The research that will be assisted under the Technology Foresight Fund will be long-term, fundamental/basic research, far from the marketplace, which will build up Ireland's research infrastructure (i.e. people) to recognised world-class levels over a ten to fifteen year period by broadening scientific and technical knowledge.

Arrangements for the operation of the Fund are currently being examined and remain to be finalised. It is not expected that State aid issues will arise as it is anticipated that the operation of the Fund will fall within the parameters of paragraphs 2.4 and 2.5 of the Community Framework for State Aid for Research and Development of 17 February 1996. However if State aid issues do arise, they will be addressed.

3.2.3 Agriculture

Three priority areas – competitive and sustainable agriculture, rural environment and rural viability – have already been identified in Chapter 2. The focus of research in these priority areas, to be implemented by Teagasc, is described below.

Competitive and Sustainable Agriculture

In Agenda 2000, the EU stresses the importance of improving the competitiveness of the broader European agriculture and agri-food sectors in the context of trade liberalisation and an expected growth in world food demand. Changes on world markets are impacting on Irish agriculture significantly, with increased consumer demands for food which is safe and is produced in an environmentally sustainable manner and with respect for animal welfare. Research will therefore have to be adapted to meet these challenges and will focus mainly on developing effective strategies for grass, crop (including organic produce), animal production and farm forestry; and nutritional and management regimes to improve quality, safety and animal welfare at farm level. In addition, it is proposed to develop an innovation centre for the application of biotechnology to animal and crop production.

Rural Environment

Securing the further development of Irish agriculture while protecting the environment represents a significant national challenge. The goal is to develop farming systems that allow farmers to optimise production efficiencies while minimising the impact on the environment. Research will involve quantifying the relationship between soil and fertiliser nutrients and grassland and crop responses and quantifying emissions from farming systems including pig, poultry and mushroom enterprises, and identifying strategies to reduce them.

Rural Viability

To meet the challenges facing the agri-food sector and rural areas in the coming period, there will be a critical need for research and analysis on the impact of policy changes on these areas. The proposed research will aim to strengthen policy formation, provide the strategic knowledge-base which will support the continued viability of rural areas and develop information systems to support the strategic development of the rural economy. In this regard the commitments made by the Government in the White Paper on Rural Development will be addressed to ensure an integrated strategic approach to the further promotion of rural development.

Research Stimulus Fund

Recognised research institutions will be invited to participate in collaborative projects where gaps are identified in the research process. The Department of Agriculture, Food and Rural Development will chair a Stimulus Fund Co-ordinating Committee which will include representatives of the research institutions and end-users and which will determine the priority areas for funding. Proposals for research projects in these areas will be invited and these will be evaluated by the committee.

Rationale for Public Intervention

This aid is classified under the heading public good. Teagasc was set up by the State to carry out research in the agriculture sector and will continue with this essential work in the coming period. However, in line with ESRI recommendations, some level of competition will be maintained in this area to encourage collaborative projects as proposed under the Research Stimulus Fund.

Compliance with EU Policies

Aid for R&D is subject to the Community Framework for State Aid for Research and Development (OJ C 45, 17.2.1996, page 5 as subsequently amended in relation to agriculture, OJ C 48, 13.2.1998, page 2). The framework states that 'public financing of R&D activities by public non-profit-making higher education or

research establishments is normally not covered by Article 92 (1) of the EC Treaty'. Consequently, aid for research activities covered by Teagasc or public research institutes would not come within the terms of a notifiable State aid.

3.2.4 Food Industry

As indicated in Chapter 2, the RTDI strategy for the food industry comprises a number of elements involving in-company research, technology transfer and public good research. The first two elements will be catered for under industry-related RTDI, set out earlier in this chapter. In the case of public good research, a specific measure will assist food-related institutional research, the results of which will be made freely available.

This will complement the support to be provided to the food industry for in-company research. It will seek to provide a base of expertise and information in generic technologies that will support innovation and product development in the industry. It will assist in assuring consumer protection and in ensuring that development is underpinned by attention to food safety and quality issues.

Funding will be provided in respect of research that is neither commissioned nor carried out in-house by individual firms. Suitable institutions may submit proposals that will be expected to address the current and/or perceived future needs of the food industry. Priority will be afforded to the themes of food safety, new innovative food products (particularly those incorporating red meats and dairy products) and the enhancement of the institutions' ability to support development in the consumer foods area. This will also assist the dissemination of research results.

This institutional (public good) research element does not come within the terms of a notifiable State aid.

3.2.5 Marine

The key elements of the marine RTDI measure, to be managed by the Marine Institute, include:

- ◆ the provision of enhanced research vessel capabilities to cover outer-shelf activities
- ◆ an upgrade of marine laboratories to provide an infrastructure platform to support ongoing R&D
- ◆ the establishment of a Marine RTDI Fund (applied and strategic RTDI, fellowship, demonstration projects etc.) to support project-based R&D in targeted areas. The proposed programme is essential in order to:

- support and promote the Government-approved marine RTDI strategy (Marine Institute, 1998)
- encourage active co-operation between RTDI users (SMEs) and RTDI providers (research institutions) to address industry problems
- promote partnerships capable of addressing critical strategic issues which are outside the capability of single research groups or institutions
- assist Irish RTDI performers to compete internationally for research funds (e.g. EU Framework Programme)
- provide support for young marine researchers/technologists who are the essential fuel that drives the economic development engine.

In order to comply with equal opportunities requirements, the above schemes will aim to have an appropriate gender balance amongst those trained and employed under the various measures proposed (i.e. at least equal to the proportion of women and men who are employed in the sector overall).

Targeted areas to be addressed by the Marine RTDI Fund are detailed in the Marine Institute's 1998 strategy document, *A Marine Research, Technology, Development and Innovation Strategy for Ireland*.

The building of infrastructure (enhanced research vessel capacity, upgrading marine laboratories) does not fall within the scope of State aid rules (Vade mecum: Community Rules on State Aid, Article 5). Aid for R&D is subject to the Community Framework for State Aid for Research and Development (OJ C 45, 17.2.1996, page 5). The aid measures proposed under the Marine RTDI Fund do not constitute State aid as they are either public financing of R&D activities by public, non-profit-making, higher education or research establishments; or R&D commissioned from firms by public authorities according to market conditions (open to tender procedure). Consequently, none of the aid for RTDI activities covered by the marine RTDI measure comes within the terms of a notifiable State aid.

3.2.6 Forestry

The main measure to achieve the Programme will be the funding of R&D projects that address the objectives and priority areas as outlined. Forestry R&D in the measure will be co-ordinated and funded through COFORD. The overall objective of COFORD is to develop and implement R&D programmes that support the competitiveness and sustainability of the forestry sector in Ireland. Funding will be provided to:

- ◆ develop R&D programmes for the forestry sector
- ◆ publish and disseminate research results and directories of forest research

- ◆ evaluate R&D carried out by Coillte and Enterprise Ireland on behalf of the Forest Service
- ◆ facilitate Irish scientific involvement in forest research proposals to the EU Framework Programmes for RTDI
- ◆ assist in the development of standards for sustainable forest management and for forest products.

Aid for R&D is subject to the Community Framework for State Aid for Research and Development (OJ C 45, 17.2.1996, page 5). The aid measures proposed under the Forestry RTDI Fund do not constitute State aid as they are either public financing of R&D activities by public, non-profit-making, higher education or research establishments; or R&D commissioned from firms by public authorities according to market conditions (open to tender procedure). Consequently, none of the aid for RTDI activities covered by the forestry RTDI measure comes within the terms of a notifiable State aid.

3.2.7 Environment

The RTDI and the environment measure will focus on four main elements: environmentally sustainable resource management, sustainable development, cleaner production and a national environmental research centre of excellence.

Environmentally Sustainable Resource Management

This will address important gaps identified in research for *Environment in Focus* (EPA, 1999) and *Ireland's Environment – Millennium Report* (EPA, 2000). In addition the EPA has engaged in a review of the earlier programme and consulted widely with academic institutions, government departments and sectoral interests. It will build on Measure 1 of the environmental monitoring R&D sub-programme carried out under the Environmental Services Operational Programme 1994-1999.

The main objective will be to contribute to a better environment by delivering applicable and relevant RTDI data and information based on high quality science and technology. It is envisaged that the following five broad areas will be included in the research programme:

- ◆ emissions to air and associated impacts
- ◆ water quality and quantity
- ◆ terrestrial environment, land use, land cover
- ◆ urban and socio-economic dimensions
- ◆ waste and dangerous substances.

Sustainable Development

Sustainable development is about ensuring economic growth and social progress while simultaneously protecting the environment and preserving natural resources. It is a universally endorsed aspiration, but complex and difficult to achieve. Integration of environmental considerations into other policy areas is a key means by which development patterns can be made more sustainable.

This measure will promote initiatives within and between the main economic sectors to assist in giving practical effect to the principle of integration, while acknowledging that primary responsibility for responding to sectoral environmental impacts must rest with the individual sectors. Areas to be considered for funding include indicators of sustainable development, further development of eco-audit methodologies, the role of fiscal measures and specific projects in economic sectors.

Cleaner Production

The Programme will support innovative solutions to environmental problems of concern as regards the Productive Sector and will carry out a range of cleaner production projects that will demonstrate best practice and be readily transferable to other companies in the sector.

It will draw on experience gained from the Pilot Project on Cleaner Production under the Environmental Services Operational Programme 1994-1999, which showed that in certain circumstances changed operating practices result in savings in respect of input costs and energy use, as well as reductions in emissions and waste.

National Environmental Research Centre of Excellence

A National Environmental Research Centre of Excellence will be established and will provide within the EPA a national focal point for environmental research. The Centre will provide a basis for future appropriate environmental research initiatives on an all-island basis and stronger environmental support in line with the CSF across the National Development Plan. The priority programmes for the new Centre will include information systems development, integrated environmental assessment and environmental management systems.

Compliance with EU Policies

The environmental R&D projects funded under this Programme do not constitute State aid as they fall within the meaning of Article 5.2 of the Community Framework for State Aid for Research and Development.

Projects will be independently carried out, mainly by academic institutions and will not be linked to any particular industrial enterprise. The results of the projects will be disseminated widely and will be available via the EPA website.

Projects will be awarded after public advertising for 'calls for proposals' and the consideration of these proposals by an assessment committee.

3.3 Marketing Priority

This Priority comprises four measures covering marketing directed at indigenous industry, the food and seafood sectors and tourism.

3.3.1 Indigenous Industry

Details on this measure are outlined at 3.1.1.

3.3.2 Food Industry

This measure will be administered by Bord Bia. It will cover the promotional and market development work undertaken by Bord Bia itself and will provide assistance to companies to improve their individual marketing capabilities. The latter will be limited to SMEs. The measure will contribute to the general aim of improving competitiveness and market-orientation within the food industry. It will help SMEs to overcome the disadvantages arising from their peripheral location, in expanding existing and developing new markets.

The measure is a corrective/targeted subsidy. The activities that will be undertaken by Bord Bia itself are governed in the main by the Community Framework on the Promotion and Advertising of Agricultural Products with which they will comply. The assistance to be provided to individual companies is being notified, as appropriate, to the Competition and Agricultural Directorates.

3.3.3 Seafood Sector

The measure proposed to achieve the objectives of the marketing programme will involve:

- ◆ market research and intelligence to facilitate the identification and evaluation of new market and product opportunities and will support the consistent gathering, analysis and monitoring of market and trade information

- ◆ market investigation to support the development of opportunities identified under the market research and intelligence action through a process of practical market investigation involving market visits, potential customer visits and the development of networks with relevant agencies within potential markets
- ◆ trade development to support the industry in developing trade opportunities and contacts
- ◆ seafood promotion to support increased awareness, consumption and understanding of seafood at national and international levels
- ◆ improvement of market conditions to support the market environment within which the industry currently operates and thereby create ease of market access and stronger competitive advantage
- ◆ marketing co-operation, skills and knowledge transfer to strengthen the industry marketing capability through the design and implementation of initiatives for producers and intermediaries within the supply distribution network.

The seafood marketing programme will include company-specific measures which will be directly undertaken by Bord Iascaigh Mhara co-operating and co-ordinating in a strategic alliance, as necessary, with Bord Bia in generic food promotion and trade activities overseas.

These actions involve a corrective subsidy which will improve the sector's international competitiveness. The actions are designed to comply with the provisions of Council Regulation 2792/1999 and the Guidelines for the Examination of State Aid to Fisheries and Aquaculture (97/C 100/05).

3.3.4 Tourism

Destination Marketing

Key Markets

Destination marketing takes the form of a mix of activities including TV/radio/press/print advertising, exploitation of Internet and digital TV technologies, direct marketing, trade and media promotions and production of materials to promote Ireland internationally as a tourist destination. Such activities will be continued in the key British and North American markets which have developed well over the past number of years and in Germany and France where recent performance has not been up to expectations.

Development of New Markets

While the US has been the fastest growing of the four major markets since 1993, some of the other markets such as Australia, the Netherlands, Italy and Scandinavia

have performed significantly better in terms of rates of growth than France, Germany or even Britain. Marketing in such countries, which have been identified as having longer term potential and are likely to promote a wider geographical spread of visitors within Ireland, has been relatively low up to now. This theme will allow for niche development in these markets which would broaden Ireland's market spread and lessen its dependence on more traditional markets.

Review and Further Investment in Tourism Brand Ireland

In overseas marketing, Tourism Brand Ireland has been the major vehicle and has played a pivotal role not only in refining tourism promotion but also in developing public-private and north/south partnerships within the tourism industry. While the projection and rollout of the brand is well advanced, this theme will allow for a continuous tracking and review of performance over the initial years, appropriate adjustments and support its further evolution. A more widespread adoption and use of the brand by all elements of the tourism industry will also be encouraged.

Niche Marketing

Special Interest Products

Special interest products (such as golf, cruising, conference visitors, angling, walking, gardens and the teaching of English as a foreign language) are particularly important in developing a sustainable tourism industry. Such market niches deliver higher-yield visitors, are inclined to benefit wider geographical areas and are environmentally friendly. Support under this theme will provide for the branding and marketing of special interest products, with priority given to those that incorporate an industry partnership approach to development. Development of cultural and heritage tourism will be pursued in co-operation with the Department of Arts, Heritage, Gaeltacht and the Islands, Dúchas and the national cultural institutions. In addition, smaller and less-developed niche businesses will be encouraged to improve marketing capabilities (e.g. walking, cycling), while better-developed sectors (e.g. golf, cruising, English language training) will be supported in targeting new markets and segments.

Small Tourism Providers

The tourist sector has developed significantly over the past ten years, with major additions to stock in all categories. However, small operators, including bed & breakfast and other small accommodation providers, who are of central importance to the Irish tourism product and facilitate wide regional spread, lack critical mass and the marketing skills necessary to compete internationally. Target support will therefore be provided to develop the marketing capabilities of this sector and to help them develop appropriate co-operative niche branding and marketing initiatives.

Tourism marketing activities that are general in nature and do not exclusively favour particular commercial undertakings are not deemed to constitute State aid within the meaning of Article 87 of the EC Treaty.

3.4 Sea Fisheries Development Priority

This Priority comprises one measure with a Structural Funds contribution of G42m which will co-finance expenditure of G132m. The scheme to assist the purchase of modern second-hand vessels is the only area in the measure which will not be eligible for Structural Funds.

An integrated programme of actions is planned under the Sea Fisheries Development Priority which involves:

- ◆ adjustment of fishing effort
- ◆ renewal and modernisation of the whitefish fleet and inshore vessels of smaller scale including support for young fishermen
- ◆ complementary measures to support and develop the fisheries sector in the areas of quality, markets and restructuring into sustainable activities.

Adjustment of Fishing Effort

The main action planned here will be to provide for a vessel decommissioning scheme, whereby fishing vessels may be permanently withdrawn from the Irish fishing fleet and removed from the Register of Sea Fishing Vessels. The payment of grant aid will apply to vessels currently entered on the Register and actively fishing. Priority will be given to the removal of vessels by reference to the achievement of balance between fishing effort and fishing opportunities within the context of the targets set in multi-annual guidance programme (MGP) for the fishing fleet. In view of the importance of this action a minimum amount of G6.5m will be reserved for it.

There will also be an element to allow for the re-orientation of fishing activities by permanent transfer of vessels to a third country, including in the framework of a joint enterprise or for permanently stopping fishing activities. Stringent conditions will apply to any such support.

Supporting, socio-economic, compensatory payments may be available to fishermen who have worked on a vessel which has been decommissioned or has permanently stopped fishing activities as provided for within the scope of this action.

These actions will ensure that the fleet capacity is maintained in balance with the resources available and that targets laid down in the MGP for the fleet are achieved. This will contribute to the protection of fish stocks and promote the sustainable exploitation of fish stocks.

Renewal and Modernisation

The actions envisaged involve fleet modernisation, fleet renewal (new and second-hand vessels) and support for young fishermen.

A priority over the course of the programme will be the modernisation and upgrading of the whitefish fleet. The scheme will target support at modernisations that promote safety, improved working conditions, improved fish handling and increased operational efficiency. There will be a continued strong emphasis on supporting the provision of essential safety equipment across the fleet, particularly for older vessels.

Provision will be made for incentives for the renewal of the whitefish fleet subject to a detailed economic assessment of the impact of the current Programme for the Renewal of the Whitefish Fleet, in terms, inter alia, of the achievement of the objectives of the programme, the performance of the vessels and the fishing opportunities available to the Irish fleet and MGP targets.

As part of the modernisation and development of the inshore fisheries sector, grant aid will be given in the context of sustainable fishing opportunities to support the renewal and modernisation of the inshore fleet (vessels up to and including 15 metres).

A new initiative will be introduced to encourage young fishermen to invest in the industry and operate safe, modern vessels. The new action will provide for the payment of a premium to fishermen under 35 years who can demonstrate that they have worked for at least five years as fishermen or can demonstrate equivalent vocational training to become vessel owners or part owners for the first time.

The actions will be targeted to encourage fishermen to operate more efficiently and profitably. Fleet development as outlined will result in enhanced safety on board and improved quality of product.

Complementary Measures

The actions envisaged include:

- ◆ support for the introduction of quality improvement programmes for certification, value added, traceability, handling, storage and presentation of fish products
- ◆ e-trade and information technology policies
- ◆ support for small-scale coastal fishing (vessels up to 12 metres), involving groups of vessel owners or a family of fishermen developing or modernising their fishing activities

- ◆ support for producer organisations or other bodies acting on behalf of producers to develop a more commercial approach to the organisation of the market for fishery products including improved knowledge, transparency and management of activities
- ◆ support for activities to improve the conservation, management and enhancement of fish stocks
- ◆ socio-economic actions to support fishermen to restructure, diversify and adjust their activities.

These actions are targeted to encourage fishermen to introduce new practices to optimise economic benefits. They also provide for incentives to restructure fishing operations and diversify into more sustainable practices.

Compliance with EU Policies

Public aid granted under the Sea Fisheries Development Priority will comply with the provisions of Council Regulation 2792/1999 laying down detailed rules and arrangements regarding Community structural assistance in the fisheries sector and in compliance with the Guidelines for the Examination of State Aid to Fisheries and Aquaculture (97/C 100/05). Measures for the renewal and modernisation of fishing vessels must comply with the Council's decision pursuant to Article 11 of Council Regulation 3760/92 and with MGPs for the fishing fleets. The schemes under the sub-programme will be notified to the European Commission.

3.5 Co-operation with Northern Ireland

Many problems experienced by indigenous firms are common to enterprises operating in both the north and the south. Indeed a regional policy strongly rooted in local enterprise development might achieve greater success through activities that include aspects of joint co-operation. The benefits of intangible entrepreneurial support such as network building and other forms of enterprise linkage can sometimes be more effective and rewarding than more direct intervention through grant schemes and other formalised programmes. Frequently, greater interaction between businesses can evolve into worthwhile new approaches to business opportunities and market development – all for the long-term benefit of both individual firms and strengthened regional employment and potential. Some of these are in a formative state with a view to developing and expanding those most appropriate to the business environment on both sides of the border.

3.5.1 Trade and Business Development Body

Arising from the Good Friday Agreement, the establishment of the Trade and Business Development Body offers a new opportunity for supporting the development of enterprise and trade on a north/south basis. Of course much existing co-operation is already taking place, and equally it is for enterprises themselves to take the lead in exploiting the full potential of the island economy. The establishment of the Body, along with the other north/south implementation bodies, offers a new opportunity and provides new tools with which to take co-operation and common action forward.

The Trade and Business Development Body's main task is to exchange information and co-ordinate work on supporting trade, business and related matters in a cross-border context. In regard to co-operation in third markets, provision has been made in the legislation establishing the Body to undertake such work when tasked jointly by the North/South Ministerial Council. The Body will build on and complement the work of the various State agencies north and south, which have been co-operating over the years in the interests of business development. It will also co-operate with and complement the excellent work done by other organisations such as the IBEC/CBI Joint Business Council and the Irish Congress of Trade Unions.

Funding of the Trade and Business Development Body is shared north and south on a one-third, two-thirds basis respectively. The total budget for the Body is expected to exceed G14m annually when fully operational.

3.5.2 Education

Considerable co-operation exists across all aspects of the education sectors north and south. The valuable linkages which have been developed provide the basis to establish more closely integrated coherent approaches in the future. Within the Operational Programme there is a commitment to the development of a strategic and planned approach by third-level institutions to the long-term development of their research capabilities. An important element of this strategic research effort is to facilitate and encourage co-operation in research between third-level institutions north and south. The aim will be to encourage collaborative endeavours in research in a north/south context including research into issues of relevance to north/south co-operation and the development of the whole island. The total cost of this initiative is expected to be G15.2m (G11.4m current and G3.8m capital) with an ERDF contribution of G2.3m.

3.5.3 Tourism

Given the real social and economic benefits of tourism, particularly in terms of employment creation, foreign earnings and regional development, there are clear

advantages to be derived from enhanced north/south co-operation in attracting visitors to the island of Ireland. It is intended that the experience gained through north/south public-private partnership initiatives, such as the Overseas Tourism Marketing Initiative, will be developed over the period 2000-2006 for the mutual benefit of all sectors of the industry in all parts of the island of Ireland.

Under the direction of the North/South Ministerial Council (NSMC) it has been agreed that a single company will be established to carry out overseas marketing and promotion activities for the respective tourist boards. Arrangements for the company are subject to agreement by the NSMC. An indicative amount of G53m is expected to be spent on this initiative.

3.5.4 Environment

It is intended that authorities north and south will work together to review and co-ordinate activities across a range of environmental areas. The following are the proposed areas for north/south co-operation on the environment:

- ◆ information on environmental research activities and on best practice and sources of information
- ◆ establishment of a database of environmental information
- ◆ current problems and issues in relation to environmental protection and mutually beneficial ways to address these
- ◆ identification of strategies and activities which would contribute to a coherent all-island approach to the achievement of sustainable development
- ◆ development of catchment-based strategies in relation to water quality
- ◆ environmental impact of agricultural activities and related issues
- ◆ the scope for improved waste management in a cross-border context taking account of waste policy in the EU, the UK and Ireland.

As part of the EPA environmental research programme within the Productive Sector Operational Programme, it is envisaged that some projects will be carried out on a cross-border basis and will address issues of common interest. At this stage, it is not possible to estimate the cost of such projects.

In addition, the development of a National Environmental Research Centre of Excellence will provide, within the EPA, a focal point for environmental research. The Centre will provide a basis for future appropriate environmental research initiatives on an all-island basis and stronger environmental support, in line with the CSF, across the National Development Plan. The NDP provides G6m for the development of the Centre.

4

Monitoring, Implementation and Evaluation

In accordance with the provisions of Council Regulation (EC) 1260/1999⁸, this chapter sets out the implementing provisions of the Operational Programme. The Managing Authorities and Paying Authorities and the principles governing their relationships with each other and the Member State are set out in National Development Plan and the Community Support Framework for Ireland 2000-2006.

4.1 Management and Monitoring Arrangements

Management of the Operational Programme will be the responsibility of the Managing Authority under the control of the Operational Programme Monitoring Committee. The Managing Authority shall be responsible for the efficiency and correctness of management and implementation of the programme. The Operational Programme will be supervised by a Monitoring Committee. The Monitoring Committee will monitor all expenditure (both EU co-financed and non-co-financed expenditure) under the Operational Programme.

4.1.1 Managing Authority

The Managing Authority for the Operational Programme will be the Department of Enterprise, Trade and Employment.

⁸ Hereafter referred to as 'the regulation', unless otherwise stated

Co-financed Expenditure

The responsibilities of the Managing Authority with regard to the management and monitoring of the EU co-funded element of Operational Programme are defined under the relevant articles of the regulation. These include:

- a** chairing and providing the secretariat for the Monitoring Committee (Article 35.2)
- b** assembling statistical and financial information required for monitoring the Operational Programme. The relevant information will be supplied to the Monitoring Committee, and, in a computerised format to be determined by the Department of Finance in agreement with the European Commission, to the NDP/CSF Managing Authority (Department of Finance) and to the European Commission (Article 34.1)
- c** drawing up the annual implementation report for approval by the Monitoring Committee and submission to the Commission (Article 34.1)
- d** after submission to the European Commission of the annual report, reviewing with the Commission and the Department of Finance the main outcomes of the previous year and preparing with the agreement of the Department of Finance the Member State's response to any recommendation from the Commission (Article 34.2)
- e** organising in co-operation with the Commission, the Department of Finance and the CSF Evaluation Unit, the Mid-term Evaluation of the Programme (Article 42)
- f** submitting payment claims to the Paying Authorities for the Structural Funds in compliance with any instructions which these authorities may issue. In the case of the FIGG, the implementing bodies will submit FIGG expenditure returns directly to the Paying Authority
- g** ensuring the correctness of operations financed under the assistance. This involves ensuring that the implementing bodies and final beneficiaries properly account for and manage EU-funded expenditure and that these bodies maintain a separate accounting system or an adequate accounting code for such expenditure. In the case of the FIGG, this will be the responsibility of the Paying Authority. The Managing Authority will monitor progress with regard to expenditure and drawdown
- h** ensuring compliance with EU policies, particularly regarding competition policy, public procurement, publicity, the environment and equality (Article 34.1)
- i** ensuring the preparation and implementation of an OP Communications Action Plan for Information and Publicity (Articles 34.1 and 46)
- j** preparing the Programme Complement for approval by the Monitoring Committee any subsequent adjustments to the complement (Article 34.3).

Non-co-financed Expenditure

The Department of Enterprise, Trade and Employment will also carry out the responsibilities and functions above for non-co-financed expenditure under the OP, except for those at d, f and g, which will apply exclusively to EU co-financed expenditure. For monitoring purposes the Managing Authority will be required to produce information on expenditure which will include EU co-financed and non-co-financed expenditure in a standard format as determined by the Department of Finance.

4.1.2 Monitoring Committee – Membership

The Monitoring Committee will be established by the Managing Authority no later than three months after the Commission decisions on the contribution of the Funds (Article 35.1). Membership of the Operational Programme Monitoring Committee will comprise representatives from:

- ◆ the Managing Authority
- ◆ the Department of Finance
- ◆ Government Departments involved in implementation of Operational Programme measures
- ◆ the Special EU Programmes Body
- ◆ Regional Assemblies
- ◆ Regional Authorities
- ◆ each of the four Social Partners Pillars
- ◆ appropriate statutory bodies to represent each interest: equal opportunity, environment, poverty and rural development
- ◆ the Commission's representation (headed by the representative of the lead Directorate General for the assistance in question), the Central Evaluation Unit, Equality Unit and the National Development Plan and Structural Funds Information Officer will serve on the Monitoring Committee in an advisory capacity.

In general, membership will be confined to representatives for each of the above interests. Where feasible and appropriate, membership of the OP Monitoring Committee will additionally contain representatives of implementing agencies and sectoral interests. Gender balance will be promoted on the Monitoring Committee. The Managing Authority will provide the chairperson for the Monitoring Committee.

4.1.3 Monitoring Committee – Responsibilities

Co-financed Expenditure

Under Article 35 of the regulation, the Monitoring Committee shall satisfy itself as to the effectiveness and quality of the implementation of EU co-financed expenditure. This will include, as appropriate:

- ◆ approval of the Programme Complement, including the physical and financial indicators and project selection criteria, and any adjustments to it
- ◆ periodically reviewing progress towards achieving the specific objectives of the Structural Funds Assistance
- ◆ examining the results of implementation, particularly achievement of the targets set for the different measures and the Mid-term Evaluation
- ◆ approval of the annual report and final implementation report before their submission to the Commission
- ◆ considering and approving any proposal to amend the content of the Commission decision on the contribution of the Funds
- ◆ proposing to the Managing Authority any adjustments or review of the Structural Funds Assistance or improvements in the management of the Assistance
- ◆ approval of amendments arising from a proposal to the Managing Authority on its own initiative.

The OP Monitoring Committee will decide the reallocation of co-funded expenditure between measures within their OP while the NDP/CSF Monitoring Committee will make such decisions across OPs. Where the Monitoring Committee makes a decision to reallocate Structural Funds from one measure to another, the corresponding matching national expenditure will, in principle, also be reallocated. Any amendment to the contribution of the Funds and transfers among priorities within the OP will be decided by the European Commission, in agreement with the Member State (i.e. the Department of Finance) within four months of the Monitoring Committee's approval (Article 34.3).

Non-co-financed Expenditure

The Operational Programme contains a substantial element of non-co-financed (mainly Exchequer) expenditure and measures. Reports on all such expenditure and measures will be integrated into the annual reports submitted to the Monitoring Committee and the NDP/CSF Monitoring Committee. It will be open to the Monitoring Committee to consider the progress and impact of such expenditure

and to make recommendations in this regard to the Managing Authority, the relevant implementing Department and the Department of Finance.

Rules and Procedures of Monitoring Committee

Subject to compliance with the principles set out in the foregoing paragraph, the Monitoring Committee will be responsible for drawing up its own rules of procedure and agreeing them with the Managing Authority.

4.1.4 Annual Implementation Report

In accordance with Article 37, the Managing Authority will submit to the Commission, within six months of the end of each full calendar year of implementation, an annual implementation report. The report must be examined and approved by the Monitoring Committee before it is sent to the Commission. Once the Commission has received the report, it shall indicate within a period of two months if the report is considered unsatisfactory, giving its reasons; otherwise, the report shall be deemed to be accepted.

The annual report shall include the following information:

- ◆ any change in general conditions which is of relevance to the implementation of the programme, in particular the main socio-economic trends, changes in national, regional or sectoral policies or in the frame of reference (i.e. the document which sets the context for assistance concerning employment and human resources development throughout Ireland, and which identifies the relationship with the priorities set out in the National Action Plan for Employment), and, where applicable, their implications for the mutual consistency of assistance from the different Funds and consistency between Fund assistance and that from other financial instruments
- ◆ the progress in implementation of priorities and measures for each of the Funds in relation to their specific targets, with a quantification, wherever and whenever they lend themselves to quantification, of the physical indicators and indicators of results and of impact referred to in Article 36 at the appropriate level (priority or measure)
- ◆ the financial implementation of the programme, summarising for each measure the total expenditure actually paid out by the Paying Authority and a record of the total payments received from the Commission and quantifying the financial indicators referred to in Article 36.2.c
- ◆ the steps taken by the Managing Authority and the Monitoring Committee to ensure the quality and effectiveness of implementation, in particular:
 - monitoring, financial control and evaluation measures, including data collection arrangements

- a summary of any significant problems encountered in managing the programme and any measures taken, including action on recommendations for adjustments made following the review between the Commission and the Member State or requests for corrective measures
- the use made of Technical Assistance
- the measures taken to ensure publicity for the programme
- the steps taken to ensure compatibility with Community policies and to ensure co-ordination of all the Community Structural Assistance, having regard to the frame of reference and rural development and fishery structures
- a separate section, where appropriate, on the progress and financing of major projects and global grants.

Non-co-financed expenditure

In keeping with the integrated approach to monitoring and evaluation as provided for in Section 5.3 of the CSF, similar information in regard to financial and physical progress will be included in the annual report in respect of non-co-financed expenditure. The report will distinguish clearly between co-financed and non-co-financed expenditure.

4.1.5 Annual Implementation Review

In accordance with Article 34.2 of the regulation, every year, when the annual implementation report is submitted, the Commission shall review the main outcomes of the previous year with the Managing Authority and the Department of Finance.

After this review, the Commission may make comments to the Managing Authority and the Department of Finance. The Managing Authority, with the agreement of the Department of Finance, shall inform the Commission of the action taken on these comments. Where in duly substantiated cases the Commission considers that the measures taken are inadequate, it may make recommendations to the Managing Authority for adjustments aimed at improving the effectiveness of the monitoring or management arrangements for the programme, together with the reasons for any such recommendations. If it receives any such recommendations, the Managing Authority, with the agreement of the Department of Finance, shall subsequently demonstrate the steps taken to improve the monitoring or management arrangements or it shall explain why such steps have not been taken.

According to Article 32.3, the degree to which the national authorities have acted upon the Commission's recommendations within the specified time period (or have communicated the reasons why no measures have been taken), where those recommendations are intended to remedy serious shortcomings in the monitoring

or management systems which undermine proper financial management of the programme, is one of the conditions subject to which interim payments shall be made by the Commission.

4.2 Implementation

The implementation of measures and sub-measures in the Operational Programme will be carried out by implementing bodies set out in the Programme Complement.

4.2.1 Programme Complement

The Programme Complement (Article 18.3) will set out for each measure:

- ◆ details of the measures under the Operational Programme Priorities
- ◆ main objectives of the measure
- ◆ ex-ante evaluation of the measures in accordance with Article 41.3, quantified where they lend themselves to quantification and indicators
- ◆ designation, as appropriate, of implementing body, Managing Authority and Paying Authority
- ◆ nature of the aid available, e.g. grant, loan, training course, stating maximum aid rates or amounts as appropriate
- ◆ operation of scheme, e.g. does it operate in tranches, cycles of particular duration, annual allocations
- ◆ project selection criteria (Article 35.3)
- ◆ composition of Project Selection Boards where they exist
- ◆ the types of final beneficiary
- ◆ an indicative financial plan which will include EU co-financed and non-co-financed expenditure in a standard format as determined by the Department of Finance
- ◆ details of the budgetary provision and arrangements for expenditure whether co-financed or non-co-financed including a description of the financial flows
- ◆ the information and publicity arrangements
- ◆ arrangements between the Commission and the Member State for the computerised exchange of data
- ◆ an indication of the scope for north/south co-operation.

The implementing bodies will be required to ensure effective implementation of their measures and their full compliance with the Structural Funds Regulation, particularly those concerning financial management control (defined in more detail below), publicity and public procurement.

4.3 Financial Management and Control Arrangements

Without prejudice to the Commission's responsibility for implementing the general budget of the European Communities, Ireland shall take responsibility in the first instance for the financial control of assistance. Financial management and control will involve a series of interlocking certification and verification operations across different tiers of management. The specific roles and responsibilities of these different tiers are outlined in the paragraphs below. Management and financial provisions may require adjustment in order to comply with any future rules enacted under Article 53.2 of the regulation.

Where the designated Managing Authority and Paying Authority is the same body, complete separation of the two functions will be ensured.

4.3.1 Role of Paying Authorities

The Paying Authorities for this OP are the Department of Finance and the Department of the Marine and Natural Resources. The functions and responsibilities of the Paying Authority relate only to Structural Funds co-financed expenditure. The Paying Authority will be responsible for:

- ◆ submitting not later than 30 April of each year expenditure forecasts to the Commission for the current and following year (Article 32.7)
- ◆ managing the payment on account of Funds
- ◆ drawing up and submitting certified payment applications to the Commission on the basis of expenditure actually incurred by the final beneficiaries
- ◆ making sure that the final beneficiary receives the EU contribution as quickly as possible (Article 32.3) and final balance (Article 32.4)
- ◆ recovering of sums due to the Funds and for the application of financial corrections where they arise as a result of the discovery of administrative errors, or from events arising from the management of the programmes or from the establishment of irregularities under Article 39.

The Paying Authority will, on behalf of the Member State, be responsible for ensuring that the Managing Authority exercises its responsibilities in relation to the

implementing bodies for ensuring that payments are legal and regular, and for preventing and detecting irregularities. It will certify that expenditure declarations are accurate and resulting from accounting systems based on verifiable supporting documentation (Article 38.1 a, c, d and e). The Paying Authority will require the Managing Authority to provide adequate assurance that Community rules are being complied with before claims are certified and submitted to the Commission. In the case of FIFG funds, the Paying Authority will provide adequate assurance that Community rules are being complied with before claims are certified and submitted to the Commission.

4.3.2 Role of Managing Authority

The Managing Authority will have primary responsibility for the correctness of management and implementation of those operations under the Operational Programme financed by Structural Funds (Article 34.1). It is responsible for gathering reliable information, ensuring proper accounts are kept, that the operations are correct and that Community rules are complied with.

The Managing Authority will establish internal controls to ensure sound financial management of EU co-financed expenditure. The tasks of financial management and general management of the Operational Programme will be carried out by separate sections/units within the Managing Authority. It will ensure that the implementing bodies and final beneficiaries are fully informed of their responsibilities in relation to financial management of EU co-financed expenditure. It will ensure compliance with Community rules in relation to public procurement. The Managing Authority will, subject to any guidance which may issue from the Paying Authority, undertake appropriate spot checks of source documentation supporting payment claims before authorising each expenditure claim and forwarding it to the Paying Authority. This will not apply in the case of FIFG funds, where expenditure returns are submitted directly to the Paying Authority.

4.3.3 Role of Implementing Bodies

The implementing bodies for each measure will be specified in the Programme Complement. The Managing Authority may delegate part of its functions in relation to management of EU co-financed expenditure to implementing bodies providing it is assured that sound financial management systems are in place. In that event, the delegated function and normal functions of the implementing body will be carried out by separate sections/units within the implementing body. The implementing bodies will be responsible for submitting eligible expenditure in the format (both electronic and hard copy) required by the Paying Authority to the Managing Authority in order for payment claims to be prepared for submission to the Paying Authority. In respect of ERDF funds, the implementing Departments/Agencies will, for the purpose of drawing down EU funds, report expenditure

through the Managing Authority, while FIFG expenditure will be reported directly to the Paying Authority.

The implementing Departments/Agencies will be responsible for ensuring that all payment claims for Structural Fund expenditure submitted by the final beneficiary are supported with receipted invoices, audit documents and that a clear audit trail exists. They will also be responsible to ensure that only eligible expenditure actually incurred, in respect of co-financed measures/projects, is submitted to the Managing Authority. The implementing body is responsible for certification of all expenditure incurred by final beneficiaries. It will be the responsibility of the Managing Authority or implementing body which may be delegated this function on its behalf to ensure that control checks are carried out on at least 5% of expenditure transactions (Article 3.1(b) and 3.2 of Commission Regulation 2064/97). These controls will be carried out by units that are independent of the management function.

4.3.4 Independent Audits

The system-based audits of EU co-financed expenditure required under Article 3.1(a) of Commission Regulation 2064/97 will be performed by Internal Audit Units at each level in the cascade of bodies – implementing Departments/Agencies, Managing Authority and Paying Authority – which will be independent of the sections/units within those bodies responsible for the management and payment of the Structural Funds Assistance. Financial Control Units will be established for each Structural Fund. The Control Unit will be responsible for random audit checks of Fund-related expenditure. These Control Units may also examine financial management, control and system procedures within Departments, Implementing Agencies and final beneficiaries.

Figures 1 and 2 outline the certification and verification procedures to be put in place and specify where responsibility lies.

When the Structural Funds Assistance is wound up, the Head of the appropriate Internal Audit Unit of the relevant Paying Authority will be responsible for presenting to the Commission a declaration summarising the conclusions of the checks carried out during previous years and shall assess the validity of the application for payment of the final balance and the legality and regularity of the transactions covered by the final certificate of expenditure (Article 38.1(f) of the regulation).

Figure 1 – Flowchart on ERDF Financial Management and Control Arrangements

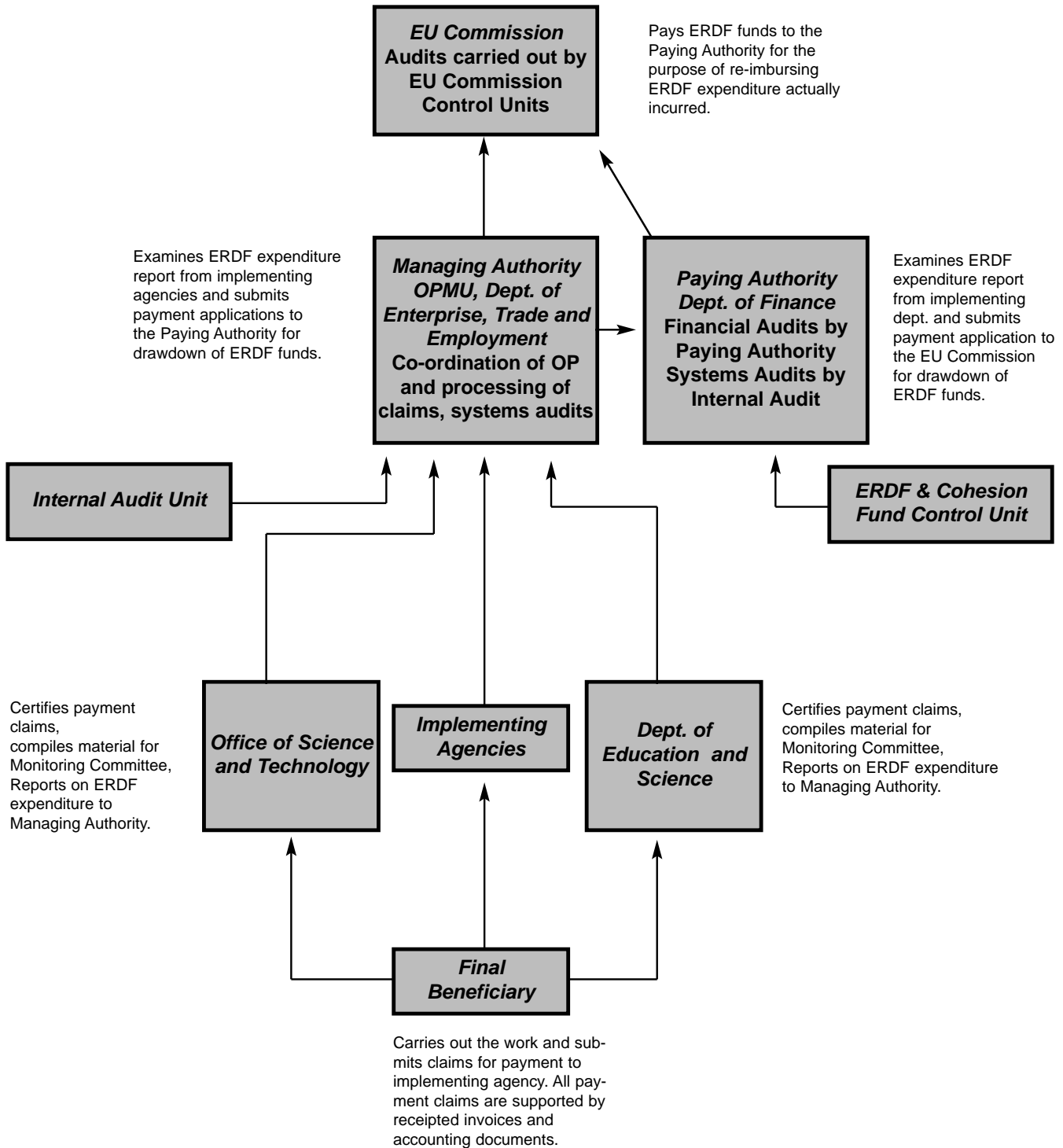
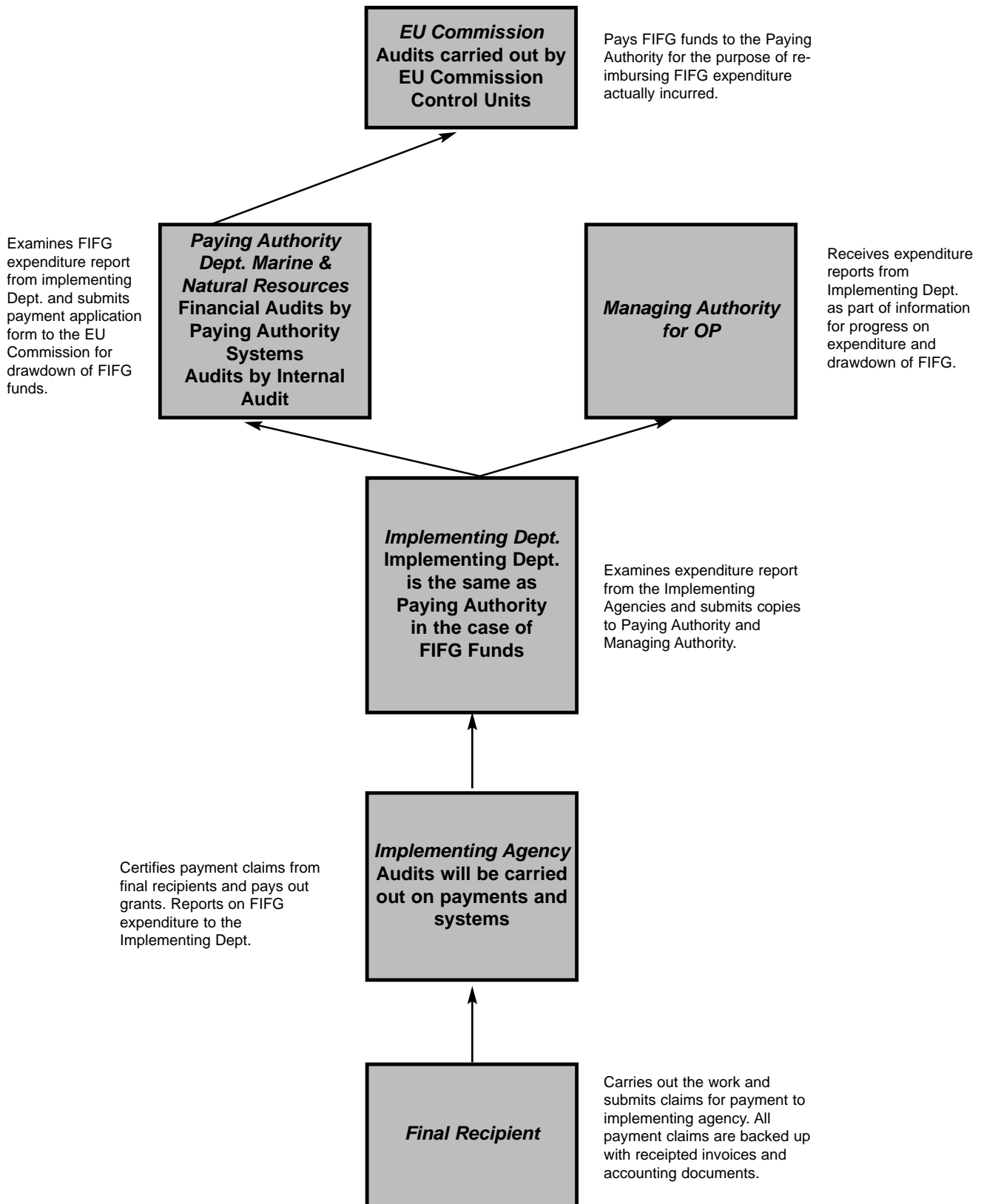


Figure 2 – Flowchart on Financial Management and Control Arrangements for Drawdown of FIFG Funds



4.3.5 Eligibility of Co-financed Expenditure

In accordance with Article 30, expenditure in co-financed measures is eligible for Community support only where these operations or measures form part of the approved programme. The starting date for the eligibility of expenditure for the Operational Programme is 19 May 2000. Expenditure incurred before then is not eligible for support under this Operational Programme.

The Community assistance concerns expenditure on operations under this programme which are the subject of legally binding commitments and for which the requisite finance has been specifically allocated no later than 31 December 2006.

Common rules on the eligibility of specific forms of expenditure are set out in Commission Regulation 1685/2000, which lays down detailed rules for the implementation of the regulation as regards eligibility of expenditure of operations co-financed by the Structural Funds.

4.3.6 Final Beneficiaries

The final beneficiaries will be responsible to ensure that only actual eligible expenditure incurred, and expenditure which comes under the terms of the project as approved by the implementing body, is submitted. They will be required to ensure that a clear audit trail exists in relation to EU funds and that all claims are supported by receipted invoices or where this cannot be done by accounting documents of equivalent probative value.

4.3.7 Irregularity Reporting

Notwithstanding the provisions of 4.3.1 above, the Department of Finance will be responsible for reporting to the Commission the irregularities notified to it by the Paying Authorities under Article 38.1(e).

4.3.8 Use of euro

The euro must be used for all grant letters of offer, project approvals, and payment claims in respect of EU co-financed expenditure (Article 33). All financial reports in respect of both EU co-financed and non-co-financed expenditure must be in euros. Paying Authorities may issue Structural Funds payments received in IR£ during the period to 1 January 2002. Equally, payments issued by the Managing Authority and implementation bodies up to that date may also be in IR£.

4.4 Electronic Data Transfer

Article 18 of the Council regulation requires that Operational Programmes contain a description of the arrangements agreed between the Commission and the Member State for the computerised exchange, where possible, of data required to fulfil the management, monitoring and evaluation requirements in respect of Structural Funds Assistance. A computerised system is being developed in the Department of Finance for this purpose. The system will be used to monitor all NDP expenditure and associated indicators. Information will be collected and codified at project level for ERDF, the Cohesion Fund, Community Initiatives and other non-EU, co-funded capital projects and at measure level for other Structural Funds. With respect to codification, the Managing Authorities will furnish with the Programme Complement the link between each measure and the corresponding category(ies) in the Commission's list of fields of interventions. Data will be inputted by the implementing bodies and mechanisms are being developed to support data transmission from implementing bodies.

The NDP/Structural Funds Computer System is designed to support programming, financial and physical monitoring and the making and monitoring of payments. It is based on a client/server application giving Government Departments and the Regional Assemblies access to a central database. All required financial and physical progress information, appropriately codified, including annual reports to enable the Commission to fulfil its responsibilities under the Structural Funds Regulations, will be relayed electronically to the Commission by the Managing and Paying Authorities, as appropriate. The frequency of electronic transmission will conform to the management requirements as agreed between the Commission and the Managing Authority and the Department of Finance.

4.5 Compliance with State Aid Rules

In accordance with Articles 9(m) and 18.2(b) of the regulation, the Operational Programme contains a summary description of the measures planned to implement the priorities, including the information needed to check compliance with State aid pursuant to Article 87 of the Treaty (see Annex A).

The Managing Authority will ensure that operations financed by the Funds or receiving assistance from the European Investment Bank or from another financial instrument shall be in conformity with the provisions of the Treaty, with instruments adopted under it and with Community policies and actions in the field of competition.

4.6 Evaluation

In order to gauge its effectiveness, Community structural assistance shall be the subject of evaluation, designed to appraise its impact with respect to the objectives set out in Article 1 of the regulation and to analyse its effects on specific structural problems. Arrangement for ongoing, mid-term and ex-post evaluations are set out in detail in the Community Support Framework. The NDP and the CSF will be subject to the same evaluation arrangements.

4.6.1 Mid-term Evaluation

The Mid-term Evaluation of the Operational Programme will be carried out in partnership between the Commission, the Member State and the Managing Authorities, as required under Article 42 of the regulation. External evaluators will be commissioned by the Managing Authority to carry out the evaluation. The arrangements for the Mid-term Evaluation of the Operational Programme will be co-ordinated through the Technical Assistance Monitoring Committee comprising the Managing Authorities and representatives of the Commission. The evaluation will be organised by the Managing Authority. The Managing Authority will set up a small Steering Committee comprising the Managing Authority, the Commission, the Department of Finance, the Central Evaluation Unit and the implementing Departments and a technical expert, as appropriate, to oversee the evaluation. In particular it will ensure close co-ordination with the work undertaken in the framework of the ongoing evaluation. The results of Mid-term Evaluation should be made available by 31 December 2003 in order to inform decisions on any adjustment to be made to the NDP/CSF and the OPs. These results will be updated by 31 December 2005.

4.6.2 Ongoing Evaluation

All ongoing evaluations will be carried out or commissioned by a Central Evaluation Unit under the general control of the Technical Assistance Monitoring Committee. The Central Evaluation Unit will also be available to offer technical advice and will provide an ongoing evaluation input to the work of the Managing Authorities and Monitoring Committees in relation to the development of performance indicators and evaluation generally (including interpretation of data and of follow-up surveys undertaken in the monitoring process at OP level).

The Equality Unit in the Department of Justice, Equality and Law Reform will advise on the development of equality indicators at Operational Programme and measure level and will offer advice in relation to the promotion of gender mainstreaming.

The Department of the Environment and Local Government will participate, as appropriate, in the development of environmental indicators at Operational Programme/measure level and the promotion of environmental integration, while recognising the primary responsibility of Departments and Agencies to achieve environmental integration within their respective sectors.

4.6.3 Ex-post Evaluation

Ex-post evaluation will be the responsibility of the Commission in partnership with the Member State and the Managing Authority. The ex-post evaluation will be organised under the general arrangements for the co-ordination of evaluations.

4.6.4 Implementing Recommendations of Evaluation

The Managing Authority will consult with the relevant implementing bodies covered by the evaluation recommendations relevant to the Operational Programme as to how they propose to address the recommendations. The Managing Authority will then submit a response paper to the Monitoring Committee for approval, addressing all the recommendations. The Monitoring Committee will exercise its discretion whether to implement the response as proposed or to vary the response. Where evaluations of horizontal themes have been commissioned and the recommendations address horizontal issues, the Managing Authority for each Operational Programme will follow the above procedure in respect of those recommendations of relevance to their programme.

The Managing Authority will report to each Monitoring Committee meeting the progress achieved in implementing decisions of the Monitoring Committee on evaluation recommendations where the Monitoring Committee has determined that a specific course of action is necessary. This report will be regularly updated for each evaluation report recommendation until such time as the Committee's decision is fully implemented or unless the Monitoring Committee otherwise decides.

4.7 Information and Publicity

The contribution of Structural Funds and the NDP to EU co-financed and non-co-financed expenditure will be acknowledged as appropriate. It will be the responsibility of each Managing Authority to ensure that the information and publicity requirements of Commission Regulation (EC) No. 1159/2000 are met. The Programme Complement for each of the Operational Programmes will comprise a set of Measure Sheets. Each Measure Sheet will make specific provision for publicising the EU's contribution to EU co-financed measures in accordance with the

communications action plan provided for in Regulation 1159/2000 (point 3.1.1 of the Annex). The EU and NDP logos will be displayed along with the implementing body's logo in all publicity material, application forms, letters of offer or grant approval, as well as on signs for projects as required under the Commission Regulation on Information and Publicity. The Managing Authority will be assisted by the National Development Plan and Structural Funds Information Officer in developing and implementing their information and publicity strategy for the Structural Funds and the NDP.

4.8 Performance Reserve

Under Articles 7(5) and 44 of the regulation, 4% of commitment appropriations must be retained for allocation to operational programmes and priorities which are considered successful following the Mid-term Review. The performance reserves for Ireland's Objective 1 Region and Objective 1 in Transition Region are G55m and G79m in current prices respectively. The indicative financial plan in the CSF for Ireland does not include a provisional allocation of the performance reserve appropriations.

These commitment appropriations will be allocated by the Commission not later than 31 March 2004 on the basis of agreed criteria and in close consultation with the Irish authorities. In this regard, the Irish authorities will establish a set of performance indicators to provide the basis for the allocation of the performance reserve. These will be drawn up at Operational Programme and Programme Complement levels, as appropriate, and will reflect the Commission's indicative list of performance indicators (see Annex B). The Irish authorities will provide the Commission with its proposals for the allocation of the reserve by the end of 2000 at the latest.

In considering the question of the allocation of the performance reserve, Operational Programmes will be assessed for (i) their effectiveness, (ii) operational efficiency and (iii) their rate of absorption of Structural Funds. The annual monitoring process leading into the Mid-term Review at the end of 2003 will also monitor progress in this regard. The assessment of Operational Programmes for effectiveness will address value for money and programme achievements having regard to inputs, objectives and targets. Operational efficiency will address whether the implementation system is operating well against predetermined benchmarks while the third criterion will address drawdown of Funds against Programme commitments.

ANNEX A: PRODUCTIVE SECTOR OP – POSITION ON STATE AID

The State aid granted under all measures will be 1) either compatible with the de minimis rule or 2) it will be applied under an exemption Regulation in accordance with Council Regulation No. 994/98 of 07.05.1998 (OJ EC L 142 of 14.05.1998) or 3) it will operate in conjunction with the notified and approved State aid schemes as set out below. There may be a need to submit ad hoc State aid notifications for specific projects as the programme is implemented – it is too soon to identify the measures under which such ad hoc notifications might fall.

| Measure Number | Title of Scheme | State Aid Number | Approval Letter Reference | Duration of Scheme |
|--|--|--|---------------------------------|--------------------|
| Schemes listed in this row are used in respect of measures 3.1.1, 3.1.2, 3.1.5, 3.2.4, 3.3.1 | Capital grants | E6/2000 | D/55094 of 9/10/2000 | 2000-2006 |
| | Employment grants | E7/2000 | D/55094 of 9/10/2000 | 2000-2006 |
| | Equity Participation | E9/2000 | D/55094 of 9/10/2000 | 2000-2006 |
| | Seed and Venture Capital Fund | N172/2000 | SG (2000) D/430190 of 4/10/2000 | 2000-2006 |
| | Training grants | N109/2000 | SG(2000) D/103184 of 17/04/2000 | 2000-2006 |
| | R&D Capability | - | SG (88) D/14386 of 8/12/1988 | 2000-2006 |
| | Consultancy Services to SMEs | N447/2000 | SG(2000)D/106864 of 19/9/2000 | 2000-2006 |
| | Trade Fair Participation by SMEs | N479/2000 | SG(2000)D/106873 of 19/9/2000 | 2000-2006 |
| | Land and Buildings | Not State aid | - | 2000-2006 |
| | 3.1.3 | Investment Aid for the Marketing and Processing of Agricultural Products | N361/2000 | Awaited |
| 3.1.4 | Quality and Value Enhancement | N526/2000 | Awaited | 2000-2006 |
| Seafood Processing | Scale and Competitiveness (Actions to comply with provisions of council regulation 2792/1999 and guidelines for the examination of State aid to fisheries and aquaculture (97/C 100/05)) | | | |

| Measure Number | Title of Scheme | State Aid Number | Approval Letter Reference | Duration of Scheme |
|-----------------------------|--|--|--|--|
| 3.1.6 Irish Film Sector | Extension of scheme of aid to film and TV productions -- Irish Film Board Development and Production Loans – Section 481 Tax-based Film Investment Incentive | N217/2000 | SG(2000)D/430125 | 2005 |
| 3.2.1 RTDI and Education | Building of Infrastructure: (basic support of research and electronic communications) does not fall within the scope of State aid rules (vade mecum: community rules on State aid, sec. 5) Public financing of R&D activities by public non-profit-making higher education institutions: community framework for State Aid for R&D (OJ C 45, 17.2.1996, p. 5) | Not State aid Not State aid | | 2000-2006 2000-2006 |
| 3.2.2 RTDI and Industry | Competitive RTDI Innovation Management Capability RTDI Collaboration Networks (National) RTDI Collaboration Networks (International) RTDI Infrastructure – Research Capability and Training RTDI Infrastructure – Technology Foresight | Awaited [N636/2000] N109/2000 Awaited [N636/2000] Not State aid Not State aid Not State aid | Awaited ^o SG(2000)D/103184 Awaited ^o ^o EU Approval letter 16/01/2001 SG(2001)D/285100 | 2000-2006 2000-2006 2000-2006 2000-2006 2000-2006 2000-2006 |
| 3.2.3 Agriculture RTDI | Teagasc Research* Community Guidelines for Agriculture 2000/C 28/02 Research Stimulus Fund* | Not State aid Not State aid | | 2000-2006 2000-2006 |

*OJ C 28, 1.2.2000, p. 19 aid for research and development is subject to the Community Framework for State Aids for research and development (OJ C 45, 17.2.1996, p.5 as subsequently amended in relation to agriculture, OJ C 48, 13.2.1998, p. 2). The Framework states that 'public financing of R&D activities by public non-profit-making higher education or research establishments is normally not covered by Article 92 (1) of the EC Treaty'. Consequently, aid for research activities covered by Teagasc or public research institutes would not come within the terms of a notifiable State aid.

| Measure Number | Title of Scheme | State Aid Number | Approval Letter Reference | Duration of Scheme |
|-----------------------------|---|------------------------------------|---------------------------|----------------------------|
| 3.2.4 Food Industry RTDI | Public Good Research Aid for Research and Development is subject to the Community Framework for State Aid for R&D (OJ C45, 17.2.1996, p. 5). The aid measure proposed does not constitute State Aid. Public Good Research, results of which will be made freely available In-company Research Technology Transfer Will be catered for in the competitive RTDI measure mentioned at 3.2.2 | Not State aid | | 2000-2006 |
| 3.2.5 Marine RTDI | Building of infrastructure: enhanced research vessel capacity, upgrading marine laboratories (Vademecum: community rules on State aid, article 5) Marine RTDI Fund: aid for research and development community framework for State aid for R&D (OJ C45,17.2.1996, p. 5) public financing of R&D activities by public non-profit higher education or research establishment or R&D commissioned from firms by public authorities according to market conditions (open to tender procedures) | Not State aid Not State aid | | 2000-2006 2000-2006 |
| 3.2.6 Forestry RTDI | Develop Research and Development Programmes for the Forestry Sector: Community Framework of State Aid for R&D (OJ C45,17.2.1996, p. 5) Public Financing for R&D activities by public non-profit higher education or research establishments, or R&D commissioned from public authorities according to market conditions (open to tender procedure) | Not State aid | | 2000-2006 |

| Measure Number | Title of Scheme | State Aid Number | Approval Letter Reference | Duration of Scheme |
|--------------------------------------|---|--|---------------------------|----------------------------|
| 3.2.7 RTDI Environment | Environment Sustainable Resource Management** Sustainable Development** Cleaner Production** National Environmental Research Centre of Excellence** | Not State aid | | 2000-2006 |
| 3.3.2 Food Industry Marketing | Company grants non annex 1 products Company grants annex 1 products Activities undertaken by Bord Bia (Irish Food Board) | Application of de minimis rule N363/2000 N362/2000 | Not yet approved | 2000-2006 2000-2006 |
| 3.3.3 Seafood Sector Marketing | Measure will focus on increasing the penetration of Irish Seafood on export markets and on increasing the consumption of seafood on the home market | N527/2000 | Awaited | 2000-2006 |
| 3.3.4 Tourism Marketing | Destination and niche tourism marketing activities financed under the Tourism Marketing Fund which are general in nature and do not exclusively favour particular commercial undertakings are not deemed to constitute State aid within the meaning of Art. 87 of the EC Treaty | Not State aid | | 2000-2006 |

** The Environmental R&D projects do not constitute State aid as they fall within the meaning of Article 5.2 of the Community framework for State aid for research and development. Projects will be independently carried out mainly by academic institutions and will not be linked to any particular industrial enterprise. The results of the projects will be disseminated widely and be available via the EPA website for interested parties both in Ireland and elsewhere. Projects will be awarded after public advertising for 'Calls for Proposals' and consideration of these proposals by an assessment committee.

| Measure Number | Title of Scheme | State Aid Number | Approval Letter Reference | Duration of Scheme |
|-------------------------------------|---|------------------|---------------------------|--------------------|
| 3.4 Sea Fisheries Development | Adjustment of the Fishing Effort This sub-measure aims to provide for a vessel decommissioning scheme whereby fishing vessels may be permanently withdrawn from the Irish Fishing Fleet and removed from the Register of Sea Fishing Vessels | N525/2000 | Awaited | 2000-2006 |
| | Renewal and Modernisation of the Fishing Fleet Schemes planned under this sub-measure will target support at projects that support safety, improved working conditions, improved fish handling and increased operational efficiency | N528/2000 | Awaited | 2000-2006 |
| | Supporting Measures for Sea Fisheries Development Schemes under this sub-measure will support and develop the sea fisheries sector in the areas of quality, markets, and restructuring into sustainable activities | N529/2000 | Awaited | 2000-2006 |

Note:

In conformity with its duties under Article 34(1)(g) of Council Regulation No. 1260/1999, the Management Authority will keep the above State aid table up-to-date and will inform the Commission of any modification of the table.

The introduction of a new aid scheme or ad hoc aid requires a modification of the assistance by a formal Commission decision.

Article 4 of the Commission decision regarding this programme (suspensive clause concerning State aid) applies to measures containing aid schemes that are subject to appropriate measures or have not been approved. At present this applies to measures: 3.1.3, 3.1.4, 3.2.2, 3.2.4, 3.3.2, 3.3.3 and 3.4.

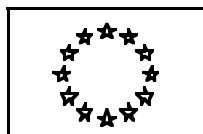
As concerns these schemes the suspensive clause will be lifted when the DG for Competition formally signals its agreements to the Irish authorities that the scheme(s) in question fulfil the requirements of the State aid rules.

Annex B: Indicative List of Indicators for Performance Reserve*Productive Sector Operational programme*

| Criteria | Indicators | Quantification |
|--|---|---|
| 1. Effectiveness | | |
| (measure level) | selection of a set of measures (covering at least 50% of structural funds) for all priorities | design of physical indicators for all measures selected 2003 2006 |
| 2. Management (common to all OPs) | | |
| Quality of monitoring system | measures covered by financial and physical data (% of total cost) | financial data (3 months after OP approval): 100% physical data from 01.01.2001: 100% |
| Quality of financial control | set up of control systems, as defined in CSF and OPs % of SF expenditure covered by financial audits | before end 2000 ≥ 5% from end 2000 (in relation to total cost of approved projects in the year) |
| Quality of selection criteria | % of commitments relative to selected projects according to clearly defined priorities and selection criteria | 100% from 2000 |
| Quality of evaluation system | evaluation reports of acceptable quality (according to predefined quality standards) | 100% (Means criteria) |
| 3. Financial execution | | |
| Financial absorption (common to all OPs) | % of SF expenditure declared admissible (in relation to OP financial plan) | attainment of 100% of declared expenditure in relation to planned expenditure in the financial plan for 2000, 2001 50% (on average) for 2002, 2003 |
| Leverage effect (specific) | amount of investments induced in relation to public funds mobilised | to be specified according to OP-relevant measures |

Appendix I

Commission Decision of 7 December 2000 approving Productive Sector OP



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 07-12-2000

COM(2000) 3445

CC1 2000 IE 16 1 PO 002

COMMISSION DECISION

of 07-12-2000

approving the operational programme for the Productive Sector forming part of the Community Support Framework for Community structural assistance in the Border, Midland and Western Region under Objective 1 and the Southern and Eastern region qualifying for transitional support under Objective 1 in Ireland

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Council Regulation (EC) No 1260/1999 of 21 June 1999 laying down general provisions on the Structural Funds¹, and in particular Article 15(4) thereof,

Whereas:

- (1) Articles 13 *et seq.* of Title II of Regulation (EC) No 1260/1999 lay down the procedure for preparing and implementing operational programmes.
- (2) Under the second subparagraph of Article 15(4) of Regulation (EC) No 1260/1999, the Commission is to appraise the proposed operational programmes submitted by the Member States to determine whether they are consistent with the aims of the corresponding Community support framework and compatible with other Community policies, and is to adopt a decision on the contribution of the Funds in accordance with Article 28(1) and in agreement with the Member State

¹ OJ L 161, 26.6.1999, p. 1.

concerned, provided that the proposals contain all the features listed in Article 18(2) of that Regulation.

- (3) The Irish Government submitted to the Commission on 19 May 2000 an acceptable draft operational programme for the Productive Sector in the Border, Midland and Western region fulfilling the conditions for Objective 1 pursuant to Article 3(1) and the Southern and Eastern region qualifying for transitional support under Objective 1, pursuant to the first subparagraph of Article 6(1) of Regulation (EC) No 1260/1999. This draft operational programme contains the information listed in Article 18 of the Regulation, and in particular a description of the priorities of the programme and an indicative financing plan specifying for each priority and each year the financial allocation envisaged for the contribution from the European Regional Development Fund (ERDF) and the Financial Instrument for Fisheries Guidance (FIFG) and the total amount of eligible public and estimated private funding from the Member State.
- (4) The date of submission of the draft operational programme which was considered acceptable by the Commission constitutes the date from which expenditure under the programme is eligible. Under Article 30 of the Regulation, it is necessary to lay down the final date for the eligibility of expenditure.
- (5) The operational programme has been drawn up in agreement with the Member State concerned and within the partnership.
- (6) Under Article 10 of Regulation (EC) No 1260/1999, the Commission and the Member State are required to ensure, in a manner consistent with the principle of partnership, co-ordination between assistance from the Funds and from the EIB and other existing financial instruments.
- (7) The financial contribution from the Community available over the entire period and its year-by-year breakdown are expressed in euro. The annual breakdown must be consistent with the relevant financial perspective. Under Article 7(7) of Regulation (EC) No 1260/1999, the Community contribution has already been indexed at a rate of 2% per year. Under Article 7(7) and Article 44(2) of the Regulation, the Community contribution may be reviewed at mid-term, and not later than 31 March 2004, to take account of the effective level of inflation and the allocation of the performance reserve.

HAS ADOPTED THIS DECISION:

Article 1

The operational programme for Community structural assistance for the Productive Sector in the Border, Midland and Western region under Objective 1 and the Southern and Eastern region qualifying for transitional support under Objective 1 in Ireland for the period 1 January 2000 to 31 December 2006 is hereby approved.

Article 2

1. In accordance with Article 18 of Regulation (EC) No 1260/1999, the operational programme includes the following elements:

- a. the priorities of the programme, their consistency with the relevant Community support framework, their specific quantified targets, an ex ante evaluation of the expected impact and their consistency with the economic, social and regional policies of Ireland

The priorities are as follows:

Industry (Indigenous and Foreign Direct Investment)

Research, Technological Development and Innovation (RTDI)

Marketing

Sea Fisheries Development

The priorities “Industry (Indigenous and Foreign Direct Investment)” and “Marketing” are not co-financed by the Structural Funds.

- b. a summary description of the measures planned to implement the priorities, including the information needed to check compliance with the state aid rules;
- c. the indicative financing plan specifying, for each priority and each year, the financial allocation envisaged for the contribution from each Fund, and indicating separately the funding planned for the regions receiving transitional support in respect of Objective 1, and the total amounts of eligible public or equivalent expenditure and estimated private funding in the Member State.

The total contribution from the Funds planned for each year for the operational programme is consistent with the relevant financial perspectives.

- d. the provisions for implementing the operational programme including designation of the managing authority, a description of the arrangements for managing the operational programme and the use to be made of global grants, a description of the systems for monitoring and evaluation, including the role of the Monitoring Committee, a definition of the procedures concerning the mobilisation and circulation of financial flows and a description of the specific arrangements and procedures for checking on the operational programme;

2. The indicative financing plan puts the total cost of the priorities selected for the joint action by the Community and the Member State at EUR 1,002,049,794 for the whole period and the financial allocation from the Structural Funds at EUR 333,214,000.

The resulting requirement for national resources of EUR 212,772,794 from the public sector and EUR 456,063,000 from the private sector can be partly met by Community loans from the European Investment Bank and other lending instruments.

Article 3

1. The total assistance from the Structural Funds granted under this operational programme amounts to EUR 333,214,000.

The procedure for granting the financial assistance, including the financial contribution from the Funds for the various priorities included in the operational programme, is set out in the financing plan annexed to this Decision.

2. By way of indication, the estimated initial breakdown between the Structural Funds of the total Community assistance available is as follows:

| | |
|-------|-----------------|
| ERDF | EUR 291,094,000 |
| FIFG | EUR 42,120,000 |
| ----- | |
| Total | EUR 333,214,000 |
| ----- | |

Article 4

This Decision is without prejudice to the Commission's position on aid schemes falling within Article 87(1) of the Treaty that are included in the assistance package and which have not yet been approved by the Commission. Submission of the application for assistance, the Programming Complement or a request for payment by the Member State does not replace the notification required by Article 88(3) of the Treaty.

Community financing of state aid falling within Article 87(1) of the Treaty, granted under aid schemes or in individual cases, requires prior approval by the Commission under Article 88 of the Treaty, except where the aid falls within the *de minimis* rule or is exempted under an exemption regulation adopted by the Commission under Council Regulation (EC) No 994/98 of 7 May on the application of Articles 87 and 88 to certain categories of horizontal aid.² In the absence of such exemption or approval, aid is illegal and subject to the consequences set out in the procedural regulation for state aid, and its co-financing would be treated as an irregularity within the meaning of Articles 38 and 39 of Regulation (EC) No 1260/1999.

Consequently, the Commission will not accept requests for interim and final payments under Article 32 of the Regulation for measures being cofinanced with new or altered aid,

² OJ L 142, 14.5.1998, p. 1.

as defined in the procedural regulation for state aid, granted under aid schemes or in individual cases, until such aid has been notified to and formally approved by the Commission.

Article 5

The date from which expenditure shall be eligible is 19 May 2000. The closing date for the eligibility of expenditure shall be 31 December 2008. This date is extended to 30 April 2009 for expenditure incurred by bodies granting assistance under Article 9(1) of Regulation (EC) No 1260/1999.

Article 6

This Decision is addressed to Ireland.

Done at Brussels, 07-12-2000

For the Commission

Michel BARNIER

Member of the Commission

Appendix II

Environmental Assessment

The National Development Plan 2000-2006 envisages continued growth in the Irish economy over the medium term. The Productive Sector is essentially the driver of economic growth and as such is relied on to deliver jobs and wealth creation. As well as economic and social development, the Productive Sector Operational Programme has been prepared within the overall framework of national and EU environmental policy.

The Productive Sector Operational Programme will contribute to the NDP and CSF objectives of:

- ◆ continuing sustainable national economic and employment growth
- ◆ consolidating and improving Ireland's international competitiveness
- ◆ fostering balanced regional development
- ◆ promoting sustainable development throughout the sector through increased social inclusion, more environmentally friendly development and improved economic growth overall.

Economic and social development, together with investment outlined in the Operational Programme will have implications for the environment. However, investment will be achieved through a balance between environment and development. As outlined earlier at 1.9.1, the Government recognises that there is considerable challenge in ensuring that the greater level of activity in the Productive Sector of the economy does not have a detrimental effect on the environment. Consequently, all expenditure decisions will be dependent on the actions being consistent with the goal of sustaining the environment.

Under the Operational Programme, four specific Priorities have been highlighted for investment:

- ◆ **Industry (Indigenous and FDI):** sectors include the food industry, seafood processing, Gaeltacht areas and the Irish film sector.
- ◆ **Research, Technological Development and Innovation (RTDI):** sectors include industry, education, agriculture/food, marine, forestry and the environment.

- ◆ **Marketing:** indigenous industry including the food industry, seafood sector and tourism.
- ◆ **Sea Fisheries Development.**

Structural Funds support will be provided in respect of investment in Sea Fisheries Development and in RTDI for industry, in particular SMEs, and for third-level capacity building in RTDI. Neither the Industry (Indigenous and FDI) Priority nor the Marketing Priority will be EU co-financed.

Industry

Industrial production has more than doubled during the period 1991 to 1998. The sectors most likely to drive future increases in manufacturing output include electronics, pharmaceuticals, healthcare, food and drink. Increased industrial production creates greater demands and pressure on the environment with higher consumption of raw materials and energy, increased emissions to air and water and increased generation of waste.

Environmental regulation, such as Integrated Pollution Control (IPC) licensing of certain categories of industrial and other activities covered under the Environmental Protection Agency Act, and voluntary measures by industry, such as participation in the EU Eco-Management and Audit Scheme (EMAS) or in the ISO 14001 Environmental Management Standard, are directed at reducing the impact of industry on the environment. IPC licensing provides a modern framework for the control of environmental pollution and significant progress has been made in the implementation of the system.

IPC focuses on the elimination of waste of all kinds at source having regard to the best available technology not entailing excessive cost. Under the IPC system a single licence covering all aspects of air, water, waste and noise is issued to each licensable activity. Regulation and enforcement of IPC licences provide a dynamic operating procedure within which progressive environmental improvements are being achieved.

Schemes such as EMAS and the ISO 14001 Environmental Management Standard provide a systematic and documented approach to manage, control and reduce environmental impacts. Although voluntary, these schemes are important tools in helping to achieve Ireland's commitments in relation to improving environmental performance.

The National Standards Authority of Ireland (NSAI) is an accredited body for EMAS verification in Ireland and also for the accreditation of Environmental Management Systems to ISO 14001. Since 1997, the NSAI has registered over 100 companies to EMAS or ISO 14001. It is expected that the number of registrations

will increase substantially over the next few years. The revision of the EMAS Regulation has extended the scope to cover all economic sectors with the result that the scheme will no longer be confined to specific industrial sites but will be open to all organisations wishing to minimise their impact on the environment. The Regulation now also incorporates the text of the ISO 14001 standard as the environmental management standard to be achieved by participating companies.

Environmental Assessment

Enterprise Ireland, carries out environmental assessment on behalf of the industrial development agencies. It approaches environmental assessment and impact in line with national legislation and EU rules.

Environmental Auditing

Environmental auditing is carried out at sectoral and project levels.

Sectoral Level

Where a sectoral plan is being formulated for a particular sector, the Environment Unit of Enterprise Ireland audits the plan in the context of its potential environmental implications. The conditions necessary to protect the environment are identified leading to modifications in the plan. Where possible negative implications are identified and an appropriate control strategy is formulated including guidance on: site selection, cleaner production, control technologies, training and environmental management. Examples of recent auditing of sectoral plans include the beef strategy and fish processing.

Project Level

All agency-funded projects must comply with national and EU environmental regulations. At project level, proposals for support are screened for possible environmental implications under an eco-audit checklist which includes water and air quality, waste, biodiversity, land use, resource conservation, heritage, health and welfare issues. Where a project is flagged to be of 'significant' or 'of some significance' to the environment, it is passed to the Environment Unit of Enterprise Ireland for environmental assessment. The assessment normally involves a site inspection (for an existing facility or a greenfield site) and an assessment of the company's emissions and legislative compliance, such as compliance with the EIA and IPC directives (planning permission, emission licences etc.). The Environment Unit draws up environmental conditions which the company must sign before grant release. Conditions identified may include site suitability, adequate emission controls, adequate infrastructure and suitable receiving environment. Companies may be re-visited for inspection, compliance and verification purposes. If a company is not compliant with the conditions set out and agreed, some or all of the grant will be withheld until a definite programme of improvement is put in place.

Positive Action in improving the Environmental Performance of Clients

Dedicated initiatives to improve the environmental performance and raise the environmental awareness of client companies will complement the auditing procedures described above. Initiatives include:

- ◆ Environmental Management System (EMS) Grant Scheme
 - aimed at promoting the installation of an EMS in SMEs.
- ◆ Environmental Audit and Waste Minimisation Grant Scheme
 - aimed at promoting cleaner production and best environmental practice in SMEs.
- ◆ Environmentally Superior Products – Demonstration Grant Scheme
 - aimed at winning business through developing environmentally friendly products.

Specific output indicators will be included in the Programme Complement.

IDA Ireland environmental assessment is fully integrated with Enterprise Ireland's system for assessing and monitoring the environmental impact of foreign direct investment. Prior to approval, all projects must complete an environmental assessment form and submit it to Enterprise Ireland's Environment Unit. This Unit then decides if the project is environmentally sensitive or not and can impose conditions which can go beyond any legislative requirements. Any failure to adhere to these conditions will result in the payment of grant approved for the project being stopped.

Structural Funds are provided for two measures under the Research, Technological Development and Innovation (RTDI) Priority – Industry Innovation Initiative, these are the competitive RTDI grant scheme and technology innovation networks (collaboration for enterprise). These measures, like all in the RTDI Priority, will be assessed by Enterprise Ireland's Environment Unit and the same assessment and monitoring as outlined above will be applied.

As outlined at paragraph 1.9.1, Ireland's commitment to the Kyoto and Gothenburg Protocols will in turn have a significant impact on any future policy development. The development agencies, in making decisions on enterprise proposals, are conscious of Ireland's obligation under these protocols. The National Climate Change Strategy, launched by the Department of the Environment and Local Government in November 2000, will pose a significant challenge for industry as well as other sectors and this will further influence enterprise policy.

It is worth noting, however, that the profile of the sectors which contribute to Ireland's Greenhouse Gas emissions is unusual compared to most of the EU States. The agricultural sector is responsible for the largest share (32%) and further large

contributors are the transport sector and the energy production sector. Industry, on the other hand, contributed only about 12% of Ireland's total emissions in 1998 (*EPA Inventories March 2000*). This is the case because of our lack of heavy industry and a concentration of more high technology sectors and knowledge-based enterprises, which have much less potential to contribute to the problem. In the base year of 1990, emissions from industry accounted for only about 13% of total emissions and this proportion has fallen since then. Nevertheless, industry will have to reduce emissions under the National Climate Change Strategy, bearing its equitable share of the overall national burden.

Industry Impact Indicators

| | <i>1999</i> | <i>2003</i> | <i>2005</i> |
|---|-------------|-------------|-------------|
| Integrated Pollution Control Licences | 395 | *735 | *1000 |
| Registration/Certification EMAS & ISO 14001 | 100 | **400 | **700 |

* EPA estimate of licences which will be in effect.

** NSAI estimate of registered companies.

Source: IPC Licences – EPA; EMAS & ISO 14001 Registration/Certification – NSAI.

Education

Educational Infrastructure

There are several aspects to the environmental policy of the Department of Education and Science in relation to its programme of investment in educational infrastructure. Firstly, all capital projects funded by the Department comply in full with the Building Regulations of the Department of the Environment and Local Government. Secondly, applications for planning permission are made in respect of all capital projects to the relevant Local Authority and any conditions laid down by such authorities are adhered to during the construction phase. Environmental impact assessments would not normally be required for small projects. However, where such assessments are required as part of the planning process, they are undertaken and the relevant conditions are complied with by the Department.

The Department is also rising to the challenge of sustainability, developing designs for a number of educational facilities of varying sizes; exploring aspects of sustainability in a way that can be applied to newer models easily and in a cost-effective manner. The designs are approached in a holistic way taking the broadest meaning of sustainability from the way the building sits in the landscape to the considered selection of construction materials. The projects will explore the application of building principles to the construction of healthy learning and working environments. They will consider the lifelong contribution of the facility to the individual,

the community and the environment by heightening the self-awareness of the user and how people impact on each other and the environment. These projects aspire to reduce the energy requirements of buildings and aim to improve the architectural considerations traditionally applied to educational buildings in Ireland.

RTDI in the Education Sector

There is an allocation of G698m, in the NDP and the Productive Sector Operational Programme (PSOP), in respect of an RTDI measure in the education sector, which is composed of four sub-measures, including the Programme for Research in Third-Level Institutions (PRTLTI) sub-measure. The selection of projects under this sub-measure, the capital element of which is assisted by the ERDF, is competitive, based on an assessment of applications carried out by an international expert panel. Many of the projects selected will have a positive environmental impact including the following:

- ◆ Under an earlier cycle of the PRTLTI announced in 1999, awards were made to the:
 - Institute of Technology, Carlow, in respect of a programme in the area of biotechnology and environmental science
 - National University of Ireland, Maynooth, in respect of a programme in bioscience research in immunology, bioengineering and agro-ecology. Collaborative arrangements are in place with the Institute of Technology, Carlow.

- ◆ Under the PRTLTI cycle announced on 24 July 2000, awards were made to the following:
 - Cork Institute of Technology, in respect of a programme for research on the environment which focuses on ecotoxicology, waste reduction and air pollution. Collaborative arrangements are in place with the National University of Ireland, Cork
 - Institute of Technology, Sligo, in respect of seven separate projects integrated within the topic of sustainable treatment, recycling and re-use of biosolids
 - National University of Ireland, Galway, for an Environmental Change Institute. This university is part of a larger collaborative undertaking, the Institute for Environmental Studies, within the Atlantic University Alliance
 - National University of Ireland, Maynooth, for a National Institute for Regional and Spatial Analysis which will facilitate the interdisciplinary and comparative study of the impact of global processes on regional and spatial development in Ireland. Themes include landscape, heritage and environment

- National University of Ireland, Cork (NUIC), for an Environment Research Institute in conjunction with an Ecosite. This proposal is being developed under a collaborative agreement of the Atlantic University Alliance. NUIC has identified the following nine research themes for inclusion in its proposal: biodiversity evaluation and ecosystem function; coastal infrastructure and development, processes and protection, marine resource evaluation and development; ecotoxicology-aquaculture; environmental biotechnology; environmental chemistry; environmental engineering; environmental management, legislation and policy; sustainable energy; and geographic information systems and modelling
- National University of Ireland, Dublin, in respect of an Urban Institute to consider the impact of demographic concentration on transport, water supply, waste treatment and urban fabric etc.

In addition the linkages between research and teaching in third-level institutions will mean that teaching effort will be enhanced by the research being carried out. In this regard, the research effort will have a positive effect by raising the level of awareness of environmental issues through enhanced course content and a greater numbers of options.

Environmental Education in the Broader Education System

Environmental education and environmental awareness-raising is an important component of programmes in the broader education sector. With regard to the:

- ◆ Primary and post-primary sectors, environmental issues lend themselves to a whole-school approach. It is for this reason that, on the recommendation of a Joint Committee which brings together staff of the Departments of Education and Science and of the Environment and Local Government, specific reference is made to the environment in the Department's guidelines on school development planning. Those guidelines also refer specifically to the need to plan for cross-curricular issues and themes. Following the pilot project on whole-school evaluation, the evaluation criteria used are being revised. One of the changes planned is the inclusion of criteria related to the school environment. This will mean that, in future, the whole-school evaluation process will extend, as a matter of course, to environmental matters.
- ◆ Primary sector, environmental education is an important element of both the geography and science programmes in the revised curriculum that was finalised under the aegis of the National Council for Curriculum and Assessment (NCCA) and launched in 1999.
- ◆ Post-primary sector, environmental education is an important component in several subjects (i.e. science subjects; geography; civic, social and political

education; business subjects and home economics). Under the Transition Year Programme, schools may offer modules on issues relating to the environment and to sustainable development. A number of schools also participate in international projects with an environmental theme.

- ◆ Further education and third-level sectors, many courses/programmes include an environmental module where appropriate, including certificate, diploma, degree and post-graduate programmes. In addition, the Department is in consultation with the National Council for Educational Awards (NCEA) and the National Council for Vocational Awards (NCVA), in relation to the development of guidelines, as appropriate, for course providers to address the CSF requirements, in this regard. Third-level institutions will also be informed of the necessity of including environmental modules, where appropriate, in the development of new or the revision of existing programmes.

Agriculture

The agriculture measure in the Productive Sector Operational Programme relates only to the RTDI Priority. The measure will involve various research projects to be undertaken by either Teagasc (under the main agriculture RTDI measure) or by other public institutes under the Research Stimulus Fund.

Teagasc will undertake research in the following three priority areas:

Rural Viability

The proposed research will aim to strengthen policy formation, provide the strategic knowledge-base which will support the continued viability of rural areas and, through strengthening its information management resources, enable Teagasc to become an established source of high quality information in relation to all aspects of the agri-food sector and rural development. This activity should have a neutral impact on the environment.

Rural Environment

The specific aim of all projects in this area is to improve the environment and to pass on the research involved to farmers through Teagasc's advisory service and training programmes. The goal is to develop farming systems that allow farmers to optimise production efficiencies while minimising the impact on the environment. Research will involve:

- ◆ quantifying the environmental implications of a range of farming systems leading to the development of production practices which will achieve the required environmental targets, with particular regard to quantifying the

relationship between soil and fertiliser nutrients and grassland and crop responses

- ◆ modelling the environmental risk of agricultural production systems and practices in different geographical locations
- ◆ quantifying emissions from farming systems including pig, poultry and mushroom enterprises, and identifying strategies to reduce them.

Competitive and Sustainable Agriculture

The aim is to develop livestock and crop production systems designed to reduce production costs and deliver foods of assured safety and consistent quality in a way that is wholly compatible with environmental protection and animal welfare. This will involve the inclusion of environmental objectives in all production research programmes and the completion of an eco-audit checklist for each project.

In relation to the Research Stimulus Fund, a selection committee will be set up to evaluate proposals for research projects and each body will be required to complete an eco-audit checklist for individual projects selected.

Environment/Sustainable Development Research

R&D has played a key role in economic development in Ireland during the 1990s. As part of this, there has been consistent and worthwhile investment in R&D to support natural resource protection and development through the EU STRIDE-Ireland programme (1991-1993), and in the 1994-1999 CSF with forestry, marine and environment R&D programmes, the latter under the Environmental Services Operational Programme. These programmes have been very successful in building expertise, increasing understanding of factors contributing to environmental change, and providing a sound basis for good decision-making in support of sustainable development.

Careful identification of environmental issues and specification of projects in the 1994-99 Environmental Services Operational Programme resulted in the completion of successful projects which generated new data in a range of areas, e.g. urban indicators, waste management, eutrophication, small-scale wastewater treatment and cleaner production in industry. The external evaluation of the Operational Programme emphasised the many positive aspects of the research, including publication and dissemination of results of R&D, organisation of seminars and application of research results. It mentioned, in particular, the publicity associated with the cleaner production measure.

The 1994-1999 R&D programme had a significant impact in terms of increasing research skills and delivering reports, datasets, models, improved instrumentation

and methods etc. The programme encouraged significant research capacity building particularly in the areas of water, air and waste, as well as helping establish basic capabilities and information in new research areas such as dangerous substances, emissions information systems and development of urban indicators. Through the cleaner production measure, impressive reductions in pollution and savings in materials usage were demonstrated as being achievable when companies opt for a cleaner production/environmental management approach. Some 54 projects have been supported under the 1994-99 programme, made up of 34 large-scale projects and 20 desk studies. More than 200 people from at least 70 organisations were directly involved in the programme which provided valuable training opportunities for a large number of post-graduate students working in the biological, physical and chemical sciences as well as in engineering, mathematical modelling and software development.

A comprehensive analysis of existing evaluation reports on the range of R&D measures was carried out by the Industry Evaluation Unit at the Department of Enterprise, Trade and Employment. The report, *Meta-Evaluation of R&D Policies and Interventions: Modelling the Future – An Evaluator's Perspective*, was published in 1999. It recommended that the objectives for the next CSF should include promotion of sustainable development and good environmental practice and integrating these with R&D strategy; the report referred to the need to focus expenditure on research in relation to environment and sustainable development.

Scope

The environmental research programme 2000-2006 will be concerned, in particular, with the need to measure the environmental impact of economic development, as well as contributing to sustainable development of natural resources using the highest environmental standards. Environmental research in the Productive Sector Operational Programme will underpin and complement investment in economic and social development. It will also assist integration of environmental considerations, through collaborative work, into all sectors of the economy.

In gathering information for the publication of *Environment in Focus* (EPA, 1999) and *Ireland's Environment – A Millennium Report* (EPA, 2000), major environmental data gaps were identified, e.g. in relation to transport, land use, waste, emissions, hazardous and dangerous substances. These data gaps will be eliminated in the new programme through the establishment of more comprehensive and long-term monitoring programmes, as well as the carrying out of specific research projects. Such research and monitoring are necessary means of establishing baselines and measuring trends; in this, new techniques and tools are required for data collection and assessment.

The environmental research programme will be an important contributor to the measurement of the environmental impact of the NDP and will be an essential support for the achievement of more sustainable patterns of development.

Consultation/Co-ordination

The detailed environmental research programme will be finalised following completion of a comprehensive review of the previous programme and extensive consultation with interested parties, e.g. the industry, agriculture and tourism sectors; government departments; universities. The programme set out here takes account of conclusions emerging from the review/consultative process, existing R&D capability, economic development needs and related environmental protection requirements. The programme will link with previous related work, complement and support research work that will be carried out in other sectors and programmes, e.g. marine, forestry, agriculture, and draw where appropriate (and without duplication) on R&D at EU level.

The programme will be broad ranging. It will be informed in its choice of topics for research by drawing on the latest reports on the environment and other environmental assessments. Complementary concerns of sectoral interests will be identified and means for co-ordination proposed. Research being undertaken by economic sectors involving environmental concerns or resources will, where appropriate, include an EPA involvement. EPA-led research will involve other interested bodies as required.

Objectives

The objectives for environmental research 2000-2006 are to:

- ◆ undertake risk assessment and prediction of future scenarios to avoid environmental problems and conflicts
- ◆ carry out integrated assessments of sectoral development impacts and of key national environmental challenges
- ◆ encourage protection of the quality of the main environmental media (i.e. air, water, soil) and, towards this end, promote the development of systems, models, instruments and techniques for environmental monitoring, management and protection
- ◆ ensure delivery of practical research results based on high quality science and innovative technology and supply research results to a central data warehouse
- ◆ contribute to sustainable economic activity by incorporating environmental considerations into natural resource and infrastructure development, specifically, to act as a conduit for the integration of environmental concerns to the main economic sectors
- ◆ engage in development of cross-border linkages/projects and in transnational (generally European) projects as appropriate

- ◆ encourage environmental knowledge transfer
- ◆ contribute data, information and assessments to assist policy and decision making
- ◆ encourage skills development/capacity building.

The EPA, as managing authority, will ensure effective public dissemination of research results to support policy formulation and review; promote sustainable production and consumption patterns; and encourage environmentally friendly behaviour across the economy and society.

Marine

The primary objectives of the marine RTDI measure are to:

- ◆ enhance and consolidate the performance of the marine sector in Ireland through support for R&D and technology transfer activities
- ◆ provide the RTDI capacity and infrastructure to enable Ireland to fully utilise its marine resource potential in a sustainable manner.

The marine RTDI measure will build on initiatives supported under the marine research measure of the Operational Programme for Fisheries (1994-1999), and will consist of the following sub-measures:

- ◆ provision of enhanced research vessel capacity to cover outer continental shelf activities
- ◆ upgrade of key national marine laboratories and facilities to provide necessary capacity and infrastructure to support planned activities
- ◆ establishment of a Marine RTDI Fund to support project-based RTDI identified in a range of targeted areas.

With respect to the environment and environmental protection, the marine RTDI measure is firmly grounded in the principle of sustainable development. In its 1998 strategy document, *A Marine Research, Technology, Development and Innovation Strategy for Ireland*, which forms the scientific basis for the marine RTDI measure, the Marine Institute noted that:

The quality of the marine environment is the delicate thread that links the sustainable development of the marine resource. All marine activities are dependent on maintaining marine environmental quality and must be supported by a

level of research, monitoring and assessment appropriate to meet existing needs and the increased pressure on the resource which will accompany a growing marine economic sector.

The focus of the Institute's strategy, in promoting marine resource development, is therefore to support a range of initiatives including the following.

Research

To support research into environmental issues arising from, or associated with, priority developments in order to provide a firm scientific foundation for environmentally sustainable marine investments and developments.

Monitoring

To improve the quality of marine environmental monitoring, modelling and reporting in order to accurately identify and understand changes and trends in marine environmental quality and provide appropriate management advice.

Assessment

To improve the quality, frequency and availability of assessments of the marine environment and periodically review monitoring programmes and supporting RTDI initiatives to ensure efficiency and cost-effectiveness.

Management

To support the management of marine environmental RTDI initiatives, to include issues related to data quality assurance, information management, advice and information, marine capacity building, education and training and international co-operation.

Application Procedures

Funding from the marine RTDI measure, in accordance with standard procedures, will be allocated on a competitive basis following an open call for proposals, evaluation by an independent panel of experts and the contract negotiation of successful proposals with the Marine Institute.

In the case of Infrastructural Projects, full account will be taken of all building and planning regulations.

In the case of RTDI Projects, applicants will be asked to identify, in the application procedures, the positive and negative impacts of their proposal on the environment; and the measures to be taken to eliminate/mitigate any harmful environmental impacts.

Reporting

The implementing body (Marine Institute) will report on the positive and negative aspects (in qualitative terms) of projects supported by the marine RTDI measure. Further, where the results⁹ of marine RTDI measure projects contribute to environmental management and/or sustainable development (e.g. environment/good practice guidelines, improved standards, environmental quality) these will be published and widely disseminated.

Forestry

The emphasis of the forestry RTDI measure will be on ensuring that the forest industry remains viable, internationally competitive and environmentally compatible within the context of sustainable development. Forest cover in Ireland is now in excess of 620,000ha, about 9% of the land cover of the country. Government policy is to increase cover to 17% by the year 2035. This is to be achieved mainly in the private sector, by farmers, under CAP reform measures. The policy is to encourage the planting of broadleaves on suitable sites and to diversify species composition. Currently broadleaves account for 20% of planting but it is envisaged that this will rise to 25 to 30% when new schemes are introduced to encourage the planting of native species. Conifers form the predominant species in Irish forestry – they grow particularly well in Ireland and form the great bulk of the 2.5m cubic metres of wood harvested each year. The processing sector is comprised mainly of sawmilling and board manufacture. Recent years have seen considerable capital investment in the sector as new board mills come on stream and sawmills invest to increase productivity and improve yield and quality.

It is worthwhile to point out that these considerable developments have taken place over the last century from a very low base. At the beginning of the twentieth century, Ireland was virtually denuded of tree cover with less than 1% of the land area carrying forest. The population pressure of eight million inhabitants in the period leading up to the Famine, and centuries of overexploitation, coupled with little or no regulation of the forest, led to an almost catastrophic decline in forest cover and the quality of the remaining forest resource. The ninefold increase in forest cover that has been achieved over the past century has been noteworthy given the background of a scarce land resource and generally subsistence farming up until the entry to the EEC.

9 Examples from the marine research measure (1994-1999):

- a study of selected maerl beds in Irish waters and their potential for sustainable development
- a survey of bottlenosed dolphins in the Shannon Estuary (and a Code of Conduct for Eco-Tourism)
- mapping and assessment of the seaweed resources off the west coast of Ireland.

Environmental Aspects

The initial expansion of forest cover was mainly on upland areas in the east and south of the country. Also degraded estate woodlands, which often were the remnants of overexploited woodland, were reforested, usually with faster growing species. From the early 1950s peatland forestry began in the western counties and was generally seen to have a significant social dimension in providing employment in deprived rural areas. There is no doubt that forestry played a significant part in stabilising some rural communities through providing much needed income for small farmers and labourers.

From the late 1960s onwards there was increasing interest and concern regarding the environmental impact of forestry. This focused on a number of issues but principally:

- ◆ the visual impact of forestry, the use of a single species at plantation establishment and the shape and disposition of new forests in the landscape
- ◆ the impact of plantation forestry on indigenous flora and fauna (including fish)
- ◆ the environmental impact of using conifers as opposed to native broadleaves in new plantations.

These concerns led to the Forest and Wildlife Service appointing and training amenity officers whose role was, inter alia, to advise on plantation design. The wildlife impact of new plantations on blanket peat and other sensitive habitats was assessed by wildlife officers in the service. These roles were devolved to the Forest Service and Dúchas when Coillte was established in 1989. In the meantime Coillte has also developed in-house expertise in plantation design. The European Communities Environmental Impact Assessment (Amendment) Regulations (Statutory Instrument 101, 1996) and the new Planning and Development Act have increased the level of regulation of the forestry sector for new planting and for forest operations in general. The Forest Service has also further developed its environmental role. It issued guidelines on forestry and fisheries, forestry and archaeology and forestry and the landscape in the early 1990s. These have recently been revised and greatly expanded. New guidelines on biodiversity and harvesting have been prepared. The suite of five guidelines, a code of best forest practice and a new national forestry standard will be issued at the end of July. These incorporate best environmental practice, underpinned by the principle of sustainable forest management. Six criteria of sustainable forest management were agreed at the Ministerial Conference on the Protection of Forests held at Lisbon in 1998. These form the basis of the new national forestry standard.

Addressing Environmental Issues in the Forest R&D Measure

The national standard was developed following a national consultation process. It incorporates measures for the assessment of, inter alia, biodiversity, forest health

and vitality, carbon sequestration and water quality. While COFORD and other agencies have carried out research in some of these areas there are considerable information gaps.

The **biodiversity** of indigenous and plantation forest is scarcely known. Likewise the impact of afforestation on existing biodiversity needs to be determined as well as best practice to conserve and enhance biodiversity in plantations and indigenous woodland. Forest managers and contractors need tools to guide them in managing forests for multifunctional uses, including biodiversity which is now recognised as a forest product that must be wisely managed. The measure will address these information needs through a broad programme of biodiversity research. It will be conducted in third-level and State research institutions. It will result in a deeper understanding of the extent and role of biodiversity in forest management and use. Guidelines will be revised and extended. Practical steps to conserve and enhance biodiversity and incorporate it into everyday management will be developed.

Forest health and vitality is key to the sustainable functioning of forest ecosystems. Plantation forests are at risk from pest and disease attack throughout the production cycle, but especially at the establishment phase. Forests are protected in a variety of ways including the use of herbicides and pesticides. There is however a trend towards the use of alternative strategies, including biological control. Methods such as natural parasitism and fungal colonisation of peat hosts are under investigation in Ireland and abroad. The measure will support further research in these areas, following particularly promising lines. Novel methods for the control of vegetation will also be investigated. These methods will lead to a lessening of the use of chemical controls.

Forests have the potential to offset rises in global concentrations of carbon dioxide and thereby mitigate global warming. The potential of Irish forests to carry out this role is quite high as they are generally young and are **sequestering carbon** at a fast rate and growth rates in Irish forests are high by international standards. However, there are very significant information gaps concerning the rate of carbon storage, particularly below ground. New models need to be developed to more accurately determine both the rate and extent of carbon storage. Work of this nature will be supported under the measure and will greatly enhance our knowledge of carbon storage dynamics in forest ecosystems.

Forest establishment and harvesting have the potential to negatively impact on **water quality** through siltation and eutrophication. These areas are addressed in the new Forest Service forestry and water guidelines but there is a need for further information to determine the best methods of preventing the occurrence of erosion and consequent siltation. Likewise the impact of afforestation on former agricultural land on nutrient budgets in streams and lakes needs to be more fully understood. Forests have the potential to contribute to surface water acidity levels. This is principally the result of scavenging of pollutants from the air. The decrease in sulphur and nitrogen emissions should lead to a lessening of this problem but there

is a need for ongoing monitoring of these effects on water quality in forests. The sensitivity of catchments to acidity needs to be further determined and quantified. Research to address these water quality issues will be funded under the measure. This will lead to improved environmental compliance and reduce and eliminate any negative effects where they occur.

Tourism

Tourism in the Productive Sector OP involves tourism marketing only. Tourism plays an increasingly significant role in the economic and cultural development of Ireland, and so there is a need to conserve the very environment that attracts the high numbers of tourists.

The major growth in the number of overseas tourists visiting Ireland increases pressure on the physical infrastructure: roads, water and sewerage. Tourism is one of Ireland's most important foreign currency earners and provides jobs for 135,000 people many of which are in rural communities. The total revenue from tourism (domestic and overseas) increased from £865.6m in 1986 to over £2.5bn in 1999, with international visitor numbers for 1999 exceeding six million.

Ireland's green image continues to be an important attraction for tourists. This recognition has led to a Pilot Initiative on Tourism and the Environment by the Department of Tourism, Sport and Recreation which commenced under the 1994-1999 Tourism Programme and aims at demonstrating how particular problems affecting tourism and the environment might be dealt with. The results of this initiative will assist in the development of policy over the 2000-2006 period.

Fisheries

Modernisation and Renewal of the Fleet

The programme will provide national and EU grant aid for the purchase of new and modern second-hand fishing vessels, modernisation of existing vessels and the purchase of safety equipment.

Selectivity

The new and second-hand vessels, together with the modernised vessels, will fish more selectively by installing new nets with legally required square mesh panels which will have the effect of reducing the catch of juvenile fish. These vessels will also be equipped with the most up-to-date detection equipment such as sonars and

sounders, which will reduce the problem of unwanted by-catch and discards. All new vessels have a high specification which conforms with EU regulations on hygiene, discharging and emission controls.

Many vessels are now rigging for seine net fishing, using lighter nets which only skim the seabed causing less disruption. These are of a larger mesh size which again reduces the incidence of juvenile catch.

Many of the inshore vessels financed under the programme will take part in the Lobster V-Notching programme designed to enhance and sustain the lobster stocks in designated areas.

At present, one vessel grant-aided under the last programme is rigged for long-line fishing, which produces better quality catch, better prices and less diesel consumption. Other skippers have expressed interest in this trial and it is probable that some of the new vessel's owners will follow this method of fishing.

The selection criteria will weight in favour of skippers/crews who have taken part in various training courses in the Bord Iascaigh Mhara (BIM) training colleges at Greencastle and Castletownbere which incorporate conservation and environmental modules and the concept of sustainability in fisheries.

Propulsion

The new and modern second-hand vessels will come equipped with leaner burning engines reducing the consumption of diesel per vessel, with more efficient lubrication and less oil consumption. Where existing vessels are to be modernised such engines will also be installed leading to a reduction of atmospheric emissions from worn-out units.

Refrigeration and Care of the Catch

On-board refrigeration and ice-making machinery will help to preserve the fish quality which should cut down on wastage. Improved quality leading to better financial return will reduce the quantity required and the new type gasses used in the refrigeration units are more environmentally friendly.

BIM has engaged quality officers to work with vessel owners at the various ports around the country to maximise the improvement in catch quality.

VMS Equipment

The larger vessels must now fit vessel monitoring equipment (satellite) which will contribute to more accurate catching statistics and therefore better management controls.

Safety

It is envisaged that the BIM's highly successful safety grant scheme will be continued in the new programme and vessel owners will be actively encouraged to avail of grant aid to upgrade on-board safety equipment in compliance with best practice and legal requirements. This will facilitate a safer working environment on board vessels which together with the benefits of greater efficiency and profitability should contribute to a less stressful and more rewarding experience for those working on board.

Seafood Processing Sector

The relevant local authorities issue effluent discharge licences with standards set for wastewater emissions and carry out routine monitoring for compliance. The Environmental Protection Agency also monitors discharges from fishmeal production operations directly. The recently adopted EU Directive 96/61/EC will shortly set thresholds that will require Integrated Pollution Control Licensing (IPC) of a small number of fish processing plants with a finished production capacity of 75 tonnes per day.

The Hygiene Directive 493/91 EEC is implemented by the Department of the Marine and Natural Resources. This also requires appropriate structural and operational standards.

The Health and Safety Authority ensures that a safe working environment is provided.

A recently published, EU-funded report, *Strategic Environmental Assessment of the Irish Fish Processing Sector*, was commissioned by BIM and the Irish Fish Processors and Exporters Association. This sets out the current situation in regard to the relevant environmental issues, particularly wastewater from processing operations. It also makes recommendations on achieving compliance with all relevant regulations and on the introduction of 'clean technologies' in the sector.

The industry has recently made considerable investment in new preventative and treatment measures, and will continue to do so in meeting the required standards.

Water Quality and Quantity

The processing sector depends on an adequate supply of potable water for its various operations. The industry has also a vested interest in a clean marine and freshwater environment. The shellfish processing industry has particular regard to the implementation of EU Directive 492/91 EEC regarding the suitability of shellfish growing waters.

Air Quality

The fish processing industry is conscious of its responsibility to minimise odours emanating from within and around processing plants.

Biodiversity

The seafood processing sector is interested in the protection of the natural balance in the aquatic environment and the conservation of the fish species.

Resource Conservation

Conservation of the commercial fish species is always of concern to fish processors and regulations are enforced by the Department of the Marine and Natural Resources. The industry employs energy saving measures, particularly in regard to freezing operations.

Waste

The industry has taken and continues to take steps to minimise and control solid waste and wastewater by the introduction of appropriate technology. The vast proportion of solid waste is utilised for fishmeal and fish oil production. Programmes for the upgrading of waste are also in place.

Environmental Impact Indicators

The Sea Fisheries Development Priority is geared towards bringing about a more modern, safer, environmentally friendly Irish fishing fleet. The measure will support improvements to the marine environment by introducing more efficient engines, improved gear technology, upgraded refrigeration units, and more efficient disposal systems on board vessels.

The number of vessels modernised will impact on the introduction of more modern environmentally friendly equipment and practices on board fishing vessels.

| <i>Estimated Number of Modernisations and Renewals to the Irish Fishing Fleet</i> | | |
|---|-------------|-------------|
| Region | 2003 | 2006 |
| National | 500 | 1,000 |
| BMW | 300 | 600 |
| S&E | 200 | 400 |

Appendix III

Eco-audit Checklist

Economic and social development, together with investment outlined in the Operational Programme, will have implications for the environment. However, investment will be achieved through a balance between environment and development. The Government recognises that there is considerable challenge in ensuring that the greater level of activity in the productive sector of the economy does not have a detrimental effect on the environment. Consequently, all expenditure decisions will be dependent on the actions being consistent with the goal of sustaining the environment. Specific needs of the productive sector will be provided for under Priorities covering Research, Technological Development and Innovation (RTDI), Industry (Indigenous and Foreign Direct Investment), Marketing and Sea Fisheries Development.

The Managing Authority has prepared the following eco-audit which is qualitative in nature with regard to the information available.

Research, Technological Development and Innovation (RTDI) Priority

This Priority aims to continue and develop the support in key areas where public investment remains fundamentally necessary consistent with the goal of sustaining the environment.

| | <i>significant</i> | <i>of some significance</i> | <i>insignificant</i> | <i>none</i> |
|---|--------------------|---------------------------------|----------------------|-------------|
| Water Quality and Quantity | | | | |
| Water quality | | | | ✓ |
| Polluting discharges to surface, ground or marine waters | | | | ✓ |
| Water quantity | | | | ✓ |
| Air Quality | | | | |
| Air quality (local) | | | | ✓ |
| Air quality (transboundary) | | | | ✓ |
| Polluting discharges to atmosphere | | | | ✓ |
| Emission of greenhouse gases | | | | ✓ |

| | <i>significant</i> | <i>of some significance</i> | <i>insignificant</i> | <i>none</i> |
|---|--------------------|---------------------------------|----------------------|-------------|
| Biodiversity | | | | |
| Quality of area of habitats | | + | | |
| Populations or range of species | | + | | |
| Protected areas | | + | | |
| Threatened or protected species | | + | | |
| Land Use | | | | |
| Land use patterns | | | | ✓ |
| Landscape | | | + | |
| Resource Conservation | | | | |
| Energy use | | | | ✓ |
| Waste recovery | | | | ✓ |
| Natural resource/material use | | | | ✓ |
| Extraction or use of non-renewable resources | | | | ✓ |
| Waste | | | | |
| Waste production | | | | ✓ |
| Disposal | | | | ✓ |
| Architectural and Archaeological Heritage | | | | |
| Buildings and structures of architectural or historic importance | | | | ✓ |
| Archaeological sites, monuments and artefacts | | | + | |
| Health and Welfare of Population | | | | |
| Noise levels | | | | ✓ |
| Security and safety of the public | | | | ✓ |
| Dangerous Substances | | | | |
| Use of dangerous substances | | | | ✓ |
| Risk of accidents during the transport, use and manufacture of dangerous substances | | | | ✓ |

Positive impact = +
 Negative impact = -
 Neutral impact = ✓

Industry (Indigenous and Foreign Direct Investment) Priority

Activity in this sector is essentially the driver of economic growth. This continuing growth will take place without compromising the environment for future generations.

| | <i>significant</i> | <i>of some significance</i> | <i>insignificant</i> | <i>none</i> |
|---|--------------------|---------------------------------|----------------------|-------------|
| Water Quality and Quantity | | | | |
| Water quality | | | | ✓ |
| Polluting discharges to surface, ground or marine waters | | | | ✓ |
| Water quantity | | | | ✓ |
| Air Quality | | | | |
| Air quality (local) | | | | ✓ |
| Air quality (transboundary) | | | | ✓ |
| Polluting discharges to atmosphere | | | | ✓ |
| Emission of greenhouse gases | | | + | |
| Biodiversity | | | | |
| Quality of area of habitats | | | | ✓ |
| Populations or range of species | | | | ✓ |
| Protected areas | | | | ✓ |
| Threatened or protected species | | | | ✓ |
| Land Use | | | | |
| Land use patterns | | | - | |
| Landscape | | | - | |
| Resource Conservation | | | | |
| Energy use | | | | ✓ |
| Waste recovery | | | | ✓ |
| Natural resource/material use | | | | ✓ |
| Extraction or use of non- renewable resources | | | | ✓ |
| Waste | | | | |
| Waste production | | | | ✓ |
| Disposal | | | | ✓ |

| | <i>significant</i> | <i>of some significance</i> | <i>insignificant</i> | <i>none</i> |
|---|--------------------|---------------------------------|----------------------|-------------|
| Architectural and Archaeological Heritage | | | | |
| Buildings and structures of architectural or historic importance | | | | ✓ |
| Archaeological sites, monuments and artefacts | | | | ✓ |
| Health and Welfare of Population | | | | |
| Noise levels | | | | ✓ |
| Security and safety of the public | | | | ✓ |
| Dangerous Substances | | | | |
| Use of dangerous substances | | | | ✓ |
| Risk of accidents during the transport, use and manufacture of dangerous substances | | | | ✓ |

Positive impact = +

Negative impact = -

Neutral impact = ✓

Marketing Priority

This Priority covers marketing directed at indigenous industry, food sector, seafood sector and tourism.

| | <i>significant</i> | <i>of some significance</i> | <i>insignificant</i> | <i>none</i> |
|--|--------------------|---------------------------------|----------------------|-------------|
| Water Quality and Quantity | | | | |
| Water quality | | | | ✓ |
| Polluting discharges to surface, ground or marine waters | | | | ✓ |
| Water quantity | | | | ✓ |
| Air Quality | | | | |
| Air quality (local) | | | | ✓ |
| Air quality (transboundary) | | | | ✓ |
| Polluting discharges to atmosphere | | | | ✓ |
| Emission of greenhouse gases | | | | ✓ |

| | <i>significant</i> | <i>of some significance</i> | <i>insignificant</i> | <i>none</i> |
|---|--------------------|---------------------------------|----------------------|-------------|
| Biodiversity | | | | |
| Quality of area of habitats | | | | ✓ |
| Populations or range of species | | | | ✓ |
| Protected areas | | | | ✓ |
| Threatened or protected species | | | | ✓ |
| Land Use | | | | |
| Land use patterns | | | | ✓ |
| Landscape | | | | ✓ |
| Resource Conservation | | | | |
| Energy use | | | | ✓ |
| Waste recovery | | | | ✓ |
| Natural resource/material use | | | | ✓ |
| Extraction or use of non-renewable resources | | | | ✓ |
| Waste | | | | |
| Waste production | | | | ✓ |
| Disposal | | | | ✓ |
| Architectural and Archaeological Heritage | | | | |
| Buildings and structures of architectural or historic importance | | | | ✓ |
| Archaeological sites, monuments and artefacts | | | | ✓ |
| Health and Welfare of Population | | | | |
| Noise levels | | | | ✓ |
| Security and safety of the public | | | | ✓ |
| Dangerous Substances | | | | |
| Use of dangerous substances | | | | ✓ |
| Risk of accidents during the transport, use and manufacture of dangerous substances | | | | ✓ |

Positive impact = +
 Negative impact = -
 Neutral impact = ✓

Sea Fisheries Development Priority

| | <i>significant</i> | <i>of some significance</i> | <i>insignificant</i> | <i>none</i> |
|---|--------------------|---------------------------------|----------------------|-------------|
| Water Quality and Quantity | | | | |
| Water quality | | | | ✓ |
| Polluting discharges to surface, ground or marine waters | | | + see note 1 | |
| Water quantity | | | | ✓ |
| Air Quality | | | | |
| Air quality (local) | | | + | |
| Air quality (transboundary) | | | + | |
| Polluting discharges to atmosphere | | | + see note 2 | |
| Emission of greenhouse gases | | | + | |
| Biodiversity | | | | |
| Quality of area of habitats | | + | see note 3 | |
| Populations or range of species | | + | | |
| Protected areas | | + | | |
| Threatened or protected species | | + | see note 3 | |
| Land Use | | | | |
| Land use patterns | | | | ✓ |
| Landscape | | | | ✓ |
| Resource Conservation | | | | |
| Energy use | | + | | ✓ |
| Waste recovery | | | | ✓ |
| Natural resource/material use | | | | ✓ |
| Extraction or use of non- renewable resources | | | | ✓ |
| Waste | | | | |
| Waste production | | + | | |
| Disposal | | + | see note 1 | |
| Architectural and Archaeological Heritage | | | | |
| Buildings and structures of architectural or historic importance | | | | ✓ |
| Archaeological sites, monuments and artefacts | | | | ✓ |

| | <i>significant</i> | <i>of some significance</i> | <i>insignificant</i> | <i>none</i> |
|---|--------------------|---------------------------------|----------------------|-------------|
| Health and Welfare of Population | | | | |
| Noise levels | | | | ✓ |
| Security and safety of the public | | | | ✓ |
| Dangerous Substances | | | | |
| Use of dangerous substances | | | | ✓ |
| Risk of accidents during the transport, use and manufacture of dangerous substances | | | | ✓ |

| | | |
|-----------------|---|---|
| Positive impact | = | + |
| Negative impact | = | - |
| Neutral impact | = | ✓ |

Note 1:

New and second-hand vessels, together with modernised vessels, will be equipped with the most up-to-date detection equipment such as sonars and sounders, which will reduce the problem of unwanted by-catch and discards. All new vessels have a high specification which conforms with EU regulations on hygiene, discharging and emission controls.

Note 2:

At present, one vessel grant-aided under the last programme is rigged for long-line fishing, which produces better quality catch, better prices and less diesel consumption. Other skippers have expressed interest in this trial and it is probable that some of the new vessel's owners will follow this method of fishing.

The new and modern second-hand vessels will come equipped with leaner burning engines reducing the consumption of diesel per vessel, with more efficient lubrication and less oil consumption. Where existing vessels are to be modernised such engines will also be installed leading to a reduction of atmospheric emissions from worn-out units.

On-board refrigeration and ice-making machinery will help to preserve the fish quality which should cut down on wastage. Improved quality leading to better financial return will reduce the quality required and the new type gasses used in the refrigeration units are more environmentally friendly.

Note 3:

The new and second-hand vessels, together with the modernised vessels, will fish more selectively by installing new nets with legally required square mesh panels which will have the effect of reducing the catch of juvenile fish. These vessels will also be equipped with the most up-to-date detection equipment such as sonars and sounders, which will reduce the problem of unwanted by-catch and discards. All new vessels have a high specification which conforms with EU regulations on hygiene, discharging and emission controls.

Many vessels are now rigging for seine net fishing, using lighter nets which only skim the seabed causing less disruption. These are of a larger mesh size which again reduces the incidence of juvenile catch.

Many of the inshore vessels financed under the programme will take part in the Lobster V-Notching programme designed to enhance and sustain the lobster stocks in designated areas.

At present, one vessel grant-aided under the last programme is rigged for long line fishing, which produces better quality catch, better prices and less diesel consumption. Other skippers have expressed interest in this trial and it is probable that some of the new vessel's owners will follow this method of fishing.

Appendix IV

Financial Tables

| | |
|--|------------|
| ◆ Tables for Co-financed Measures | 146 |
| ◆ Overall Tables for Productive Sector OP | 152 |

List of Abbreviations

| | |
|----------------|---|
| BDM | Business Development Model |
| BIC | Business Innovation Centre |
| BIM | Bord Iascaigh Mhara (Sea Fisheries Board) |
| BMW | Border, Midland and Western Region |
| BSE | Bovine Spongiform Encephalopathy |
| COST | European Cooperation in Science and Technology |
| CSF | Community Support Framework |
| DG | Directorate General |
| EIA | Environmental Impact Assessment |
| EMAS | Eco-Management and Audit Scheme |
| EMS | Environmental Management System |
| EPA | Environmental Protection Agency |
| ERDF | European Regional Development Fund |
| ESF | European Social Fund |
| ESRI | Economic and Social Research Institute |
| FDI | Foreign Direct Investment |
| FIFG | Financial Investment for Fisheries Guidance |
| GDP | Gross Domestic Product |
| IBEC | Irish Business Employers Confederation |
| ICTU | Irish Congress of Trade Unions |
| IDA | Industrial Development Agency of Ireland (IDA Ireland) |
| IPC | Integrated Pollution Control |
| MGP | Multi-Annual Guidance Programme |
| NDP | National Development Plan |
| NITL | National Institute for Transport and Logistics |
| NSAI | National Standards Authority of Ireland |
| NSMC | North/South Ministerial Council |
| OP | Operational Programme |
| OPMU | Operational Programme Management Unit |
| PRTL | Programme for Research in Third-Level Institutions |
| PSOP | Productive Sector Operational Programme |
| R&D | Research and Development |
| REPS | Rural Environmental Protection Scheme |
| RTDI | Research, Technological Development and Innovation |
| S&E | Southern and Eastern Region |
| S&T | Science and Technology |
| SF | Structural Funds |
| SME | Small and Medium-sized Enterprise |
| WES | European Network to Promote Women's Entrepreneurship |