

The Thematic Evaluation on the Contribution of the Structural Funds to Sustainable Development

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EXECUTIVE SUMMARY

1 INTRODUCTION

Aim and Objectives of the Study

The aim of the study has been to understand the contribution that the EU Structural Funds (SF) have made, and can make in the future, to sustainable development (SD). In doing so, the work has sought to develop and test approaches and analyses that improve the definition of sustainable development and enable a better integration of sustainable development in EU regional policy objectives for economic and social cohesion. The results provide a basis for recommendations for enhancing the contributions that the SF make to SD through changes in the design and delivery of SF Programmes.

SF regulations already acknowledge the importance of SD for economic and social cohesion, the rationale for SF interventions. But there is a desire to improve the contribution of SF to the achievement of SD; partly by improving an understanding of the regional context within which Programmes are delivered, partly by refocusing regional development strategies and partly by improving the quality of projects submitted for funding.

The evaluation has the following specific objectives:

- To develop methods, indicators and approaches for the evaluation of regional SD;
- To identify the main policy trade-offs being made in regional development policies either explicitly or implicitly;
- To identify ways throughout the delivery systems for SF to generate better projects promoting SD.

The resulting evaluation will be used:

- To provide tools and methodologies which can assist regions, Member States and the EU in assessing the sustainability of their development plans;
- To enhance the sustainability of the SF programmes in the 2000-2006 period, for example in the context of the mid-term programme reviews;
- In the preparation of SF policies beyond 2006, with particular regard to the use of programmes in the new Member States (the former Candidate Countries).

The study has taken a largely case study approach to the research, examining the regional nature of SD; assessing the contribution of the SF to SD by reference to selected measures and projects; and considering how to improve the project pipeline in terms of projects that better support SD. Some 20 regional and national case studies were carried out, comprising 8 Objective 1 regions, 8 Objective 2 regions and 4 national studies, examining different types of region and covering all types of SF intervention. The case studies were designed to give evaluators flexibility in determining relevant criteria and interventions for analysis. As a consequence the synthesis is based on taking the cases as a whole, and their ability to address the

range of issues collectively, if not in any one case. The judgements made by evaluators have been subject to discussion and regional stakeholders to secure a measure of validation of the conclusions drawn.

The case study approach has been complemented by a macro-economic assessment of the impact of the SF against a set of indicators representing different elements of SD. This allows some insight into the contributions at the EU and MS level.

What are the Structural Funds?

The Structural Funds are an instrument of the EU to implement Community policies for economic and social cohesion. In particular, they are applied, using a programming approach, to support the convergence of regional economic performance supporting those regions with particular structural difficulties that hinder development and the attainment of average EU living standards. In supporting regional convergence the SF also support the balanced and sustainable development of regions.

Council Regulation 1260/1999 relating to the SF states that in the “efforts to strengthen economic and social cohesion, the Community also seeks to promote the harmonious, balanced and sustainable development of economic activities, a high level of employment, equality between men and women, and a high level of protection and improvement of the environment. [...] Efforts should in particular integrate the requirements of environmental protection into the design and implementation of the operation of the SF and help to eliminate inequalities, and promote equality, between men and women.”

For further information on the Structural Funds, see the following webpages on the Commission's Europa website:

EU regional policy and the role of the Structural Funds:

http://europa.eu.int/comm/regional_policy/intro/regions1_en.htm

Key policy documents relating to the EU regional policy

http://europa.eu.int/comm/regional_policy/sources/key/key_en.htm

What is Sustainable Development?

At its simplest it means “development that lasts”. That is, a path along which the maximisation of human well being for today’s generations does not lead to declines in future well-being. Meeting human needs and increasing quality of life may be regarded as the ‘development’ part of sustainable development. Being able to maintain this into the future may be regarded as the ‘sustainable’ part.

Sustainable development as defined above is entirely consistent with the EU SD strategy, which defines SD using the usual Brundtland definition¹, and with the recent EC Communication on (sustainability) Impact Assessment, that considers the pursuit of SD as requiring the closer integration of economic, social and environmental policies (the so-called three pillars approach). The requirement for closer integration of these three pillars generally form the basis of most ideas of how to secure a more sustainable form of development through time.

¹ The Brundtland Report defined SD as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

For the purposes of this study the three pillars have been extended into a four capitals idea of SD, which separates out issues dealing with individuals (such as their education and health, skills, innovation, and entrepreneurship) from the economic and social pillars. This allows the economic pillar to be defined in relation to human made assets (buildings, infrastructure, businesses) and the social pillar to be defined in relation to inter-relationships between individuals (in the context of local or informal networks, or formal institutions of government and governance networks). The environmental pillar is unchanged.

The extension of the three pillars idea still maintains a recognition that social welfare is determined by more than economic development. However, the four capitals approach allows a more explicit focus on assets as the basis of the services that provide social welfare and detailed look at human capital, both important in the context of the SF, which explicitly seeks to invest in assets including skills and competencies. It also provides a decision rule for defining unsustainable development, and for judging more from less sustainable development paths, based on an explicit recognition of the normative basis of SD.

This 'four capitals' model therefore operationalises the more established idea of SD as comprising the integration of the three pillars of the economy, society and the environment. The 'four capitals' model also considers development (and the meeting of needs and aspirations) to takes place through the services provided by economic, human, social and environmental assets. Development is then considered to be sustainable if and only if the stock of assets or capital (wealth) per capita remains constant or rises over time.

For the purposes of this study, the operational definition of sustainable development is **the provision of services and benefits that increase human well-being without causing a decline in capital stocks per capita**. Capital stocks (assets) provide a flow of goods and services, which contribute to human well-being. More specifically, the four types of capital that sustain well-being have been defined as:

- manufactured (or man-made) capital, broadly synonymous with economic infrastructure;
- natural (or environmental) capital covering all forms of eco-systems and natural resources that provide services for social welfare;
- human capital, relating to the stock of human productivity potential of individual people based on their health, motivation, talents and skills;
- social capital, relating to the stocks of social trust, norms and formal and informal networks that people can draw upon to access resources, solve common problems and create social cohesion.

Social Capital – Measurement and Interpretation

Social capital is the system of networks and relationships, based on trust and rules, formal and informal, that permits individuals or groups of individuals access to resources. Two difficulties have emerged for the evaluation in the use of this idea. The first is that underlying concepts such as trust and reciprocal behaviour are difficult to measure. The second difficulty is that there is limited understanding of how the services provided by social capital (such as empowerment or governance) relate to the achievement of socially desirable outcomes, such as equity, inclusion or poverty

reduction. As a result social capital has tended to be measured using a wide range of indicators which are sometimes poorly related to the underlying concept. In particular there has been a tendency to measure social outcomes rather than the stock of capital or the flow of services. Although social outcomes (such as equity or inclusion) are significantly influenced by the level of social capital, they form part of overall social welfare and are impacted on by all forms of capital. Conclusions relating to social capital have therefore to be treated with some caution.

2 METHODOLOGICAL ISSUES AND TOOLS

Weak and Strong Sustainable Development

Distinguishing the different types of capital raises the question of whether it is the total stock of capital that must be maintained, with substitution allowed between the various forms (weak sustainability) or whether, below certain stock levels (critical thresholds), particular components of capital are non-substitutable, i.e. they contribute to welfare in a unique way that cannot be replicated by another capital component, thus preventing unlimited substitution (strong sustainability). That this is important stems from the obvious fact that at any given time stocks of particular types of capital are in decline at the same time as other stocks are increasing. The substitution of one form of capital for another has the potential to lead to an overall decline in total capital, and hence unsustainable development.

The potential for unsustainable development lies in the trade-offs (increases in one form of capital at the expense of decreases in another form) occurring between different forms of capital, and the degree to which:

- Any decline represents a breach of some critical threshold (in which case development would be considered unsustainable), and if not whether
- Any decline in one form is compensated by increases in other forms.

The challenge for public policy is therefore to establish the existence and nature of trade-offs, and to engage in an explicit determination of whether declines in particular forms of capital are unsustainable by reference to the possible existence of critical thresholds and the acceptability of compensation implicit in the trade-off. In the event of trade-offs that give cause for concern for the sustainability of development, then policy responses will be required.

Tools and Methods for Assessing Sustainability

The evaluation has used and developed a number of existing ideas for examining the sustainability of regional development. These include the concept of development paths, first introduced in the environmental evaluation of the SF, and the use of an assessment matrix specifying assessment criteria against which to examine selected policies or projects, commonly used in multi-criteria analysis.

Regional Development Pathways – This idea suggests that a region is on a particular path of development but has a choice, through policy decisions, as to the nature of this path. Paths vary in their sustainability as identified through the nature and scale of trade-offs in different forms of capital. Development paths that are more sustainable have fewer and less severe trade-offs that are considered to threaten sustainability. The more sustainable path is one where the development is either not subject to declining stocks of capital, or where any decline is wholly understood and accepted by

society as not representing a threat to a given threshold and as representing a means of increasing overall social welfare now and over time.

The value of the tool rests in its application by stakeholders in framing future policy. In particular it requires recognition of the importance of time and the assessment of trends for sustainability. It forces explicit consideration of current and future trade-offs. It also enables stakeholders to ask the question of whether there are alternative and more sustainable development paths for the region and what they might look like, and to consider explicitly the types of policy response that would secure a change from existing to alternative paths. In doing so it allows a challenge to prevailing trends and to inertia in policy making caused by an acceptance that the only way to develop is by continuing on the present path.

Sustainability Assessment Matrix - This is used to examine the contribution to, or impact of, policies or programmes on particular objectives or criteria that are taken to represent SD, determined according to the spatial level (EU, MS, region), at which the policy intervention is being managed. In the evaluation, regional SD objectives are represented using a range of criteria. Typical criteria include levels of GDP, employment, crime, greenhouse gases. These criteria reflect some consensus among the relevant stakeholders as to the most important trends for the sustainable development of the region (or MS, EU) and the most important trade-offs and win-wins (where the increase in one form of capital increases another).

The careful assessment of policies against each criterion in turn, as carried out in the case studies, allows a view of the contribution that the policy can make (or has made) to SD. Note that whilst some of the trends can be quantified using relevant indicators, the real value of the assessment is the opportunity to include criteria that are less easily quantified but important for SD, and at the same time focus on those issues of particular significance to the relevant stakeholders for SD. It forces an explicit consideration of the more important trends, and overcomes the weakness of standard indicator led approaches of providing much information but with little sense of what is more or less significant.

Project Pipeline Checklist - This is a checklist of questions to be considered by Managing Authorities and Programme Monitoring Committees as a means of stimulating the project pipeline to generate projects that contribute more effectively to SD.

A more detailed description of these tools is provided in Volume 2 of this Synthesis Report.

3 CONCLUSIONS: ENHANCING THE SUSTAINABILITY OF DEVELOPMENT PROGRAMMES

Regional Trends and Potential Constraints on Sustainable Development

The key issue for a development programme concerned with enhancing its sustainability is the degree to which it addresses regionally specific and significant trade-offs. The key questions are:

- Whether the trade-offs are considered important to the achievement of regional aspirations for social welfare? and if so

- Whether additional measures, explicitly framed as a response to the trade-offs, and designed to minimise the negative consequences (particularly in relation to perceived critical thresholds) and enhance the positive effects, should be integrated within the programme?

The main trade-offs in regional development identified in the case studies are between increases in manufactured capital with associated decline in natural capital, and increases in manufactured and human capital with associated decline in social capital. In the first set of trade-offs the cause and effect relationship is obvious for direct impacts, but also fairly clear in relation to the indirect effects of growth on the environment. In the second case cause and effect relationships are far from clear between economic or income growth and effects on social capital, with decline in social capital partly inferred from a decline in desired social outcomes. The case studies also suggest that, with the exception of environmental standards, there are few specified thresholds permitting definition of any declining capital as representing the loss of some critical component of capital. The possibility of using constitutionally defined rights of individuals as a threshold has been suggested as one way of formalising thresholds in relation to human and social capital.

The absence of thresholds except for natural capital raises the question of how feasible or valuable such thresholds, say for acceptable levels of crime, voting activity, or income inequality would be for future regional policy. Political difficulties with such an approach are obvious. However, there is clear value for SD policy in at least making more transparent the levels and rates of decline that require immediate and additional policy responses, especially for social capital and social outcomes.

Given continuing policies to invest in manufactured and human capital as major drivers for regional development, the key constraints on the sustainability of regional development relate to the stock and use of natural and social capital. It is largely in relation to these two types of capital that trends indicate a decline in capital. Of course, a decline in certain types of capital is not of itself indicative of an unsustainable development path; this depends on the extent to which the decline is compensated for by increases in other types of capital. The explicit decision making of regional authorities in the case studies, at least in relation to natural capital, has demonstrated the belief that social welfare is increased with increases in manufactured capital even if this is associated with a decline in natural capital. The apparent lack of appreciation of social capital trends, and their significance directly for regional development and indirectly for social welfare, raises difficult judgements for regional authorities, especially if the assumption that general increases in employment and income levels lead to increases in social capital is challenged.

Evidence of the Contribution of the Structural Funds to SD

At the level of the programme, the evaluation has identified over past and current programming periods, an increasing level of integration of the SF programmes with broader regional development strategies. This increasing level of consistency means that the SF interventions better support regionally agreed priorities (although not usually expressed in SD terms), including those where there is an acknowledged and accepted trade-off. This consistency makes it more likely that the interventions are relevant to and supportive of SD, although until regional stakeholders formally specify SD strategies integration per se does not imply a better contribution to SD.

At the level of the measures and large projects, the assessment has sought to take account of the influences of national and regional policies on the effectiveness of SF interventions. This analysis indicates that there is a broad level of consistency, and the

case studies provide a range of examples where the SF measure is complementary to and consistent with other regional policies. However, there is clearly a measure of degree associated with this level of consistency, between passive (where policies although consistent tend to work in parallel and lack integration), and strong (where there is a high level of consistency supported by detailed integration in policy delivery). It is difficult to generalise across the range of measures. The key point is that an increased level of integration between the SF and regional policies at the level of individual measures and projects is required for a more effective contribution to SD.

The case study work and the macro-economic assessment both suggest that the SF has made a generally positive contribution to manufactured and human capital, as might have been expected. The key regional constraints to sustainability in relation to natural and social capital, identified in the regional assessments, are not however at the centre of SF programmes.

SF measures have made significant negative contributions to natural capital, as well as making contributing to significant environmental improvements, especially in Objective 2 regions. These negative effects occur largely in relation to the impacts of new infrastructure investment, especially roads. These impacts are generally an implicitly understood and accepted part of a programme of development and have been taken to provide higher levels of social welfare, by regional decision-makers. The case studies suggest however changes in the relative weight given to natural capital in determining trade-offs with a decline in natural capital becoming less acceptable in the current period. The evaluations are those of regional (and MS) decision-makers. It is not obvious that taking an EU perspective would result in a similar evaluation of the trade-offs, for example in the cases where increases in GHG have been accepted. The emergence of potential differences in the way in which trade-offs are evaluated is suggestive of the need for clearer EU criteria when evaluating SF programmes. The evidence from the cases is that resource efficiency measures are not specified as a means of managing the inevitable trade-offs.

In the case of social capital, the contribution of the SF is less clear, because of the poor level of understanding of the cause and effects between the stock of social capital, social policy outcomes, and economic development measures. However, the failure of economic development and the associated growth in employment and incomes to halt a decline in social outcomes is at least suggestive of a failure of social capital, although it is not possible to attribute this specifically to SF interventions. In some cases the observed trends in social outcomes may be a cause rather than effect of a decline in social capital.

The contribution of the SF to SD, and lessons for improving programmes, can also be considered by reference to the added value of the programmes compared to a situation lacking such interventions. Whilst a difficult and necessarily speculative analysis, the case studies suggest that the SF programmes have accelerated 'conventional' measures of regional development in the form of infrastructure, productive investments and skills development. Perhaps more importantly the SF have allowed regions to broaden and 'modernise' the policy mix to include fuller consideration of ICT and R&D, environmental measures, territorial planning and integrated urban and rural development, human resource development and measures to combat social exclusion. In doing so, the SF fosters a more comprehensive regional development policy and one that has greater co-ordination with other Community policies.

Finally, in terms of the contribution of the SF to SD, identified in the cases, a common finding has been the strong positive impact that the design and operation of SF programmes has had on the development of institutional capacity at the regional and local levels. The ability to take strategic views, adopt co-ordinated policy approaches, apply methods for policy evaluation and to adopt consultative and partnership approaches, has been strengthened. This capacity has taken a considerable time to develop, but will remain a permanent benefit in those regions receiving SF support.

4 RECOMMENDATIONS FOR CURRENT AND FUTURE PROGRAMMES

Proposals for the Mid-term Evaluation

These conclusions suggest a number of recommendations relevant to the current programmes. The main vehicle for securing revision to current programmes is the formal mid-term evaluation. This process has already started in most MS. The following tasks could be highlighted for Managing Authorities in the context of on-going evaluations:

1. When assessing progress on the integration of the horizontal priorities, consider the extent to which projects are demonstrating their contribution as a result of their basic design rather than because of 'bolt-on' extras. Review the project generation and selection approach (perhaps using the checklist in Section 7.0, Volume 2) and consider whether changes are required to better reflect the balance between vertical and horizontal priorities. Consider the role of planning and the use of partnership processes in the design of projects as a means of improving integration. In terms of the review of progress on outputs and results comment on the trade-offs that have been made between achieving vertical and horizontal priorities. The addition of eco-efficiency indicators to complement existing monitoring of horizontal priorities should be considered.
2. If there have been regional assessments of SD since programme approval: Consider whether the regional aspirations and desired policy outcomes, against which programme objectives were set, has changed significantly. Review the extent to which the objectives and targets of the programme continue to contribute to these aspirations and desired outcomes. Identify any emerging gaps that should be addressed by broadening the remainder of the programme, consistent with current regulations, to target new or revised outcomes. Highlight any implications for the Programme objectives, priorities and balance of resources between priorities to reflect new SD objectives.
3. When updating the regional assessment of economic, social and environmental trends, consider with the PMC whether there is any evidence of emerging critical thresholds. Review existing measures and the degree to which the programme might threaten particular thresholds. Consider new measures that would contribute to easing pressure on a particular threshold.
4. Review the extent to which the programme has identified the intended beneficiaries. Examine how far this is taken to include (explicitly or implicitly) the most disadvantaged households and sub-areas. Consider the need for a more explicit statement about how the programme addresses the needs of the least advantaged, and the degree to which the programme contributes to agreed regional policy goals for social inclusion and reducing social exclusion. Review the

extent and depth of partnerships and the scope for improving the targeting of the programme. A key question is how effective has been the integration of ERDF and ESF funded activities, and Objective 3 Programmes with Objective 1 or 2 Programmes.

Guidelines for the Mid-term Review

The Review seeks to advise Managing Authorities of recent policy development in so far as it might influence the remainder of the programme. This thematic evaluation study provides weight to the current policy interest and initiative in greater policy integration. This policy development is exemplified with the recent EC Communication on Impact Assessment), as well as the wider debates on SD and by the EU strategy, (which was published subsequent to the start of the current programming period).

In this policy context, the evaluation suggests that the Mid -Term Review should give greater weight to national and / or regional SD statements (new or old) and to the identification of key regional trade-offs, and hence prompt Managing Authorities to consider how well integrated the programme is in regional policy. The mid-term evaluations consider how well the programme is 'joined-up' to other policies, to a limited degree. This could be used to encourage programme changes in favour of greater regional integration.

The Review should also highlight the importance of the Project Pipeline in delivering strategies that can take regions to a more sustainable development path. In particular, the project generation process needs to be seen as the engine of the programme, but steered by the strategy, oiled by participative approaches. The use of Technical Assistance funds and other initiatives identified in Section 3.7 above, should be encouraged, to improve the level of innovation and commitment to project design and delivery.

Finally, it might be noted that there remains uncertainty, pending EU decisions, as to the nature of future regional programmes. In this context it is worth stressing the importance of succession planning for measures and projects, and working to broaden the scope for project mainstreaming.

The Preparation of the Next Structural Fund Regulation

The evaluation, building on existing EU policies, suggests ideas for a number of key principles that should inform future regulations.

Linking SD and Cohesion: The general policy aim of regional economic and social cohesion, under which the SF are justified and approved, should be restated or expanded to be clearly seen and understood as a policy for sustainable regional development. In particular, SD should be seen as an over-arching principle because it relates to the attainment of overall social welfare. It should also be made clear that the underlying objective of economic and social convergence and of balanced development, between regions, also applies within regions. Possible refinements might confirm that:

- social cohesion is concerned with inter-generation equity as well as with inter-regional equity and therefore refers to the ability of society to access resources (including environmental resources) now and in the future; and that
- economic and social convergence at the EU level has to be based on sustainable development at the regional level.

Starting with regional SD statements: Given that programmes have to promote SD at the EU, MS and regional levels, then SF programmes can only be properly formulated where there is a regional SD statement (or national in the case of CSFs). The presence of such a statement, setting out regional aspirations, aims and objectives, should be considered a condition of establishing the need and relevance of a SF programme. The regional development programme should then be clearly defined in relation to the statement, setting out its relevance to SD by reference to the complementarity and consistency of the intended programme results and impacts with SD objectives and the desired regional outcomes. This relevance would be tested in the ex-ante evaluation. This integration of SD into regional objectives and programme priorities from the statements would avoid the need for horizontal priorities and simplify programme design and delivery.

Establishing a hierarchy of objectives and associated evaluation system: The priorities in future programmes should be determined by reference to stated regional SD statements, and criteria describing the key SD issues. Working from criteria in the statement to programme priorities allows, in principle and depending on the quality and consensus behind the SD statement, a hierarchy of objectives to be formulated. The achievement of higher order objectives would then be directly linked to the achievement of lower order objectives, where higher order objectives were in part dictated by a desire to respond to key trade-offs or to build win-wins.

For example, one criterion in the regional SD statement might relate to the need for improved resource efficiency. A programme priority could be defined in relation to sustainable sectoral development, with a measure defined for say sustainable tourism, and with projects explicitly optimising economic, social and environmental benefits in the sector (rather than aiming to maximise economic benefits with the addition of certain mitigation activities).

This hierarchy of objectives also has implications for the monitoring system; with measurement of higher and lower order objectives, allowing some appreciation of the direct and indirect effects. At the same time, the measurement of regional SD criteria through a chosen basket of indicators would provide the programme's contextual indicators. The evaluation system should also define targets not just in terms of desired economic impacts but also desired social and environmental impacts.

Establishing the EU added value and use of criteria. The EU SD Strategy, Community Policies and previous evaluations of SF activities, provide a basis for establishing criteria which the EC would apply in assessing the sustainability of proposed development programmes, and the added value to the EU of the SF expenditure. These criteria would relate to the four types of capital, or three pillars, and be used to check the proposed sustainability of the programme from the EU perspective. Published criteria would allow programmes to respond. The sensitivity of the proposed results and impacts to non-regional policy would need to be included. These criteria might relate to (using the current typology of interventions – this might well change in future programmes depending on the defined nature of EU regional policy) preferred types of infrastructure (e.g. collective transport), requirements for business support (e.g. EMAS, waste recycling, training requirements), requirements for training (e.g. links to target beneficiaries or areas). Further elaboration of some of these requirements is given below.

Building on the experience of the Community Initiatives in future programmes. The evaluation has highlighted the strong contribution of the Community Initiatives to the improved integration of both policy and of policy making and delivery processes in

those areas where they have been implemented. The experience and lessons are an important element of the current SF added value and need to be reflected (especially in the light of full ex-post evaluations) to a much greater degree in future programmes.

Use of incentives to support accelerated moves to a more sustainable development path: The introduction of incentives agreed with Managing Authorities designed to encourage moves to a more sustainable development paths offer a possible tool for the EC, especially when criteria defining preferred investments are more explicit. However, their introduction inevitably complicates programme procedures, and risks the possibility of perverse effects. Two options might be either the generation of criteria indicating the preferred forms of intervention tied to different rates of grant, or a Performance Reserve available to those regions that are deemed by the EC, using the criteria, to have best achieved steps to a more sustainable development path.

Integrating SF funding sources: The SF programmes are increasingly being integrated within broader regional development programmes as a response to the need to improve policy coherence. Where there is a common set of objectives, the delivery of integrated policy is inhibited by the need to co-ordinate different funding sources. The effective delivery of future development programmes could usefully be supported by a single funding source, rather than several funds, directed and managed by a wide range of relevant stakeholders and interest groups. An alternative approach would be to have a '3 pillars' fund, adding an explicit environmental fund to the social and economic funds, but managed in an integrated manner. The present benefit of the different funds of generating engagement with a wide range of stakeholders would be retained through the involvement of the full range of stakeholders in the preparation of the regional sustainable development statement.

The Preparation of SF Programmes, Post 2006

The main direction of regional policy making and the SF, identified in the case studies, is towards the increasing integration of SF, firstly, within region wide economic development strategies and, secondly, within broader regional development strategies, which, in the case of Andalusia for example, are designated regional sustainable development strategies. This trend is consistent with the drive in a number of Member States (the UK, NL and Germany prominent among them) for a more integrated approach to policy making that seeks to avoid so called 'silo' thinking and to consider explicitly links between policies. The trend is also acknowledged in the recent EC Communication on Impact Assessment, and also informed by the very positive contribution to SD that were identified in the case studies from the Community Initiatives, especially Leader and Urban.

In this context, and in the light of the principles established above, the evaluation suggests a number of recommendations to future Managing Authorities:

1. *SD and Balanced Development:* All programme submissions should be accompanied by a statement describing how the programme will impact on the spatial pattern of development of the region over a 10 year or more period; and how territorial responses (spatial planning) will be used to integrate the range of regional objectives within the SF programme. This should indicate how the programme will be managed to contribute to stated objectives for spatial development and the achievement of the desired balance of development, including the extent of targeting to relieve areas sensitive to 'over heating' or to benefit particular areas of disadvantage. This statement should explain the consistency between the programme and the spatial development perspectives. In particular it should describe how this consistency will lead to improved resource

management, (for example in relation to the management of travel demand or the demand for natural resources such as water), and support social cohesion, (for example through targeting disadvantaged households and communities).

2. *Specification and Management of Trade-offs:* The regional needs assessment, (SWOT analysis) submitted as a basis for funding, should include a detailed analysis of the expected trade-offs and win-wins from a programme of accelerated regional economic and social development. The acceptability of significant trade-offs should be clearly described by reference to the results of regional consultation and stakeholder involvement. Programmes should be encouraged to specify those measures that are intended to address directly the trade-offs identified or to secure the win-wins. Note that more severe trade-offs may require more expensive and longer-term responses – and hence may justify additional funding, i.e. there should be an incentive to highlight rather than obscure trade-offs and policy responses.
3. *Integrated Sustainability Assessment:* Ex-ante evaluations should be designed to specify how programmes lead to different economic, social and environmental consequences, what trade-offs are therefore likely, and what measures could address the trade-offs. The ex-ante evaluation should also examine the degree of policy integration and the extent to which the programme addresses the wider set of desired policy outcomes. The evaluation of the contribution of the programme to the set of regional outcomes will need to apply a multi-criteria approach (MCA) to evaluation using the SD objectives, based in part on detailed qualitative analyses and by reference to identified benchmarks of good practice.
4. *Added Value:* The case studies indicate that the added value of the SF lies in large part in the modernisation of the conventional regional development programme, in part helping to respond to a more integrated regional agenda. Whilst acknowledging the value in an acceleration of the development of basic infrastructure and skills, the SF contribution could be more explicitly used to challenge regional stakeholders to consider alternative development paths. The EU perspective on key trade-offs could be developed, based on the EU SD strategy, and by reference to criteria that could guide policy responses, and the allocation of SF, to address constraints on sustainable regional development relating to natural and social capital. In doing so, the SF could seek to secure an accelerated move to more sustainable development paths, and to address the otherwise incremental approach to regional development.
5. *Addressing Key Constraints:* The evaluation has indicated that the policy responses to the main constraints to regional SD, in relation to natural and social capital, are not well integrated within SF programmes. In the case of natural capital, there is little attempt to de-couple the use of natural capital from economic development, by integrating resource efficiency within interventions (for example by having SD responses for key sectors). In the case of social capital, there are strong social policies directed to achieving desired social outcomes, and which incorporate attempts to build, implicitly at least, social capital. However, this is not 'coupled' with SF programmes. Future SF programmes have to address these constraints if they are to further enhance SD.
6. *Capacity of Regional Bodies:* Delivery of the SF has, over the programming periods, encouraged regional bodies to develop the capacity necessary to plan, manage and monitor programmes of economic and social development. This capacity has taken a considerable time to build up. The potential weakness in the capacity of regional bodies in the Candidate countries has been widely recognised,

with pre-accession programmes directed to building relevant capacity. However, capacity is still likely to be limited. Experience has shown that the capacity is in large part a function of the competencies of a few senior managers, capable of providing direction, appraisal methods (especially financial and environmental) and stimulating partnership approaches and project pipelines. The further development of an explicit staff exchange system with chosen ‘animateurs’ in both the Candidate countries, and in existing Managing Authorities / PMCs, would facilitate the accelerated learning required of the Candidate countries.

This could be complemented by increased support for inter-regional networks of competent environmental and social authorities represented on PMCs. Pilot Community Initiatives (Urban and Leader) might also be considered as a means of encouraging skills in territorial integration and local co-ordination. In terms of SD implementation more generally, Annex 6 sets out a checklist for “Improving Policy Coherence and Integration for Sustainable Development”, that has been developed from the findings of five case studies in OECD countries. It aims to contribute to building longer-term governance for sustainable development, and could be developed as a useful tool for improving mechanisms to support SD at the policy level.

7. *Stimulating the Project Pipeline:* The ability of stakeholders to generate innovative projects that contribute to SD needs to be enhanced. The programme submissions, especially when outlining preferred strategies, should indicate clearly the methods for project generation, the extent and breadth of local level participation by stakeholders in the process, and the lead times available for project generation. Managing Authorities and Programme Monitoring Committees should provide significant levels of technical assistance and support to potential project holders to understand and to integrate the broader sets of requirements in project design and implementation and encourage appropriate initiatives by potential project generators. There are a number of initiatives that could be developed and promoted. These include:
 - support for capacity building among smaller organisations in relation to application and management, perhaps through ‘mentoring’ schemes;
 - providing outreach activities using SD theme managers to raise awareness, perhaps using ‘model’ projects to illustrate and stimulate ideas; and
 - ensuring the PMC has both the necessary breadth of coverage of stakeholder interests and the depth of experience of SD to advise potential applicants. Evidence of existing mechanisms, and support to ensure that they are of sufficient quality, could anticipate the formal request for programmes.
8. *Indicative Projects:* The review of project pipeline experience in the case studies suggests the need for earlier consideration of how strategies are going to be delivered, if the dependence on large ‘off the shelf’ projects is to be avoided and innovation stimulated. This argues for a requirement to consider indicative projects in tandem with strategy development. The process of project generation needs to give early consideration of how to benefit from ideas that have community support and participation. This in turn requires suitable mechanisms for the necessary dialogue, dissemination and feedback, at regional and at neighbourhood level.

Concluding Observation

The SF have progressively increased their contribution to SD, as regional decision-makers have begun to understand the integrated nature of regional development, and to recognise the need to relate investment programmes not just to economic or employment outcomes, but also to social and environmental goals. The growing idea and awareness of the three pillars among regional policy makers, the push for improved integration in policy design, and the better understanding of trade-offs and win-wins, provide a supportive context within which the SF can better contribute to SD.

In order to rise to the challenge the SF has to be seen as an agent for SD as well as the achievement of cohesion. Across the regions, recognising differences in the effectiveness of different programmes, there remains scope for a considerable improvement in the extent and manner in which the SF contribute to SD. As an EU policy tool, the SF, with due initiative and improvement, has the potential to be a constructive motor for SD. The SF provide the opportunity to challenge regions to accelerate to a more sustainable development path, to embrace a model of development that better addresses the constraints to sustainable development, and which in turn fosters an improved quality of life now and in the future for regional and EU citizens.

1 INTRODUCTION

1.1 Aim of the Study

The aim of the study has been to understand the contribution that the EU Structural Funds (SF) have made, and can make in the future, to sustainable development (SD). In doing so, the work has sought to develop and test approaches and analyses that improve the definition of sustainable development and enable a better integration of sustainable development in EU regional policy objectives for economic and social cohesion. The consequent implications for the design and delivery of Objective 1, 2 and 3 Programmes and selected Community Initiatives, funded by the (SF) have therefore to be identified.

Sustainable development is already a horizontal priority (complementing the vertical priorities for economic development) in SF programmes. But there is a desire to improve the contribution of SF to the achievement of SD, partly by improving an understanding of the regional context within which Programmes are delivered, partly by refocusing regional development strategies and partly by improving the quality of projects submitted for funding. The concept of SD for the purposes of this project is based on the four capitals model, as proposed by the Terms of Reference. Annex 1 provides an extended introduction to this concept.

The outputs and deliverables of the project are intended to support the various stakeholders (EC desk officers, national, regional and local government officers, managing authorities, programme monitoring committees) to improve the contributions that Objective 1, 2 and 3 Programmes, the Cohesion Fund, and Community Initiatives can make to SD. This support comprises the development of concepts, methods and tools in this study, and their translation into practical guidance in non-technical language.

The points at which guidance might be provided, in the process of SF Programme design and delivery, are suggested in Annex 2. The Terms of Reference emphasise the importance of the project pipeline (i.e. the process through which projects are defined, designed and brought forward for funding) in this process.

1.2 Objectives of the Study

The evaluation has the following specific objectives (as specified in the terms of reference):

- To develop methods, indicators and approaches for the evaluation of regional SD;
- To identify ways throughout the delivery systems for SF to generate better projects promoting SD;
- To identify the main policy trade-offs being made in regional development policies either explicitly or implicitly.

The resulting evaluation will be used:

- To provide tools and methodologies which can assist regions, Member States and the EU in assessing the sustainability of their development plans;

- To enhance the sustainability of the SF programmes in the 2000-2006 period, for example in the context of the mid-term programme reviews;
- In the preparation of SF policies beyond 2006.

1.3 Sustainable Development

Sustainable development (SD) is variously defined as either meeting human needs or increasing quality of life, both now and in the future. The Brundtland Report defined SD as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” At its simplest it means “development that lasts”. That is, a path along which the maximisation of human well-being for today’s generations does not lead to declines in future well-being.

Meeting human needs and increasing quality of life may be regarded as the ‘development’ part of sustainable development. Being able to maintain this into the future may be regarded as the ‘sustainability’ part. Meeting human needs and increasing quality of life may be regarded as increasing human welfare or well-being (through consumption, satisfying work, good health, rewarding personal relationships and well functioning social institutions, and the full range of environmental goods and services). Doing so sustainably requires that the capital stocks, from which the benefits of human needs satisfaction and increased quality of life derive, are maintained or increased over time. Development is considered to be sustainable if and only if the stock of capital (wealth) remains constant or rises over time.

Sustainable development as defined above is entirely consistent with the EU SD strategy (see below), which defines SD using the Brundtland definition, and with the recent EC Communication on (sustainability) Impact Assessment, that considers the pursuit of SD as requiring the closer integration of economic, social and environmental policies (the so-called three pillars approach). The requirement for closer integration of these three pillars generally forms the basis of most ideas of how to secure a more sustainable form of development through time.

For the purposes of this study the three pillars have been extended into a four capitals idea of SD, which separates out issues dealing with individuals (such as their education and health, skills, innovation, and entrepreneurship) from the economic and social pillars. This allows the economic pillar to be defined in relation to human made assets (buildings, infrastructure, businesses) and the social pillar to be defined in relation to inter-relationships between individuals (in the context of local or informal networks, or formal institutions of government and governance networks). The environmental pillar is unchanged.

The extension of the three pillars idea still maintains a recognition that social welfare is determined by more than economic development. However, the four capitals approach allows a more explicit focus on assets as the basis of the services that provide social welfare, and detailed consideration of human capital, both important in the context of the SF, which explicitly seeks to invest in assets including skills and competencies. It also provides a decision rule for defining unsustainable development, and for judging more from less sustainable development paths, based on an explicit recognition of the normative basis of SD.

This ‘four capitals’ model therefore operationalises the more established idea of SD as comprising the integration of the three pillars of the economy, society and the environment. The ‘four capitals’ model also considers development (and the meeting of needs and aspirations) to take place through the services provided by economic,

human, social and environmental assets. Development is then considered to be sustainable if and only if the stock of assets or capital (wealth) per capita remains constant or rises over time. We develop further the operational definition of SD in the next section.

1.4 Policy Context

The policy context for this study can be traced back to 1992, and the Maastricht Treaty on the European Union. This Treaty added further environmental objectives to the original objectives in the Treaty of Rome, stating that “the Community shall have as its task, [....] a harmonious and balanced development of economic activities, sustainable and non-inflationary growth respecting the environment ...” (Article 2). In 1993, the Council of Ministers adopted the 5th Environmental Action Programme (5EAP) “Towards Sustainability”, covering the period 1993-2000, which committed the EU to promote sustainable development through its policies and actions.

The Treaty of Amsterdam in 1998 went further by adopting the threefold definition of sustainable development and stating that the Union's financial instruments should work, simultaneously and in the long-term interest, towards economic, growth, social cohesion and the protection of the environment. Thus, Article 6 states that “environmental protection requirements must be integrated into the definition and implementation of community policies and activities [...] in particular with a view to promoting sustainable development”. This represented an important shift in emphasising the importance of SD in all community policies.

The issue of sustainable development has also been regularly addressed at the summit meetings of the European Council. Beginning with an agreement to develop a structured reporting system on the issue of SD at the Luxembourg Council in 1997, subsequent Councils have progressively considered environmental integration strategies in sectoral policies, environmental appraisal as part of policy development and the mainstreaming of environmental policies. Further progress was made in 1998, when the Commission presented a Communication to the European Council in Cardiff on “Partnership for Integration – A Strategy for Integrating Environment into EU policies”. At the most recent, Gothenburg Council (July 2001), the summit adopted a Sustainable Development Strategy (SDS), encouraging the assessment of environmental aspects, as well as social and economic aspects, in the drafting of all future policy documents (see Box 1.1 for details of the SDS).

Box 1.1: EU Sustainable Development Strategy

In May 2001, the Commission presented its Sustainable Development Strategy, in which it recommended urgent action and a new approach to policymaking to improve policy coherence. It declared that all policies must have sustainable development as their core objective. This strategy was adopted at the Gothenburg Council in July 2001.

The Commission had identified six important trends that pose a threat to sustainable development in the EU: climate change; dangers to public health; increasing pressure on vital natural resources; poverty and social exclusion; an ageing population; congestion and pollution.

European Councils at Lisbon, Nice and Stockholm already agreed objectives and measures to tackle two of the six issues: combating poverty and social exclusion, and dealing with the economic and social implications of an ageing society. This strategy does not propose new actions in these areas, but focuses on the following four areas:

1. Limiting climate change and increasing the use of clean energy: The EU must meet its Kyoto commitments

2. Addressing threats to public health: Food safety and quality should be the objective of all players in the food chain.
3. Managing natural resources more responsibly: Biodiversity must be better protected and the pressure on natural habitats reduced.
4. Improving the transport system and land use: Economic growth should not mean continually rising pollution and congestion from transport.

The Commission reports to each Spring European Council on progress in implementing the Sustainable Development Strategy, through actions proposed under each field.

At Gothenburg, the Sixth Environmental Action Programme was also adopted, specifying the guidelines for environmental work within the EU over the next ten years. Apart from specifying priority areas for future action, the programme moves towards clearer specification of its strategic objectives and, crucially, the need to define measurable goals and timetables in areas such as land use, the urban environment and resource use.

As a means of monitoring EU change and development in all fields, the European Commission also adopted in 2001 a Communication on the Structural Indicators that will be used to assess progress towards achieving the economic and social goals set by the March 2000 Lisbon European Council. The main change to the list of Structural Indicators is that a new domain on the environmental aspects of sustainable development has been incorporated into the list, reflecting the outcome of the Gothenburg Council. This domain includes new indicators on climate change, sustainable transport, threats to public health and managing natural resources. New indicators have also been added on the gender pay gap, quality of work, science and technology doctorates and market structure in the network industries. These new indicators reflect the Commission's concern with the raft of economic, social and environmental factors that make up a broader view of sustainable development.

1.5 The Structural Funds and Sustainable Development

Following the publication of the "Agenda 2000" document, the 1999 Structural Fund (SF) Regulations further strengthened the requirements for the inclusion of the two horizontal themes of environmental sustainability and equal opportunities in the 2000-06 programmes, making them more systematic and extensive. Council Regulation 1260/1999 relating to the SF states that in the "efforts to strengthen economic and social cohesion, the Community also seeks to promote the harmonious, balanced and sustainable development of economic activities, a high level of employment, equality between men and women, and a high level of protection and improvement of the environment. [...] Efforts should in particular integrate the requirements of environmental protection into the design and implementation of the operation of the SF and help to eliminate inequalities, and promote equality, between men and women."

The integration of environmental issues as a horizontal theme in the 2000-06 programming period is articulated around a comprehensive framework, with environmental considerations featuring under most of the main headings addressed by the Regulations: programme preparation, content, monitoring, evaluation and information. The Vademecum and other Commission Working Papers and Technical Documents further specify the regulatory requirements and suggest methods for compliance.

Thus, many programmes under the current period include projects that relate explicitly to environmental sustainability, such as projects promoting eco-industries. These so-called 'positive action' projects have an important role to play in addressing attitudes and changing perceptions of those involved in managing and implementing the programmes. However, they are only one component of the overall aim of the Commission, which is to 'mainstream' these horizontal themes, integrating them across all stages of programming including in monitoring and evaluation, and into all policies pursued. Thus the two concepts are both necessary and complementary, with 'positive action' projects paving the way for more comprehensive mainstreaming.

There were also other key changes to the workings of the programmes between the previous and current periods. One of the main changes involved delivery, and the introduction of partnerships that encompass a wide range of economic, social and environmental actors. Environmental impact legislation was also strengthened between the two programming periods, further reinforcing the move towards more comprehensive impact assessment. At the project level, the requirement for cost benefit analyses of large projects has also confirmed this commitment.

There were also changes in the way that the Commission sought to impose its 'will' in different national and regional contexts, for example, through the designation of the Natura 2000 sites. This change in the 'balance of power' between the Commission and the national / regional authorities is reflected in the Commission's capacity to influence member state management structures, procedures and policy, and its greater involvement with managing authorities.

These changes have been implemented to differing degrees in the different member states, partly due to the different 'starting positions', and partly as a function of the willingness of national and regional authorities to embrace the changes.

1.6 Case Study Approach

The basic approach to the study has been to examine the contribution of selected SF interventions in a series of selected regional case studies. Twenty case studies have been selected (Table 1.1), to provide:

- The required number of CSF cases and Objective 1 and Objective 2 regions;
- A broad coverage of Member States;
- Coverage of important programmes because of size or innovation; and
- Analysis of a broad range of urban and rural circumstances, enabling a reasonably comprehensive inclusion of the major trade-offs.

Each case study has three parts:

- Part A – providing a regional assessment of the key trends and trade-offs affecting sustainable development, and hence a series of criteria against which to assess the contribution of SF interventions
- Part B – providing an assessment of the selected SF interventions against the chosen criteria, as defined using relevant indicators of regional change (or regional pathways)

- Part C – providing a review of programme management arrangements, especially with respect to the project pipeline, as the basis for advice on future management arrangements.

Table 1.1: The Selection of Case Study Regions

| Member State | REGIONAL CASE STUDIES | | | |
|----------------|---------------------------------|---|----------------------------|-------|
| | CSFs | Objective 1 | Objective 2 | Total |
| Belgium | | | Antwerp | 1 |
| France | | Nord Pas de Calais | Midi-Pyrénées | 2 |
| Germany | CSF/OP objectives in new Länder | Saxony | Nordrhein Westphalia (NRW) | 3 |
| Greece | CSF/ OP objectives for Greece | Thessalia | | 2 |
| Ireland | | Infrastructure OP | | 1 |
| Italy | | Calabria Campania | | 2 |
| Netherlands | | | Gelderland | 1 |
| Portugal | CSF/ OP objectives for Portugal | Norte | | 2 |
| Spain | | Andalucia (as two) – coastal & hinterland | Catalonia Navarra | 4 |
| Sweden | | | Västra Götaland | 1 |
| UK | | | West Midlands | 1 |
| Total Selected | 3 | 9 | 8 | 20 |

Note: The Sectoral programmes, Community Initiatives, Large projects and Cohesion Fund projects are analysed within the regional case studies.

The selection of measures and projects for assessment within the regional case studies have been guided by the following criteria:

- Coverage of all SF interventions (not just Objective 1 or 2)
- Coverage of interventions in previous as well as the current programming period
- Key measures, especially where there has been some continuity of intervention between periods
- Larger projects

- Innovative projects

Table 1.2: Total Funding (2000-2006) in the Selected Case Study Regions (Million Euro)

| Member State | Regions | Obj Status | Total GVA 2001 (1995 Meuro) | Total Fund | Total EU | of which: | | | | | Other Public | Private |
|--------------|-----------------|------------|-----------------------------|------------|----------|-----------|-----|-------|------|----------|--------------|---------|
| | | | | | | ERDF | ESF | EAGGF | FIFG | Urban II | | |
| Belgium | Antwerp | 2 | 42,719 | 143 | 38% | 77% | 10% | 0% | 0% | 13% | 52% | 10% |
| France | Nord P Calais | 1 | 66,690 | 1,118 | 35% | 65% | 25% | 10% | 0% | 0% | 42% | 23% |
| | Midi-Pyrénées | 2 | 48,558 | 1,450 | 28% | 83% | 17% | 0% | 0% | 0% | 55% | 17% |
| Germany | Saxony | 1 | 67,935 | 11,255 | 43% | 63% | 23% | 14% | 0% | 0% | 20% | 37% |
| | NRW | 2 | 427,011 | 3,598 | 27% | 85% | 15% | 0% | 0% | 0% | 28% | 45% |
| Greece | Thessaly | 1 | 6,089 | 939 | 61% | 70% | 7% | 21% | 0% | 2% | 19% | 20% |
| Ireland | Infrastructure | 1 | 74,625 | 1,480 | 58% | 100% | 0% | 0% | 0% | 0% | 42% | 0% |
| Italy | Calabria | 1 | 20,771 | 5,878 | 34% | 58% | 20% | 20% | 1% | 1% | 30% | 36% |
| | Campania | 1 | 61,636 | 9,231 | 42% | 65% | 16% | 17% | 1% | 0% | 33% | 26% |
| Netherlands | Gelderland | 2 | 36,701 | 979 | 35% | 100% | 0% | 0% | 0% | 0% | 58% | 7% |
| Portugal | Norte | 1 | 25,740 | 4,650 | 59% | 75% | 17% | 8% | 0% | 0% | 34% | 7% |
| Spain | Andalucia | 1 | 67,041 | 11,733 | 67% | 78% | 12% | 10% | 0% | 0% | 33% | 0% |
| | Catalonia | 2 | 95,872 | 2,664 | 47% | 78% | 21% | 0% | 0% | 1% | 53% | 0% |
| | Navarra | 2 | 8,647 | 207 | 49% | 85% | 4% | 0% | 0% | 11% | 45% | 5% |
| Sweden | Västra Götaland | 2 | 33,671 | 431 | 29% | 92% | 8% | 0% | 0% | 0% | 34% | 37% |
| UK | West Midlands | 2 | 58,512 | 2,268 | 38% | 83% | 17% | 0% | 0% | 0% | 40% | 22% |

Source: DG Regio and Cambridge Econometrics

Note: Västra Götaland: Data for Vastsverige, which includes Västra

1.7 Structure of The Report

The report is structured as follows:

- Section 2 summarises the ideas of sustainable development used in the study and the associated method (summarising the detail given in Volume 2)
- Section 3 summarises the findings from the case studies
- Section 4 summarises the results from the macro-economic assessment
- Section 5 provides conclusions on the methods used and lessons for further use
- Section 6 identifies the main lessons from the work as a basis for proposals for the present and future programming periods.

Annexes are also presented, where additional detail is required.

2 OUTLINE OF THE ANALYTICAL FRAMEWORK

Volume 2 of the synthesis report sets out the analytical framework for the study. This section provides a summary of key aspects of the framework, relevant to an appreciation of the approach to the study. Volume 2 provides a fuller discussion.

2.1 Operational Definition of Sustainable Development

For the purposes of this study, the operational definition of sustainable development is **the provision of services and benefits that increase human well-being without causing a decline in capital stocks per capita**. Capital stocks (assets) provide a flow of goods and services, which contribute to human well-being. Types of capital that sustain well-being – because of their levels and distribution – include man-made, natural, human and social capital. Box 2.1 elaborates the four kinds of capital.

Other types of capital have been put forward, principally among them financial capital. However, financial capital, and the financial system through which it acts, may better be seen as a type of social capital, a conventional way of allocating and representing the power to mobilise the other four kinds of capital which have the real inherent power to deliver benefits. This is an important point because the SFs which are the subject of this evaluation are themselves financial capital, and in fact this clarifies the essential nature of this type of capital as social capital. These Funds are the product of a political process which has determined their allocation to certain regions of the European Union in order to achieve certain social and economic objectives. They represent the power to mobilise and create other kinds of capital rather than embodying real productive power themselves. The evaluation seeks to determine the extent to which they have been successful in the exercise of this power, and to recommend guidelines and procedures for their deployment in the future. These guidelines and procedures will themselves be further examples of social capital, if their effect is to enable the SFs more effectively to achieve their objectives.

Box 2.1: Types of Capital

Four kinds of capital have been identified:

Manufactured Capital

Manufactured (or human-made) capital is what we traditionally consider as capital: produced assets that are used to produce other goods and services. Some examples are machines, tools, buildings, and infrastructure.

Natural Capital

In addition to traditional natural resources, such as timber, water, and energy and mineral reserves, natural capital includes natural assets that are not easily valued monetarily, such as biodiversity, endangered species, and the ecosystems which perform ecological services (e.g. air and water filtration). Natural capital can be considered as the components of nature that can be linked directly or indirectly with human welfare.

Human Capital

Human capital generally refers to the health, well-being, and productivity potential of individual people. Types of human capital include mental and physical health, education, motivation and work skills. These elements not only contribute to a happy, healthy society, but also improve the opportunities for economic development through a productive workforce.

Social Capital

Social capital, like human capital, is related to human well-being, but on a societal rather than individual level. It consists of the social networks that support an efficient, cohesive society, and facilitate social and intellectual interactions among its members. Social capital refers to those stocks of social trust, norms and networks that people can draw upon to solve common problems and create social cohesion. Examples of social capital include neighbourhood associations, civic organisations, and co-operatives. The political and legal structures which promote political stability, democracy, government efficiency, and social justice (all of which are good for productivity as well as being desirable in themselves) are also part of social capital.

Meeting human needs and increasing quality of life may be regarded as increasing human welfare or utility (through consumption, satisfying work, good health, rewarding personal relationships and well functioning social institutions, and the full range of environmental goods and services). Doing so sustainably requires that the capital stocks from which the benefits of human needs satisfaction and increased quality of life derive are maintained or increased over time.

This immediately raises the question as to whether it is the total stock of capital that must be maintained, with substitution allowed between various parts of it, or whether certain components of capital are non-substitutable, i.e. they contribute to welfare in a unique way that cannot be replicated by another capital component. With regard to natural capital, Turner (1993, pp.9-15) identifies four different kinds of sustainability, ranging from very weak, which assumes complete substitutability, to very strong, which assumes no substitutability so that all natural capital must be conserved. The assumption of the former is implicit in the so-called 'Hartwick rule' (Hartwick 1977), namely that, provided that the resource rents from the exploitation of exhaustible resources are invested in manufactured capital, per capita consumption can remain constant indefinitely over time. Very strong sustainability has been called "absurdly strong sustainability" (Daly 1995, p.49) in order to dismiss it from practical consideration. Turner's more interesting intermediate categories are:

- Weak environmental sustainability, which derives from a perception that welfare is not normally dependent on a specific form of capital and can be maintained by substituting manufactured for natural capital, though with exceptions.
- Strong environmental sustainability, which derives from a different perception that substitutability of manufactured for natural capital is seriously limited by such environmental characteristics as irreversibility, uncertainty and the existence of 'critical' components of natural capital, which make a unique contribution to welfare. An even greater importance is placed on natural capital by those who regard it in many instances as a complement to man-made capital (Daly 1992, pp.27ff.).

The point at issue is that substitution of one form of capital for another has the potential to lead to an overall decline in total capital, and hence unsustainable development. The potential for unsustainable development lies in the trade-offs made between different forms of capital, and the degree to which:

- Any decline represents a breach of some critical threshold, and if not whether
- Any decline in one form is compensated by increases in other forms.

The existence and nature of trade-offs needs to be understood empirically, not withstanding the fact that the determination of unsustainable development is essentially normative in terms of the extent of compensation and the existence of critical thresholds.

2.2 Principles of Sustainability

As noted above, sustainable development entails meeting human needs and increasing quality of life now and in the future. The process is often regarded as having economic, social and environmental dimensions which shows quality of life being generated directly by natural (also often called environmental) and social capital, as well as through the economic process of production. If there are concerns that current modes of development (meeting human needs and increasing quality of life) are unsustainable, it is interesting to consider whether these concerns largely have an economic, social or environmental basis (or some mixture of the three). Further, are there principles or criteria of sustainability which could be applied across these dimensions to facilitate judgements as to whether development is sustainable or not, i.e. whether there are critical thresholds that can be defined in addition to those already reflected in environmental standards.

With regard to the economic dimension, economists have long had guidelines as to whether economic growth and development should be regarded as sustainable. The rate of inflation, public sector net credit requirement, and balance of payments, among others, are all considered to be important indicators of economic sustainability. The sustainable development idea has brought little new to this particular sustainability dimension.

In contrast, the idea of social sustainability is both far less developed and seems much more intractable. Doubtless it is true that social sustainability is affected by such conditions as poverty, inequality, unemployment, social exclusion and the corruption or breakdown of social institutions. But the relationship between sustainability and these conditions is clearly very complex and quite different as between different societies. It seems unlikely that a social sustainability threshold for unemployment or inequality, comparable for example to the target rate of inflation for economic sustainability, will be identified. What seems more important in this case is to ensure that the direction of change is towards what is considered necessary for sustainability, rather than the attainment of some particular number (e.g. full employment). This evaluation has sought to generate insights about the direction of change in social capital and the contribution of the SF to these trends. However, the evaluation has not done so in relation to targets or thresholds of social sustainability.

The environmental dimension of sustainability is different from both the economic and social dimensions, in that it is possible to articulate principles of sustainability based on scientific evidence, and thence to derive thresholds and standards for environmental sustainability, according to which it is possible to distinguish between sustainable and unsustainable use of the environment and the functions which it performs for people. An important part of the evaluation of the contribution of the SFs will be to determine whether and to what extent they have contributed to trends in relation to environmental sustainability thresholds and standards.

2.3 Levels of Analysis

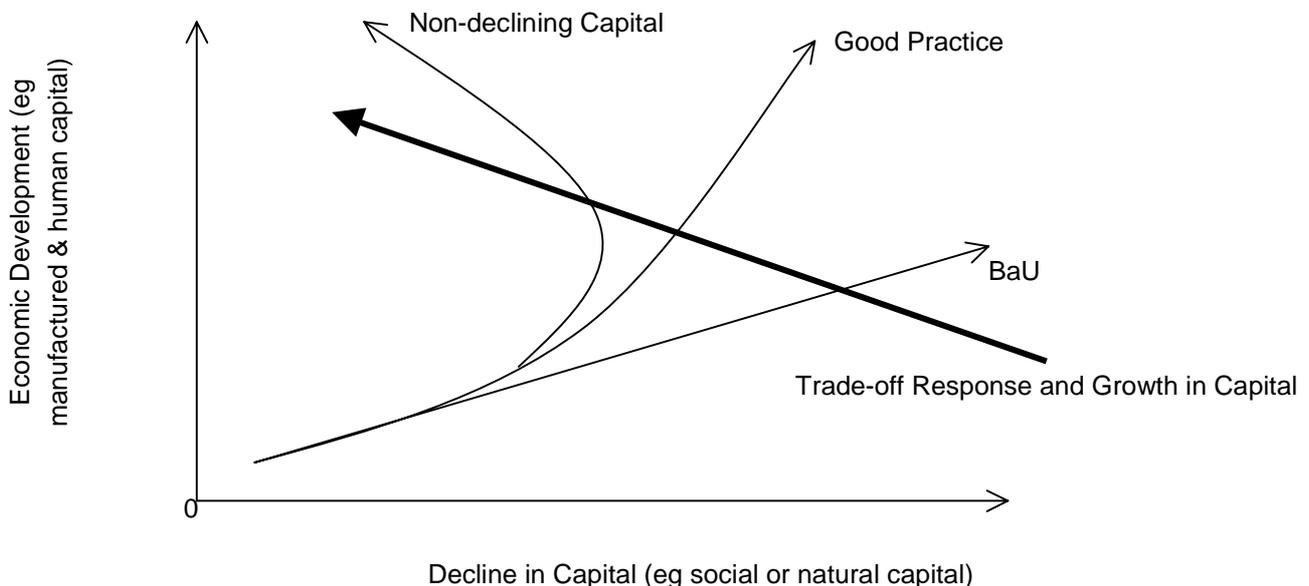
The evaluation is based on the region as the unit of analysis (although there are a number of MS level cases based on the CSFs). This means that the focus is on the regional perspective, as articulated in the case studies, of various stakeholders as to the importance of particular regional trends, the identification of specific trade-offs and the ways in which trade-offs are evaluated. There are obviously also national and EU perspectives on these matters, but the evaluation has sought to focus on the regional (and sub-regional and local) level. This means that non-regional perspectives and policies are taken as given in shaping regional policy. The evaluation has considered

policy interfaces, but essentially only at the regional level. To broaden the evaluation to examine the interface between regional policies and the set of national and international policies has not been possible, except by reference to the relationships between national and regional SF programmes in the cohesion countries. The further examination of vertical policy integration, between levels, represents an important area for further work.

2.4 Regional Development Paths

The idea of managing trade-offs, and of seeking to minimise the decline of capitals, in line with society's preferences, can be simplified. In Figure 2.1, below, the regional development path is shown (BaU), based on optimising between different capitals. In the longer term, in order to expand total capital and to repair depleted capital, regions will seek, subject to society's preferences, to minimise the trade-offs using good practice. In the long run regions would be looking to avoid a decline in capital and to secure win-wins through policy responses, as indicated by the bold arrow.

Figure 2.1: Regional Development Paths



This heuristic tool seeks to conceptualise regional (or national or EU) development as being one of a number of alternative development paths through time. These development paths vary in their sustainability as identified through the nature and scale of trade-offs in different forms of capital. Development paths that are more sustainable have fewer and less severe trade-offs that are considered to threaten sustainability. The move towards more integrated policy in recent years that actively seeks to understand the links between policies and to anticipate and manage adverse consequences provides the basis of good practice policy responses. The most sustainable path is one where the development is either not subject to declining stocks of capital, or where any decline is wholly understood and accepted by society as not representing a threat to a given threshold and as representing a means of increasing overall social welfare now and over time.

The value of the tool rests in its application by stakeholders in framing future policy. In particular it requires recognition of the importance of time and the assessment of trends for sustainability. It forces explicit consideration of current and future trade-offs.

It also enables stakeholders to ask the question of whether there are alternative and more sustainable development paths for the region and what they might look like, and to consider explicitly the types of policy response that would secure a change from existing to alternative paths. In doing so it allows a challenge to prevailing trends and to inertia in policy making caused by an acceptance that the only way to develop is by continuing on the present path.

This implies that the development path can be the subject of or described by a vision and strategic policy goals; and that the move towards more sustainable paths requires strategic responses to trade-offs, requiring some conflict resolution, through public policy and public policy agencies. This would note that there are some regional level trade-offs that are outside the direct influence of regional stakeholders, and which require policy responses at higher levels; with the attendant need to integrate across policy levels.

2.5 The Use of Indicators

The measurement of SD is often based on the selection and quantification of a wide range of indicators, which cover all aspects of economic, social and environmental change. The UN, EU and MS have all prepared analyses based on indicator selection and population. The normative basis of the analysis is however poorly specified, with little evidence or guidance on how or why the indicators were selected, and what weight to attach to different indicators, despite the common separation of indicators in core or non-core indicators.

The approach in this evaluation has been based on a view that the normative basis of SD measurement has to explicitly lead the selection of indicators and their interpretation. The 'four capitals' model provides the first base, by specifying the first four areas for measurement. The second base is the identification of those criteria deemed by regional stakeholders and evaluators to best capture those drivers most important for SD at the regional scale, with respect to each of the four capitals, and trade-offs between them. It is expected that in the order of ten or twelve criteria are able to capture the essence of regional SD issues, across the four capitals. Typically, equal weight is attached to each criterion in the absence of any explicit weighting by regional stakeholders to the contrary. These criteria then form the basis of indicator selection. In most case studies the criterion is reflected in a single indicator. However, in setting up a more detailed and complex measurement system it is envisaged that regional stakeholders would select a basket of indicators to reflect the various aspects of a chosen criterion. Section 3.2 below summarises the range of criteria and indicators selected, with the full set for each case study described in Annex 2.

2.6 Evaluation Framework

The evaluation framework links the analysis of regional trends to identify those issues of particular concern for SD in the region (the regional assessment) with an analysis of the contribution of the programme (programme level assessment). This assessment is supported by a review of programme management arrangements to understand how far the contribution of the programme to SD is the result of management decisions and operation.

The regional assessment is based on the measurement of trends in capital stocks, both within assisted and non-assisted regions, as the basis for reviewing the extent to which regions (or MS) are developing sustainably. This provides the basis for considering the contribution of the SF over one or more planning periods, in conjunction with other policy and non-policy influences.

The programme assessment examines the ways in which past and current programmes have responded to the sustainability issues in the region (identified in the regional assessment) and the contribution of programme results and impacts to the level and balance of different capitals. The assessment includes some consideration of the extent to which activities might otherwise have been undertaken in the absence of the programme (by reference to other domestic and regional policies) and hence the possible 'added value' of the SF.

Programme management considers the design and operation of programmes, especially in the current planning period and the response to the need to promote SD and to generate and select projects accordingly. Programme managers have had a number of guidance tools including the Vade Mecum, the Guide to ex-ante environmental evaluation (which includes wider consideration of SD) and exemplar case studies of relevant projects that are especially directed to helping with project generation and appraisal. Improvements in this area are of particular interest.

2.7 Methodological Issues in Assessing Contributions at Regional Level

The methodological approaches to the study (Volume 2) addressed a number of key issues. We summarise the approaches below.

- Region (context) specific analysis – the approach explicitly recognised the need to allow regional case studies to specify the specific features of SD, and of SF programmes that were of regional significance. This inhibits direct comparison between regions, but this is not the principle reason for the cases.
- Trend analysis of selected criteria – the evaluators identified specific criteria considered regionally important for SD. To the extent possible within the case studies, this selection has been validated with regional stakeholders. Indicators were selected by evaluators, based on the criteria, to quantify trends.
- Non-weighting of assessment criteria (but reference to implicit weighting as observed) – the approach to weighting was effectively to provide equal weight to each criterion, unless there was evidence or a willingness of stakeholders to attribute weights.
- Non-aggregation of specific contributions – the aggregation of contributions across criteria has not been undertaken because of the difficulties in comparing different types of contribution. The approach places particular weight on the appraisal of individual contributions against specific criteria. This detailed analysis also provides a more informed basis for policy responses. To the extent that weak sustainability has been identified, aggregation of negative and positive impacts is possible on the basis of case study evidence of the political willingness of regional stakeholders to accept acknowledged trade-offs
- Examination of policy synergy and of non-SF activities – the contribution of SF has to take account of other non-SF policies. This is especially important in Objective 2 regions, where the SF is only a modest element of regional policy. The approach has been to examine the interplay between the SF and non-SF policies in relation to selected measures or projects.
- Counterfactual judgements as to contribution of interventions compared to no SF – the added value of regional programmes that benefit from SF has been examined by a necessarily speculative examination of the selected measures and projects. Arguments in support of conclusions have been developed.

2.8 Methodological Issues in Assessing Contributions at MS/EU Level

The macro-economic modelling approach to assessing contributions of SF to SD is limited by the absence of econometric relationships between economic development and social outcomes. Indeed the model is silent on such impacts. However, the model can provide a complementary, if partial analysis of how the SF have contributed to the other types of capital, using selected indicators from the model. That the model has been designed to capture at least some of the consequences of economic change for natural capital renders it particularly useful.

The model also allows the classic policy-on, policy-off comparison, by constructing a counterfactual scenario characterised by the absence of an EU contribution to regional investment and economic development programmes.

2.9 Programme Management

The delivery of strategies and programmes requires the effective management of programmes. There has been a tendency in previous programming periods to use 'off-the-shelf' projects, limiting the effectiveness of strategic direction. This occurs partly because of the difficulties in generating projects in response to the strategy. It also occurs because of the pressures to commit resources, favouring large capital projects, that have already received some previous development

Issues of process have therefore to be examined, and in particular those relating to the construction and management of a project pipeline. Given the future direction of the SF in the context of enlargement, we have provided a review (Annex 4) of the present experience with project pipelines, and key characteristics that might shape the nature of required projects and project appraisal issues.

A specific checklist of issues and questions, describing in more detail these issues, has been developed and used, at least in part, in the case study work, see Volume 2.

3 SYNTHESIS OF THE MAIN CASE STUDY RESULTS

3.1 The Main Constraints and Trade-offs for Sustainability in a Region

The extent to which trade-offs represent constraints on sustainable development depends on:

- whether the decline in a particular form of capital represents the loss of some critical asset that cannot be replaced or compensated for by increases in other forms of capital, or
- whether the decline is, in part or in whole, compensated for by increases in other capitals.

The contribution of the Structural Funds (SF) to sustainable development is therefore examined by reference to their influence on identified regional trends, and especially in relation to specified trade-offs.

A focus in the case study regional assessments has therefore been on the identification of:

1. The regionally important characteristics of each of the four capitals, and the long term trends in these characteristics (as measured by available indicators), and the extent to which any declining trend threatens or breaches some pre-defined critical threshold
2. The main increases and decreases in the different forms of capital, and the extent to which understood cause and effect relations allow trade-offs and win-wins to be defined
3. The specific contributions of the SF to the identified trends, trade-offs and win-wins, and in particular the added value of SF to SD (recognising the inherent difficulties associated with such an assessment).

The understanding of how the various trends, trade-offs and win-wins combine to represent sustainable development has to be understood in the specific regional context. The generalisations provided in this synthesis do not seek to represent the individual appreciation of sustainable development specified at regional level. These are presented in the case studies. The synthesis seeks to identify mainly common but also disparate features of regional sustainable development in the EU, and the contributions made by the SF, from the case study material.

3.2 Regional Progress towards Sustainable Development

3.2.1 *Indicators of regional sustainable development*

Sustainable development (SD) has been defined in operational terms as non-declining stocks of capital per capita, as described in the previous section. To measure changes in the different types of capital and in particular to assess whether types of capital are declining, it is necessary to specify criteria, which are taken, regionally, to represent the type of capital. These criteria can then be used to specify particular indicators.

Each case study has identified relevant criteria and the related indicators, which illustrate the most important trends as judged by evaluators in consultation with

regional stakeholders. The range of indicators reveals the importance of allowing local stakeholders to define the issues that are considered salient to regional SD, and to reflect the context specific character of long-term regional change.

The range of indicators chosen in each of the case studies, and the range of regional characteristics reflected, is provided in Annex 2. The use of indicators can be summarised as:

Manufactured Capital: Although there is some consistency in the use of GDP per capita as an appropriate indicator, there is also a wide range of other issues introduced into the analysis, from transport and ICT (for example in **Västra Götaland**), to the importance of key sectors (e.g. agriculture and tourism in **Gelderland**).

Human Capital: Levels of employment and unemployment, and of education and training, were the criteria chosen as relevant to SD in the majority of cases. Added to this was a focus in some regions on the importance of R&D, particularly in the **New German Länder** as well as new business creation. In the French regions (**Midi-Pyrénées**, and **Nord Pas de Calais**) health issues were seen by the evaluators to be important to human capital, although in other regions they were perceived as being more pertinent to social capital.

Social Capital: The criteria selected proved to be the most diverse, covering a full gamut of issues from poverty and its spatial impact, to networks and co-operation, health, crime and access to public services. These varied themes reflect the decision in the study to adopt, in line with the OECD and the World Bank, a wider definition of social capital than that usually found within the academic literature. The theoretical view of social capital is the use of relationships of, or networks and organisations based on, mutual trust to gain access to resources or to facilitate co-operative behaviour. Unlike the other capitals there is no implicit set of services that the capital should be providing to further social welfare, other than empowerment and the access to resources or co-operation. For example, the use of roads to provide mobility or the acquisition of skills from training infrastructures are implicitly understood to further social welfare. Given the policy outcomes, especially social cohesion, that are the aims of EU policy, the study has proposed a set of indicators that also seek to understand some of the services implicit in an interest in social capital. Given the obvious issues surrounding the definition and measurement of social capital we expand in Box 3.1 on case study findings.

Box 3.1: A Review of Social Capital Indicators used in the Case Studies

Of the types of social capital criteria / indicator identified at the beginning of the evaluation, some have proved to be more salient than others to sustainable development in the regions, according to the case studies. We briefly review the main ideas of social capital as reflected in the case studies:

- **Trust:** This type of criteria did not feature in the case studies. Although crime was an issue in a couple of the regions, the fear of crime was not highlighted as a key indicator. Indicators measuring the extent of trust proved too difficult.
- **Equity:** The case studies highlighted the relevance of this type of measure, with associated indicators of poverty and income inequality, as being highly relevant as a measure of social capital in the regions. Poverty is of course a relative concept, and there is no one single measure of poverty that can be applied to all regions in the EU (c.f. the Urban Audit, and the paucity of comparable data on poverty

levels). However, within a region, to measure trends in social capital over time, it appears that this is a highly appropriate, and relatively universal, measure of social capital (12 of the 19 cases chose to illustrate trends in this type of criteria).

- **Social integration and cohesion:** The case studies show that there is some relevance of these issues to SD at the regional level. In particular, access to health care and basic public services was highlighted as being important in regions such as **Andalucia** and **Catalonia**. However, interestingly, there was little use of voter turnout as an indicator to show trends in social capital.
- **Social exclusion:** The issue of social exclusion was important to a number of case studies, and this was measured using crime rates (**Campania** and **Portugal**) and the number / share of welfare recipients (for example, in **Catalonia**, **Navarra**, **Greece** and **Calabria**). The other indicators that might have been used (prisoners, retirement age and the extent of homelessness) were not seen to be practicable in measuring this form of social capital.
- **Networks, horizontal organisations:** There were various manifestations of this criterion in the case studies, with over a third of the cases suggesting that it is a good measure of social capital at the regional level. The specificity of the indicator however, ranged widely according to the region, illustrating the different types of networks and organisations that are relevant at the local level.
- **Hierarchical organisations:** The case studies did not choose to apply this criterion to represent social capital.
- **Governance:** Governance structures were not by and large reflected in the chosen indicators. Only a couple of cases took indicators that related to political arrangements or legal / financial arrangements (in **Midi-Pyrénées**, and **Nord Pas de Calais**, using the indicator “Improvement of governance capacity”).

Natural Capital: The most common criteria and indicators chosen to represent trends in natural capital related to biodiversity and land protection (for example, in the **German, Spanish, French** and **Italian** cases). Other important issues were air quality and water quality and consumption. Some cases also highlighted the general resource / eco-efficiency debate in the selection of criteria, for example, **Campania**, **Calabria** and the **West Midlands**.

In sum, there is a diversity of criteria and indicators, in part reflecting the local variations in the significant characteristics of the different types of capital. The impression of diversity in criteria does however appear greater than the situation suggested by closer examination of the underlying concepts or phenomenon. For manufactured and human capital there is a strong level of consensus over the principal criteria relevant to regional SD.

Only in the case of social capital is there a wide range of different underlying concepts, reflected in the range of indicators. Even here, there is a degree of consensus that at least one dimension to social capital relates to equity and social health (cohesion or exclusion) issues, reflected in concern over relative incomes, access to opportunities and the numbers and types of groups excluded.

3.2.2 Key trends in the different types of capitals

This section summarises the main results in relation to the identified trends.

Manufactured capital – most usually represented by trends in GDP. Trends are generally increasing due to national rates of economic growth, and regional infrastructure and business investment. In addition there are continuing long run structural changes in regional economies, especially the decline in manufacturing and increases in services, which supporting growth. In some regions (e.g. **Calabria**) the rate of growth is reported to be slowing.

Although the economy of the **North Rhine-Westphalia** NUTS II region is relatively diversified, the Objective 2 region has traditionally been dominated by coal mining and the steel industry. There have been important localised job losses in these industrial sectors, coupled with a below-average increase in the services sector, an over concentration of large businesses to the detriment of SMEs and a low percentage of innovative businesses. As a result, the Objective 2 region is characterised by low competitiveness, a lack of jobs and a lower than average growth in per capita income. This has impacted on the regional as a whole, where manufactured capital (as measured by GFCF, change in real income and regeneration of disused buildings) is considered to be increasing, but slowly and to an inadequate degree.

Human capital – most usually represented by employment and education and training activity. Trends are generally increasing due to improvements in employment rates and education and training systems. **Portugal** and **Ireland** have both targeted increases in human capital as a means of securing improved rates of national and regional development. Trends also indicate improving adaptability of employers and workers although there are significant variations in rates of employment, quality of employment and progression opportunities, and R&D activity. Migration patterns are also highlighted as effecting trends. In **North Rhine-Westphalia**, out-migration is reducing the stock of skills, whilst in **Andalucia** in-migration is contributing to the employment base. The case studies provide little comment on the ageing of populations (with the exception of **Navarra**) or on the wider pensions debate.

The lack of education and training qualifications in **Portugal** has been considered a major obstacle to the country's development. Over the last 20 years, policy has particularly targeted human resources, with significant improvements in education attainment and vocational training levels among the general population. This has brought increases in human capital, although there are still issues of rising youth unemployment that must be addressed, both at the national **CSF level**, and within the region of **Norte**.

Social capital – represented by the widest range of criteria and indicators, reflecting the relative immaturity of the concept among regional stakeholders. Trends have been defined broadly with respect to issues of social equity and inclusion, often by reference to income disparities (for example in **Andalucia** with the use of the Gini coefficient), and to issues of social participation and networking (such as the degree of coverage by Agenda 21 processes in **Navarra**). There are some positive increases in social capital related to the development of community networking, partnership and consultation procedures. However, the more significant trends in social capital are considered to be declining, implied by reduced social inclusion and cohesion, measured by increasing income disparities and population changes and movements, and in some cases by increasing crime rates.

In **Campania** in the 1990s, there was a sharp decrease in social capital. In the regional capital, Naples, economic development stagnated and did not bring intended benefits to the most disadvantaged in the city, partly due to poor access to health and education. As a result, there are still enduring pockets of poverty, deprivation, high unemployment and social exclusion. Crime rates, and in particular, violent crimes, are on the increase. Despite increases to some indicators of social capital, such as social networks, the social economy and the third sector, these have not been significant enough to outweigh the deficits in other areas.

Natural capital – represented by a wide range of indicators (but less than social capital). Common indicators relate to climate change, air quality, biodiversity and water quality. Trends are varied, with increasing trends in some regions due in part to the loss of heavy industry for example in **Nord Pas de Calais**, or due to land reclamation and environmental infrastructure investment. Conversely declining trends are occurring due to the loss of bio-diversity due to development, for example in **Saxony** and throughout the New Länder **CSF** area, and because of increasing emissions (mainly from transport but also agriculture). Adverse impact on water abstraction rates has also been reported in the **Spanish cases**.

There have been important pressures on water resources in **Andalucia**. Seasonal imbalances of water resources, coupled with concentrations of demand (relating to tourism and agriculture), has made water a strategic resource in the region. Recently water resources have been heavily modified due to increasing water abstraction, for a variety of uses. However, it is increasingly recognised that water resources are fundamental for the maintenance of some of the most valuable ecosystems in Europe, and that the continued depletion of water stocks is not a sustainable path for the region to pursue.

A regional trend that was highlighted in a number of case studies as being significant for the trends in capitals, was the issue of migration. Regarding net in-migration, a number of cases such as **Ireland** and **Navarra**, illustrated the importance of the increase in the labour force for the progressive development of these regions. However, in other regions, and in particular the new **German Länder** and **North Rhine-Westphalia**, there has been significant out-migration of qualified workforce, having direct negative impacts on both human and social capital, as well as adverse indirect consequences for manufactured capital.

In the new **German Länder**, the lack of high level jobs has been the main driver for out-migration, especially of young people. This has had a serious impact over the last few years, bringing difficulties in town planning, infrastructure maintenance and social welfare. Due to the diminishing stock of qualified workforce, and a reduced level of consumer demand, new businesses which could offer highly qualified jobs are not choosing to locate in the new Länder. The resulting loss of image as a region in which to locate, live and work, has had negative impacts on social capital, and has in turn contributed to the 'brain-drain'.

3.2.3 *Declining capitals and critical thresholds*

A key question in the review of trends in the different types of capital, is the extent to which declines in capital represent some threat to, or even a breach of, specified critical thresholds. In answer, the first point to make is that there are very few thresholds identified either by the stakeholders, or by the evaluators. The only references made are in the context of natural capital, especially in relation to climate change, air and water quality standards, and water abstraction rates. However,

declining trends in natural capital were not generally considered to be raising a threat to these thresholds.

One of the exceptions to this was found in **Saxony**, where natural areas are considered as one of the region's key strengths. A recent 1998 report into environmental conditions in the Länd describes the status of bio-diversity as being critical, with many species endangered or potentially endangered. There have been recent improvements in the situation since the 1990s, but it is still considered that there have been critical losses of species and habitats, which breach thresholds in natural capital.

Thresholds relating to air quality may have been reached in **North Rhine-Westphalia**, where air quality is particularly poor in certain regional 'hot-spots'. Concentrations of toxic and carcinogenic pollutants in some areas are considered to be so high as to have endangered the population's health. However, in the main, the case studies report that declines in natural capital are not linked with concerns about critical thresholds, as the examples below illustrate.

In **Västra Götaland**, although there have been declines in natural capital due to an increase in population, infrastructure building and the indirect effects of increasing wealth and more resource use, the regional stakeholders did not feel that these trends threaten critical thresholds or irreversibility in the environment. Natural capital is considered to be abundant and the population levels low enough for the losses not to pose a threat. In **Ireland**, there is explicit recognition and acceptance that development programmes would contribute to exceedencies in target GHG emissions. However, there is no recognition of approaching threshold limits. Indeed, the Kyoto agreement itself does not appear to be regarded as a threshold.

Outside natural capital, there is generally an absence of the notion of thresholds. For example in **Navarra**, it is recognised by stakeholders that in-migration could threaten social capital, but there is no definition of a critical threshold for in-migration, beyond which regional population growth would critically threaten other capitals. This raises the question of how feasible or valuable such thresholds would be, say for acceptable levels of in- or out-migration, crime, voting activity, or income inequality for future regional policy.

Political difficulties with such an approach are obvious. However, there is clear value for SD policy in at least making more transparent what variables are taken to represent relevant trends, and in discussing levels and rates of decline that require immediate and additional policy responses, especially for social capital. The definition and use by the UK of floor targets (minimum standards) for selected criteria and indicators (of trends in health, housing, employment, crime, education) relating to local (neighbourhood) conditions, found in the **West Midlands**, is an interesting example of the possibilities for new threshold definition.

3.2.4 **Regional trade-offs**

The set of regional trade-offs identified in the case studies does not necessarily represent the choices of the regional stakeholders. Firstly, some trends are determined by wider socio-economic forces, and by policies adopted at national and international levels. Secondly, some trade-offs are poorly understood and the influence of policy (regional and non-regional) uncertain. The key questions for regional policy are:

- whether the trade-offs are considered important to the achievement of regional aspirations for social welfare, and if so

- whether regional policy measures should be explicitly framed as a response to the trade-offs.

The main trade-offs in regional development identified in the case studies are between increases in manufactured capital with associated decline in natural capital, and increases in manufactured and human capital with associated decline in social capital. In the first set of trade-offs the cause and effect relationship is obvious for direct impacts, and also fairly clear in relation to the indirect effects of growth on the environment. In the latter case cause and effect relationships are far from clear between growth and effects on social capital. To the extent that declining trends are measured using indicators of relative change (e.g. income disparities) then growth can clearly lead to a change in measured relativities.

The main trade-offs in each of these two categories are summarised below. A simple schematic of the trade-offs is shown in Figure 3.1 (a and b), illustrating the potential range of trade-offs, and the possibility for de-coupling growth in one capital with decline in a second capital, or better coupling of growth in one capital with growth in another.

Increases in Manufactured Capital and Declines in Natural Capital

Common and continuing trade-offs identified in the case studies include:

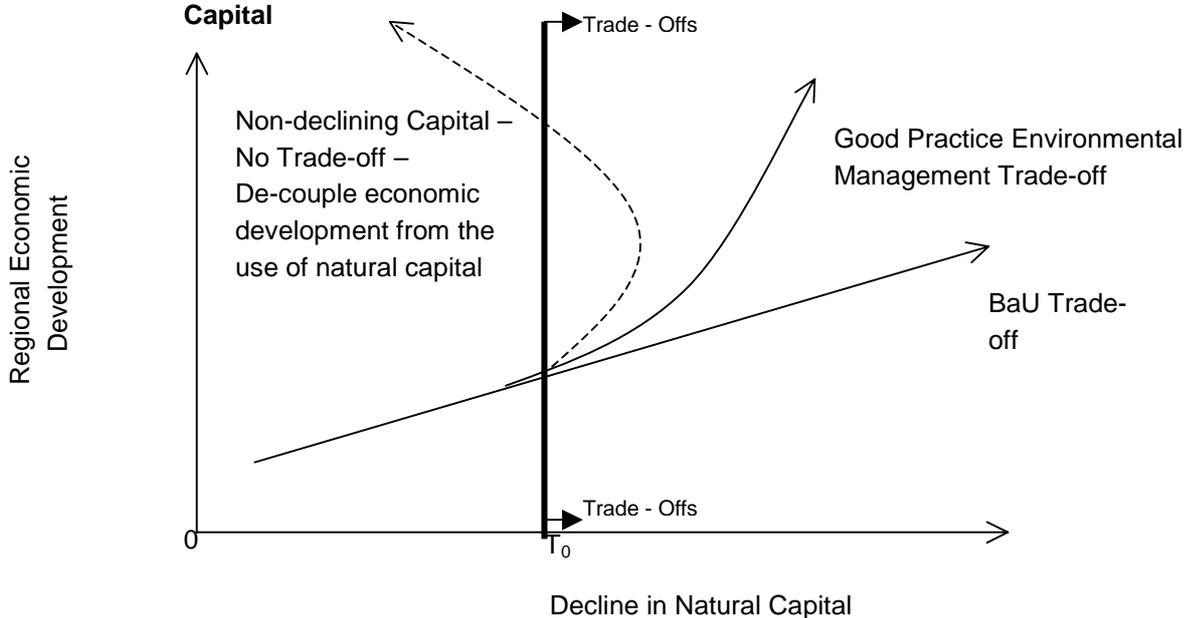
1. Investment in infrastructure, especially road building, and increases in economic activity, and subsequent increases in economic prosperity and household incomes, have significant negative consequences for natural capital (land take and emissions). This is particularly the case in Objective 1 regions such as **Thessalia**, where investment in the road network to increase accessibility and exploit the region's central position has already had a damaging effect on the environment in terms of land use, and is predicted to have negative effects in the future through increased car use and a concomitant decrease in air quality.
2. Investment in the expansion of towns and cities on greenfield sites has impacts on bio-diversity, and is associated with increased travel distances and with increased emissions. For example, as a result of investment patterns in the **West Midlands**, there has been a move of jobs and people away from the major urban areas. This has brought pressures on the environment through land-take, but also encouraging the need for car-based travel and has thus brought increased pollution through car emissions.
3. Increased tourist activity has negative consequences for natural capital, especially in relation to transport and the impacts on sensitive eco-systems. A clear example of this is in **Andalucia**, southern Spain, where tourism has increased pressure on coastal habitats, due to construction of an 'urban continuum'. However, there is increasing awareness of the need to preserve the coastal environment, particularly 'quality environments' that attract 'quality tourism'.
4. Increased agricultural activity has negative consequences for natural capital, especially in relation to water use and pollution. In **Gelderland**, intensive farming has brought decreases to natural capital through overuse of fertilisers, damaging groundwater, surface water and lowering the water table. In addition, intensive livestock breeding has led to high levels of manure production and high levels of ammonia emissions, causing acidification of nearby natural areas and lowering soil quality.

Other trade-offs include:

- An increase in manufactured capital leading to a loss and fragmentation of green open spaces, increased traffic (leading to increased air and noise pollution) and poorer health (human capital) (**North Rhine Westphalia**).
- Waste and pollution directly generated by industrial activities (**Antwerp, Calabria**).
- Human capital, especially in areas of employment need, by attracting new external direct investments, may have negative effects on natural capital: the need to increase employment levels may lead to environmental standards for production activities to be ignored (**Campania**).
- Increased social and economic connectivity threatening nature preservation (**Catalonia**).
- Higher levels of electricity consumption leading to an increase in GHG emissions (**Greece**).

All these trade-offs are largely recognised and accepted as necessary consequences of regional development. At project level mitigation measures are taken to minimise the extent of the trade-off (consistent with the move from Business as Usual (BaU) to Good Practice, in Fig 3.1a). However, the recognition of the trade-offs has not generated particular resource efficiency strategies, designed to de-couple economic development with the use of natural capital (indicated by a trend of non-declining capital).

Figure 3.1a: Regional Development Paths and Trade-offs with Declining Natural Capital



Increases in Manufactured and Human Capital and Declines in Social Capital

Common trade-offs identified in the case studies include the following:

1. Increasing prosperity resulting from increased employment rates and income levels, but associated with increasing income disparities and increasing social exclusion. This has been the pattern in the **West Midlands**, where increased

average household incomes have been paralleled by a growing disparity between the better-off in the region and the most disadvantaged.

2. Unequal growth in economic activity and wealth between different sub-regions, and neighbourhoods, contributing to social and spatial inequalities, partly due to the market failure to articulate community needs or provide tailored responses, leading to social exclusion. In **Antwerp** there has been an out-migration of mainly white middle-class families, due to the lack of green space, rising crime rates and illegal waste dumping. This has increased social and spatial segregation within the city, and has led to a decrease in social capital (as measured by the concentration of different social groups in particular neighbourhoods).
3. Increases in in-migration leading to reduced social cohesion where existing values and measures for cultural integration are weak. In **Navarra**, although in-migration into the mainly rural areas is seen as a positive trend in terms of human capital, it is also seen to have the potential to threaten social cohesion, if the necessary mechanisms are not put in place to integrate migrants with the indigenous population.

Other trade-offs include:

- Increased levels of investment in new firms increases the rate of mortality of companies leading to insecurity in the job market and reduced social cohesion (social capital) (**Andalucia**)
- Economic development has led to increased wealth, but also increasing social disparities (**Norte**)
- Increases in manufactured capital directly connected with modern technology has created a new category of deprived groups (digital illiteracy) (**Greece**).

These trade-offs are far less well defined and understood than the previous set. This is partly a reflection of the limited appreciation and interpretation of social capital as a concept relevant to the policy significant outcomes of equity, social cohesion and social exclusion. It is difficult to represent these trade-offs as a cause-effect relation, similar to that for natural capital. However, there is a general and growing recognition that regional development as measured by growth in conventional output or employment terms does not imply a growth in social cohesion or a reduction in social exclusion.

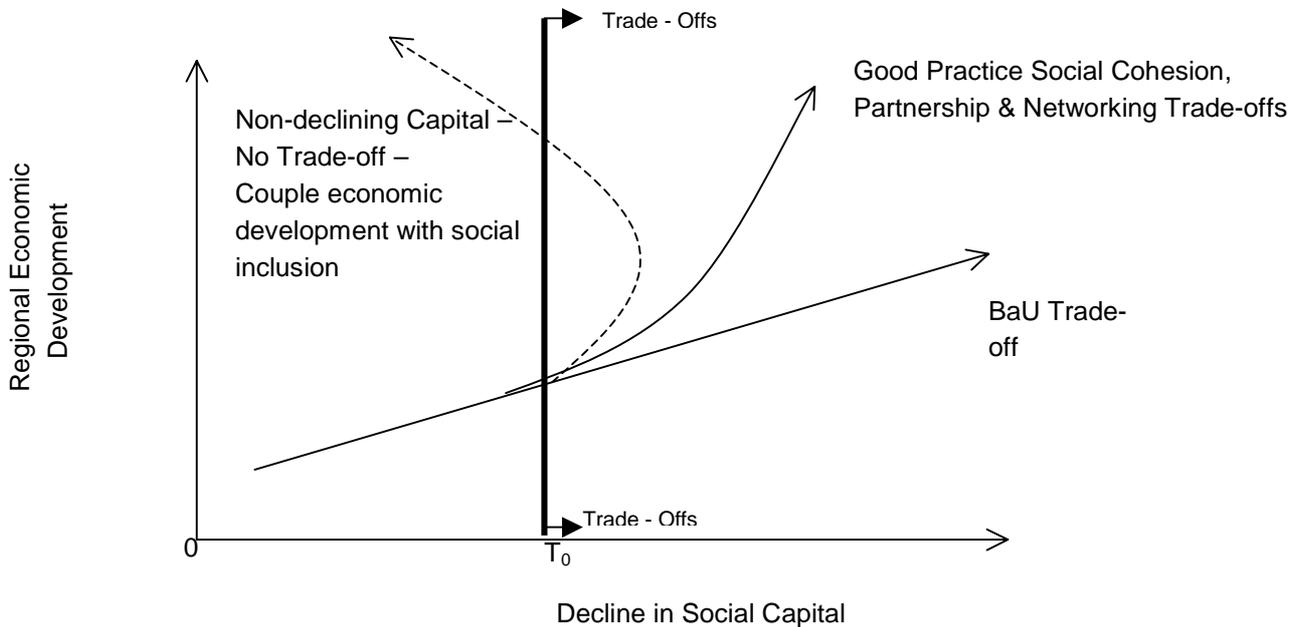
There is a recognised need for strategic policy responses directed to providing a couple between economic growth and social cohesion, (analogous to preventing the decline in social capital, Fig 3.1b). This response is based partly on improving social networks and developing local level partnerships as a way of defining needs and particular groups of beneficiaries, and delivering policy responses, partly by targeting the specified beneficiaries. The policy response is not however really informed by the type of trade-off analysis suggested by the capitals model as applied in the case studies.

3.2.5 Planned and unplanned declining trends and implied weightings

The regional stakeholders have argued that most of the declines in natural capital are expected and planned for (and accepted) in the context of programme and project planning, including the statutory use of environmental impact assessments. Mitigation measures as identified during the EIA process are taken into account (although in **Midi-Pyrénées**, the stakeholders feel that the EIA should have been more systematic).

In **Västra Götaland**, declines in natural capital are considered to be an acceptable, and viable, cost of economic development.

Figure 3.1b: Regional Development Paths and Trade-offs with Declining Social Capital



However, the degree to which these declines will continue to be acceptable in the future remains uncertain. There appears to be a growing sense in some regions that previously acceptable trends will increasingly be challenged, reflecting an implicit change in the weighting which has previously favoured growth in manufactured capital over the maintenance of natural capital. However, this is not generally explicit in the case studies. In **Ireland**, it is widely acknowledged that economic growth will continue and that car ownership will increase significantly, but it is recognised that there is unlikely to be international support for further concessions permitting additional emissions (which are already set to exceed Kyoto-agreed limits). In **Midi-Pyrénées**, the case study reported significant differences between views of the national and regional authorities, on the appropriate trade-off in relation to road building and the attendant economic development, and the impacts on natural capital. The dispute was resolved in favour of the Region's preference (road building), but it is increasingly unlikely that such a disagreement would result in a similar result in the future.

These examples suggest that stakeholders, both at national and regional levels, are beginning to consider that continuing declines in natural capital as a consequence of economic development are less acceptable, and that measures should be taken to address these declines.

However, the case studies do not generally reveal any strategic level response to the range of trade-offs, for example in the form of an eco-efficiency strategy (with the exception of isolated examples such as eco-efficiency in water management in **Andalucia**). Instead responses are located more at a project level using mitigation measures. There are some strategic responses, mainly in relation to the use of territorial planning as a way of better managing resources, but these have not tended to be explicit responses to the set of trade-offs. However, the use of territorial planning

as a more strategic response is clearly an important element of any SD policy response.

In the case of social capital, declining trends (at least as reflected in growing income disparities) have occurred in a far less planned and accepted manner. To some extent this is a reflection of definition and measurement difficulties (e.g. ambiguities over trends in **Ireland**). It is also a function of the breadth of the concept, so that whilst there are explicit social policies directed to problems of social inclusion and exclusion, other aspects such as declining voter participation, rising crime rates and reducing levels of trust within communities are seen as more intractable. The implicit weighting given to the decline in certain forms of social capital is also more difficult to define, reflecting the absence of clear cause and effect relationships; and assumptions that increased overall wealth as measured by manufactured and human capital would automatically translate into increased social capital. The decline in certain forms of social capital is not, therefore, indicative of a low weighting per se, but more a failure to recognise the links between regional development and social capital and a failure of measures targeting disadvantaged areas and households to address social problems.

However, because of a major policy concern with the outcomes associated with a decline in social capital (either as cause or effect) there are significant strategic policy responses, based increasingly on local sub-regional level interventions.

3.2.6 **Regional Win-Wins**

There are a number of win-wins in regional development that have been identified in the case studies. In some cases the win-win is as much about the potential of the relationship to support a virtuous circle of growth in different types of capital, as about the actual regional outcomes. The main win-wins identified are:

1. Investment in reclaiming and regenerating disused industrial land and buildings has positive effects on natural capital through environmental improvements, and on manufactured capital through increasing productive capacity. Depending on the type of new use, there could also be benefits for social and human capital, through supporting new businesses or creating training opportunities. Cases where this was identified include: **North Rhine-Westphalia**, the area covered by the **German CSF**, **Campania**, and **Antwerp**.

Investment in brownfield sites and disused industrial buildings is seen as having great potential for win-win situations in the **New German Länder**. There are clear benefits for natural capital. On the one hand, targeted contaminated sites are 'cleaned up' and put to productive use. On the other hand, regenerating brownfield sites has an indirect benefit, through channelling investment away from potential greenfield development. There are also potential increases for manufactured capital through job and business creation opportunities on site. Disused historic industrial buildings in urban centres can also be brought back into residential and / or commercial, with potential positive impacts on social capital. The know-how in brownfield remediation developed in the region can also be used as a basis for business development, as the same problems exist in eastern Europe.

2. Investment in infrastructure and training for eco-tourism, eco-agriculture, and the diversification of rural economies, improving manufactured and human capital and leading to increases in natural and social capital. This was cited in most of the rural case studies, such as **Västra Götaland**, **Gelderland**, **Andalucia**, **Calabria** and **Campania**.

In **Andalucia**, green tourism is considered to have positive impacts on reducing congestion and environmental impacts on coastal tourist sites, addressing rural unemployment and diversifying the tourism 'offer'.

3. Human capital investment leading to improved innovation, productivity and entrepreneurship, and subsequent increases in business performance and economic development, as well as contributing to social capital through investing in and encouraging social inclusion, citizenship and to natural capital through increased awareness and education of environmental management. This is identified in a number of regions including **Navarra**, **Catalonia** and **Norte**.

In the Portuguese region of **Norte**, investment in education has led to increases in the delivery capacity of education systems, and a resultant increase in human capital. However, the case study highlights that there is still untapped potential, as there are enduring mismatches between the supply and demand of a qualified workforce.

4. Increasing investment in ICT as a means of addressing issues of accessibility and economic diversification. Other benefits include improving connection and citizenship, reducing the need for travel and related environmental and social effects. Investment plans need to include appropriate collective transport infrastructure, and to take account of the possibility of exacerbating social divisions and relative disadvantage. This was highlighted in the cases of the **West Midlands** and **Västra Götaland**.

In **Västra Götaland**, the planned increase in ICT, coupled with suitable transport infrastructure, is considered have a positive effect on social and human capital through the creation and strengthening of networks, and improving skills and qualifications.

5. Increasing investment in environmental infrastructure leading to increases in natural capital, and subsequent increases in investor confidence and manufactured capital, increasing visitor numbers and related spending, and social capital related to the improved access to environmental resources and improved human health. This has been implemented in regions such as **North Rhine-Westphalia**.

The region of **North Rhine-Westphalia** has developed an approach to address the environmental legacy of its industrial past. It promotes the environmental technology sector, contributing to improving the region's competitiveness and creating jobs (manufactured capital) while at the same time developing a more resource- and energy-efficient and less polluting economy (with benefits for natural capital). The **West Midlands** has also invested through a specific Action Plan, in the regional eco-industry.

6. Investment in public transport as means of encouraging modal change (and related improvements in natural capital), increased urban development densities supporting natural capital (reduced decentralisation) and social capital through improved access to services, improved accessibility for rural areas supporting social capital through encouraging population retention and improved access to services, and manufactured capital by retaining working age populations. This was seen as an effective 'win-win' strategy in **Campania**.

In **Campania**, improving transport infrastructure will have direct environmental impacts, as well as very positive indirect impacts on natural, human and social capital: reducing car based travel and therefore vehicle emissions, improving accessibility and narrowing regional inequalities in service provision, limiting congestion and creating employment.

Other examples of win-wins include:

- Stimulation of “softer industries” such as design, fashion and food increases social capital by reducing the level of social and racial segregation as a mixed population is attracted back to the city (**Antwerp**)
- Improving public infrastructure improves accessibility and narrows regional inequalities, creating more balanced development (**Campania, Greece**)
- Increasing social capital and reducing environmental pressures by improving living conditions through investment in basic sanitation infrastructure (**Norte**)
- Switching of power plants to natural gas has a favourable impact on natural capital (**Greece**)
- An increase in manufactured capital has a positive impact on human capital through increased employment and a reduced ‘brain drain’ (**Calabria**)
- Increasing collective transport and ICT infrastructure has positive benefits for manufactured capital (reducing congestion), social capital (improving accessibility), and natural capital (reducing vehicle emissions) (**West Midlands**)
- An increase in manufactured capital has a positive impact on social capital, reducing crimes and phenomena of social exclusion, and facilitating a more equal access to social services (**Calabria**).
- Increasing investment in tourism creates employment and generates higher incomes, potentially reviving communities in remote areas (**Västra Götaland**).
- Increasing investment in human capital has a positive effect on natural capital through increasing education and environmental awareness, modifying individual behaviour and reducing the demand for natural resources (**Calabria, Nord Pas de Calais**)
- Increasing human capital has a positive effect on manufactured capital, helping to move to higher value economy (**Saxony**). This structural change will also have effects of decoupling economic growth and use of natural resources by reducing the use of energy and production of waste (**Navarra**).
- Enhancing natural capital contributes to increasing human capital through job creation (**Catalonia**).
- Increasing natural capital improves the long-term productivity of agricultural land and forestry with corresponding increases in manufactured capital (**Saxony**).

These win-win policies are reasonably well developed, and find expression in most regions. To some extent they address some of the trade-offs identified, especially in

relation to the efficiency with which environmental resources are used, but also in relation to social capital (e.g. through increasing access to services, improving labour market opportunities and improving local environmental problems). Interestingly, in none of the case studies were these policies identified as a programme specifically directed at responding to trade-offs, although clearly the rationale for many of the policies is to address problems caused by 'traditional' models of regional development.

3.2.7 Key constraints on the sustainability of regional development

Given continuing policies to invest in manufactured and human capital as major drivers for regional development, the key constraints on the sustainability of regional development relate to the stock and use of natural and social capital. It is largely in relation to these two types of capital where trends indicate a decline in capital. Of course, a decline in certain types of capital is not of itself indicative of an unsustainable development path; it depends on the extent to which the decline is compensated for by increases in other types of capital. The explicit decision making of regional authorities in the case studies, at least in relation to natural capital, has demonstrated the belief that social welfare is increased with increases in manufactured capital even if this is associated with a decline in natural capital. The apparent lack of appreciation of social capital trends, and their significance directly for regional development and indirectly for social welfare, raises difficult judgements for regional authorities, especially if the assumption that general increases in employment and income levels lead to increases in social capital is challenged.

3.3 The Contribution of the Structural Funds to Sustainable Development: The Consistency and Coherence of Programme Objectives with Sustainable Development Objectives

The case studies examined the extent to which Structural Funds contributed to the various regional trends, trade-offs and constraints, which define regional SD. This evaluation was set within the framework developed and presented in Volume 2, and summarised in Section 2 above. In sum, the evaluation examined both the relevance of the SF to regional needs, and how the impacts of specified interventions contribute to regional change defined by reference to SD criteria. This section considers the relevance of programmes. The next section summarises the contribution of particular SF interventions.

3.3.1 The consistency of SF programmes with national / regional SD policy

The consistency of SF programmes with broader regional or national policy is important in conditioning the SF contribution. If SF programme objectives and the associated policy outcomes are defined within a broader regional policy framework that is defined as supporting SD, then the SF programmes should be consistent with, and supportive of, SD. If the SF programme is set up outside such a framework, or within a framework that is essentially concerned only with economic development, then the contribution of the programme to SD will be less.

The case studies demonstrate a wide spectrum in the specification of the wider regional policy context, and the role of the SF within it (see Figure 3.2). It should be stressed that this typology relates to strategy rather than delivery. At one end of the spectrum (weak), and most clearly observed with the Objective 2 programmes, is a regional policy framework, that is mainly concerned with economic development, and does not link explicitly to a regional SD strategy. Although there are regional SD statements and broad goals, these are not sufficiently well defined to provide a clear policy framework for economic development programmes, including the use of the SF.

The slight variation to this is **Västra Götaland**, where the region has explicitly chosen to develop a “Growth Agreement” that approximates to an SD strategy.

Figure 3.2: Spectrum of regional approaches to SD, and their relation to national SD strategies

| Typology of regional approaches to SD (strategy rather than <i>delivery</i>) | | Example regions |
|---|--|---|
| <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">strong</div> <div style="text-align: center; margin: 10px 0;">↑</div> <div style="text-align: center; margin: 10px 0;">↓</div> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">weak</div> | 1. Strong regional SD strategy, linked to other regional strategies | Andalucia, Thessalia (implicit in CSF II, explicit in CSF III) |
| | 2. Regional statements of SD but not linked to development strategies | West Midlands, Nord Pas de Calais, Midi Pyrénées Navarra, Catalonia, Campania, Calabria, |
| | 3. No regional statement but awareness of SD at regional level (Agenda 21), and a developing national SD framework | North Rhine-Westphalia, Saxony, Västra Götaland, Antwerp, Norte |
| | 4. No regional statement, and only general national SD statement and policy initiatives | (No case study regions) |

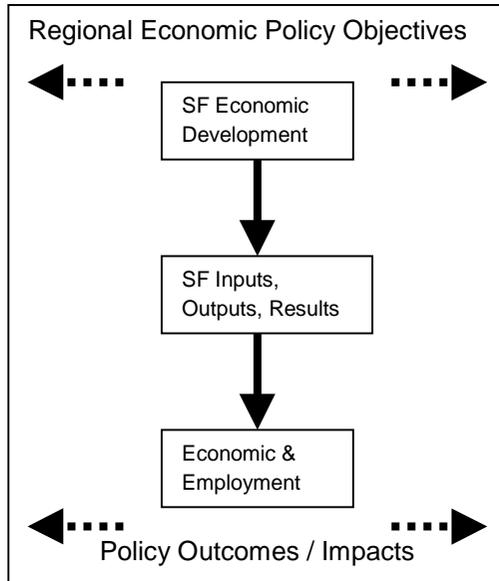
Västra Götaland’s regional development strategy is implemented through a so-called “Growth Agreement” (GA) that was elaborated in conjunction with a broad range of regional partners. There are no regional statements on SD, but the GA approximates an SD strategy, and there are close comparisons between the GA and the Objective 2 SPD.

What is also observable between programming periods, is the increased integration of the SF programmes within clear regional economic strategies, sharing the same objectives and contributing to the same desired policy outcomes. Gone are the days when the SF programme was a ‘stand alone’ bag of projects pursuing a discrete set of economic objectives, separated, despite matched funding, from other regional and sub-regional economic development activities

At the other end of the spectrum is a much broader regional policy framework, which is increasingly defined in explicit SD terms. In this framework, all regional strategies, including economic development, are seen as contributing to the broader SD agenda, and to have responsibility for a wider set of policy outcomes than just economic or employment. This increased level of integration goes beyond just the integration of the SF programme within a regional economic strategy. It effectively integrates the SF programme within a regional SD strategy. The spectrum and evolution of regional policy frameworks and the role of the SF is summarised in Figure 3.3.

Figure 3.3: Changes in the Role of Structural Fund Programmes in Regional Development

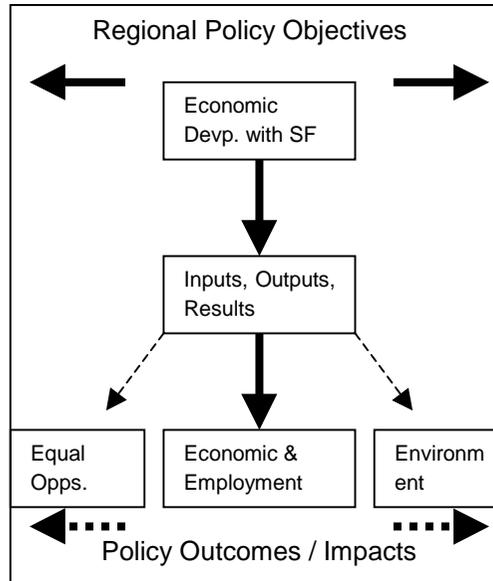
Earlier SF Programmes



Previously SF Programmes were largely defined by reference only to regional economic policy objectives. SF programmes tended to operate in parallel with other regional economic policy activities, even with match funding.

The focus was almost exclusively on economic and especially employment impacts. There was some recognition of the links with, and impacts on, other policies, including the environment, but little attempt to integrate with other policies, or to be concerned with non-economic / employment impacts.

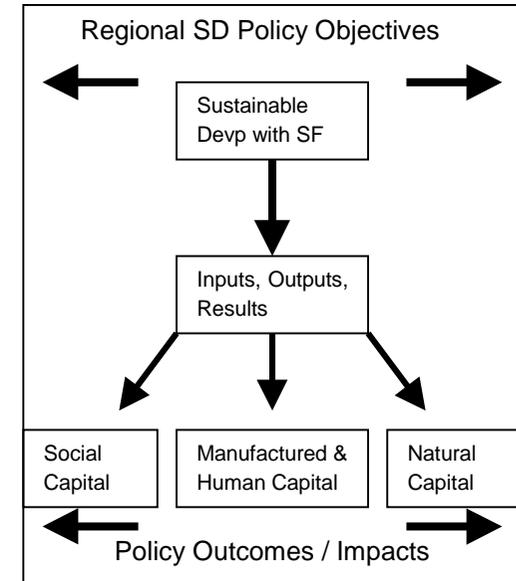
Current SF Programmes



The current SF programmes are more clearly defined with respect to not only economic development but also other regional policy objectives. SF activities are integrated within regional economic development activities, although separate SF funding sources prevents full integration.

SF Programmes are implemented with a clear recognition (with horizontal priorities) of possible impacts on non-economic policy. The focus remains on economic and employment objectives, as the main criteria for funding, but delivery of non-economic outcomes is recognised and valued. Also recognise a need to be more explicit about the beneficiaries and their intended benefits.

Future SF Programmes ?



The role and focus of SF in the next period is uncertain. The logic of changes in SF programming, supported by trends in some of the current programmes, is that SF should support regional development by reference to the full range of regional objectives and strategies. These should be more explicitly framed by reference to SD. Possible move to a single SF funding source.

Future implementation, by the same logic would be explicitly concerned with contributing to a wide range of policy outcomes and not focusing mainly on economic & employment impacts. The added value of SF inputs would be appraised by reference to a wider range of criteria reflecting regional SD objectives. This would include explicit definition of beneficiaries and intended benefits

Perhaps the most evident example in the case studies of this approach is **Andalucía**, with other cases not quite so far advanced. However, it is interesting to observe that the cases in southern MS had taken this approach further than in the more northern MS, partly reflecting the greater importance of the SF, and partly the increasing confidence and ability with programming regional policy, gained from earlier programming periods.

The SF programmes in **Andalucía** are closely linked to other national and regional policies in the area, including the National Sustainable Development Strategy. This is particularly the case with the Regional Government's environmental policy, with its focus on natural parks and protected areas. A key example is the Doñana Natural Park where the SF programme aims to improve the management of the park, and make it a landmark of biodiversity protection, while at the same time developing the area with adequate infrastructure and services to support the local population. This fits closely with the Regional Government's stated environmental policy priorities.

From the examples of Community Initiatives examined in the case study regions, it seems that these small-scale innovative actions fit well within national and regional SD frameworks. Often tackling a range of issues in an integrated manner, CIs such as URBAN or LEADER address all four capitals through their activities, and target issues of relevance both to SD and to wider regional policy agendas.

The **URBAN** Community Initiative in the City of **Antwerp** has been particularly successful in integrating a range of issues relating to SD and quality of life in the city, including physical regeneration, employment, education and training facilities and youth disaffection and criminality. These initiatives fit well within the city's approach to SD, although this is not formulated in an explicit strategy.

In this context it is also worth emphasising that compared with previous periods, the introduction of horizontal priorities has required SF programmes to consider more than just their economic and employment impacts. In particular the requirement to consider how the SF contribute to the promotion of equal opportunities and the protection of the environment has meant a broadening of the range of relevant policy outcomes to which the SF interventions, as part of integrated strategies, are meant to contribute. The actual effectiveness of horizontal priorities is considered in the context of programme management findings, in section 3.6 below.

In terms of the actual clarity and consistency of regional SD objectives, it is worth noting that in the main these remain vague and generally of limited value in defining delivery strategies. This lack of clarity arises partly because of political difficulties in actually setting priorities and hence relegating certain objectives (and related stakeholder interests) to a lower priority. As a consequence there is little explicit weighting of objectives. Neither do the regional SD strategies and frameworks actively define and address regional trade-offs, leaving these to be largely resolved on a project by project basis. For example, none of the case studies have identified a strong and explicit set of resource or eco-efficiency objectives. Neither are major social policy strategies formalised as a response to perceived trade-offs.

3.3.2 The consistency of SF interventions with national and regional policy

The consistency of SF at measure or project level with other regional policies, which is governed (or should be governed) by the regional policy framework, strongly influences the contribution of particular interventions. This is because national and regional non-SF policies are at least as important as the SF, and in the case of Objective 2, much

more important than the SF, in shaping the regional development path, and the sustainability of development. The extent of support or conflict with non-SF policies has a major bearing on the contribution that the SF makes to SD.

Many of the SF programmes work in close accordance with other policies in the region, be they the region's own economic development strategy, or other environmental or employment policies instigated at the national or regional level. In Objective 1 regions, where there are strong synergies between the EU and endogenous national/regional development strategies, the SF programmes seem to be both the main economic development policy instruments as well as key players in improving the effectiveness of other policies within the region. In Objective 2 regions, although the financing involved is relatively small compared to other economic development programmes, the SF still play an important role through synergies with the other policies.

In the main, the cases highlight a strong consistency between SF interventions and other policies in the region. For some cases (for example in **Portugal**, **Gelderland** and the **French regions**), this is true for a broad range of policy domains. In other examples, the case studies pick out strong support for individual policy domains, such as the environment (**North Rhine-Westphalia**) or economic / employment activity (the **Italian regions**).

A key instrument, among others, in the attainment of this consistency is the use of spatial or territorial planning, at regional and sub-regional levels, as illustrated in the following examples:

During the 1990s, **Portugal** developed the "Base Law for Territorial Planning and Urbanism Policy" (*Lei de Bases de Política de Ordenamento do Território e do Urbanismo*). Several programmes and strategies have resulted from this base law, particularly in the environmental field, including the national programme of territorial planning policy, the national plan for water and Natura network, and the national strategy for nature and biodiversity preservation. The SF programmes have been developed in parallel with these strategy documents, with a high degree of consistency between the national strategy statements and the EU co-financed regional policies.

The region of **Gelderland** is subject to a series of non-SF policies that are, in the main, consistent with the approach of the SPD. These include structural measures within the CAP (for rural development), economic policy with a specific agenda for industry and services, ICT policy, spatial planning policy and the national plan for employment. There are clearly strong overlaps between the SF Objective 2 programme, and these other policies working in the region.

In **Midi- Pyrénées**, the region-state strategy document '*Contrat de Plan*' focuses on a range of issues pertinent to the region's development, including: transport cohesion, training, spatial planning, the living environment, and inter-regional cooperation. The themes of transport, training and environment are picked up by, and consistent with, the Objective 2 SPD. There are also synergies between the SPD and other policies in the region, such as in the environment sector, the "Main Scheme of Water Planning and management in the Adour Garonne Basin".

In **North Rhine-Westphalia**, SF interventions tend to reflect the regional and sub-regional development needs well. Compared to other German regions, SF in NRW are co-financed by a broad range of programme stakeholders, which broadens the scope of SF interventions, and allows for more synergies between regional priorities and EU financed projects. For example in the domain of air quality, the SF complement several state programmes, (e.g. the NRW State Initiative on Future Energies and the State Initiative 'Production Integrated Environmental Protection'), through financing particular measures such as 'Precautionary environmental protection in the economic sector' and 'Energies of the Future'.

The southern Italian regions of **Campania** and **Calabria** receive significant national funding for regional development. In the domain of economic / employment policy, initiatives include encouraging new employment opportunities in manufacturing, services and tourism, tackling SME debts, and tax credits for businesses in disadvantaged areas (an exception to European state aids legislation). SF interventions in both regions also have a strong focus on addressing economic actors in the region and supporting the mechanisms of regional economic markets. Integration of national / sectoral programmes with regional priorities is facilitated by the use of sub-regional territorial plans (PITS).

The **West Midlands Region** in the UK has formulated the SPD as a means of delivering the regional economic strategy (RES), by ensuring consistency through sharing common vertical and horizontal priorities. Since the SPD was approved, the region has prepared draft regional planning guidance (RPG) which provides a regional and sub-regional basis for integrating the RES and SPD with other regional policies and strategies, notably for transport, housing and the environment.

The importance of matched funding in securing a measure of consistency between member state and SF policy objectives is obvious, but this condition alone is not always sufficient to generate the degree of integration required for effective delivery. On the whole, however, it was considered that the interplay between the SF and other policies in the region generated positive synergies for SD. There were only a few cases identified where it was considered that national or other regional policies hindered the objectives of the SF, or their potential to encourage more sustainable regional development. This included the **West Midlands**.

In the **West Midlands**, the first line of the Midland Metro (LRT system) represented an ambitious attempt to secure a step change in public transport provision. However, the benefits have been limited by the failure of the local transport plan to develop a metro system (rather than a single line) with the necessary 'critical mass', and a corresponding set of supporting transport measures. This failure stemmed partly from funding difficulties, but also from the lack of an integrated spatial and transport strategy for the conurbation, which resulted in inadequate multi-modal planning and operation. A new regional transport strategy, as part of the regional spatial planning framework has subsequently been prepared.

3.3.3 *The internal cohesion of programme objectives with needs analysis*

Examination of the case studies suggests that the needs analysis, for example described using SWOT analyses, does reflect regional conditions and that programme priorities and objectives do reflect the needs analysis. However, the needs analysis should have a bottom-up component that checks the rationale for projects, their links to strategies and their ability to respond to needs. This finding is important for future programming because it emphasises the value of objective regional economic, social and environmental analyses in framing and justifying policy objectives, and improving the consistency between regional programmes, projects and SD objectives.

3.4 The Contribution of SF to SD

The individual case studies discuss and describe how the individual measures and projects contribute to the particular trends, which are regionally significant for SD. The following summary (Table 3.1) represents a highly generalised set of conclusions, abstracting from the case study findings. A more detailed assessment can be found in Annex 5.

The nature of the evaluation method prohibits aggregation of contributions across different criteria, where there are both positive and negative effects, or where effects are uncertain. In these cases the overall assessment is uncertain. Rather the focus has been on examining the contribution of selected interventions against selected criteria, in order to gain insight into the detailed nature of SF contributions.

In summary, the SF do, as would be expected from their purpose and design, make positive contributions to the formation of manufactured and human capital. It is in the cases of social and natural capital where there are a combination of positive and negative contributions that general conclusions are difficult to draw.

Table 3.1: Overall Summary Assessment of the Contributions of SF to SD

| Types of SF Interventions | Sustainable Development Trends | | | | Overall Assessment |
|---------------------------|--------------------------------|---------------|----------------|-----------------|--------------------|
| | Manufactured Capital | Human Capital | Social Capital | Natural Capital | Total Capital |
| Basic Infrastructure | Positive | Positive | Uncertain | Negative | Uncertain |
| Business Services | Positive | Positive | Uncertain | Uncertain | Uncertain |
| Human Resources | Positive | Positive | Positive | Positive | Positive |
| Community Initiatives | Positive | Positive | Positive | Uncertain | Uncertain |
| Overall Assessment | Positive | Positive | Uncertain | Uncertain | Uncertain |

In the case of social capital there is considerable uncertainty surrounding the direct and especially the indirect effects of interventions on the stock of social capital. The

reductions in certain types of social capital, as inferred by the decline in some desired social outcomes, is difficult to directly attribute to SF interventions. In some cases the observed trends in social outcomes may be a cause rather than effect of a decline in social capital.

In the case of natural capital, the contribution of SF interventions (especially in relation to infrastructure) is often negative and promotes a decline in capital. With some important exceptions, the decline is judged by regional stakeholders to be an understood and acceptable cost for growth in overall social welfare, principally measured in conventional economic, employment and income terms. However, there is also evidence from the case studies that the weights attached to regional priorities in the implementation of SF programmes are changing, with a greater weight being attached to the maintenance of natural capital.

We briefly review the broad types of intervention and their contribution to social and natural capital, as detailed in Annex 5:

3.4.1 Basic infrastructure

Infrastructure projects as funded under Objective 1 tend to be large and wide-ranging. It was considered that most of these infrastructure projects would have been funded without the structural funds, albeit over longer periods, and /or at a smaller scale.

Social capital - Many interventions were judged to have a neutral effect on social capital. This may be a reflection of the difficulty in attributing effects between increased manufactured capital and social capital. However a clear conclusion from the case studies is that public transport such as rail and light rail is considered to have a positive effect on social capital by facilitating more dense networks of people and by improving access to services. Power and water treatment projects have a slightly positive effect. The main effects of road programmes were judged to be positive contributions to networks and improving access to services. The type of funding for the intervention does not seem to influence the effect on social capital.

Natural capital - Infrastructure projects tend to have significant effects on natural capital. However the nature of the projects determines whether these effects are positive or negative:

- Road building or improvement projects were considered to have a negative impact on emissions and congestion, whereas heavy and light rail infrastructure is thought to improve emission generation as car trips are replaced by train journeys.
- Water efficiency and waste management projects were considered to have a positive effect on natural capital, despite some short-term negative effects due to the building of the facilities.
- Energy (power generation) projects were considered to have a short-term positive effect on total emissions by displacing more polluting sources, but a negative effect in the longer term as overall demand increases.

The overall contribution of infrastructure projects on natural capital is considered to be negative.

There are fewer infrastructure projects funded under Objective 2, (light rail and telecommunications infrastructure projects, as well as logistics infrastructure). These were considered to have a neutral to slightly positive indirect effect on natural capital,

mainly because of the effects on road travel. In addition, these regions often had significant derelict or contaminated land, which were improved by the SF, increasing natural capital.

3.4.2 **Business services**

The case studies show that business services measures and projects have usually been targeted at the most depressed areas within the region, which may have seen a decline in traditional manufacturing or agricultural activities. Projects are aimed at supporting technological innovation in businesses within these sectors, as well as encouraging diversification of the economy through the provision of new premises and information technology resources. The main beneficiaries of business service measures are SMEs (although some measures include larger companies), often in the new technology, tourism and environmental sectors. Tourism is especially important in the southern MS case studies assessed.

Social capital - Although business service measures are separate from human resource measures, there is a common theme in that they are often both aimed at disadvantaged groups such as youth and women. The introduction of ICT to SMEs through business service projects comes hand in hand with HR training activities in ICT, although these are usually funded separately. Within the Objective 2 funded projects, networking and encouraging exchange of knowledge between companies and research institutions is an important component of business support. This is considered to have led to the creation of more productive systems and a positive contribution to the different types of capital.

Social and natural capital - As might be expected, the greatest contribution of business services measures is to manufactured capital and human capital. However, depending on the nature and scope of the measure, several measures and projects also have positive effects on social capital and to a lesser extent, natural capital. Some key issues relating to business services measures can be summarized from the case studies as follows:

- Projects that are considered to have made a longer lasting contribution to SD are ones that increase social capital and integrate different players at a local level, e.g. the research community and local businesses, which improve enterprise through increased innovation, risk sharing and the creation of knowledge based industry.
- The failure to better integrate business service measures (using territorial approaches as one approach) within regional policy and focusing on the local economy is viewed as leading to a less effective contribution to SD; in relation to developing social capital (by failing to build and support existing supply chains and business links), and increasing natural capital (by failing to address environmental objectives).
- In some regions (mainly Objective 1) increasing industrialization, in part brought about by business service measures, puts pressure on natural capital. This increase in density of firms, more than changes in the type of companies and production processes in an area, needs to be effectively managed and better integrated with environmental objectives.
- Interventions have increased their positive contributions over the programming periods by encouraging a more spatially balanced economy, leading to a more

positive contribution of these measures to social and natural capital (for example by addressing environmental problems caused by overheating of particular local economies or providing a catalyst to investment in less advantaged communities).

3.4.3 *Human resources (HR)*

Many interventions were assessed as being neutral or having indirect positive effects for all types of capital. In terms of social capital, HR interventions contribute positively, with only one of these interventions considered as having indirect negative effects (on wage differentials). Overall, HR interventions have had a positive effect on poverty and wage differentials, with a very positive contribution to gender inequalities, the latter reflecting the nature of some projects explicitly aimed at reducing inequality in the workplace. The contribution to network development and crime reduction is slightly positive. A higher proportion of interventions aimed at facilitating access to jobs had positive effects on social capital, than interventions focused on training.

The effects of HR interventions on natural capital were difficult to estimate. There was little contribution on air, water and soil quality and climate change, and traffic congestion. However training programmes were found to have a slightly positive effect on waste and biodiversity; and a positive effect on resource use and eco-efficiency, as education and training improve environmental awareness, which is translated into better use of environmental resources. The contribution of HR interventions does not appear to differ significantly with the various programme funding sources (Objective 1, 2 or 3).

3.4.4 *Community Initiatives*

Table 3.2 summarises the overall contribution of the Community Initiatives to SD, according to the assessments that have been carried out in the case studies. The impact of interventions is seen as almost overwhelmingly positive, particularly for social capital. This is in contrast to the overall assessment for all SF interventions as shown in Table 3.1.

Table 3.2: Overall Summary Assessment of the Contributions of Community Initiatives to SD

| Community Initiatives | Manufactured capital | Human capital | Social capital | Natural capital | Overall assessment |
|-----------------------|----------------------|---------------|----------------|-----------------|--------------------|
| URBAN | Positive | Positive | Positive | Uncertain | Uncertain |
| LEADER | Positive | Positive | Positive | Positive | Positive |
| INTERREG | Positive | Positive | Positive | Uncertain | Uncertain |
| EQUAL | Positive | Positive | Positive | Uncertain | Uncertain |
| Overall assessment | Positive | Positive | Positive | Uncertain | Uncertain |

The main area where uncertainty occurs is in relation to their impact on natural capital. This is either because, as with EQUAL, the contribution to natural capital criteria is either not relevant or unclear, or because aspects of some Community Initiatives, such as INTERREG, are concerned with transport and infrastructure interventions that are not necessarily positive for the environment. For example, this was the case with the transport actions funded under **Saxony's** INTERREG III A programme, linking Saxony with the Czech Republic and the Lower Silesia region of Poland.

Overall, the Community Initiatives seem well aligned with SD strategies and policy. The key positive aspects appear to lie in their small scale, often strongly rooted in local partnerships and action plans, such as LEADER's Local Action Groups, or URBAN's neighbourhood focused interventions. Their integrated approach, bringing potential benefits to all four capitals, can also be seen as a major success driver.

LEADER has been particularly well received in **Ireland**. It makes a particular contribution by being multi-sectoral and integrated in nature, developing the linkages between local sectors such as food and tourism to maximise the added value and develop markets. There is evidence that additional employment and activity generated from LEADER has led to additional local spend as well as new products and increased turnover for small firm beneficiaries.

The integrated approach taken by the **Urban I** Community Initiative has been highly successful in the two cities of Salerno and Naples, in **Campania**. Actions targeting physical improvements to the environment have been combined with start-up business measures to support manufactured capital, as well as social and cultural initiatives to strengthen social capital. The impact on social capital has been particularly positive, with local people actively involved in the project, strengthening social cohesion, and with reduced crime rates.

3.5 Added Value of SF Contributions to Sustainable Development

The case study evaluators have sought to address the difficult question, of what regional economic development policy might have looked like in the absence of the SF, and the consequences for SD. Given the scale of SF and the length of time that SF programmes have been operating, especially in Objective 1 regions, it requires some degree of speculation. However, the speculation is suggestive for future policy thinking.

The case studies suggest that there are three specific areas of added value to regional development, which are attributable to the SF and which have subsequently boosted the positive contribution that the SF have made to SD.

3.5.1 *The modernisation of the 'Development Model'*

SF programmes are considered responsible for a 'modernisation' of supply led regional economic development policy, traditionally based on infrastructure provision and training programmes. This modernisation is characterised by recognising and supporting a wider range of policy requirements and outcomes for regional development. These include:

- IT development (e.g. in **Navarra**)
- R&D investment (e.g. in **Andalucia**)

- territorial planning and integrated urban and rural development, (e.g. **Portugal** and **Saxony**)
- human resource development (especially the promotion of entrepreneurship and vocational training) (e.g. **Andalucia** and **Portugal**)
- social exclusion measures, especially with respect to equal opportunities, (**most cases**) and
- environmental protection and improvement (**most cases**)

In **Navarra**, decision-makers at the regional level feel that the Objective 2 programme has had an important effect in facilitating the implementation of 'advanced' measures such as those related to promoting the knowledge society, environmental improvements, the employment of women and rural innovation, that would not necessarily have been given priority. As a result, these actions have been implemented earlier than they would have been without the SF

In **Ireland**, one of the most often attributable impacts of LEADER has been the effect that it has had on animation and capacity building which in turn has done much to increase rural identity, confidence and commercial development capacity. Measures funded under LEADER have included the provision of basic services that contribute to alleviating deprivation, particularly in remote rural areas. These include childcare, and family support targeted at women and single parents, and out-reach services for the long-term unemployed, including those who have never worked and lack the know-how to access available education and training. These interventions are likely not to have been funded without SF support.

The reasoning of evaluators point to the following arguments in support of this SF induced modernisation:

- Short-term critical situations would still have demanded the traditional responses of investment in basic infrastructure, such as traffic problems or a lack of basic sanitation, and business support because of sectoral responses
- In the case of some new entrants, the very low levels of education and skills, relative to the EU average, would have necessitated significant national responses
- Limited financial and management capacity would have prevented a diversion of resources to a broader and more pro-active set of interventions
- Non-economic or employment outcomes would not have been considered to be a measure of regional development. Consequently, in the absence of the SF, the perceived lack of relevance would have mitigated against their application.

In addition, it also noted that even in the absence of new measures, the SF has clearly allowed an accelerated programme, and projects of an increased scale capable of securing a larger step change in regional development.

3.5.2 Raising awareness of EU policy

A large number of case studies remark on the value and influence of European policy on regional policy. This is reflected in the modernisation agenda noted above. Another consequence of this interplay between EU and regional policy is to raise the

awareness and political significance of the European agenda for domestic policy makers. This can be seen, anecdotally, between regional authorities in non-SF regions compared to SF regions. The added value is less tangible but relates to the ability of different regions and MS to share and understand a wider policy agenda, which sits comfortably under an SD umbrella; and which is driven by a concern with both the efficiency of regional economies and the enduring disparities between regions, encapsulated in the pursuit of European regional cohesion.

In countries such as **Greece** and **Portugal**, who are relatively new members of the EU, and where regional policies were not extensively developed prior to membership, the influence of the SF can be seen as directly contributing to the way that regional policies are formulated, in terms of their strategic character and the determination of priorities. Moreover, the EU policy agenda and related analyses of regional drivers, has had a significant influence on regional policy priorities.

3.5.3 *Increasing regional social capital*

All the case studies have identified the contribution of SF programming approaches, based on defined objectives and intended impacts supported by an integrated set of measures and flow of projects and activities, set within a partnership based structure, as marking a major improvement in previous models of policy making. This improvement in social capital is most evident in the southern MS, but even in northern MS the SF programming approach has been picked up in wider regional strategies. Partnerships supported, objectives-led planning, and implementation based on a clear specification of the links between inputs and outputs, has permeated many public policy approaches.

In some member states, for example **Italy** and **Portugal**, there have been marked improvements between programming periods, with the CSF 2000-2006 showing more advanced aspects of good practice in terms of managing the programme than were revealed in the previous CSF.

In the southern Italian regions of **Calabria** and **Campania**, the Objective 1 programme is implemented in large part through 'Territorially Integrated Projects' (PITs), innovative regional development tools that build a local strategy around a context-specific growth path, implicitly integrating the different dimensions of the four capitals. The PIT involves projects at the sub-provincial level managed by the local authority, through the creation of local partnerships and is strongly rooted in participation and negotiation. The SF are seen as having had a pivotal role in instigating this new approach, involving 'bottom up' programming principles'.

Experiences of Leader and Leader+ have revealed positive contributions to regional development in particular through the partnership approach. Local Action Groups are set up to develop the strategy, manage the programme and evaluate projects for selection, building capacity for the future management of regional change programmes. For example, in **Navarra**, the LAG's preparation of the Leader + strategy was highly participatory, with the creation of working groups with a broad membership from local stakeholder groups.

Regarding pilot or demonstration projects, few of the measures and projects analysed in the case studies were considered as innovative in their approach or strategy. The structures and procedures for mainstream funding through the SF does not seem to promote innovative projects, given the long time lags, the requirement for match funding and the procedures for project generation and selection. One area where SF have been seen to support more innovative projects is through the Community Initiatives, which, given their narrow spatial and sectoral focus and more discrete management structures, offer more possibilities for risk-taking and innovation from the grass-roots up.

There are some good examples of SF supporting projects that take an integrated approach to regional development. In addition to the Italian cases outlined above, there are other examples such as **Andalucia**, which also demonstrate a strong degree of integrated thinking, through the regional development strategies. Again the Community Initiatives, in particular Leader and Urban also take a strong integrated approach, which favours improved contributions to SD by taking a global (and local) perspective to the initiatives funded.

In many of the case studies, the European Commission is accredited with introducing the regions to stricter monitoring and evaluation systems, which have now permeated their own national and regional systems for running public programmes. The Commission's added value is also enhanced through its promotion of EIAs, which are now more commonly acknowledged as being essential for programme planning, due to their integration into the SF programmes. However, as the next section will illustrate, although project appraisal systems have been introduced into the generation and selection processes, there is still work to be done in harmonising those systems, before the clear value added of the Commission's involvement can be recognised.

In **Catalonia**, the discipline imposed by the European Commission in the structure of preparing programmes, as well as methods for monitoring and evaluation, has acted as a catalyst for the development of a culture of managing public sector programmes. Due to the influence of the Commission, both politicians and technicians have become familiar with evaluation methodologies, have put in place monitoring systems, and have progressively changed the way that integrated programmes are planned and managed. This is also true of the cases in **Southern Italy**.

3.5.4 The added value of the SF – accelerating change to more sustainable development paths

The contribution to regional SD as implied by the added value described above is identified from the perspective of regional stakeholders, and evaluators assessing regional contributions. To a large degree the objectives of the EU for economic and social cohesion and the development objectives of the regions are integrated through the programming approach.

However, it is possible to conceive a situation, partly as a result of the new EU SD strategy, where the EU level evaluation of regional trade-offs in development might be different to that of the regions. One can imagine, for example, a lower willingness on the part of the EU to accept the trade-offs with natural capital, as a price worth paying for accelerated economic development, compared with regional decision-makers. In this situation the EU would effectively be challenging the region to consider change to an alternative development path, considered by the EU to be more sustainable.

To this end the added value of the SF to the EU would be associated with encouraging the move to an alternative more sustainable development path. Assessing the added value could use a criteria based approach, constructed from previous SF evaluations, for example in relation to the environment, or the use of partnerships, but related to the EU SD strategy. The SF then become a tool for promoting sustainable regional development. We return to this idea in the conclusions and recommendations.

3.6 Programme Management

Findings from the case studies show that there could be significant improvements to the structures for programme development and management, to promote SD more effectively.

The range of **partners** involved in the development of programme strategies is generally not as extensive as it could be. This is particularly the case in relation to the development of CSFs (for example in **Greece**). Participation in the partnership is often restricted to the traditional economic and social partners (representing business and trade unions), to the exclusion of other stakeholders and NGOs. However, where a wider range of stakeholders has been consulted on the programme strategy, their influence in practice may be very limited (such as NGOs in **North Rhine-Westphalia**). Examples of good practice include **Västra Götaland**, where the Objective 2 programme was prepared by a wide partnership covering several levels of administration.

In most of the case study regions, authorities responsible for environmental protection and equal opportunities are formal members of the **Programme Monitoring Committees** (PMCs). In **Saxony**, PMC membership has been widened to include a broader range of stakeholders and NGOs, and in **North Rhine-Westphalia**, they also have voting rights. However, formal PMC membership is a necessary but not a sufficient condition for influencing the implementation of programmes, for two reasons. The first is that effective representation on PMCs requires resources which are generally not available to most social/environmental authorities, let alone many other stakeholders and NGOs. The second is that PMCs meet infrequently. Therefore, more important is membership of subordinate committees and working groups, particularly those responsible for screening project applications. However, this also requires resources.

Ideally, a **Sustainable Development Advisory Group** – or separate Environmental and Equal Opportunities Advisory Groups – should be established to provide advice and guidance on SD to the PMC, and to participate at all the critical stages in the development and implementation of the programme. Membership of such groups should link with the regional ‘roundtable’ on Sustainable Development, where this exists. However, few of the case study programmes have such groups. In Italy (**Calabria** and **Campania**) as well as in other regions, Regional Environmental Authorities have been established to champion environmental protection throughout all stages of programme management - although their effectiveness remains to be determined. In **North Rhine-Westphalia**, an Equal Opportunities Advisory Committee has been established with an official mandate to advance gender mainstreaming throughout the programme.

To support such advisory groups on a day-to-day basis, dedicated staff are necessary, in the form of **Sustainable Development Theme Managers** (or separate managers for each of the horizontal themes). These appointees can provide day-to-day advice and guidance to partners and project applicants, and to improve project selection procedures. Only the **West Midlands** of the case studies reported such appointments, although elsewhere, their effectiveness is well established (as in the UK Wales and Cornwall Objective 1 programmes).

A fundamental message from most of the case studies is that establishing formal structures and procedures is not enough. Mainstreaming SD needs to be supported by adequate *resources* - for the appointment of dedicated staff within programme secretariats, and to support the work of competent environmental authorities. This should be made a priority in the allocation of technical assistance.

In summary, some of the **recommendations** relating to programme management to come out of the case studies include:

- **Broadening partnerships and programme monitoring committees** to include the widest possible membership, covering several levels of administration, as well as key environmental and equal opportunities stakeholders;
- Establishing a **Sustainable Development Advisory Group** to provide advice and guidance on SD;
- Putting in place the support for an Advisory Group, in the form of a **Sustainable Development Theme Manager**;
- Making **resources** available from technical assistance budgets for such SD support.

3.7 Project Generation and Selection

The findings from the case studies suggest that one of the key issues for the improvement of programme management for sustainable development lies in project generation and selection, and in particular, the operation of the project pipeline.

3.7.1 Project pipeline

The selection of innovative projects that exploit 'win-win' opportunities has been constrained in all the case study areas by a number of basic factors. These include the dominance of bureaucratic incrementalism over strategic thinking; the lack of awareness and resources among potential project applicants; and the need to spend large sums of money in a short space of time.

Many Structural Fund programmes are based upon existing national or regional plans – the classic example being the French *Contrats de Plan Etat-Région*. As evidenced in Section 3.3.2 above, this means that SF programme priorities, measures and projects are likely to reflect existing national or regional practice. Since in most areas, explicit regional sustainable development strategies either do not exist or are at an early stage of development, mainstreaming sustainable development through project generation and selection, *ab initio*, is difficult. As noted in the **North Rhine-Westphalia** case study: “Strategic thinking is not yet very prevalent among the institutions involved in SF programming, and a strategic approach is only beginning to develop – many of the involved partners still think ‘from measures to strategy’, not vice versa”. In the **Midi-Pyrénées**, the 1999 pilot programme ‘Sustainable Development in Midi-Pyrénées’ –

the D2MIP programme – represents a good, though rare, example of an explicit attempt to develop a model structural funds programme with sustainable development at its heart. However, the actual outcomes of this initiative are perhaps not as positive as the programme initially promised.

A number of cases highlighted the problem of the 'n+2' rule, meaning that there is an imperative to spend money quickly. There is pressure on Managing Authorities to give priority to large well-developed 'off the shelf' project proposals. This means that, particularly in the early stages of the programme, formal project scoring and selection procedures are sidelined (for example in **Navarra** and **Midi-Pyrénées**). The development of new programmes well in advance of the beginning of a new programming period would give more scope to innovative programme and project development. This means that early agreement is needed for revised SF Regulations relating to the post 2006 period.

The pressure to spend money is clearly greatest in the big Objective 1 programmes (for example in **Andalucia**). In the smaller Objective 2 programmes, there is often a wider range of project proposals chasing a smaller budget, and so there is more scope for selection, as highlighted by the case of **Västra Götaland**.

It was also found that project application and selection procedures in many of the case study areas were non-transparent. In some programmes, there are open calls for project proposals. In **North Rhine-Westphalia**, the Projekt Ruhr GmbH has encouraged the development of locally-based, innovative projects, and represents good practice.

Some of the **recommendations** to come out of the case studies relating to the project pipeline suggest that:

- **'outreach' activities** should be further developed to raise awareness particularly among small organisations of the opportunities presented by programmes. Good examples include the **Saxony** and **Västra Götaland** programmes. Outreach should include the development of possible 'model' projects to fill gaps in the applications under particular priorities.
- **capacity building** should be provided for small organisations in relation both to project applications and successful project management. Previous successful applicants should be encouraged to 'mentor' potential new applicants.

3.7.2 Project scoring and appraisal procedures

From the case studies, there appear to be widely varying approaches to formal project scoring and appraisal procedures. Often these are not transparent, and where they exist, they may not be applied to certain major, pre-selected projects.

In the case of project scoring, it was found that particular caution needs to be exercised in relation to quantification and weighting. This is in effect a political and not a technical exercise, which can tilt the balance against proposals seeking to advance aspects of sustainable development. There are particular issues of concern:

- There is sometimes an unfair and unexplained allocation of potential scores between 'core' and 'horizontal' criteria;
- There are often no negative scores for poor performance in relation to environmental/social priorities;

- Total scores may be based on an arbitrary choice of the highest 2 or 3 scores out of a much longer list of scores. This may mean that projects can be selected even though they score very poorly in relation to horizontal themes;
- Sometimes there is no minimum threshold for horizontal themes, or where they exist, they may be set very low.

Some of the **recommendations** to come out of the case studies relating to project scoring suggest that:

- More detailed **guidance** is required from the Commission on project scoring and appraisal procedures.
- **Detailed project selection criteria and procedures** are currently not required to be published in the Programme Complement. This can cause confusion and frustration among potential applicants. This could be remedied for the next programming period, through their inclusion.
- Particular **caution** needs to be exercised in relation to **quantification and weighting**. Guidelines to programme managers would help to harmonise systems, to ensure that they are fair.

3.7.3 **Strengthening information and awareness**

Formal institutional structures and procedures are important but not enough to ensure the mainstreaming of SD throughout Structural Fund programmes. It is apparent from most of the case studies that it is essential to encourage a culture change among programme managers, involving strengthening information and awareness. Mainstreaming has to address the fact that many stakeholders perceive the Structural Funds as an instrument solely for the promotion of economic development, with no reference to the concept of sustainable development. It requires a long-term process of awareness-raising among partners, in relation to all stages of programme development, implementation, monitoring and evaluation.

Some of the **recommendations** to come out of the case studies relating to awareness raising include the following:

- Information **on good practice examples** of the employment-creating potential of SD-related projects should be exchanged between programmes. In order to quantify the economic and employment benefits of environmental projects, econometric models should be further developed, building on existing work. Case studies should be included on programme websites.
- **Networks** should be established in each Member State bringing together the competent environmental/social authorities represented on PMCs for the exchange of good practice and shared learning. The **Spanish** network of environmental authorities provides a model. National networks should be linked to an EU-wide network, funded through a bid under INTERREG IIIC.
- Better projects also require a stream of good applications. **More information should be made available to raise awareness of SD opportunities among potential project applicants.** For an EU policy instrument which is supposed to be based on partnership, the availability of information on many Structural Fund programmes and their management is poor, and contravenes the spirit if not the letter of the Regulation on information and publicity requirements. Comprehensive

information should be available to the public on dedicated websites, including programme documentation; information on administrative structures; membership of all committees, sub-committees and working groups; minutes of all meetings; project selection criteria; and lists of all successful project applications.

Even if they have good project ideas, stakeholder groups often have **difficulty in finding the necessary match funding**. There is provision in the Framework Regulation for higher rates of support for projects which enhance the environment, although it appears that this has not been used frequently. In the **Midi-Pyrénées** programme, the *Agence Régionale pour l'Environnement* has proposed that this should be used more extensively. Similarly, in **Nord Pas-de-Calais**, higher rates are available for support for businesses demonstrating a higher level of corporate environmental and social responsibility. These cases could be rolled out and use as exemplars for other programmes to follow.

4 A MACRO-ECONOMIC ANALYSIS OF THE CONTRIBUTION OF THE STRUCTURAL FUNDS TO SUSTAINABLE DEVELOPMENT – A SUMMARY OF MODELLING RESULTS

4.1 Summary of Findings

The macro-economic analysis assesses the contribution of structural funds to sustainable development at EU and MS level. The analysis identifies changes in a number of measures of capital stock with and without the structural funds. The analysis compares a policy-on scenario based on historical data, against a counterfactual scenario (policy off) where EU structural funds expenditures have been eliminated. The present exercise covers the three programme periods 1986-1993, 1994-1999 and 2000-2006. Figures are the percentage difference p.a in the selected variables between the two scenarios.

Manufactured capital - The effects of the SF on the level of gross value added (GVA) for the whole of the EU is to increase it by over ½% per annum (200-2006). Capital formation also increases, to 0.3% by the end of the period. At the country level most Member States benefit, including those who are net contributors to the EU budget due to trade flows. The levels of activity for investment in ICT sectors and export in high-tech products are barely affected.

Human capital - The positive SF effects on employment follow closely the effects on GVA with a long run increase of 0.2% at the EU level. The ratio of total labour costs to GVA decreases through time, to a 0.3% in the EU, as the output effect is greater than the employment increase. Expenditure on education as a proportion of total government expenditure tend to revert to zero by the end of the period. The SF have a positive effect on labour productivity.

Natural capital - Emissions of pollutants, used as indicators of consumption of natural capital, tend to follow economic activity. There is an increase of 2% each year of CO₂ emissions at the EU level, at the end of the period. Emissions of SO₂ follow a similar trend. At the MS level the main effects are concentrated in Greece and Portugal. Energy use increases are particularly high for road transport users and other transport uses, particularly by the end of the period. However, the increase in energy use is less than the increase in GVA, with a decline in energy intensity.

4.2 General Approach

This section summarises the approach and results of the macro-economic analysis. used to examine the contribution of structural funds (SF) to sustainable development (SD). The approach uses the Cambridge Econometrics multi-sectoral dynamic model, E3ME, which combines economic, energy and environment models. The approach seeks to identify change in capital stocks with and without the SF, using selected indicators. Note that total SF expenditure comprises a combination of EU funding plus Member state and private sector contributions. The analysis only examines the contribution of the EU share of funding. The remainder of the SF expenditure is assumed to take place. The EU co-financing of total SF varies between MS, ranging between 30% and 50%.

Using scenarios, the analysis compares the existing 'policy-on' situation with a counterfactual 'policy-off' scenario, where the EU component of structural funds expenditures is assumed not to take place. The policy-on scenario represents the

actual state of the economy and incorporates all the investment and other expenditures from the structural funds, including EU, national and private contributions. In the counterfactual scenario (policy off), the EU contribution to the funds is assumed to be taken away from government current expenditures and investment, and at the same time taxes (VAT) are assumed to be lower, equal at the EU level to the reduced EU contribution.

The comparative analysis examines the positive effects of the structural funds on the generation of additional demand but takes into account the costs to consumers' of marginally higher taxes. The structural funds aim to affect long-term investment trends and technology trends while stimulating the production of certain types of capital. At the same time the financing of the SF generates costs to consumers, with an associated reduction in demand.

From the point of view of output production, the existing literature together with the E3ME structure, suggests following both a demand side and supply side modelling approach in which investment and expenditure in education drive economic activity and environmental change. The demand side modelling assesses the effects that SF have on the levels of taxes, current government expenditure, investment and the economy. The supply side modelling assesses the longer-term effects of the SF on changes in productivity and changes in the accumulation of capital and technology. These longer-term effects are incorporated in the model through the changes in productivity induced by these expenditures.

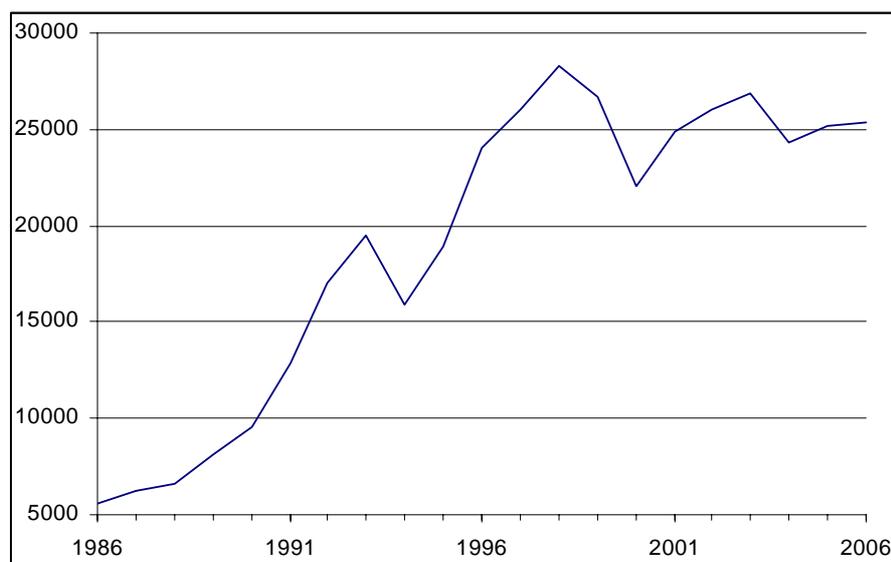
The analysis produces estimates of the changes in a set of indicators related to three types of capital stocks: manufactured, human and natural. The analysis does not address changes in Social Capital given the difficulty of identifying suitable economic variables to represent this form of capital.

The exercise generates results for the European Union area covering a 20-year period, from 1986 to 2006 over three programme periods: 1986 to 1993, 1994 to 1999 and 2000 to 2006. The results for the latest period are forecasts.

4.3 The Policy-On Scenario

This scenario corresponds to the actual development of the economy throughout 1986 to 2006. This scenario incorporates all international, government and private current expenditures and all international, government and private investment derived from the structural funds, but identifies the EU contribution specifically. Figure 4.1 presents the EU contribution to structural funds. During the period 1986-1993 the funds grew threefold. However, in subsequent periods, the EU contribution has grown more slowly.

Figure 4.1: EU contribution to structural funds 1986-2006 (mio €)



Sources: EC (2000b,2001a,2001c), Beutel (2002), Ernst & Young (1999)

EU structural fund expenditure contributed to Member States is summarised in Table 4.1.

Table 4.1 Total structural funds expenditure by period (mio €)

| | 1986-1993 | 1994-1999 | 2000-2006 |
|-------------|-----------|-----------|-----------|
| Belgium | 1,187 | 1,890 | 1,490 |
| Denmark | 677 | 807 | 568 |
| Germany | 7,127 | 18,562 | 26,997 |
| Greece | 8,923 | 14,274 | 24,575 |
| Spain | 16,686 | 36,167 | 39,910 |
| France | 9,771 | 12,258 | 11,782 |
| Ireland | 5,654 | 6,830 | 3,230 |
| Italy | 14,496 | 16,730 | 31,663 |
| Luxembourg | 97 | 94 | 39 |
| Netherlands | 1,024 | 1,710 | 1,990 |
| Portugal | 9,695 | 16,885 | 20,342 |
| UK | 10,127 | 9,887 | 7,250 |
| Austria | 0 | 1,405 | 871 |
| Finland | 0 | 1,232 | 1,993 |
| Sweden | 0 | 1,143 | 2,040 |
| EU15 | 85,463 | 139,874 | 174,740 |

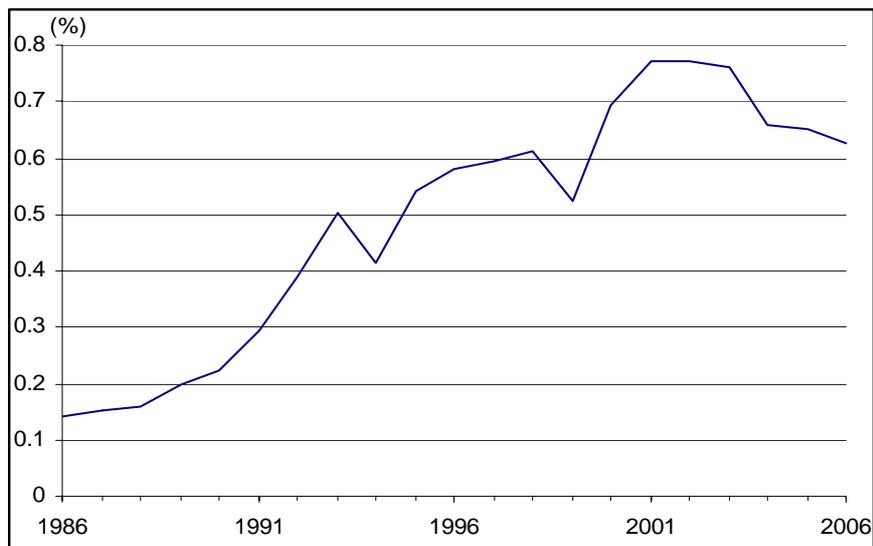
Sources: EC (2000b, 2001a, 2001c), Beutel (2002), Ernst & Young (1999)

^a: Sum of all SF expenditures by year including: EAGGF - Guidance (incl. fisheries), ERDF, ESF and Other operations

^b: 2001-2006 period source data includes only expenditure in Objective 1 regions. 2001-2006 Year allocation estimated from total year allocation (see Beutel 2002). Expenditures in year 2000 from 2000-2006 programme funds not included.

Figure 4.2 below indicates the share of total fixed investment through time for the EU15 accounted for by the EU contribution to the SF on physical capital.

Figure 4.2 EU Structural funds (physical capital) as a share of total investment EU15 (%)



Sources: E3ME (2002), EC (2000b,2001a,2001c), Beutel (2002), Ernst & Young (1999)

^a: Structural fund data considers expenditures in physical capital only.

Table 4.2 presents the net financial positions by MS calculated as the difference between receipt of EU structural funds expenditure in the MS and the MS contribution to EU funding of structural funds. The MS contribution to SF is calculated in proportion to their total contribution to the EC budget. The underlying assumption is that if the EU contribution to structural funds expenditures were stopped, then there would be a proportional reduction in payment by Member States to set against a the loss of SF expenditure. The largest net contributors are Benelux, Germany, France and the UK, while the largest net recipients are the cohesion countries (Greece, Spain, Ireland and Portugal).

4.4 The Policy-Off Scenario

The counterfactual, policy-off, scenario excludes all expenditures attributable to the EU contribution to SF. National matching funds and private contributions are assumed to remain unchanged². The scenario assumes that the matching funds are maintained and spent on the same type of expenditure: so that physical capital expenditures remain physical capital, education expenditures remain education, etc. The possibility that, in the absence of the EU contribution, MS investment would have been reallocated to other activities has not been examined. The reduction in SF is calculated as a reduction in investment in physical capital (infrastructure) and in education and training (human resource interventions).

The policy-off scenario requires three elements to be estimated:

- 1) the reduced level of taxes equal to the estimated Member States contributions to the EU share of the Structural Funds. The reduction in each Member State is calculated in proportion to each Member State's total contribution to the EU. The increase in consumer expenditure equivalent to the tax reduction is modelled;

² There was no consistent data available for the matching public funds or the private contributions throughout the period under analysis.

Table 4.2 EU regional financial positions by period (mio €)

| | 1986-1993 | 1994-1999 | 2000-2006 |
|-------------|-----------|-----------|-----------|
| Belgium | -2477.3 | -3750.7 | -5499.8 |
| Denmark | -1,155 | -2,014 | -2,927 |
| Germany | -15223.5 | -15845.3 | -15639.4 |
| Greece | 7457.8 | 12018.1 | 21779.4 |
| Spain | 9632.4 | 25309.4 | 26454.6 |
| France | -5526.4 | -11291.4 | -17399.5 |
| Ireland | 4371.3 | 4855.8 | 783.7 |
| Italy | 2588.3 | -1601.7 | 8946.7 |
| Luxembourg | -85.9 | -187.5 | -310.0 |
| Netherlands | -4930.3 | -7456.1 | -9368.4 |
| Portugal | 8320.5 | 14769.9 | 17721.0 |
| UK | -2971.5 | -10277.3 | -17737.9 |
| Austria | 0 | -1,696 | -3,497 |
| Finland | 0 | -628 | -629 |
| Sweden | 0 | -2,206 | -2,678 |
| EU15 | 0 | 0 | 0 |

Sources: EC (2000b,2001a,2001b,2001c), Beutel (2002), Ernst & Young (1999)

^a: Based on total SF expenditure (See Table 4.1)

^b: Based on 2002 Public finance figures of the European Union (EC 2002b).

- 2) the reduced level of investment in physical capital due to the reduction in EU SF contribution. The reduction in demand due to less investment in physical capital is modelled through a reduction of public administration investment. The supply component of the reduction is assumed to negatively effect productivity of tradable goods³. Table 4.5.2 (in Volume 2) presents time series for the expenditure in physical capital foregone;
- 3) the reduced level of investment in education due to the reduction in EU SF contribution. The reduction in demand due to less education expenditure is modelled through a reduction of government current expenditure. The supply component that arises from this reduction is also assumed to affect negatively productivity of tradable goods⁴. Annex 6, Volume 1 presents time series for the total structural fund expenditures (physical capital and current expenditures).

The impact at the level of the EU15 will therefore result from the net effects of these expenditures, i.e. how the cash invested is raised and spent. At the level of the Member State the impact is also a reflection of the net transfer of resources to or from the Structural Funds. Annex 6, Volume 1 detail country contributions and countries' financial position with the structural funds.

The counterfactual is constructed by removing the EU component of structural funds from the national budget categories funded and by reducing taxes by the amount saved by not having to contribute to the structural funds. In a net receiving country like Spain, the regional development policy receives substantially less money under the counterfactual, but at the same time the Spanish taxes are reduced by Spain's

³ This is somewhat similar to the approach in the HERMIN study (See Bradley 2001). In E3ME the reduction of supply is assumed to be absorbed by trade.

⁴ Similar to the HERMIN approach (Bradley 2001).

contribution to the structural funds (and therefore by less than the reduction in structural investment). At the individual country level, and given the multiplicative effects of investment, the policy-on scenario would be expected to show a clear increase in economic activity. In a net contributor country like Germany, the regional development policy receives less money, but at the same time German taxes are reduced by Germany's contribution to the structural funds (and therefore by more than the reduction on structural investments). The effects in activity are less clear in this case due to two factors. Firstly, the impact on economic activity of investment expenditure, compared to consumers' expenditures, is larger. Secondly, the net contributor countries benefit indirectly through trade, from increases in the demand for investment goods, attributable to the SF in other MS.

The analysis takes account of not only the change in net expenditure in each MS but also the effect on MS as a result of inter-MS trade. In an alternative scenario where taxes are only reduced (in a net contributor like Germany) by the net amount paid to the external regions, and the total amount for regional policy and the spending profile remains unchanged, would result in weaker effects in economic activity and investment. On the one hand net recipient regions would not benefit by a net transference of resources. On the other hand, net contributor regions experience higher levels of consumer demand but lower exports demand. Further work might explore assumptions about trade integration in such a counterfactual.

Box 4.1: The Sensitivity of Results to the Counterfactual Scenario

The results of modelling counterfactual scenarios are clearly a direct consequence of the definition of the counterfactual. Where the counterfactual scenario potentially has a number of possible variants then different results are also to be expected with these variants. The study has not tested these variants in the model, but acknowledges that there are other ways of defining the counterfactual to the option that has been modelled.

For example, another possible counterfactual is one where structural fund expenditure is assumed to be financed from increased borrowing by national governments, rather than higher taxes. In this scenario crowding out effects would need to be modelled, because the higher borrowing would lead to higher interest rates, constraining private sector investment. A counterfactual that ignored these effects would overstate the effects of higher government expenditure. In the chosen approach, based on the assumption that SF are financed by higher taxes, and with a balanced budget, crowding-out effects are not considered. This is a reasonable assumption as long as all the additional investment comes from the tax-funded investment and in this approach there would be no overestimate of a positive economic impact of the structural funds. In the present exercise, the higher tax burden on consumers plays the role that investment crowding out would play in the debt-financed alternative.

Another counterfactual is one where the reduction in taxes occurs only in net contributor countries, based on the net amount paid to the net recipient countries. The allocation between net contributors being assumed to be based on their relative contribution to the EU budget. This scenario might be expected, although no modelling has been undertaken, to lead to a lower or negative effect on GVA in net contributor countries because of the lower levels of investment spending and lower levels of trade generated by investment spending.

For the 2001-2006 period the basic information included the expenditures by form of intervention. This allowed for an estimated allocation of expenditures between E3ME

investment categories. For the pre-2001 period the source data was less detailed and allowed only the identification of the broad interventions of infrastructure, human resources, productive sector, environment and other. Thus, the average 2001-2006 converter between each of these broad forms of interventions and E3ME investment categories such as, physical capital, education and other government expenditures was applied to the 1986-2000 period.

In addition, the 2001-2006 period data (based on Beutel 2002) included only expenditures in objective 1 interventions. In order to estimate the overall expenditure the average objective split⁵ was used.

4.5 Selection of Indicators

The selection of indicators is limited by the scope of the project and to those indicators that are capable of being produced by E3ME as model outputs. The indicators are based on the Commission's 'structural indicators' work (EC 2000a) using the results for E3ME output variables. The structural indicators are macroeconomic variables designed to cover a range of areas that the Commission deems important. These E3ME outputs are used (as detailed in table 4.3 below) to generate three groups of indicators: manufactured capital, human capital and natural capital.

Table 4.3 : Selected Indicators

| Indicator Group | Description | Units | E3ME formula |
|-----------------------------|--|-------|--|
| Manufactured Capital | Gross domestic fixed capital formation | mio € | RKR*PRKR |
| | Gross value added | mio € | RYM*PRYM |
| | 'Knowledge / ICT' investment share | % | $(K(20,J)*PK(20,J)+K(35,J)*PK(35,J))/RKR(J)*PRKR(J)$ |
| | 'High tech' products export share | % | $(QRXPQRX(20,J)+QRX(35,J)*PQRX(35,J))/RQX(J)*RQX(J)$ |
| Human Capital | Real unit of labour cost | % | $(RWS+RERS)/(RYM*PRYM)$ |
| | Employment share | % | REMP/RPOP |
| | Labour productivity | % | $(RYM*PRYM)/(PRSC*REMP)$ |
| | Public expenditure in education | % | $GR(2,J)*PGR(2,J)/(GR(J)*PGR(J))$ |
| Natural Capital | Carbon Dioxide emissions (CO2) | ettc | RCO2 |
| | Sulphur Dioxide emissions (SO2) | ettc | RSO2 |
| | Energy efficiency | kgoe | RFU/RYM |

4.6 Summary of Results

The results that follow refer to the indicators in section 4.5. The results have been organised by indicators and by country including one table with the results for the whole of the European Union (EU15) area. The results are summarised below for the three programme periods 1986-1993, 1994-1999 and 2000-2006. The values reported correspond to average annual changes for each period. The reported changes for the selected indicators are calculated as the percentage change from the policy-off scenario. More detailed tables with year by year changes are presented in Annex 6 of this document.

⁵ The split was estimated using data from the Ex-post evaluation 1989-1993 objective 2 Ernst&Young, the 11th annual report on the structural funds (1999) and the 12th annual report on the structural funds (2000).

The following tables illustrate the short and long-term effects of the EU contribution to investment and other government current expenditures. In addition, lower levels of VAT in each national economy, equivalent to the lower level of EU expenditure, are included in the tables below. The result therefore, represent both the short and long run effect of structural funds and the positive (additional investment) and negative (reduced consumers expenditure) effects of the EC expenditures.

4.6.1 Contribution to Manufactured Capital Trends

Table 4.4 below illustrates the effects on GVA and investment of the community contribution to the structural funds. The policy-on scenario results in an increase in the value of GVA of close to 0.5% pa. The EU increase in total capital formation attributable to the policy-on is close to 0.3% by the end of the period with a peak towards the end of the period 2000-2006⁶.

At national level, the largest effects on GVA appear in Greece, Spain, Ireland and Portugal. There are small positive impacts in Italy, UK, France and Germany. There is a small reduction in Denmark and larger reduction in the Netherlands. The impact on the Netherlands is due to a relatively limited indirect benefit from trade with the main recipient MS. A similar pattern occurs in relation to the impact on GDFCF.

Table 4.4 : Results for Physical Capital Indicators

| | Gross domestic fixed capital Formation (%pa) | | | Gross value added (%pa) | | |
|-------------|---|-------|-------|----------------------------|-------|-------|
| | 86-93 | 94-99 | 00-06 | 86-93 | 94-99 | 00-06 |
| | Belgium | -0.07 | -0.10 | 0.06 | 0.01 | 0.00 |
| Denmark | -0.02 | -0.12 | -0.12 | -0.01 | -0.12 | -0.18 |
| Germany | -0.04 | 0.01 | 0.03 | -0.02 | 0.02 | 0.05 |
| Greece | 2.03 | 3.81 | 3.45 | 2.63 | 3.19 | 3.36 |
| Spain | 0.59 | 1.49 | 1.54 | 0.60 | 1.55 | 1.91 |
| France | 0.03 | 0.01 | 0.10 | 0.10 | 0.12 | 0.09 |
| Ireland | 1.71 | 2.18 | 1.20 | 2.86 | 3.52 | 2.72 |
| Italy | 0.19 | 0.18 | 0.45 | 0.28 | 0.24 | 0.27 |
| Luxembourg | 0.09 | 0.15 | 0.25 | 0.17 | 0.26 | 0.34 |
| Netherlands | -0.34 | -1.43 | -1.84 | -0.22 | -0.59 | -0.72 |
| Portugal | 2.93 | 4.69 | 4.36 | 3.58 | 5.63 | 4.78 |
| UK | 0.07 | 0.02 | 0.00 | 0.13 | 0.11 | -0.02 |
| Austria | 0.00 | 0.07 | -0.01 | -0.02 | 0.05 | -0.03 |
| Finland | 0.00 | 0.06 | 0.20 | 0.03 | 0.03 | 0.14 |
| Sweden | -0.05 | -0.04 | 0.10 | -0.03 | 0.03 | 0.01 |
| EU15 | 0.14 | 0.22 | 0.30 | 0.23 | 0.50 | 0.59 |

Source: E3ME (2002).

Notes: All values are annual average percentage difference from policy-off scenario. When variables are measured in level, percentage changes are used. For variables measured as a percentage, simple differences are used.

Table 4.5 presents the results for investment in ICT sectors and export in high-tech products. At the EU level investment in ICT is barely affected. This is explained by the limited weight attached to ICT in the investment attributable to the SF. The shares of high tech export are also increased in the policy-on situation. The largest impacts are

⁶ These result are in line with previous work; see for example the HERMIN Work for Greece, Spain, Ireland and Portugal by Bradley (2000)

in Ireland and Portugal, while Spain and Greece tend to move away from ICT sectors in both investment and exports. Germany, France and the UK show a small but positive trend towards ICT under the policy-on scenario.

Table 4.5 : Results for Physical Capital Indicators

| | Investment in 'knowledge-ICT' sectors (%pa) | | | Share high-tech products in total exports (%pa) | | |
|-------------|--|-------|-------|--|-------|-------|
| | 86-93 | 94-99 | 00-06 | 86-93 | 94-99 | 00-06 |
| Belgium | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 |
| Denmark | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.04 |
| Germany | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.03 |
| Greece | -0.01 | -0.03 | -0.02 | -0.02 | -0.06 | -0.09 |
| Spain | -0.01 | -0.03 | -0.04 | -0.04 | -0.06 | -0.06 |
| France | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.06 |
| Ireland | 0.03 | 0.12 | 0.16 | -0.01 | 0.10 | 0.17 |
| Italy | 0.00 | 0.00 | 0.00 | -0.01 | 0.01 | 0.01 |
| Luxembourg | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.07 |
| Netherlands | -0.01 | -0.02 | -0.01 | -0.01 | 0.00 | -0.01 |
| Portugal | -0.02 | -0.03 | -0.05 | 0.46 | 1.21 | 5.43 |
| UK | 0.00 | 0.00 | -0.01 | -0.01 | 0.03 | 0.07 |
| Austria | 0.00 | 0.00 | 0.00 | 0.00 | -0.01 | -0.01 |
| Finland | 0.00 | 0.00 | 0.01 | 0.00 | 0.01 | 0.02 |
| Sweden | 0.00 | 0.01 | 0.01 | 0.00 | 0.02 | 0.05 |
| EU15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.10 |

Source: E3ME (2002).

Notes: All values are annual average percentage difference from policy-off scenario. When variables are measured in level, percentage changes are used. For variables measured as a percentage, simple differences are used.

4.6.2 Contribution to Human Capital Trends

Table 4.6 below presents the results for labour costs and employment. The labour cost index is defined as the ratio between current wages and labour contribution by industry divided by the GVA at current prices. In the policy-off scenario GVA is lower due to lower investment and government expenditure and so is employment⁷. In the policy-on scenario the total labour costs to GVA ratio decreases as the output effect compensates for the employment effect. This effect accumulates through time, although the overall decrease in cost in the policy-on situation is below 0.3% for Europe. At the country level the largest effect is in Portugal where this decrease in costs reaches more than 1%. In Greece, Ireland and Spain there are a mix of effects mainly towards cost decrease, but with varying dynamics. In the rest of the countries the results indicate slightly increasing labour costs.

The effects on employment (Table 4.7) follow closely GVA as expected from the E3ME specification of employment. At the EU level the EU SF contribute to an average annual increase in employment of 0.2%. The largest impacts are in Portugal, Ireland, Greece, Spain and Italy. In France, Germany, the UK and other higher income countries the effects are close to zero.

⁷ Industrial employment in E3ME is based on a theory of the firm that adjusts to the desired level of employment, which is determined by output. (See E3ME manual 2002 and Lee, Pesaran and Pierse (1990))

Table 4.6 : Results for Human Capital Indicators

| | Real unit of labour cost (%pa) | | | Employment on total population (%pa) | | |
|-------------|-----------------------------------|-------|-------|---|-------|-------|
| | 86-93 | 94-99 | 00-06 | 86-93 | 94-99 | 00-06 |
| Belgium | 0.04 | 0.05 | -0.01 | 0.01 | 0.01 | -0.01 |
| Denmark | 0.01 | 0.07 | 0.05 | 0.00 | -0.02 | -0.06 |
| Germany | 0.04 | 0.13 | 0.11 | 0.02 | 0.05 | 0.03 |
| Greece | -0.07 | 0.60 | 0.28 | 0.59 | 0.83 | 1.02 |
| Spain | -0.01 | -0.23 | -0.80 | 0.14 | 0.37 | 0.38 |
| France | -0.02 | 0.03 | 0.05 | 0.03 | 0.06 | 0.06 |
| Ireland | -0.69 | 0.49 | -0.27 | 0.60 | 1.38 | 1.04 |
| Italy | 0.31 | 0.32 | 0.13 | 0.34 | 0.38 | 0.24 |
| Luxembourg | -0.13 | -0.21 | -0.24 | 0.02 | 0.03 | 0.04 |
| Netherlands | 0.16 | 0.38 | 0.44 | -0.02 | -0.09 | -0.11 |
| Portugal | 0.36 | -0.88 | -1.19 | 1.50 | 2.49 | 2.50 |
| UK | -0.03 | -0.08 | -0.03 | 0.03 | -0.01 | -0.05 |
| Austria | 0.03 | -0.01 | 0.05 | 0.00 | 0.01 | 0.00 |
| Finland | -0.02 | 0.05 | 0.08 | 0.01 | 0.02 | 0.06 |
| Sweden | 0.00 | -0.08 | -0.03 | -0.02 | -0.04 | -0.03 |
| EU15 | 0.05 | -0.11 | -0.29 | 0.15 | 0.21 | 0.19 |

Source: E3ME (2002).

Notes: All values are annual average percentage difference from policy-off scenario. When variables are measured in level, percentage changes are used. For variables measured as a percentage, simple differences are used.

Other Human Capital indicators are presented in table 4.7, including labour productivity and public expenditure in education. Except for Greece and Portugal, where large differences remain, expenditures in education as a proportion of total government expenditure tend towards zero. For the EU15 in the long run, the increase in education expenditure, attributable to the policy, is 0.1% pa or higher.

A reduction in labour productivity means that employment has grown faster than GVA growth, and that the funds had a large employment creation component. Overall, the EU SF have a positive effect on EU labour productivity, with some productivity losses in the period 1986-1994.

Variations in the impact of the policy, between countries and time periods, is explained through the productivity movements of different sectors. For example, in Ireland, productivity in manufacturing was increasing throughout the period while services experienced a tendency to lower productivity by the end of the period. There is an important loss of productivity in government services in Ireland and these losses accumulate towards the middle period 1994-1999, this trend is reflected in the overall productivity movements. Productivity increases in the final period, mainly due to manufacturing improvements.

Table 4.7 : Results for Human Capital Indicators

| | Labour productivity (%pa) | | | Education to total Expenditure ratio (%pa) | | |
|-------------|------------------------------|--------|--------|---|-------|-------|
| | 86-93 | 94-99 | 00-06 | 86-93 | 94-99 | 00-06 |
| Belgium | -0.012 | -0.011 | 0.056 | 0.01 | 0.04 | 0.02 |
| Denmark | -0.013 | -0.071 | -0.049 | 0.00 | 0.00 | 0.00 |
| Germany | -0.052 | -0.096 | -0.034 | 0.02 | 0.06 | 0.05 |
| Greece | 0.974 | 0.883 | 0.576 | 1.55 | 1.52 | 1.36 |
| Spain | 0.193 | 0.565 | 1.008 | 0.27 | 0.51 | 0.29 |
| France | 0.026 | -0.037 | -0.058 | 0.11 | 0.17 | 0.07 |
| Ireland | 0.981 | -0.106 | 0.407 | 3.55 | 3.01 | 0.61 |
| Italy | -0.022 | -0.052 | 0.028 | 0.16 | 0.11 | 0.12 |
| Luxembourg | 0.13 | 0.211 | 0.269 | -3.37 | -1.09 | -0.17 |
| Netherlands | -0.149 | -0.358 | -0.415 | -0.03 | -0.02 | -0.02 |
| Portugal | 0.724 | 1.882 | 1.671 | 2.49 | 3.18 | 1.67 |
| UK | 0.062 | 0.138 | 0.097 | 0.06 | 0.06 | 0.02 |
| Austria | -0.028 | 0.02 | -0.029 | 0.00 | -0.02 | -0.01 |
| Finland | 0.015 | -0.018 | -0.007 | 0.00 | 0.05 | 0.07 |
| Sweden | 0.012 | 0.115 | 0.075 | 0.00 | 0.01 | 0.00 |
| Europe | -0.043 | 0.108 | 0.228 | 0.11 | 0.17 | 0.11 |

Source: E3ME (2002).

Notes: All values are annual average percentage difference from policy-off scenario. When variables are measured in level, percentage changes are used. For variables measured as a percentage, simple differences are used.

4.6.3 Contribution to Natural Capital Trends

Table 4.8 presents indicators of pollutants as indicators of consumption of natural capital. These results are mainly driven by the level of economic activity and therefore follow closely the changes in GVA. There is an average increase of 2% pa in EU CO₂ emissions for the period 2000-2006, while during the period 1994-1999 the average is 1%. At the country level the main effects are concentrated in Greece and Portugal and to a lesser extent in Ireland and Spain. Similar impacts of the policy obtain for sulphur dioxide emissions, with large increases in Greece and Portugal and comparatively more significant than CO₂ in Spain and Ireland. At the level of the EU15 the trend in SO₂ is small but consistently positive.

Finally, Table 4.9 presents the results for energy intensity, measured as the total kilograms of oil equivalent, per unit of GDP. In this case, the adaptation to new technology, from the higher levels of investment and R&D under the policy-on scenario, has the effect of increasing energy efficiency. Overall energy use increases under the policy, particularly in relation to road transport users and other transport uses. This is explained in E3ME through the great elasticity of road transport to income and its effects when income increases under the policy⁸. However, the increase in energy use is not greater than the GDP increases, resulting in a lower level of energy use per unit of output.

⁸ Notice that Structural funds' investment in roads plays a role to enable increased road transport. However, in the current version of E3ME, investment in roads does not increase road transport by itself.

Table 4.8 : Results for Natural Capital Indicators

| | Sulphur Dioxide emissions | | | Carbon Dioxide emissions | | |
|-------------|---------------------------|-------|-------|--------------------------|-------|-------|
| | SO ₂ (%pa) | | | CO ₂ (%pa) | | |
| | 86-93 | 94-99 | 00-06 | 86-93 | 94-99 | 00-06 |
| Belgium | 0.00 | -0.05 | 0.03 | -0.06 | -0.06 | 0.02 |
| Denmark | 0.00 | -0.03 | -0.04 | -0.01 | -0.11 | -0.12 |
| Germany | -0.02 | -0.03 | -0.01 | -0.18 | 0.02 | 0.10 |
| Greece | 0.59 | 1.01 | 3.85 | 0.72 | 1.87 | 8.85 |
| Spain | 0.16 | 0.55 | 0.76 | 0.15 | 0.32 | 0.60 |
| France | 0.05 | 0.09 | 0.10 | 0.05 | 0.09 | 0.17 |
| Ireland | 0.43 | 0.59 | 0.35 | 0.68 | 0.66 | 0.67 |
| Italy | 0.08 | 0.10 | 0.10 | 0.12 | 0.13 | 0.19 |
| Luxembourg | 1.14 | 0.29 | 0.05 | 0.05 | -0.03 | -0.25 |
| Netherlands | 0.00 | -0.01 | 0.03 | -0.06 | -0.24 | -0.31 |
| Portugal | 0.59 | 1.62 | 1.80 | 6.27 | 6.88 | 5.24 |
| UK | 0.03 | 0.07 | 0.01 | 0.01 | 0.03 | 0.03 |
| Austria | 0.01 | 0.02 | 0.03 | -0.01 | 0.03 | 0.00 |
| Finland | 0.04 | 0.04 | 0.15 | 0.05 | 0.03 | 0.23 |
| Sweden | -0.02 | -0.01 | -0.08 | 0.04 | 0.03 | -0.03 |
| Europe | 0.06 | 0.13 | 0.23 | 0.49 | 0.93 | 1.83 |

Source: E3ME (2002).

Notes: All values are annual average percentage difference from policy-off scenario. When variables are measured in level, percentage changes are used. For variables measured as a percentage, simple differences are used.

For the EU the changes are close to 0.2% pa fall in energy intensity at the beginning and a 0.4% pa fall at the end of the period. The fall in energy use per unit of GDP slows down at the end of the period due to the increase in road transport demand and other energy demands. Within MS the changes in energy intensity occur at different paces with for example Ireland strongly affected throughout the period while Spain becomes more efficient at the end of the period. Greece, Ireland and Portugal experience the largest changes.

Table 4.9 : Results for Natural Capital Indicators

| | Energy intensity (%pa) | | |
|-------------|---------------------------|--------|--------|
| | 86-93 | 94-99 | 00-06 |
| Belgium | -0.014 | -0.042 | -0.008 |
| Denmark | 0.010 | 0.086 | 0.142 |
| Germany | 0.003 | -0.044 | -0.064 |
| Greece | -2.193 | -2.685 | -2.954 |
| Spain | -0.412 | -0.937 | -1.068 |
| France | -0.066 | -0.059 | -0.036 |
| Ireland | -2.295 | -2.784 | -2.243 |
| Italy | -0.194 | -0.095 | -0.165 |
| Luxembourg | 0.523 | -0.050 | -0.270 |
| Netherlands | 0.216 | 0.573 | 0.709 |
| Portugal | -2.860 | -3.717 | -2.759 |
| UK | -0.100 | -0.042 | 0.032 |
| Austria | 0.009 | -0.061 | -0.015 |
| Finland | 0.008 | -0.018 | -0.085 |
| Sweden | -0.058 | -0.060 | -0.071 |
| Europe | -0.177 | -0.366 | -0.360 |

Source: E3ME (2002).

Notes: All values are annual average percentage difference from policy-off scenario. When variables are measured in level, percentage changes are used. For variables measured as a percentage, simple differences are used.

4.7 Conclusions

In conclusion, the analysis indicates that the SF has generated economic benefits from higher levels of investment in manufactured and human capital in virtually all Member States. The benefits to cohesion countries are expected. The benefits to net contributor MS are explained by trade relationships and market integration in the EU15. The EU, overall, therefore benefits in economic and human capital terms. However, higher levels of economic activity generate a trade off with natural capital as measured by the levels of gas emissions. Emissions increase in most MS directly as a result of the SF investment. However, the higher levels of economic growth are associated with an increase in resource productivity. The EU, and most notably the cohesion economies, become more energy efficient, but this increase in efficiency is insufficient to compensate for the overall increases in resource demand.

These conclusions of trade-offs with natural capital are consistent with the regional case studies. They also highlight the importance of indirect effects on the level of capital, with reductions in natural capital in net contributor counties as a consequence of the higher levels of economic activity generated by increased levels of exports to cohesion countries, in turn supported through SF expenditure. These indirect effects are often difficult to quantify at the regional level, but have significant consequences for attempts to infer the effects of policy from direct effects alone.

5 METHODOLOGICAL CONCLUSIONS

5.1 Use of the Case Study Methodology

The work clearly provides the basis for subsequent advice on the use of tools and methods for analysis, and for programme management. The current approach and ideas for the evaluation are set out in the Guidance to evaluators, and subsequent refinements as the study has progressed. These are reported in Volume 2.

Key methodological lessons from the work include:

- The critical importance of defining regional trends and policies, within which the contribution of particular SF activities is assessed. Note that the evaluation is not an impact assessment of measures on sustainable development, rather it is an attempt to understand how SF policies have complemented or contrasted with Member State policies in achieving progress (if any) towards those objectives regionally defined as important for sustainable development
- The focus on regional sustainable development trends has necessarily to take a long term (10 years plus) perspective. Time series data of this duration are scarce, making quantification of trends difficult. At the same time corporate memories of SF managing authorities is limited, with knowledge of activities implemented in previous programming periods and their impacts quickly evaporating. Monitoring systems are not well tailored to identifying the lag effects (which are arguably the most important) of interventions. This prevents any direct impact assessment.
- The definition of trade-offs and win-wins within and between the different forms of capital are difficult to make, not least because of the complex inter-relationships between changes in one capital and another. Cause and effects are difficult to identify. However, there are important trade-offs that have been identified and which are reported in each of the regional assessments. The extent to which these trade-offs represent unsustainable development is a matter of judgement (although in some cases these judgements are reflected in legal limits and standards – especially for natural capital). The case studies make explicit trade-offs and hence inform debate about the sustainability of regional trends.

We elaborate further findings from the use of the case study methods, to inform future approaches to the issues.

5.1.1 *Qualitative and quantitative analysis and the use of indicators*

The attempt to characterise all the main trends using available data is extremely time consuming, and not especially revealing, confirming understanding rather than illuminating important new issues. A better approach is to synthesise the key regional development issues, (based on review of written materials and discussions with key actors) and to highlight important issues using the '4 capitals' model to structure the discussion. In the light of this a small number of key criteria can be selected, recognising that they are used to reflect a much wider set of issues. Each criterion might be measured by more than one indicator. It is important to seek out the really useful indicators, rather than just taking those which are readily available.

The selection of the assessment criteria should be driven by a logical argument of the key issues, rather than by indicator availability. The selection of indicators would be

secondary to a clear expression of the actual criterion (and especially the related normative judgement concerning the desired outcome with respect to the criterion).

The assessment should not extend the range of criteria beyond about 12, based on say 2 criteria for each capital, plus say 2 criteria relating to particular trade-offs and win-wins. Much more than this and it becomes difficult to have a full qualitative discussion, which includes consideration of the direct and indirect inter-relationships between the criteria. The focus of the assessment should be qualitative, recognising that many of the relationships are impossible to quantify, but using available quantitative analysis where this is possible.

5.1.2 Regional trends and policy counterfactuals

Focusing on the regional assessment prior to the programme assessment has the important advantage of allowing some consideration of regional development in the actual 'policy-on' situation, compared with (an admittedly speculative) 'policy-off' situation. In other words it is possible to consider the overall policy impact at the level of the region by considering how the region might have developed with a complete 'laissez-faire' or market led approach. This type of analysis can then provide insights into:

- the main policy sensitive issues, and
- the relative significance of the SF programmes compared with other public policy.

It seems a more helpful (and cost-effective) approach to consider the counterfactual issues at this point, and focus on the policy mix (and the relative significance of the SF) with respect to particular SF projects and measures.

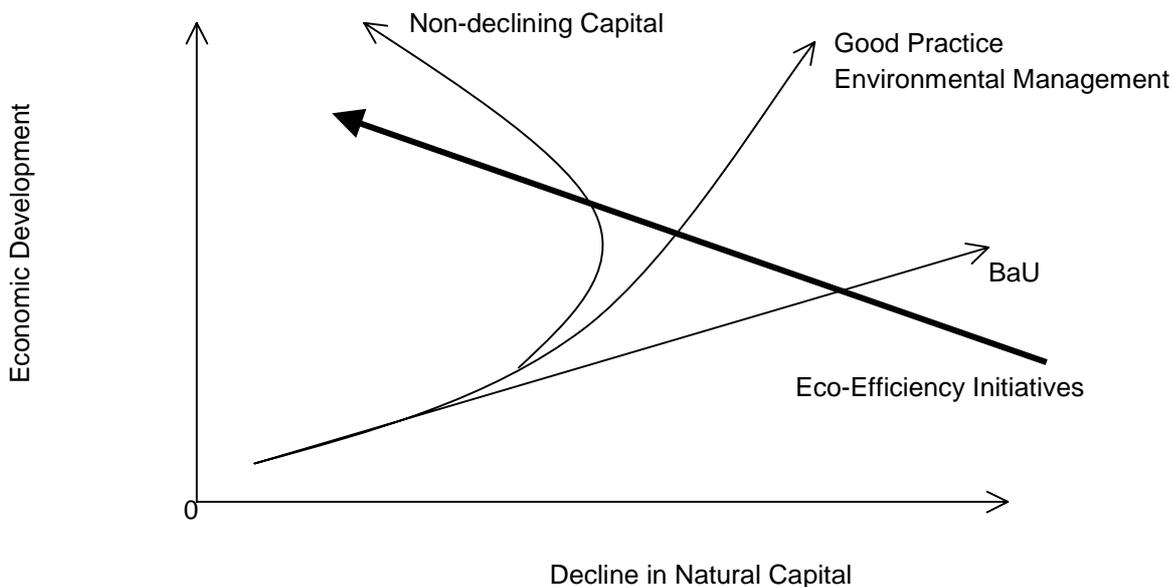
5.1.3 Economy –environment links: Eco-efficiency

The economy-environment links are obviously critical to the evaluation. However, it is generally the case that the direct impacts of development (eg land take for new roads) are not (with important exceptions) controversial and determined through the political process (based on statutory instruments such as development plans or EIAs).

The more interesting but difficult issue for evaluators is how to consider the resource efficiency of development, and the extent to which this has been influenced by past policy interventions, and could be improved through better project design, and through other policies. In terms of characterising the trade-offs in the region, some simple measures such as passenger kms per GDP, or waste arisings per GDP would be a useful indicator. Note the usual caveat – resource efficiency has to grow faster than resource demand to have absolute improvement. Cases where this is not occurring need to be highlighted.

There are various measures of and approaches to resource productivity, (e.g. total material requirements, ecological footprints). The Factor 4 / 10 debate addresses the question explicitly. These approaches can be used to construct suitable responses, to generate the eco-efficiency responses in Figure 5.1a, below.

Figure 5.1a: Regional Development Paths : Eco-Efficiency Initiatives



5.1.4 Economy – social links: The role of community

Social capital is the system of networks and relationships, based on trust and rules, formal and informal, that permits individuals or groups of individuals access to resources. Two difficulties have emerged for the evaluation in the use of this idea. The first is that underlying concepts such as trust and reciprocal behaviour are difficult to measure. The second difficulty is that there is limited understanding of how the services provided by social capital (such as empowerment or governance) relate to the achievement of socially desirable outcomes, such as equity, inclusion or poverty reduction. As a result social capital has tended to be measured using a wide range of indicators which are sometimes poorly related to the underlying concept. In particular there has been a tendency to measure social outcomes rather than the stock of capital or the flow of services. Although social outcomes (such as equity or inclusion) are significantly influenced by the level of social capital, they form part of overall social welfare and are impacted on by all forms of capital. Conclusions relating to social capital have therefore to be treated with some caution.

The economy-social links tend to be assumed to be mutually reinforcing: economic development generates investment, employment and income, and reduces unemployment and poverty, which improves community well being. The case study research suggests that the link is more complex, and that whilst the general rule might hold for most people and some communities, it does not hold for significant numbers of people and communities. This is because the opportunities are not accessible to particular groups because of a lack of skills, poor education and poor health. The relative lack of income means a reduced level of housing choice, which leads to spatial concentrations of disadvantaged communities, increased disparities and alienation and reduced community 'well being'.

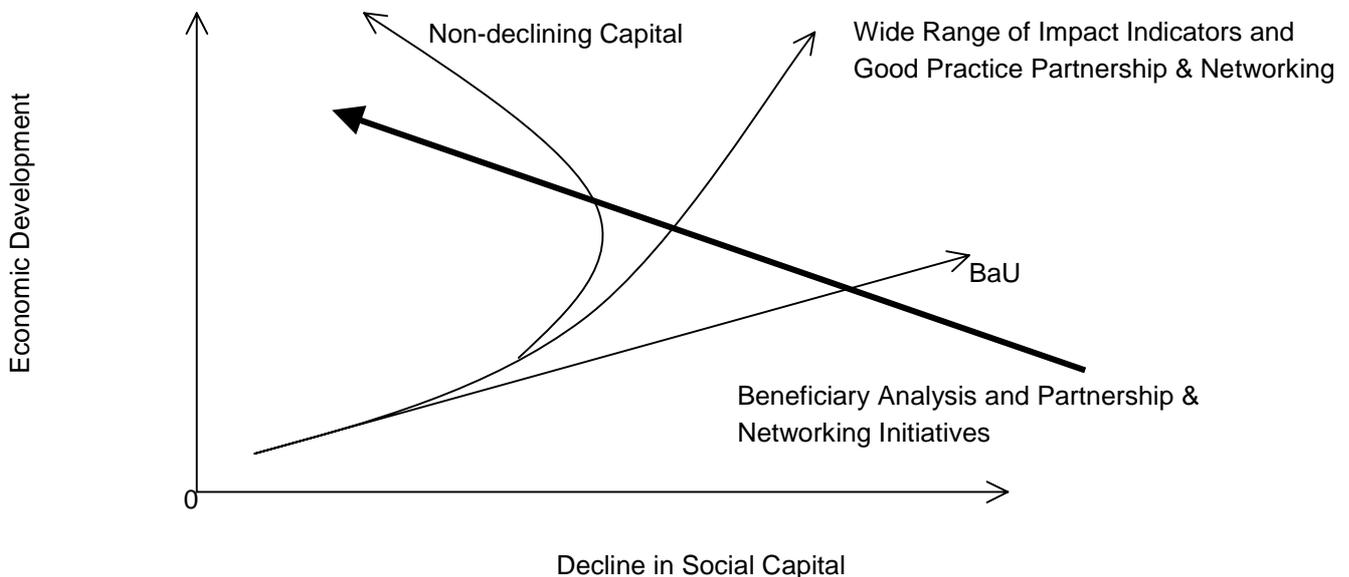
The implication for SD is that social capital needs to be developed if barriers, which prevent the take-up of opportunities, are to be overcome, even with economic development. Additional measures (typically classed as local regeneration based in part on providing the means for increased participation of communities) are required. Future evaluations need to consider explicitly the extent to which opportunities from

economic development actually lead to a decline in social outcomes because of a lack of social capital. Income disparities within the region could be one indicator that might be considered as an inferential measure of the relative absence of social capital.

Interestingly, one can observe significant social policy strategies directed to securing improved social outcomes analogous to the policy response in Figure 5.1b, below. However, these strategies are not grounded in the type of trade-off analysis implied by the capital model.

At a more fundamental research level, the study has shown that operationalising the concept of social capital is the least developed area, especially with respect to the delivery of services for social welfare, and the realisation of desired social outcomes. Further work is clearly required if the concept is to be used to inform policy-making, especially in terms of the defining the nature of stocks and flows (services) and the implications for social welfare (and especially social outcomes).

Figure 5.1b: Beneficiary Analysis and Partnership & Networking Initiatives



5.1.5 *Inter-relationships between capitals*

The previous two discussions relate to the ways in which changes in one capital impact on another. A more generic description of key inter-relationships are summarised in Table 4.4 in Volume 2. These are intended to help think through to impacts of the SF that might be missed by focusing on the usual direct impacts (these are summarised in *italics* on the leading diagonal).

5.2 Approaches to Assessing Regional Sustainable Development

Building on the evaluation guidelines and lessons from the case study work we outline elements of an approach to assessing regional sustainable development.

5.2.1 *Four capitals model*

The initial starting point for the study has been the 'four capitals' model. This is described in Volume 2. The work has demonstrated the power of the model in providing a framework within which to capture the breadth of issues, related to current and future levels of social welfare. In particular, the requirement to consider trade-offs between capitals provides a stepping stone to integrated policy development. Evaluators have found the approach to require considerable effort to translate the theoretical framework to an analysis that actively informs policy-making decisions. However, the underlying ideas, both of the different types of capital and of the need for increasingly integrated policy mean that the model has a particular resonance.

The model also enables a clearer definition of sustainable development than that usually expressed in terms of 'quality of life'. In particular it provides a basis for understanding unsustainable development and for framing policy priorities. In this context the finding from the case studies, that future development is likely to be constrained by inadequate levels of social capital as well as the more conventionally understood environmental constraints, provides not only the basis for a new set of policy questions but also evidence of the diagnostic value of the model.

5.2.2 *Criteria and indicators – the Assessment Matrix*

The study has used an assessment matrix, which examines policies, including SF programmes against a set of criteria that are determined according to the spatial level of the policy intervention (EU, MS, region). These criteria reflect some consensus among the relevant stakeholders as to the most important trends for the sustainable development of the region (or MS, EU) and the most important trade-offs and win-wins (where the increase in one form of capital increases another).

The careful assessment of policies against each criterion in turn, as carried out in the case studies, allows a view of the contribution that the policy can make (or has made) to SD. Note that whilst some of the trends can be quantified using relevant indicators, the real value of the assessment is the opportunity to include criteria that are less easily quantified but important for SD, and at the same time focus on those issues of particular significance to the relevant stakeholders for SD. It forces an explicit consideration of the more important trends, and overcomes the weakness of standard indicator led approaches of providing much information but with little sense of what is more or less significant.

5.2.3 *Project pipeline – A check list*

The research in the case studies to review the approaches taken to developing a project pipeline was based on a checklist of questions that sought to capture the institutional issues associated with developing and managing a programme of development based on specific measures and projects. The work in the case studies suggested that the core issues do not vary to any great extent between programmes. These issues generally revolve around the tendency (driven in large part by the difficulties of committing funds, which seems to be a common problem) to select available, and especially large capital, projects rather than give weight to the strategy as a basis for project design and selection. The added constraints of designing and selecting projects that also address horizontal priorities serves only to make delivery more difficult.

As a consequence, there is a requirement to reconsider the broader institutional approach to programme design and delivery. The research suggest that in this context, consideration should be given to:

- Improved partnership working (as previously recommended, see section 5.4 below, addressing especially the need for improved top-down, bottom-up dialogue and interaction as a means of using the strategy to drive project design and selection
- The integration of SD into the overarching aims of the programme, informing the specification of the vertical priorities (eg by supporting sustainable economic sectors) allowing the removal of horizontal priorities
- Acknowledging the timescales involved in both the development of institutional capacity and the evolution of integrated strategic and project design by introducing a 'pre-programme' phase allowing a longer gestation period for the development of strategies, projects and institutional development. The pressure to spend is often cited as a reason for less effective programming. Ensuring some proportionality between the institutional capacity and the level of funds might also be considered as a way of improving the effectiveness of future programmes, especially if timescales cannot be extended.

5.3 The 'Four Capitals Model' as an Extension of the 'Three Pillars' of SD

The main methodological description of SD used in present discussions is that based on analyses of trends in the 'three pillars' of economy, society and the environment; and a recognition of the importance of integrated policy development that seeks to take account of these pillars. The 'four capitals model' used in this study clearly has a high level of consistency with the basic description based on three pillars. The application of the model (where model implies conceptual framework describing a system of inputs and outputs rather than any cardinal specification of relationships) in this study allows some methodological comment on the advantages and disadvantages of using the model to extend the three pillars description.

5.3.1 Advantages

Prescriptive Framework – the 'four capitals model' is based on a clear specification of the requirements for increased social welfare, expressed in terms of flows of benefits or services derived from stocks of the different types of capital. To this extent the model's prescription of non-declining capital per capita as a means of ensuring SD, provides an operational basis for policy analysis that is missing from the three pillars approach, which is silent in terms of how the pillars are to be integrated in order to increase social welfare. Note that the model does not itself seek to determine whether the stock of capital is declining, or the values attached to the different services provided. This is determined by the values of society as expressed through political processes.

Stocks and flows – the distinction between a stock of assets and the flow of services it provides is also important for understanding how the management of the different types of capital contributes to social welfare. The model therefore goes beyond descriptions of pillars as themes or fields and seeks to understand explicitly how services influence desired policy outcomes, which are taken to express social welfare.

Society – the distinction in the model between human and social capital provides a clear extension to the 'social' pillar. This distinction permits a more detailed understanding of the differences between the benefits for social welfare of individual and societal attributes. It therefore allows a more detailed and in-depth appreciation of the relevant policy responses.

5.3.2 **Disadvantages**

Complexity – The complexity of the model is a disadvantage in terms of its tractability for formal analysis. However, more tractable models have undesirable limitations in their physical interpretation. It seems that the multiple feedbacks implied by the model are necessary for an adequate description of how the four capitals are combined in a production process and if their contribution to wealth creation and welfare is to be understood. Simplification of linkages, perhaps because they are not reflected in more conventional evaluation and accounting systems, risks missing important effects.

5.4 **Approaches to Regional Development Strategies**

5.4.1 **Sustainable development goals and pathways**

The emerging evolution in regional development strategies, as described in Section 3.3, is a move towards a single holistic strategy for development, providing a common set of broad regional objectives. Within this framework, establishing coherent objectives for the various ‘thematic’ strategies (eg economic development, transport, housing) is clearly consistent with the desire for a more integrated approach to policy-making at all levels. There is growing recognition that for an effective framework that purports to address all aspects of regional development, that such a framework is essentially the same as a SD strategy. In the case of **Andalucía, Midi-Pyrénées** and **Thessalia** such a framework is explicitly understood in this way.

In most other regions the recognition that SD represents the basis of an overarching policy framework is less developed, not least because the early interpretations of SD, as essentially concerned with environmental protection, persists in many areas of policy making. As recognition grows that SD is about defining and responding to social welfare needs and aspirations, and that all aspects of development are addressed, the acceptance of SD as an over-arching concept should become more widely accepted. In this context the ‘four capitals’ model has a major advantage over the three pillars, because it is formally concerned with increasing social welfare.

The emergence of SD strategies, and more explicit discussion of regional aspirations for social welfare, will allow more formal discussion of alternative development paths. The opportunity to construct scenarios and debates about long-term futures should be a natural corollary of the formulation of SD strategies. The development path concept can but aid these debates.

5.4.2 **Spatial and temporal framework**

Emerging regional SD strategies provide a broad vision and articulation of aspirations for the future development of the region. The strategy will inevitably address longer term as well as short term needs. The use of the development path ideas should force a more explicit treatment of time in future development strategies. At the same time, although the SD strategy can articulate regional aspirations for balanced development, the SD strategy, as an overarching statement of intent, cannot address the more practical questions of how the various thematic strategies that respond to the SD strategy should be managed in time and space.

There is a requirement for a management tool that sits below the SD strategy, and thematic strategies, and that reflects SD objectives in terms of the spatial and temporal allocation of resources. The physical, economic and social outcomes of the thematic strategies can then be managed to be consistent with the overarching framework. The tool also provides another means of integrated policy making and for more effective policy delivery. The emergence of stronger spatial frameworks for the latest rounds of

SF programmes, of which the PITS in Italy are perhaps the most marked example, (see section 3.3.2 above) provides some evidence that this management value is beginning to be recognised.

5.4.3 Partnership based approaches to goal definition and policy delivery

Partnerships play a key role in the implementation of the Structural Funds. They involve close collaboration between the Commission, national, regional and local actors, as well as economic, social and environmental partners in the elaboration, implementation and administration of the programme. The success of partnership working lies in the integration of top-down mechanisms with bottom-up concerns, to build an inclusive programme that addresses all actors' interests.

There are a number of positive benefits of partnership working, as identified by the DG Regio's "Thematic Evaluation of the Partnership Principle" (February 1999):

- Greater effectiveness in programme development and monitoring
- Greater legitimacy and transparency in decisions and decision-making processes
- Greater commitment and ownership of programme outputs
- Opportunities for reinforcing innovation and learning across organisational boundaries, and
- Development of institutional capacity at sectoral and territorial levels.

Partnerships have made an important contribution to developing regional and local institutional capacity, particularly in member states where such capacity has hitherto been weak. They have also been instrumental, not only in contributing to territorial development, but also as a means through which spatial areas can develop territorial integration and articulation. Both these aspects have an important impact on SD at the regional level.

Specifically in terms of programme implementation and project selection:

- Partnerships make a significant contribution to improved programme preparation and management.
- Partnerships have a major impact in developing project selection criteria.

Partnership working can have a significant impact in terms of effective delivery, and could therefore be a key mechanism for improving implementation along SD lines.

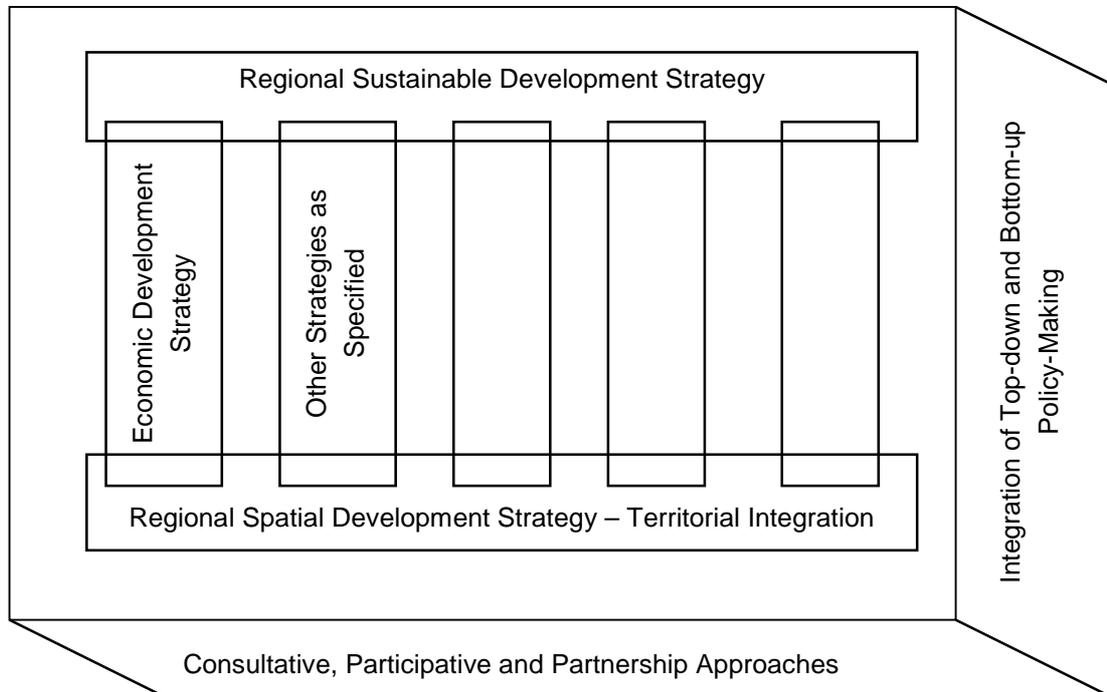
5.4.4 A stylised approach to regional SD policy

The following diagram (Figure 5.2) seeks to summarise the above discussion as a stylised approach to regional SD. It comprises four elements as discussed above:

- The over-arching SD strategy
- The thematic regional strategies, each addressing a particular part of the regional agenda
- The regional spatial development strategy

- Processes for consultation, participation and transparent decision-making

Figure 5.2: A Stylised Approach to Regional SD



5.5 Tools to Support Strategies

5.5.1 Consultation and Decision Making

The importance of building institutional capacity, not only to deliver programmes, but also to define, debate and determine regional development paths, is critical to improving the ability of development programmes to deliver SD. At the heart of the process has to be clear consultative processes that enable participation by a diverse range of stakeholders, directly linked to the decision making process. There has been considerable research to this end, including work to review the use of partnerships for the delivery of SF programmes. In addition there is growing interest in participative techniques such as citizens juries. Another example is the use of deliberative techniques. Lessons from this wider research have obvious application in the context of this evaluation.

5.5.2 Integrated Assessment of Policy

The integrated assessment of policy and programmes, and of individual measures and action plans within a programme, requires evaluation techniques capable of examining a wide range of objectives and criteria, some of which are only capable of expression in qualitative terms. In this context the more formal development of multi-criteria analysis (MCA) is likely to be of specific value. One example of a recent application of MCA in a SF programme is summarised in Table 5.1 below, organised using the 'four capitals' approach. This particular approach dispensed with a formal scoring system and instead applied a 'benchmark' approach, where performance on individual criteria was judged in part by reference to relevant good practice. MCA, as with all other

evaluation techniques suitable for use in SF programmes is still only a support to decision-making, it does not determine the decision.

Table 5.1: Exemplar Project Summary Multi-Criteria Analysis, Organised Using Four Capitals Approach: Seaside Town Improvements

| Judgement criteria | Assessment | |
|--|--|--|
| | Summary | Comparison with Best Practice |
| Manufactured capital | | |
| <ul style="list-style-type: none"> ▪ New or refurbished housing | No benefits proposed | No reference or plans to provide 'over the shop' accommodation |
| <ul style="list-style-type: none"> ▪ New or refurbished industrial and commercial floorspace | Significant improvements to built stock. Numbers of properties, floorspace not defined. Extrapolation of benefits from improvements elsewhere in the town could be applied | <p>Could link property grant scheme to training for managers, to support occupying business</p> <p>Some plans for upgrading visitor accommodation by support for first mover?</p> |
| <ul style="list-style-type: none"> ▪ Increase in accessibility to jobs, services and activities (via new transport and new ICT infrastructure) | <p>Longer term benefits from improved linkages within the town and with future developments (eg port area)</p> <p>Improved local access through traffic management schemes</p> <p>Improved accessibility for disabled and those with mobility problems</p> <p>New ICT infrastructure for tourism SMEs</p> | <p>Limited assessment of the impact on retained or increased retail spend from either residents or visitors (eg from improved linkage with beach area)</p> <p>Could consider portal system for SMEs</p> |
| Human capital | | |
| <ul style="list-style-type: none"> ▪ New business and employment opportunities (especially for those in need) | <p>Business opportunities from increased spending as a result of increased awareness of the town, improved facilities, and events programme</p> <p>Although stated links with SRB scheme, no explicit reference to provision of opportunities for residents in deprived wards (eg linked SRB projects)</p> | In the longer term the significant business and employment opportunities derive from net additional visitor spend, and improved competition within the retail hierarchy. Needs to be better explained |
| <ul style="list-style-type: none"> ▪ New learning and training opportunities and take-up (especially for those in need) | Training packages for owner managers and some ICT training | Could be a more explicit element of the Project, especially given the role of the Town Manager and the expected links with the LSC/SBS |
| <ul style="list-style-type: none"> ▪ Environmental management systems | Training manager expected to support development | Could link to property grant scheme |
| Social capital | | |
| <ul style="list-style-type: none"> ▪ New or improved networks (relating to economic (e.g. clusters) and/or social activities (e.g. voluntary community work)) | Town Manager Initiative will have major benefits in terms of improving and facilitating networks between businesses, including formal business associations | <p>Could link to RES plans for cluster development within the tourism sector</p> <p>Could be more explicit link with SRB activities for community regeneration</p> |
| <ul style="list-style-type: none"> ▪ Increase in safety and of healthy living and working environments | Major benefits from environmental enhancements, improved traffic management and from improved 'life in the street' | |
| <ul style="list-style-type: none"> ▪ Increase in community consultation and participation | Significant benefits already from previous exercises. Planned 'Town Panel' and Town Manager will facilitate further participation | Role of SRB partnership in Project unclear |
| Natural capital | | |
| <ul style="list-style-type: none"> ▪ Improve efficient use of resources (land, water, energy) | <p>In-fill development and increased density is expected to improve efficiency of land use.</p> <p>Benefits from EMS</p> <p>Longer term benefits in use of port area</p> | <p>Stronger spatial (rather than land-use) plan would enable the links and opportunities between different activities to be better highlighted</p> <p>Importance of design noted but could be more explicit in plans for resource efficiency</p> |
| <ul style="list-style-type: none"> ▪ Minimise local and global waste and pollution | Important benefits from sustainable transport package | Unclear how transport measures will facilitate the intended outcomes |
| <ul style="list-style-type: none"> ▪ Maintain and improve bio-diversity | Limited scope within town centre improvements | Clearer design ideas for planting |

Source: Amion Consultants & GHK, for EEDA, 2002

6 POLICY CONCLUSIONS AND LESSONS FOR ACTION

6.1 The Contribution of the Structural Funds to Sustainable Development

The contribution of the SF to sustainable development has been evaluated from a number of different perspectives. In each case the changes in contribution over time have been examined:

- The relevance of SF programmes to regional SD objectives
- The effect of selected measures and interventions on criteria selected in relation to particular forms of capital
- The added value of SF programmes, relative to national or regional programmes
- The net impact of total EU SF expenditure on selected EU and MS indicators

6.1.1 *The relevance of SF programmes*

Increasingly, regions are integrating different policy domains into a more cohesive set of regional development objectives, introducing some hierarchy into the expression of needs and aspirations. This more integrated set of regional objectives is seen as providing the context not just for economic or labour market policies but also social and environmental policies. Consequently, in some case study regions at least, these objectives are considered to define the basis of the perceived sustainable development of the region. In this policy framework, it is clear from the case studies that the SFs have made a growing contribution to SD, through their increasing use as a tool not just for economic development but for a wider set of objectives, expressed for example in the use of horizontal priorities. To increase their relevance still further requires a continuation of the process of policy integration and the more formal expressions of regional needs and aspirations as a basis for defining more sustainable regional development paths.

6.1.2 *The effects of selected SF measures and projects*

The case study research indicates that as investment in manufactured and human capital continues, the determinants of sustainable regional development are largely related to trends and trade-offs in natural and social capital. In the case of natural capital, declining capital is not generally considered to threaten critical thresholds (assuming compliance with environmental standards) and is held by regional decision-makers to contribute to an increase in overall social welfare. In the case of trends in social capital, inferred in part from trends in social outcomes, the evidence is less clear, but there is a suggestion that a depletion of social capital is occurring at the same time as economic development and that this is less obviously accepted as leading to an improvement in overall social welfare. In this context, SF measures and projects contribute to both positive and negative changes in natural and social capital. However, the policy responses to these trade-offs do not appear as a central feature of SF programmes. For example, there is little recognition of eco-efficiency programmes, as an attempt to de-couple the depletion of natural capital from economic development, neither are there major efforts to better integrate social and economic policies.

6.1.3 *The added value of SF programmes*

The added value of SF programmes to SD, identified by case study evaluators comprise:

- An acceleration in the growth of manufactured and human capital (the main focus of the SF);
- A broadening of regional development policy, adding weight to innovation and R&D, environmental improvement, social inclusion and more integrated territorial responses (illustrated by the Urban and Leader Community Initiatives);
- An increase in social capital for policy and programme formulation, management and delivery; which has reinforced regional capacity to better integrate policy, and to design implementation procedures.

The added value to SD of the SF at the regional scale, as with other regional policy interventions, is conditioned by the influence of national and international policy drivers. The study has only partially examined the nature and influence of the interactions between regional and non-regional policy. This remains a major area for future study, given the many different policy interfaces.

6.1.4 *The impact of SF expenditure on EU and MS indicators*

Finally, the contribution of the SF at EU and MS levels, as estimated through econometric modelling, confirms not only increases in manufactured and human capital in net recipient countries but, because of trade links, in net contributor countries, with an overall increase at the EU level. At the same time the SF have contributed directly to increases in pollution, as measured in terms of GHG and SO₂. The SF has led to improved resource efficiency (measured with respect to labour and energy), but not to the level necessary to avoid trade-offs with natural capital. Social capital indicators were not available from the modelling.

The scale of the result can be debated in terms of the influence of the model structure and the counterfactual assumptions. The work does however highlight the importance of non-regional policy influences on regional SD, (reflected in the variations in effects between MS as indicated by the modelling) and the significance of indirect (eg trade) as well as direct (eg SF investment) effects.

6.2 *Opportunities and Constraints for Improved Regional Sustainable Development*

The key issue then for a current programme or future programme concerned with enhancing regional sustainability is the degree to which it addresses regionally specific and significant trade-offs (recognising the influence of non-regional policy on the nature of key trade-offs). The key questions are:

- Whether the trade-offs are considered important to the achievement of regional aspirations for social welfare? and if so
- Whether additional measures, explicitly framed as a response to the trade-offs, should be added to the programme, particularly in relation to perceived critical thresholds?

The main trade-offs in regional development identified in the case studies are between increases in manufactured capital with associated decline in natural capital, and increases in manufactured and human capital with associated decline in social capital.

In the first set of trade-offs the cause and effect relationship is obvious for direct impacts, but also fairly clear in relation to the indirect effects of growth on the environment. In the second case cause and effect relationships are far from clear between a growth in manufactured and human capital and changes in social capital. To the extent that declining trends are measured using indicators of relative change (e.g. income disparities) then growth can lead to a change in measured relativities. The case studies also suggest that, with the exception of environmental standards, there are few specified thresholds defining critical levels of decline.

The absence of thresholds except for natural capital raises the question of how feasible or valuable such thresholds, say for acceptable levels of crime, voting activity, or income inequality would be for future regional policy. Political difficulties with such an approach are obvious. However, there is clear value for SD policy in at least making more transparent what variables are taken to represent relevant trends, and in discussing levels and rates of decline that require immediate and additional policy responses, especially for social capital. The definition and use by the UK of floor targets (minimum standards) for selected criteria (health, housing, employment, crime, education) and chosen indicators relating to local (neighbourhood) conditions is an interesting example of the possibilities for new threshold definitions.

Given continuing policies to invest in manufactured and human capital as major drivers for regional development, the key constraints on the sustainability of regional development relate to the stock and use of natural and social capital. It is largely in relation to these two types of capital that trends indicate a decline in capital. Of course, a decline in certain types of capital is not of itself indicative of an unsustainable development path; this depends on the extent to which the decline is compensated for by increases in other types of capital. The explicit decision making of regional authorities in the case studies, at least in relation to natural capital, has demonstrated the belief that social welfare is increased with increases in manufactured capital even if this is associated with a decline in natural capital. The apparent lack of appreciation of social capital trends, and their significance directly for regional development and indirectly for social welfare, raises difficult judgements for regional authorities, especially if the assumption that general increases in employment and income levels lead to increases in social capital is challenged.

6.3 Strategic Approaches for Regional SD

6.3.1 *Regional Pathways to Sustainable Development*

The definition of regional sustainable development is essentially normative, although the case studies (and assessment frameworks) demonstrate a reasonable degree of consistency between regions in the selected characteristics (and hence subsequent criteria) deemed to be most important in shaping sustainable development.

As a consequence statements by regional authorities that set out clear aspirations for the sustainable development of their region, and the nature of development paths, appear to be highly feasible. However, the regional assessments generally identified only vague and bland statements, or indeed the absence of regional level SD strategies (notwithstanding work on LA21 strategies). This suggests that it will be a challenge to regional and sub-regional authorities to define and project alternative future development scenarios (that include consideration of future resource use or the future nature of social exclusion) as the basis for defining preferred development paths.

The existence of important policy trade-offs demonstrates that there remain important gaps in the strategic direction of regions and in integrating the various regional strategies to achieve overarching objectives of sustainable development. In particular the evaluation has highlighted the absence of strategic attempts in SF programmes either to de-couple resource use, or to couple social inclusion, with economic development.

Resource efficiency

The importance of resource efficiency as a means of responding to key trade-offs is evident from the case studies. However, although the macro-economic analysis suggests that resource productivity (eg energy) is improving as a result of the SF, it is still the case that there is no evidence from the case studies of a strategic level response. Instead the response is reflected in the design and implementation of individual projects, partly in response to project appraisal criteria, notwithstanding the possibility that the strategy itself is insufficiently aware of its resource implications. Given the continuing significance of the trade-offs between economic development and the use of natural resources, which can be anticipated to be to the fore in the design of programmes post 2006, there is a case for a more explicit requirement in SF funded strategies to directly address resource efficiency and to encourage de-coupling.

Beneficiaries and social inclusion

The existence of increasing social exclusion at the same time as increasing economic development requires future SF funded regional strategies to give explicit consideration of the effects of interventions on local level beneficiaries, and the means by which opportunities are made more widely available within communities. In contrast to the issue of resource efficiency, there are strategic level responses directed to increase social inclusion. These responses are not however, always integrated with the SF funded development programmes.

Implications of developing regional pathways

Developing regional development pathways as described above has implications for European regional policy. These are that:

- Sustainable development is increasingly seen as providing an over-arching concept for regional development (even though there remain significant numbers of policy makers who have yet to understand this) and the concept remains largely blurred;
- The concept of defining a long term regional development path, that is clearly sustainable, is understood by regional stakeholders (at least in some regions) and by some SF managing authorities, as the basis for an integrated approach to regional development, allowing a common agenda and defined aspirations to guide different regional strategies, and focusing on creating and exploiting policy synergies (possible win-wins);
- Trade-offs mean that regional convergence in economic and social cohesion (when measured in conventional GDP per capita), is an inadequate policy aim without reference to the sustainability of development of individual regions. Trade-offs mean that economic convergence (recognising that this includes investment in environmental services and for inter-regional equity) does not automatically imply a more sustainable regional development;

- Policy responses to address resource efficiency and social inclusion need to be integrated fully with the conventional regional focus on economic development.

These implications suggest that a revised regional policy might be drafted, based on existing mandates, to promote EU regional sustainable development. The policy would combine the macro objective of economic and social cohesion and convergence with a micro objective of regional sustainability (this pre-supposes that the European development model promoted by cohesion is also a sustainable model – insight from the macro-economic analysis suggests that it is).

The revised policy would allow:

- a single regional strategy for all structural fund interventions AND for related Member State policies (aside from that reflected in matched funding). Note that this approach has been partially introduced in some regions in the current period. This approach could be based on:
- a clearly defined and preferred sustainable regional pathway (perhaps using the Part A regional assessments as models?);
- an overarching set of regional objectives allowing some separation between strategic objectives and budgets, and removing the need to define separate objectives and programmes for individual funding sources and the attendant measurement and evaluation;
- explicit responses to integrate resource efficiency and social inclusion;
- the removal of horizontal priorities replaced with a tiered approach to objective setting.

These ideas are reflected in recommendations below.

6.3.2 *Integrated territorial responses*

A number of key trade-offs, especially relating to transport, and to urban – rural links, have arisen because the SF (and non-SF) interventions lack a clear spatial framework within which to manage and implement policy objectives. Whilst there are land use plans, these tend not to provide a strategic framework that identifies the future inter-relationships between different social and economic activities and the use of natural capital. Spatial planning as the basis of a territorial integration of policy responses is increasingly recognised as a tool for long term planning, especially in terms of organising future economic and social functions and relationships. This subsequently enables a more meaningful basis for infrastructure planning, especially transport, and productive investments (e.g. in relation to their regional resource use, and in relation to particular communities and local needs).

The development of an integrated territorial response would allow some testing of the sustainability of the development pathway, allowing key potential trade-offs to be identified, and would provide a complementary tool for assessing SF interventions. It is noteworthy that the Irish Government has begun the preparation of a national spatial strategy in response to the perceived imbalances and environmental resource costs of the current development path. The territorial responses in the Italian, Spanish and UK cases also provide evidence of the benefits of this approach.

6.3.3 Top-down strategic guidance with bottom-up planning and delivery

Coherence of regional and local economic development

The integration of top-down with bottom-up processes needs to work effectively if SD is to be fully operationalised. The top-down strategy and region-wide actions (especially in relation to infrastructure) need to be complemented by local or community level interventions. One important feature identified in the regional assessments is the difficulty in translating economic development into benefits for the least advantaged areas and households, hence the paradox of increasing general prosperity while at the same time increasing income disparities and social exclusion. The implication is that there needs to be greater integration between top-down and bottom-up measures. The former to ensure a strategic approach, the latter to ensure that interventions are sensitive to meeting the needs of specified beneficiaries. Programme approval should be conditional on clear provision for this process and a clear approach to the management of this integrative process, including identification of the principle actors and their interests.

Two issues need to be considered in future programmes. First is the importance of defining and then delivering a regional development strategy, and moving from strategy to project, rather than focusing on available projects. Second is the importance of ensuring the strategy and subsequent projects are sensitive to the needs of local communities and target beneficiaries through adequate participation of local groups and agencies in strategy and project pipeline preparation. Third is the importance of fostering commitment to, and enhancing the impacts of, the strategy. Greater weight needs to be attached to the succession of measures and projects into mainstream regional policies and programmes following the end of the programming period.

The apparent success of the Urban and Leader Community Initiatives, to secure improved levels of integration of policy actions, using participative approaches to link strategy and delivery, and to mainstream actions, is of particular importance. The EC could request future programmes to better reflect the experience of Community Initiatives in the design of particular measures or action plans in designing and delivering strategies.

Project pipeline

The general requirement for greater integration of top-down with bottom-up processes has particular significance in the context of generating better quality project pipelines. Three features might be considered in setting the context for the pipeline. First, the case studies indicate the long time-scales involved and hence the need for early consideration of indicative projects, as strategies are outlined. Second, in order to generate ideas informed by the outline strategy, participation of local communities and stakeholders, is required, and hence the need to ensure suitable mechanisms are in place for the necessary dialogue, dissemination and feedback, at regional and at local level.

The EC could request MS or regions, when outlining strategies, to demonstrate the availability and quality of mechanisms to deliver strategies and to foster adequate project pipelines.

6.4 The Role of the Structural Funds in Regional Development

The role of the structural funds, as revealed both in the case studies and by reference to previous programme evaluations, has changed with the evolution of regional policy

and regional development programmes. In particular, this evolution has seen the increasing integration of different economic activities within single strategies, and the growing integration of economic development strategies within wider regional development frameworks. The role of the SF has therefore changed from funding discrete activities, to funding activities specified within integrated development strategies. This has meant that SF funded activities are required to take into account and to contribute to a wider set of impacts and policy outcomes. Figure 3.2 above illustrated the changes.

The logical extension of the evolution is that whilst there maybe economic development strategies as part of regional programmes their focus and delivery will be required to be consistent with wider regional policies. In this context, it is likely that SF interventions will have to be judged against a wider set of desired policy outcomes than in the past. The added value of the SF in terms of the broader policy mix that it has encouraged so far should be even greater in the future.

The evaluation raises the possibility that the EU, supported by the EU SD strategy, might choose to evaluate regional trends and policy trade-offs in a different manner to that of the regions. In this case the SF could be used to encourage those policy responses considered by the EU to contribute more to SD. For example, an obvious issue for the next programming period will be the extent to which road infrastructure desired and justified as sustainable by regions, should receive co-finance, rather than looking to fund alternative and more resource efficient modes. In this context it is worth making the point that the preferences in some Candidate Countries for accelerated economic development relative to the depletion of natural capital are less likely to favour environmental protection than in many of the current MS. This returns to the normative aspect of trade-off definition, and the willingness and ability of the EU to propose and fund alternative development paths.

The added value of the SF could therefore be defined in terms of accelerating the change to alternative, more sustainable development paths, and of funding measures that would otherwise be largely missing from programmes, where they are considered necessary to respond to specified trade-offs (as judged by the EU).

6.5 Proposals for the Mid-term Evaluation

These lessons suggest a number of recommendations relevant to the current programmes. The main vehicle for securing revision to current programmes is the formal mid-term evaluation. This process has already started in most MS. The following tasks could be highlighted for Managing Authorities in the context of on-going evaluations:

1. When assessing progress on the integration of the horizontal priorities, consider the extent to which projects are demonstrating their contribution as a result of their basic design rather than because of 'bolt-on' extras. Review the project generation and selection approach (perhaps using the checklist in Section 7.0, Volume 2) and consider whether changes are required to better reflect the balance between vertical and horizontal priorities. Consider the role of planning and the use of partnership processes in the design of projects as a means of improving integration. In terms of the review of progress on outputs and results comment on the trade-offs that have been made between achieving vertical and horizontal priorities. The addition of eco-efficiency indicators to complement existing monitoring of horizontal priorities should be considered.

2. If there have been regional assessments of SD since programme approval: Consider whether the regional aspirations and desired policy outcomes, against which programme objectives were set, has changed significantly. Review the extent to which the objectives and targets of the programme continue to contribute to these aspirations and desired outcomes. Identify any emerging gaps that should be addressed by broadening the remainder of the programme, consistent with current regulations, to target new or revised outcomes. Highlight any implications for the Programme objectives, priorities and balance of resources between priorities to reflect new SD objectives.
3. When updating the regional assessment of economic, social and environmental trends, consider with the PMC whether there is any evidence of emerging critical thresholds. Review existing measures and the degree to which the programme might threaten particular thresholds. Consider new measures that would contribute to easing pressure on a particular threshold.
4. Review the extent to which the programme has identified the intended beneficiaries. Examine how far this is taken to include (explicitly or implicitly) the most disadvantaged households and sub-areas. Consider the need for a more explicit statement about how the programme addresses the needs of the least advantaged, and the degree to which the programme contributes to agreed regional policy goals for social inclusion and reducing social exclusion. Review the extent and depth of partnerships and the scope for improving the targeting of the programme. A key question is how effective has been the integration of ERDF and ESF funded activities, and Objective 3 Programmes with Objective 1 or 2 Programmes.

6.6 Guidelines for the Mid-term Review

The Review seeks to advise Managing Authorities of recent policy development in so far as it might influence the remainder of the programme. This thematic evaluation study provides weight to the current policy interest and initiative in greater policy integration. This policy development is exemplified with the recent EC Communication on Impact Assessment), as well as the wider debates on SD and by the EU strategy, (which was published subsequent to the start of the current programming period).

In this policy context, the evaluation suggests that the Mid -Term Review should give greater weight to national and / or regional SD statements (new or old) and to the identification of key regional trade-offs, and hence prompt Managing Authorities to consider how well integrated the programme is in regional policy. The mid-term evaluations consider how well the programme is 'joined-up' to other policies, to a limited degree. This could be used to encourage programme changes in favour of greater regional integration.

The Review should also highlight the importance of the Project Pipeline in delivering strategies that can take regions to a more sustainable development path. In particular, the project generation process needs to be seen as the engine of the programme, but steered by the strategy, oiled by participative approaches. The use of Technical Assistance funds and other initiatives identified in Section 3.7 above, should be encouraged, to improve the level of innovation and commitment to project design and delivery.

Finally, it might be noted that there remains uncertainty, pending EU decisions, as to the nature of future regional programmes. In this context it is worth stressing the

importance of succession planning for measures and projects, and working to broaden the scope for project mainstreaming.

6.7 The Preparation of the Next Structural Fund Regulation

The evaluation, building on existing EU policies, suggests ideas for a number of key principles that should inform future regulations.

Linking SD and Cohesion: The general policy aim of regional economic and social cohesion, under which the SF are justified and approved, should be restated or expanded to be clearly seen and understood as a policy for sustainable regional development. In particular, SD should be seen as an over-arching principle because it relates to the attainment of overall social welfare. It should also be made clear that the underlying objective of economic and social convergence and of balanced development, between regions, also applies within regions. Possible refinements might confirm that:

- social cohesion is concerned with inter-generation equity as well as with inter-regional equity and therefore refers to the ability of society to access resources (including environmental resources) now and in the future; and that
- economic and social convergence at the EU level has to be based on sustainable development at the regional level.

Starting with regional SD statements: Given that programmes have to promote SD at the EU, MS and regional levels, then SF programmes can only be properly formulated where there is a regional SD statement (or national in the case of CSFs). The presence of such a statement, setting out regional aspirations, aims and objectives, should be considered a condition of establishing the need and relevance of a SF programme. The regional development programme should then be clearly defined in relation to the statement, setting out its relevance to SD by reference to the complementarity and consistency of the intended programme results and impacts with SD objectives and the desired regional outcomes. This relevance would be tested in the ex-ante evaluation. This integration of SD into regional objectives and programme priorities from the statements would avoid the need for horizontal priorities and simplify programme design and delivery.

Establishing a hierarchy of objectives and associated evaluation system: The priorities in future programmes should be determined by reference to stated regional SD statements, and criteria describing the key SD issues. Working from criteria in the statement to programme priorities allows, in principle and depending on the quality and consensus behind the SD statement, a hierarchy of objectives to be formulated. The achievement of higher order objectives would then be directly linked to the achievement of lower order objectives, where higher order objectives were in part dictated by a desire to respond to key trade-offs or to build win-wins.

For example, one criterion in the regional SD statement might relate to the need for improved resource efficiency. A programme priority could be defined in relation to sustainable sectoral development, with a measure defined for say sustainable tourism, and with projects explicitly optimising economic, social and environmental benefits in the sector (rather than aiming to maximise economic benefits with the addition of certain mitigation activities).

This hierarchy of objectives also has implications for the monitoring system; with measurement of higher and lower order objectives, allowing some appreciation of the

direct and indirect effects. At the same time, the measurement of regional SD criteria through a chosen basket of indicators would provide the programme's contextual indicators. The evaluation system should also define targets not just in terms of desired economic impacts but also desired social and environmental impacts.

Establishing the EU added value and use of criteria. The EU SD Strategy, Community Policies and previous evaluations of SF activities, provide a basis for establishing criteria which the EC would apply in assessing the sustainability of proposed development programmes, and the added value to the EU of the SF expenditure. These criteria would relate to the four types of capital, or three pillars, and be used to check the proposed sustainability of the programme from the EU perspective. Published criteria would allow programmes to respond. The sensitivity of the proposed results and impacts to non-regional policy would need to be included. These criteria might relate to (using the current typology of interventions – this might well change in future programmes depending on the defined nature of EU regional policy) preferred types of infrastructure (eg collective transport), requirements for business support (eg EMAS, waste recycling, training requirements), requirements for training (eg links to target beneficiaries or areas). Further elaboration of some of these requirements are given below.

Building on the experience of the Community Initiatives in future programmes. The evaluation has highlighted the strong contribution of the Community Initiatives to the improved integration of both policy and of policy making and delivery processes in those areas where they have been implemented. The experience and lessons are an important element of the current SF added value and need to be reflected (especially in the light of full ex-post evaluations) to a much greater degree in future programmes.

Use of incentives to support accelerated moves to a more sustainable development path: The introduction of incentives agreed with Managing Authorities designed to encourage moves to a more sustainable development paths offer a possible tool for the EC, especially when criteria defining preferred investments are more explicit. However, their introduction inevitably complicates programme procedures, and risks the possibility of perverse effects. Two options might be either the generation of criteria indicating the preferred forms of intervention tied to different rates of grant, or a Performance Reserve available to those regions that are deemed by the EC, using the criteria, to have best achieved steps to a more sustainable development path.

Integrating SF funding sources: The SF programmes are increasingly being integrated within broader regional development programmes as a response to the need to improve policy coherence. Where there is a common set of objectives, the delivery of integrated policy is inhibited by the need to co-ordinate different funding sources. The effective delivery of future development programmes could usefully be supported by a single funding source, rather than several funds, directed and managed by a wide range of relevant stakeholders and interest groups. An alternative approach would be to have a '3 pillars' fund, adding an explicit environmental fund to the social and economic funds, but managed in an integrated manner. The present benefit of the different funds of generating engagement with a wide range of stakeholders would be retained through the involvement of the full range of stakeholders in the preparation of the regional sustainable development statement.

6.8 The Preparation of SF Programmes, Post 2006

The main direction of regional policy making and the SF, identified in the case studies, is towards the increasing integration of SF, firstly, within region wide economic development strategies and, secondly, within broader regional development strategies,

which, in the case of Andalusia for example, are designated regional sustainable development strategies. This trend is consistent with the drive in a number of Member States (the UK, NL and Germany prominent among them) for a more integrated approach to policy making that seeks to avoid so called 'silo' thinking and to consider explicitly links between policies. The trend is also acknowledged in the recent EC Communication on Impact Assessment, and also informed by the very positive contribution to SD that were identified in the case studies from the Community Initiatives, especially Leader and Urban.

In this context, and in the light of the principles established above, the evaluation suggests a number of recommendations to future Managing Authorities:

1. *SD and Balanced Development:* All programme submissions should be accompanied by a statement describing how the programme will impact on the spatial pattern of development of the region over a 10 year or more period; and how territorial responses (spatial planning) will be used to integrate the range of regional objectives within the SF programme. This should indicate how the programme will be managed to contribute to stated objectives for spatial development and the achievement of the desired balance of development, including the extent of targeting to relieve areas sensitive to 'over heating' or to benefit particular areas of disadvantage. This statement should explain the consistency between the programme and the spatial development perspectives. In particular it should describe how this consistency will lead to improved resource management, (for example in relation to the management of travel demand or the demand for natural resources such as water), and support social cohesion, (for example through targeting disadvantaged households and communities).
2. *Specification and Management of Trade-offs:* The regional needs assessment (SWOT analysis) submitted as a basis for funding, should include a detailed analysis of the expected trade-offs and win-wins from a programme of accelerated regional economic and social development. The acceptability of significant trade-offs should be clearly described by reference to the results of regional consultation and stakeholder involvement. Programmes should be encouraged to specify those measures that are intended to address directly the trade-offs identified or to secure the win-wins. Note that more severe trade-offs may require more expensive and longer term responses – and hence may justify additional funding, i.e. there should be an incentive to highlight rather than obscure trade-offs and policy responses.
3. *Integrated Sustainability Assessment:* Ex-ante evaluations should be designed to specify how programmes lead to different economic, social and environmental consequences, what trade-offs are therefore likely, and what measures could address the trade-offs. The ex-ante evaluation should also examine the degree of policy integration and the extent to which the programme addresses the wider set of desired policy outcomes. The evaluation of the contribution of the programme to the set of regional outcomes will need to apply a multi-criteria approach (MCA) to evaluation using the SD objectives, based in part on detailed qualitative analyses and by reference to identified benchmarks of good practice.
4. *Added Value:* The case studies indicate that the added value of the SF lies in large part in the modernisation of the conventional regional development programme, in part helping to respond to a more integrated regional agenda. Whilst acknowledging the value in an acceleration of the development of basic infrastructure and skills, the SF contribution could be more explicitly used to challenge regional stakeholders to consider alternative development paths. The

EU perspective on key trade-offs could be developed, based on the EU SD strategy, and by reference to criteria that could guide policy responses, and the allocation of SF, to address constraints on sustainable regional development relating to natural and social capital. In doing so, the SF could seek to secure an accelerated move to more sustainable development paths, and to address the otherwise incremental approach to regional development.

5. *Addressing Key Constraints:* The evaluation has indicated that the policy responses to the main constraints to regional SD, in relation to natural and social capital, are not well integrated within SF programmes. In the case of natural capital, there is little attempt to de-couple the use of natural capital from economic development, by integrating resource efficiency within interventions (for example by having SD responses for key sectors). In the case of social capital, there are strong social policies directed to achieving desired social outcomes, and which incorporate attempts to build, implicitly at least, social capital. However, this is not 'coupled' with SF programmes. Future SF programmes have to address these constraints if they are to further enhance SD. Box 6.2 outlines more specific programme requirements linked to reducing constraints to SD.

Box 6.2: Programme Requirements:

Three possible sets of requirements are suggested by the evaluation.

Emission limits (especially GHG) and resource efficiency targets (especially greenfield development, water and energy) – The specification of the intended economic outputs and results of the programme allows an estimate of the possible impact on emissions and resource use (using known coefficients, eg from Corineair). A limit for the maximum level of resource use and emissions associated with the Programme, or minimum resource efficiency target, could be specified and agreed at the beginning of the programme. The PMC (at least in some regions) in approving projects can require an appraisal of the potential use of resources and emissions and manage the delivery of the programme to follow the agreed target limits. The PMC can allocate a share of the resources to projects as it chooses, but in line with the target limits. This has three benefits: firstly it enables the programme to reflect acceptable impacts, judged and established by stakeholders in the light of the specified regional development path and integrated assessment; secondly, it requires explicit consideration of the resource and emission effects of particular interventions (eg by estimating traffic generation); thirdly it encourages choices between measures and projects that have significant impacts on emissions.

Education and training – The importance of integrating education, training, learner and non-learner support, and social dialogue with economic development interventions suggests that joint programming is necessary. This integration has previously been encouraged, by allowing ESF co-financing projects within ERDF programmes, although they tended to be discrete projects. Programme approval would be conditional on specifying the methods through which all (especially business support) interventions comprise an education and training component. The benefits of this programming include an accelerated level of adaptation to new forms of working by businesses and workers, increased levels of social dialogue and improved human resource strategies.

Integrating top-down with bottom-up processes – This combination needs to work effectively if SD is to be fully operationalised. The top-down strategy and region-wide actions (especially in relation to infrastructure) need to be complemented by

community level interventions. One important feature identified in the regional assessments is the difficulty in translating economic development into benefits for the least advantaged areas and households, hence the paradox of increasing general prosperity while at the same time increasing income disparities and social exclusion. The implication is that there needs to be greater integration between top-down and bottom-up measures. The former to ensure a strategic approach, the latter to ensure that interventions are sensitive to meeting the needs of specified beneficiaries. Programme approval should be conditional on clear provision for this process and a clear approach to the management of this integrative process, including identification of the principle actors and their interests.

6. *Capacity of Regional Bodies:* Delivery of the SF has, over the programming periods, encouraged regional bodies to develop the capacity necessary to plan, manage and monitor programmes of economic and social development. This capacity has taken a considerable time to build up. The potential weakness in the capacity of regional bodies in the Candidate countries has been widely recognised, with pre-accession programmes directed to building relevant capacity. However, capacity is still likely to be limited. Experience has shown that the capacity is in large part a function of the competencies of a few senior managers, capable of providing direction, appraisal methods (especially financial and environmental) and stimulating partnership approaches and project pipelines. The further development of an explicit staff exchange system with chosen 'animateurs' in both the Candidate countries, and in existing Managing Authorities / PMCs, would facilitate the accelerated learning required of the Candidate countries.

This could be complemented by increased support for inter-regional networks of competent environmental and social authorities represented on PMCs. Pilot Community Initiatives (Urban and Leader) might also be considered as a means of encouraging skills in territorial integration and local co-ordination. In terms of SD implementation more generally, Annex 6 sets out a checklist for "Improving Policy Coherence and Integration for Sustainable Development", that has been developed from the findings of five case studies in OECD countries. It aims to contribute to building longer-term governance for sustainable development, and could be developed as a useful tool for improving mechanisms to support SD at the policy level.

7. *Stimulating the Project Pipeline:* The ability of stakeholders to generate innovative projects that contribute to SD needs to be enhanced. The programme submissions, especially when outlining preferred strategies, should indicate clearly the methods for project generation, the extent and breadth of local level participation by stakeholders in the process, and the lead times available for project generation. Managing Authorities and Programme Monitoring Committees should provide significant levels of technical assistance and support to potential project holders to understand and to integrate the broader sets of requirements in project design and implementation and encourage appropriate initiatives by potential project generators. There are a number of initiatives that could be developed and promoted. These include:
 - support for capacity building among smaller organisations in relation to application and management, perhaps through 'mentoring' schemes;
 - providing outreach activities using SD theme managers to raise awareness, perhaps using 'model' projects to illustrate and stimulate ideas; and

- ensuring the PMC has both the necessary breadth of coverage of stakeholder interests and the depth of experience of SD to advise potential applicants. Evidence of existing mechanisms, and support to ensure that they are of sufficient quality, could anticipate the formal request for programmes.
8. *Indicative Projects*: The review of project pipeline experience in the case studies suggests the need for earlier consideration of how strategies are going to be delivered, if the dependence on large 'off the shelf' projects is to be avoided and innovation stimulated. This argues for a requirement to consider indicative projects in tandem with strategy development. The process of project generation needs to give early consideration of how to benefit from ideas that have community support and participation. This in turn requires suitable mechanisms for the necessary dialogue, dissemination and feedback, at regional and at neighbourhood level.

6.9 Concluding Observation

The SF have progressively increased their contribution to SD, as regional decision-makers have begun to understand the integrated nature of regional development, and to recognise the need to relate investment programmes not just to economic or employment outcomes, but also to social and environmental goals. The growing idea and awareness of the three pillars among regional policy makers, the push for improved integration in policy design, and the better understanding of trade-offs and win-wins, provide a supportive context within which the SF can better contribute to SD.

In order to rise to the challenge the SF has to be seen as an agent for SD as well as the achievement of cohesion. Across the regions, recognising differences in the effectiveness of different programmes, there remains scope for a considerable improvement in the extent and manner in which the SF contribute to SD. As an EU policy tool, the SF, with due initiative and improvement, has the potential to be a constructive motor for SD. The SF provide the opportunity to challenge regions to accelerate to a more sustainable development path, to embrace a model of development that better addresses the constraints to sustainable development, and which in turn fosters an improved quality of life now and in the future for regional and EU citizens.

GLOSSARY

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| Assets | (see Capital Stocks) |
| Base Indicators | These are indicators of regional or national level changes in the social, economic and environmental context within which SF programmes operate. For the purposes of this project, base indicators will be provided in the context of the four capitals model, and will measure either capital stocks, or flows of related services, that contribute to human welfare (as defined by agreed policy objectives). |
| Candidate Countries | The countries of central and eastern Europe that have applied to become members of the European Union. In 1998, negotiations opened with six countries, which form the 'first wave' of applicant countries: Cyprus, the Czech Republic, Estonia, Hungary, Poland, and Slovenia. A 'second wave' will be made up of Bulgaria, Latvia, Lithuania, Romania, Slovakia and Malta. |
| Capital Stocks | Capital stocks provide a flow of income and other services to society. A depreciation (or reduction) in the stock of capital reduces the subsequent flow of services. Different capital stocks have been defined that provide different services. Four types of capital are generally defined: Economic (or human-made or manufactured) capital, Environmental (or natural) capital, Human capital, and Social capital. Note that investment in stocks does not automatically give rise to productive activity, rather the potential for productive activity, eg investment in training (human capital) requires employment opportunities in which to apply new skills. New infrastructure has to be used. |
| Contextual Indicators | For the purposes of this project, these are the indicators that the programme has defined itself, as being relevant to the social; economic and environmental context within which the SF programmes operate. |
| Environmental Capital | (see Natural Capital) |
| Human Capital | Human capital generally refers to the health and productivity potential of individual people. Types of human capital include <i>mental and physical health, education, motivation and work skills</i> . |
| Human-made Capital | (see Manufactured Capital) |
| Managing Authority (MA) | In operation since 2000, the body designated by the Member State to manage the programme. |
| Manufactured (Man-made or Economic) Capital | Manufactured capital comprises human made or produced assets that are used to produce other goods and services. Some examples are machines, tools, buildings, and infrastructure. |
| Natural Capital | Natural capital comprises the stock of natural resources linked directly or indirectly with human welfare. Natural resources |

comprise ecosystems and biodiversity that provide natural services, e.g. drinking and bathing water, energy, minerals, timber, air and water filtration,

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| Objective 1 | The first EU regional policy Objective, which aims to promote the development and structural adjustment of regions whose development is lagging behind. |
| Objective 2 | The second EU regional policy Objective, which aims to support the economic and social conversion of areas facing structural difficulties: industrial areas, rural area, urban areas, and areas dependent on the fishing industry. |
| Objective 3 | The third EU regional policy Objective, which aims to support the adaptation and modernisation of education, training and employment policies and systems. |
| Performance Indicators | These are specified by the individual Programme Monitoring Committee (PMC) in order to measure the inputs, results, outputs and impacts of SF programmes. |
| Programme Monitoring Committee (PMC) | Committee set up by the Member State and the managing authority to ensure the quality and effectiveness of programme implementation. |
| Project Pipeline | The flow of projects that is generated by promoters and sponsors which may come forward for possible SF programme funding. |
| Project Selection Criteria | These are criteria set by the MA and PMC to guide project promoters and sponsors as to the acceptable design and operation of possible projects for programme funding. These criteria are set by reference to the objectives and priorities of the programme, but also SF guidance in relation to horizontal priorities such as SD. |
| Services | The flow of attributes provided by capital stocks, necessary to meet human needs (food, shelter, clothing, society) and to increase human welfare |
| Social Capital | Social capital, like human capital, is related to human well-being, but on a societal rather than individual level. It consists of the social networks that support an efficient, cohesive society, and facilitate social and intellectual interactions among its members. Social capital refers to those stocks of social trust, norms and networks that people can draw upon to solve common problems and create social cohesion. Examples of social capital include neighbourhood associations, civic organisations, and co-operatives. The <i>political and legal structures</i> which promote political stability, democracy, government efficiency, and social justice (all of which are good for productivity as well as being desirable in themselves) are also part of social capital. |
| Strong Sustainability | Strong sustainability requires that the quantity of each type of capital is preserved independently, i.e., the different types of |

capital can complement, but not substitute one another.

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| Structural Funds | The financial instruments with which the European Union implements its structural policies. There are four Structural Funds: ERDF, ESF, EAGGF-Guidance, and since 2000, the Financial Instrument for Fisheries Guidance (FIFG). The EU's structural policies are also implemented through the Cohesion Fund (not a SF) and through loans from the EIB. |
| Substitution of Capital or Trade-off | The use (reduction) of one capital to increase another capital. The desirability of substitution is debated, but the existence and extent of substitution can be examined empirically |
| Sustainable Development | Non-declining <i>total</i> capital stocks per capita over time |
| Sustainable Development Criteria | These are specified by the PMC as the basis for assessing the performance of the programme against the horizontal priority of SD. These criteria will represent the normative interpretation of SD by the PMC, which may or may not fit with the capitals model. |
| Weak Sustainability | Weak sustainability preserves total capital, but not necessarily each of the four kinds of capital. i.e., the different types of capital are viewed as substitutable for one another. Making this concept operational requires that the different types of capital are expressed in the same unit, usually money. |
| Win-win policies | Investment in one form of capital that leads, directly or indirectly, to an increase in another type of capital. |