

Chapter 5. Policy frameworks for sustainable agriculture

If environmental sustainability is to be secured there will be a need:

- to enhance the remaining resource of semi-natural habitats (through site buffering, linkage and re-creation);
- to address the decline in the other biodiversity components of agro-ecosystems (the 'common' habitats and species in the wider countryside);
- to improve the status of water, soil and air;
- to ensure the viability of farms and communities required to underpin such objectives.

To deliver such objectives an integrated holistic view of countryside management is required. The achievement of whole countryside objectives should be embodied in an Integrated Rural Policy and will depend upon a reform of the CAP which removes incentives, through production linked support, to undertake environmentally damaging activities and removes constraints upon environmental enhancement. Whilst a necessary condition, however, the mere removal of damaging incentives will be insufficient to secure environmental objectives. The abandonment of support of any kind will leave the market *ceteris paribus* to determine land use decisions. The results of this are likely to be mixed but, on balance, the environmental consequences will probably be negative (cf. Potter 1996). Throughout much of the arable belt, comparative advantages will tend to be realised and a continuation of the current configuration of intensive production is likely. High opportunity costs of diverting land to conservation use, or of environmentally beneficial extensification are likely to mean that environmental 'policy reach' will be limited. Incentive schemes will be able to afford conservation costs only on managed land and will tend to 'cherry pick' the priority sites for biodiversity. Throughout much of the wider countryside the only means cost-effectively of securing compliance with environmental objectives will be by means of tighter regulations.

In much of the uplands the removal of all support would similarly generate negative environmental consequences but for rather different reasons. Here comparative advantages are unlikely to be realised and common results are likely to be farm abandonment and amalgamation with deleterious consequences for the management of semi-natural habitats. Such widespread environmental and social 'market failure' in integral situations will require extensive mitigation of a kind which minimalistic and 'cherry picking' agri-environmental schemes will be unable to deliver. Intervention will need to be of a scope and scale that matches the need for widespread retention of 'joint economies' (of agricultural products and environmental services) upon which the nature conservation resource in 'integral' areas in particular depends.

Trade liberalisation is therefore likely to foster widespread and environmentally damaging restructuring and relocation of production, with future aid confined to payments strictly decoupled from production in conformity to stringently defined 'green box' criteria under WTO rules. Such environmental support will take the form of targeted, narrowly defined payments which, in this form, will fail to secure 'joint economies' of agricultural products and environmental services and the 'policy reach' required to achieve whole countryside conservation. This 'radical decoupling' strategy appears to be a model for a continuing juxtaposition of market-oriented production, on the one hand, and a strictly limited set of positive agri-environment measures, on the other. The implication is clearly one of a 'zoned'

countryside with large areas of intensive, environmentally-poor, but commercially competitive, farming, plus smaller zones where farms exist only as tools for environmental management, supported by targeted schemes.

The realisation of whole countryside objectives will require therefore intervention and support by public policy. Its rationale, however, will not be production maximisation as at present but rather environmental and socio-environmental in character. Its design will be one which simultaneously achieves conservation of the broader fabric of countryside while at the same time delivering additionality on special sites. The supply of environmental services requires public support for two basic reasons: firstly many environmental goods have no market (they are public goods) and will therefore be 'undersupplied'; secondly, the sale of agricultural commodities which have the capacity indirectly to foster biodiversity (for example extensive or organic production) are generally uncompetitive because they seek to secure sustainability objectives, that is to 'internalise' environmental costs (or, more specifically, to obviate the generation of negative externalities). It seems clear from the preceding analysis that the current competitiveness of conventional agriculture is secured in no small part by the lack of such internalisation, constituting a systematic breach of the polluter pays principle. Sustainable agricultural systems require the establishment of a strong and consistent regulatory system which enforces the polluter pays principle, public subvention to reward positive environmental management and the construction of markets which enable consumers to identify 'eco-products' clearly.

It seems likely that such subvention will need to fulfil the dual roles of income support (conditional on the delivery of stipulated environmental benefits) and purchaser of more ambitious environmental improvements. Basic income support payments, disbursed in return for stipulated environmental products and services, would replace current market/direct payments and, via transitional arrangements, constitute a 'basic tier' payment to all farmers to maintain field patterns and land use necessary to conserve and enhance biodiversity and landscape character. Such a basic tier payment would avoid the mistake of modelling a framework for agri-environment policy purely on the basis of very tightly drawn schemes which maximise value for money in narrowly defined environmental output terms, with 'additionality' considerations being uppermost. The latter model neglects the need to realise ecological economies of scale by securing 'joint economies', a current necessity particularly in 'integral scenarios' and a future one if whole countryside objectives in the lowlands are to be secured. A key issue here is the so-called product/process distinction (ie whether allowable environmentally beneficial trade distorting measures should relate to an end product or to the process(es) which led to its creation). In the agri-environmental field support for entire sectors, albeit of a 'green' interventionist rather than a 'productivist' kind, will need to be retained to ensure that particular farming systems and practices are maintained. It will not be sufficient, desirable or even possible to confine or relate support to specific environmental outputs if this does not take into account the fundamental need to keep people on the land in order to deliver sustainability objectives.

The preceding does not mean of course that there would be no payments for environmental additionality, that is for more exacting environmental outputs. Such would constitute the 'second' role of subvention. Such payments would represent premia or discretionary payments allocated to generate more ambitious environmental improvements on certain farms and sites.

The ESA scheme provides a model (albeit currently an imperfect one) for this two-tiered subvention approach, combining as it does basic tiers for wider countryside management with higher tiers to deliver more demanding wildlife and landscape objectives. Given future uncertainties, the scheme also sets an important precedent in its explicit linkage of the

maintenance of farmers' incomes and the achievement of conservation goals. Modulation to meet local area objectives is essential and an ideal delivery mechanism for whole countryside objectives would be an ESA co-extensive with each Natural Area. The ESA would comprise a number of tiers which would encapsulate management options for the whole of the Natural Area profile. These management options would address three basic situations: sensitive (maintenance and enhancement of semi-natural habitats); diversion/reversion (habitat expansion and re-creation); extensive/organic (adoption of extensive conventional or organic systems of 'intensive' infield production).

This system of support would need to be underpinned by a strong regulatory environmental baseline, prescribing statutory standards of management (a statutory Code of Good Practice) and proscribing certain damaging land use changes, for example ploughing of permanent grassland in sensitive locations (eg adjacent to rivers), new drainage work, removal of hedgerows etc. Regulation would also need to enforce environmentally defined levels for nitrates and pesticides. Such measures would be legally defined environmental standards, the introduction of which would draw legitimacy from society's insistence on certain property rights in the sustainable use of environmental resources. This would enforce an internalisation of environmental costs by the farming community and prevent compensation being paid, as it presently is, for activities which breach of polluter pays principle. Such internalisation of environmental costs would provide a significant stimulus to farmers to move from conventional to organic systems, for which additional income support would, of course, be available. In other words such regulation could serve to keep larger farms, for example, those in the arable sector who otherwise might be reluctant to enrol in an environmental payment scheme, within 'policy reach'.

The appropriate tools for such an integrated rural policy would comprise a mixture of regulation, policy support and market-led signals to encourage environmentally and socially sustainable activity in the countryside. Each mechanism would be supported by the provision of advice, information and training. Using a balance of regulation and support, market-led signals can then be employed as a cost-effective means to ensure adequate levels and quality of food production, although public policy will still need to ensure food safety through appropriate regulation and information.

This alternative policy framework is proposed to comprise a pyramid of measures comprising:

- a regulatory baseline of minimum standards - a common level of regulation to ensure that basic environmental resources were protected from irreversible and damaging activities by land managers. Based on EU environmental principles, this baseline would not include any element of compensatory payment but would be expected to form part of normal responsible management practice. Compliance with this baseline would be required for land managers to receive any support payments.
- a 'basic tier' of direct payments to all farmers to maintain field patterns and land use necessary to conserve and enhance biodiversity and landscape character. This would represent a contract offered to every land manager across Europe to provide for the maintenance of the basic fabric of the countryside, to preserve valued features in the landscape. This requires positive incentives to reward careful and responsible stewardship of the rural environment. Proper stewardship cannot be secured through regulation alone and, because it presupposes an internalisation of environmental costs and the production of public benefits for which the market alone will not pay, requires some level of policy support. Such support would have the dual function of securing a basic level of environmental benefit in rural land management and of supporting

active management of the countryside by the people who live and work in it, representing an income support measure.

- upper tiers of payments to be used a) to secure the management of existing high natural value land and b) to encourage producers to progress to more ambitious forms of environmental management. These would be targeted payments, although in principle available to all land managers.
 - a. Would be available to all land managers whose land meets specific quality criteria. Payments would be higher than for the basic tier to reflect the quality of the resource, economic marginality and to act as a form of ‘modulation’ in recognition of the past, and continuing, stewardship role of land managers in such situations.
 - b. Would be offered to areas/situations most in need of more ambitious environmental action. Those on the basic tier would be encouraged to progress to this higher tier. Qualifying management practices might include conversion to organic production, re-creation of species-rich grassland, re-creation of native woodland, re-creation of wet grassland/wetland areas, etc.

Additionally, the upper tiers would include investment aids (as currently available under EU Structural Funds) to stimulate the adjustment of the rural economy to create more opportunities for sustainable employment and environmental management. These would support economic diversification and development which respects natural and cultural assets in those areas where current economies and management systems are unsustainable and in decline.

The policy model proposed here, then, is one designed to secure ‘strong sustainability’. It would be fully decoupled from current ‘productivist’ policy but would need to articulate with it in an evolutionary sense via transitional payments. It would not conform to the model of ‘radical decoupling’ commonly understood as trade liberalisation mitigated by the availability of incentive payments for environmental products. Rather this model would conform more closely to Potter’s notion of ‘moderate decoupling’ (cf. Potter 1996) in its desire to secure the retention of the ‘process’ of biodiversity generation through joint economies and thereby in its desire to preclude, rather than to mitigate, the environmentally damaging restructuring of production and land use changes that trade liberalisation is likely to set in train. This policy, however, would not seek to enshrine the current rigidities in the distribution of arable and livestock production, but rather to dismantle the commodity regimes underlying such inflexibility.

This ESA-type model of Integrated Rural Policy would be most needed, and would be most readily achievable, in ‘integral’ situations. This is because, firstly, the retention of the whole farm system is vital to both wider countryside and special site objectives and, secondly, because livestock production is unlikely, particularly in more marginal areas, to be very profitable in a free market with the result that purchasing nature conservation services will be less costly. The first reason is well evidenced in current ‘integral’ ESAs where it is important to make basic tier payments for wider countryside management to attract and keep farmers in the scheme in order that higher tier objectives can be realised.

By contrast this model will be less immediately necessary, and less achievable, in ‘peripheral’, particularly lowland arable areas because, firstly, priority habitats are generally peripheral to farm systems and therefore do not depend immediately upon basic tier payments for conservation (ie additionality is delivered ‘outside’ the farm system); and secondly, because of

the considerable expense of purchasing reversion or extensification of arable land even at world market prices. It should be recalled, however, that the conservation of special sites depends in the longer-term upon the expansion of this resource with the wider countryside, making this peripheral model unviable when viewed over time. Moreover, this model of special site conservation does not address the conservation of 'critical' species dependent upon both special sites and the wider countryside nor other sustainability criteria for productive resources. Where the uplands and marginal lowlands can rely upon social 'market failure' to push farmers within an environmental policy reach, this situation may not obtain through much of the more productive lowlands. In such cases, the incentive model is unlikely to prove viable and a Rural Sustainability is likely to depend upon a strong regulatory base to bring much of the wider countryside within policy reach.

The CAP has been, and is still, determined largely by economic motives of a 'social democratic/market' type. That is, it is a system premised on market interventionism to stimulate production through which wider social objectives are putatively to be secured. As a purely market mechanism, the CAP has failed signally however, to fulfil these latter objectives with the result that additional structural mechanisms have been introduced to secure in some measure the survival of smaller/more marginal farms. The farmers who have benefited from the CAP (ie the larger farmers of the northern-central regions and the 'pluriactive' farms of the central-southern regions) assure the political popularity of the CAP as an interventionist system. On this model, the environment, and perhaps perversely, social sustainability, have been subordinated to the dictates of productivism. This need not be the case, however. The social democratic tradition of market intervention, together with the likely vulnerability of the majority of Europe's farmers to processes of neo-liberal restructuring, mean that, potentially, there exists a wide constituency of support within the EU for a Policy premised on the notion of 'green intervention'. Indeed, it would seem to be a widespread European view that environmental and socio-economic sustainability are complementary, with an attractive countryside being dependent upon management by large numbers of farmers. On this view, the support of farmers' incomes and environmental conservation are inextricably linked "such that proposals for reducing prices appear inescapably to imply a denial of environmental values" (Hodge, 1992). Indeed, the Agriculture Commissioner, Franz Fischler, has himself stated that "Rural society is a socio-economic model in its own right which must be preserved in the interests of European society as a whole" (Fischler 1996).

To succeed then, an Integrated Rural Policy must satisfy the criteria of environmental sustainability, socio-economic sustainability and political acceptability. In order to achieve this, it must be a policy which is both sufficiently restrictive to generate positive environmental outcomes and sufficiently permissive to attract sufficient farmers to make an impression at the landscape scale. Integrated Rural Policy must provide, in other words, a model which takes us away from making only targeted payments for specified products to one more in line with broader socio-economic priorities needed both for whole countryside conservation and for political acceptability in other Member States. A policy based on free standing environmental payments is likely to fail on both environmental and political grounds. It would seem that the time has come when we must recouple environmental to social concerns.

As we saw in Chapter 2, a number of factors, mainly economic in character, have served to challenge the dominant 'social democratic/market' model. These are:

- a. internal budgetary pressure and the prospect of CEEC accession;
- b. external GATT/WTO pressures;

- c. environmental concerns over the adverse impact of CAP policies.

These pressures, driven principally by a. and b., have already resulted in the MacSharry Reforms of 1992 which have placed the CAP on a path which is likely to lead ultimately to a more thorough-going liberalisation. Such pressures are likely to increase considerably in the next WTO round which begins in 1999. In recognition and anticipation of these current and future pressures, the EC, in 1995, published a strategy document setting out future options for the CAP. The favoured option, 'Developing the 1992 Approach', clearly accepted the argument that trade liberalisation was unavoidable but, for social, political and environmental reasons, impractical to implement in the shorter term. This favoured option clearly envisaged market competitiveness as the major goal of policy. Implicitly, however, it recognised the adverse socio-environmental impacts that such continuing capitalisation would engender and therefore made provision, in its proposals, for a 'safety net' for environments and communities/farmers either marginalised or unable to compete under this scenario. The Strategy Paper, further developed in the Cork Declaration 1996 (Rural Europe - Future Perspectives), pointed towards an expanded rural development programme, with a strong emphasis on including the whole farmed countryside within the scope of rural development programmes, rather than focusing on specific geographical zones, such as Objective 5b areas. Many of those existing funds and schemes were to be integrated, so simplifying the current plethora of policy mechanisms. This was very welcome insofar as it went, but juxtaposed to liberalisation, it would seem that the model for such 'Integrated Rural Policy' would have been the familiar one of voluntary incentive schemes disbursed on a discretionary basis in return for specified socio-environmental products.

In Agenda 2000 the EU, under political pressure from Germany and France, has of course retreated from the Declaration of Cork into a more conventional policy mode, very much in the MacSharry tradition, in which only piecemeal reforms to the current productivist regime are envisaged. As noted earlier, whilst Agenda 2000 will probably go some way towards a greater integration of sectoral policies on the margins of the CAP, the effectiveness of these measures is likely to be undermined by the much larger scale of competing commodity payments which will keep environmental conservation on the periphery of agricultural policy and land management decisions. Current stimuli to more intensive and environmentally-damaging farming, both direct and indirect, will thus remain largely in place.

Economic pressures thus comprise the major influence upon the present and likely future configuration of the CAP. Environmental concerns currently are restricted to exploiting opportunities within the interstices of this policy, usually in areas where production is marginal, or where it is being subjected to supply controls (eg set-aside). Agenda 2000 envisages a continuation of this policy, with the result that EN's objectives for a 'whole countryside' approach to sustainability will be largely unfulfilled within the current and medium-term policy contexts. However, the foundations on which an Integrated Rural Policy might be built are incipiently present within Agenda 2000.

Certain elements within Agenda 2000 could be identified, in this regard, as transitional assistance in the process of reform towards an Integrated Rural Policy. In order truly to represent a transitional phase, the reformed CAP beyond 2000 would need to

- apply environmental conditionality to all direct payments;
- achieve and strengthen an integrated approach to the suite of accompanying measures, termed Objective '0'.

Environmental conditionality, for example, has considerable potential as a time-limited measure to facilitate a transition from the current system of commodity support to one based on direct environmental payments. In the short-term, elements of the baseline of minimum standards and basic tier, proposed above as part of the structure of Integrated Rural Policy, might be covered temporarily by using environmental conditions as a transition mechanism applied to direct payments under the main commodity regimes. Under the former, for example, an option could require all arable aids to be made conditional on not destroying existing wildlife habitats (e.g. Natura 2000 sites), landscape and historic features, avoiding incidences of pollution and poor waste disposal, and soil erosion. Under the latter, an option could provide for a proportion of the compensatory aid (the so-called 'national envelope') to be made available only if basic environmental land management is undertaken.

Direct environmental and rural development support could develop from the current proposal for Objective '0'. This is proposed to combine the existing Accompanying Measures, the supports for farming in more marginal areas (current objective 5a) and a new horizontal rural development and innovation measure. Objective '0' potentially offers the building blocks from which to construct the 'pyramid' of support identified above over the next decade. The components of Objective '0' are likely to comprise:

- agri-environment compensatory/management payments (multi-annual contracts);
- rural development/diversification investment aids (capital funds);
- less-favoured area aids (annual, ongoing);
- afforestation and early retirement (multi-annual contracts);
- LEADER-style innovation funds (capital funds).

The 'Structural Fund' component of Objective '0' (former Objective 5b and 5a and LEADER-type measures) should be an essential part of the new objective. It should encourage the redirection of investment in the countryside towards the creation and maintenance of environmental and social assets and away from 'production at all costs'. Sustaining environmental value and environmental capacity in the longer-term requires investment to strengthen the economic viability and employment capacity of rural areas. Within these measures, co-financed investment aids should be offered for:

- restoration and creation of valuable environmental features and habitats;
- aids to encourage a shift towards more sustainable farming systems (for example, to adopt low-input and organic agriculture);
- investment in diversification of farming and rural infrastructure in order to facilitate shifts to more sustainable systems (for example, producer associations, market development, processing plants, rural service development, farmer start-up aids, development of tourism and leisure-related business which can support sustainable land management, etc.);
- training in new techniques/technologies of sustainable land management and rural business development, related to all the above items;

It is essential that these measures should not be confined exclusively to farmers in view of the changing nature of the rural economy in Europe. In future, the survival of sustainable land management and viable rural communities is likely to depend upon the generation of more diverse rural economies involving many elements 'off the farm'. There also needs to be continuation and development of the LEADER and LIFE approaches to innovation and bottom-up development as a complement to the more institutional and planned 'programming' of regional needs and priorities.

The need over the next few years will be for English Nature and others to exploit the opportunities and lines of weakness generated by the contradictions of current policy, and to forge alliances with political constituencies of support in Europe, in the furtherance of whole countryside objectives. Key episodes and events in this process will be the negotiations over the detail of Agenda 2000 following publication of the Regulations in March 1998, the new round of WTO negotiations due to begin in 1999, and the next round of CAP reform proposals which are likely to emerge in the early/middle years of the next decade. The WTO negotiations and the imminent accession of the first tranche of CEECs will, by the middle of the next decade, have placed further, and probably ineluctable, pressures on the EU for the abandonment of productivist agricultural policy.

In respect of the WTO negotiations, it is possible that it may be difficult to structure the proposed 'green recoupled' support payments of Integrated Rural Policy in such a way that they will be accepted by the WTO as not being 'agricultural' support payments (i.e. green box payments). This takes us back to the issue of to what extent any environmental payments can, and should, be decoupled from support for agricultural production. The Agreement on Agriculture in the final communique of the Uruguay GATT Round makes it clear that decoupled payments will be excluded from the estimate of the Aggregate Measure of Support only if they meet the following five conditions (World Trade Organisation, 1994, Annex 2):

1. Eligibility for such payments shall be determined by clearly defined criteria such as income, status as producer or landowner, factor use or production level in a defined or fixed base period.
2. The amount of such payments in any given year shall not be related to, or based on, the type or volume of production (including livestock units) undertaken by the producer in any year after the base period.
3. The amount of such payments in any given year shall not be related to, or based on, the prices, domestic or international, applying to any production undertaken in any year after the base period.
4. The amount of such payments in any given year shall not be related to, or based on, the factors of production employed in any year after the base period.
5. No production shall be required in order to receive payments.

To meet these criteria fully would preclude measures which demand that the producer take a particular management action, such as controlling the stocking rate. Probably only the policies described as radical decoupling would really comply with these criteria. Implicit in this scenario is, as we have seen, a significant shift of support to targeted, output-based environmental payments. The above conditions would seem to preclude, firstly, payments which are intended to compensate for production foregone or, secondly, are tied to production. The former represents a problem only in so far as agri-environment payments may need to 'track' returns under conventional, intensive farming if farmers are to be

attracted into schemes (this is likely to be especially important in areas where farming is 'peripheral' to habitat and landscape conservation, such as the arable heartlands of Europe). The latter restriction is much more critical since it runs counter to the fact that, in many parts of Europe, nature and landscape conservation are linked to the continuation of farming. A central proposition of Integrated Rural Policy is premised on this particularly European characteristic, that is, to make support payments conditional not just on the fact that a farmer owns or occupies a piece of land, but that it is 'farmed' in a specified way. Accordingly, payment is conditional on production. By not exempting agri-environmental support of this kind, the whole idea of 'base tier' payments would be threatened (Doyle et al 1997). As such, there would seem to be a good argument for avoiding decoupling environmental payments from production support. **It should be emphasised, however, that a support system that determines and rewards environmentally sustainable output is not the same as the current system of 'production-oriented' payments.** A major policy objective for the next WTO round, therefore, should be to secure a definition of 'green box' payments that enables and supports environmentally sustainable farming throughout the countryside.

How should 'strong' sustainability, as embodied in Integrated Rural Policy, be integrated into the operation and governance of world trade? The WTO currently reflects neo-liberal thinking. It assumes, as a rule of thumb, that freer trade will deliver both economic, environmental and social benefits. This report has articulated a rather different view in which free trade is seen, within the current socio-political context, to externalise social and environmental costs in the search for enhanced competitiveness. Such costs can only be internalised, and damaging economic restructuring (towards larger, capitalised farming units, for example) prevented, through public intervention and support. The primary preoccupation of the WTO, in so far as it is concerned with the environment at all, is to ensure that such intervention and support does not compromise free trade, a strategy reflected in the GATT definition of 'green box' payments and its favoured policy scenario of radical decoupling. This effectively subordinates social and environmental sustainability to the dictates of the market, a market increasingly structured by the interests of transnational corporations. The GATT Agreement of 1994, particularly through the Agreements on Agriculture and Subsidies, began the process of outlawing measures which might support environmentally sustainable production (particularly where this entails 'joint production') and which might enable discrimination between sustainable and unsustainable methods of production. The WTO thus looks at the effect of environmental measures on trade, rather than the reverse, since it is concerned with trade, rather than environmental, policy. The way in which the WTO seeks to address these issues is symptomatic of the contradictory nature of neo-liberal and environmental objectives.

'Strong' sustainability requires that the full environmental and social costs of production be internalised, demanding, in turn, a fundamental reappraisal of the theory of comparative advantage which underpins free trade advocacy. It requires that governments intervene to prevent damaging restructuring and relocation of production patterns and that they commit resources to sustaining producers who deliver environmental (and social) goods and services. It also demands, *inter alia*, that consumers be given the means (ecolabelling, for example) to discriminate between products on the basis of the latter's contribution to environmental sustainability. These sustainability criteria demand important changes to current WTO rules as embodied, particularly, in the Agreement on Agriculture, the Agreement on Subsidies and the Agreement on technical Barriers to Trade. Most importantly, it requires that the next WTO round does not push the EU further down the road to the radical decoupling scenario outlined above. Rather, what appears to be needed is an international trade framework that not merely allows environmentally sustainable production but actively seeks to outlaw comparative advantages of production achieved through the externalisation of environmental and social costs.

Conclusions

This paper opened with a discussion of the conceptual issues surrounding sustainable development. It was suggested that sustainable development is a contested discourse characterised by a number of differing and competing interpretations. 'Weak' sustainable development is that propounded by economic orthodoxy - environmental and social objectives are subordinated to those of the market. 'Strong' sustainable development, by contrast, derives its objectives from qualitative criteria and argues that sustainability should be secured not by mitigating, but rather by addressing directly, the underlying economic causes of environmental deterioration (and social dislocation). Economic orthodoxy thus perceives globalisation to be broadly complementary to environmental sustainability. This paper, by contrast, has argued that economic globalisation and environmental sustainability are structurally antithetical.

An assessment was then undertaken of current institutional objectives for, and policy responses to, environmental issues in England and these were found to conform to 'weak' sustainable development. The paper went on to define the physical objectives required for the realisation of a whole countryside approach/strong sustainable development. A significant shift towards mixed/organic farmer was seen to be a major requirement if the full range of sustainability objectives (including those for soil, water and atmosphere) are to be secured.

The policy framework required for a whole countryside approach was then outlined. It seems likely that a broad base of public financial support for environmentally sustainable agriculture will be required in which it will fulfil the dual roles of income support and purchaser of more ambitious environmental improvements. It was argued that this framework should include a strong regulatory baseline, prescribing statutory standards of good management. Such a Rural Sustainability Policy would need to satisfy the criteria of environmental sustainability, socio-economic sustainability and political acceptability.

Putting in place such a policy framework will be a difficult process, one which will encounter severe constraints. Opportunities will also present themselves, however. The major constraint will derive from the forces of neo-liberal globalisation, embodied in the WTO, whose objective is a further restructuration and capitalisation of agriculture. The favoured model in this scenario will be one of environmental/social mitigation with voluntary incentive schemes disbursed on a discretionary, 'value for money' basis. Opportunities on the other hand, will flow principally from the potentially very strong European constituency of support for an integrated rural policy which successfully articulates the environmental and social dimensions of sustainable development.

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Generic impacts on biodiversity of agricultural intensification and specialisation

- Loss and fragmentation of semi-natural 'infield' habitats through improvement or arabilisation.
- Abandonment or under management of extant semi-natural 'infield' habitats (mainly in the lowlands).
- Overgrazing of semi-natural habitats (mainly in the uplands).
- Loss or mismanagement of 'interstitial' habitats.
- Drainage or dry-out of wetland habitats due to water over-abstraction.
- Pollution and eutrophication of surface and groundwaters leading to loss or degradation of aquatic ecosystems.
- Loss of crop rotations and arable-pasture mosaics leading to severe reduction in characteristic farmland species.
- Shift from spring-sown to autumn-sown cereals leading to loss of winter stubbles and to loss of suitable nesting sites for characteristic bird species.
- Universal application of artificial fertiliser leading *inter alia* to the loss or degradation of characteristic hedgerow or field margin vegetation.

Principles for environmental policy embodied in the Single European Act 1987

- The principle of prevention is better than cure.
- Environmental effects should be taken into account at the earliest possible stage in decision making, and should be a component of all EC policies.
- Exploitation of nature or natural resources which causes significant damage to the ecological balance must be avoided. The natural environment can only absorb pollution to a limited extent. It is an asset which may be used, but not abused.
- Scientific knowledge should be improved to enable action to be taken.
- The polluter pays principle: the cost of preventing and eliminating nuisances must be borne by the polluter, although some exceptions are allowed.
- Activities carried out by one Member State should not cause deterioration of the environment in another.
- The effects of environmental policy in the Member States must take account of the interests of developing countries.
- The Community and Member States should act together in international organisations and in promoting international and worldwide environmental policy.
- The protection of the environment is a matter for everyone. Education is therefore necessary.
- The principle of the appropriate level. In each category of pollution, it is necessary to establish the level for action (local, regional, national, community, international) best suited to the type of pollution and the geographical zone to be protected.
- National environmental policies must be coordinated within the community, without hampering progress at a national level. This is to be achieved by the implementation of the action programme and of the 'environmental information agreement'.