

1. The Department for Environment, Food and Rural Affairs (DEFRA) and the Forestry Commission (FC) jointly commissioned an evaluation of woodland creation in England under the Woodland Grant Scheme (WGS) and the Farm Woodland Premium Scheme (FWPS) as part of the policy evaluation programme of both organisations. The stated aims for new planting under WGS are to encourage the creation of new woodlands; to improve the economy and the environment of rural areas and to provide an alternative use for agricultural land. DEFRA's FWPS pays compensation to owners of land for income losses as a consequence of converting agricultural land to woodland.

2. The aim of the evaluation was to provide a full economic, social and environmental evaluation of the new planting aspects of the WGS and the operation of the FWPS in relation to the priorities of the England Forestry Strategy (EFS), the UK Biodiversity and Habitat Action Plans, the England Rural Development Programme (ERDP) and EU Structural Funds' Objectives. More specifically the evaluation had to address: the extent to which the underlying rationales for the schemes remained valid and to identify what are the perceived market failures that justify Government intervention; how effective the schemes have been in delivering their initial outputs and intended economic, social and environmental outcomes; how efficient the Schemes have been in meeting and delivering their objectives; how woodland creation compares with other ERDP measures in delivering sustainable development objectives; what factors influence uptake of the schemes; and how effective the scheme are in delivering policy objectives.

3. The evaluation of new planting over the period 1992/3-2000/01 was conducted using a variety of methods which included a literature review; self completion postal questionnaires sent to a stratified random sample of 800 scheme participants; 160 non-applicants; 100 non-proceeding applicants and 50 stakeholders, and telephone interviews, along with workshops, with Forestry Commission staff in England and key stakeholders.

THE BENEFITS OF WOODLAND CREATION

4. The private benefits that may arise from tree planting, stemming, for example, from the potential to produce timber commercially; the development of sporting opportunities, particularly shooting; improvement of the visual appearance, or increased privacy, of the owner's property; the provision of shelter for livestock, or even the integration of tree planting with other commercial business development opportunities such as paint balling. If the only benefits that accrued from woodland creation were those enjoyed by the woodland owners, it would be extremely difficult to

argue for any public intervention to influence planting decisions. However, there can be significant external benefits associated with woodland creation so that the benefits that all established woodlands can provide are increasingly shared amongst society more widely. These benefits can include: their important role in the landscape for supporting the tourism and recreation industries; the provision of access for recreation; their contributions to biodiversity and the provision of habitats for wildlife; carbon sequestration; and the potential abatement of floods. The potential exists for a significant under provision of new woodland as private owners will consider only their private benefits and costs in arriving at planting decisions, ignoring any wider public benefits. If the private costs of woodland creation exceed the private benefits, then planting will not take place even though there may be substantial public benefits that would greatly exceed the costs and hence justify a decision to plant. Reflecting the environmental and social benefits, charitable organisations and local authorities also engage in a significant amount of a tree planting but, given the public good dimension of many of the benefits, there is little that can be done to avoid free-riding behaviour and the level of provision is therefore likely to be sub-optimal if left to the voluntary sector. As the profitability of commercial timber production has fallen in recent years, there may have been an impact on the scale of delivery of public benefits as the private benefits accruing to owners are likely to have diminished as a proportion of the total benefits (private plus public) arising from woodland creation. In essence there will be less commercial income associated with any given level of environmental and community benefits.

THE RATIONALE FOR PUBLIC SECTOR INTERVENTION

5. Public sector intervention to encourage woodland creation was justified until about 30 years ago by the desire of successive Governments to create a strategic reserve of timber in case of future wars or other national emergencies. Since then Governments have felt that the expansion of commercial woodlands to create a strategic timber reserve is no longer a national priority. During the 1980s and 1990s the environmental and social benefits that woodlands can provide have been increasingly recognised and valued by the public. Without public sector intervention through the provision of grants, there would be market failure as the costs of woodland creation with the potential for delivering the environmental and social benefits that the public value would be unattractive to many private landowners. Market failure could also be expected to occur to a greater or lesser extent in the delivery of public preferences for the types of trees planted, the size of the woods established and their locations, as their aggregate values would reflect the preferences of the individual

owners for environmental, economic and social benefits rather than those of the wider public. The creation of woodlands provides an alternative use of land that is being used for agriculture, but by changing the use of the land from agriculture to woodlands the owner will forego income. Without public sector intervention there would be a reduced incentive for land owners to take land out of agricultural production and plant trees, given the level of support which farming presently receives under the CAP.

6. Post 1990 there have been a significant number of changes in policy at the international, European and UK levels that impact on forestry which are encapsulated in the English Forestry Strategy, the UK Biodiversity and Habitat Action Plans, the England Rural Development Programme and the Structural Funds' Objectives. The four key programmes in the EFS are: Forestry for Rural Development; Forestry for Economic Regeneration; Forestry for Recreation, Access & Tourism and Forestry for Environment and Conservation. These are delivered through the WGS, Forestry Commission regulation and partnership projects and through the activities of Forest Enterprise. The FWPS is intended to compensate farmers for income foregone on land that it is taken out of agricultural production as a result of tree planting. Both schemes form part of the ERDP, which is funded from both EU and national sources. As a result of the policy changes that have taken place over the period of the evaluation, assessing the efficiency, effectiveness and outputs of both schemes is complex.

OUTPUTS OF SCHEMES

7. Over the period of the evaluation (1992/93 to 2000/01) the total area of new woodland created in England, on which grants have been paid, totals approximately 41,925 ha and of this 22,070 ha (52%) were created using the WGS and FWPS and 19,855 ha (48%) using WGS only. This is an increase of approximately 3.8% in the woodland area in England over the evaluation period. The majority of participants in the two schemes have been individuals, estate owners or farmers, but with an increasing role being played by public and voluntary sector organisations. Their main motivation has been predominantly environmental and social rather than economic. The average area of new woodland created under WGS was approximately 1 ha and approximately 3 ha under WGS with WGS/FWPS. Under both WGS and FWPS the predominant species planted were broadleaved. The total amount of new planting, and the amount planted under WGS/FWPS increased from the North to the South of England. Most of the land planted was previously in arable use (58%) with lesser amounts on improved land (37%) and unimproved land (5%). Non-participation in the scheme appears to reflect farmers' lack of experience with forestry; tenancy restrictions on planting; perceived loss of

agricultural income, and the lower level of forestry incentives compared with agriculture. Overall WGS expenditure on woodland creation alone has risen from £4m in 1992/93 to £10m in 2000/01. Expenditure per year on FWPS has risen from £1.36m in 1994/95 to £4.5m in 2000/01 at current prices.

EFFECTIVENESS OF SCHEMES

8. The woodlands created under both schemes are too young to generate any significant local economic development benefits, but one third of the owners responding to a survey expect their new woodlands to generate local economic benefits through shooting or tourism and in the long term, timber. The economic sustainability of the woodlands created is uncertain partly due to their young age, and partly because only 13% of the WGS alone participants felt that their woods would be economically sustainable. The environmental objectives of both schemes are broadly defined and are referred to in the UKFS, EFS and ERDP particularly in relation to BAPs. The scale and type of environmental contributions from the woodlands created has been limited because of their young age and the small average size of the areas planted. There is some evidence to suggest that they are, or have the potential to contribute to the landscape; that both historic environment and important archaeological sites are being protected; biodiversity is being improved; water quality protected and pollution reduced. However, as there is no system of longer term biological and compliance monitoring in place, it is not possible to evaluate these contributions conclusively either quantitatively or qualitatively. Over half the scheme participants who responded to the evaluation questionnaire had noticed an increase in wildlife after establishing their woodlands. The survey of scheme participants in a stratified sample, which included environmental charities and Local Authorities, showed that there was community involvement in the design, establishment and management of the woodlands created in a number of the schemes, and that access paths and the establishment of community facilities are being encouraged. The young age of the woodlands created and their small size means that the social benefits the woodland have provided are at present very limited.

9. A survey of a relatively small sample of stakeholders suggests that WGS and FWPS are seen overall as performing relatively well in delivering economic, environmental and social benefits post 1992. The schemes are judged to have done relatively well in generating environmental benefits over the early years of creating woodlands, but stakeholders felt it is too early to expect economic or social benefits to emerge, especially as the average new planting scheme has been small.

10. Although it was not possible within this

evaluation to provide a detailed comparison of the benefits delivered by WGS and WGS/FWPS with those of other schemes under the ERDP, the view amongst stakeholders was that the WGS & FWPS schemes compared either well or moderately well with other ERDP schemes and that they were important because of their potential to deliver economic, environmental and social benefits which are the three strands of the ERDP and key aspects of sustainable rural development.

EFFICIENCY OF SCHEMES

11. It is not possible to identify the FC's costs of administering and managing the WGS grants for woodland creation in isolation, but FC costs for administering all WGS grants have fallen in current prices from 27p per £ of grant spend in 1995/96 to 19p per £ of grant spend in 2000/01. This downward trend is due mainly because costs have remained fairly static and overall grant expenditure has risen. DEFRA's cost in administering the FWPS can only be identified for 2000/01. These work out at 19.7p per £ of grant spend including overheads and 11.5p per £ of grant spend excluding overheads. There is potential to measure and monitor these administration costs more closely.

12. Forestry Commission experience in all 3 GB National Offices of handling WGS and FWPS applications since 1992/93 is that under 11% of WGS enquiries are withdrawn before application approval, under 2% of plans are withdrawn following FC approval and around 3% expire without a grant claim being submitted. Nearly 60% of WGS and WGS/FWPS participants regarded the rules and contractual arrangements as either very good or good with less than 4% regarding them as poor. The survey revealed no dominant reason for applicants not proceeding with their application. Those given included: the projected cost of establishing trees, a re-think of owner investment priorities; and the occurrence of more profitable investment opportunities.

13. The participants in the survey considered that the administration of the WGS and FWPS was efficiently organised with 71% stating that it was good or very good. Nearly 60% of the participants in WGS regarded the rules and contractual arrangements as either very good or good. Just over 68% of respondents to the survey felt there was no confusion from the joint administration of FWPS by DEFRA and the FC, though 18% believed that there was. Stakeholders are generally supportive of the way both schemes are administered.

14. The survey of responding Scheme participants suggests that in the absence of grants around 69% of the smallest schemes (under 2 ha) and 42% of the larger (over 20 ha) schemes would have proceeded. For those schemes that would have proceeded without grant aid, it appears that they

would have been delivered on a smaller scale than originally planned. This suggests that WGS/FWPS grant aid has enabled or encouraged owners to plant larger areas of woodland than originally intended. The removal of land out of agricultural use for woodland creation with WGS/FWPS grant support, amounts to approx 0.5% over the evaluation period. This provides a saving in agricultural subsidies, but as most new woodland schemes are small the savings are not very significant.

15. In the past grant support for forestry was provided on an unrestricted flat rate basis throughout the UK provided the basic scheme rules were met. During the 1990s more targeted discretionary delivery has been introduced. The majority of participants (55%) appear to prefer certainty in receiving a grant on application, provided they meet scheme rules, since this allows them to plan woodland creation and also to develop their businesses more easily. Stakeholders were generally more interested in making the schemes more discretionary and were attracted to developing the WGS (and, by implication, FWPS) scoring system so that it reflects local priorities for delivering the EFS. More discretion would, however, also increase administrative costs.

EVALUATION CONCLUSIONS

16. Although woodlands can provide benefits to individual land owners such as from timber production, shooting opportunities or shelter for livestock, private landowners will not generally consider the significant benefits to wider society such as the public value attaching to landscape, recreation, conservation and carbon fixing. This mis-match of private and public benefits, the movement in Government policy to deliver sustainable rural development and the distortions arising from CAP support that tend to discourage tree planting on agricultural land provide a strong case for public sector intervention through grant support for woodland creation.

17. Evaluating the effectiveness of these schemes in delivering against their objectives has been complicated by changes over the evaluation period in the detailed policy objectives relating to woodland creation. These have changed in response to policy developments at the international, European and UK levels in areas such as environmental protection and enhancement and rural development. As a result, there is no single set of clearly defined quantitative or qualitative indicators that is suitable for measuring the impact of the Schemes over the period. Additionally, it has to be recognised that a long lead time is almost inevitable in realising a number of the benefits that tree planting is intended to deliver.

18. The economic contributions of the woodlands created during the evaluation period to rural

development has been small due to their young age and small average size and they are expected to continue to be small due to the latter. The environmental contributions have been difficult to measure in the absence of any long term monitoring, but many scheme participants have noted an increase in birds, plants and mammals after planting trees. Technical discussions with stakeholders have indicated that the environmental contributions of both schemes could potentially be improved by making a number of relatively small operational changes to both schemes. Where new planting has taken place in community forests and in other peri-urban locations, larger social, and in some cases environmental, gains can be expected to be achieved than with new planting in rural areas. Approximately 20% of all new woodlands created between 1992/93 and 2000/01 have received grants to provide community benefits through increasing access or recreational opportunities. In this evaluation it has not been possible to assess independently the quality of the community benefits nor the subsequent level of uptake by communities. These, however, may be expected to increase over time as the woodlands mature. In comparison with other ERDP schemes, the WGS and FWPS seem well placed to deliver a mixture of economic, environmental and social benefits.

RECOMMENDATIONS & PROPOSALS

19. The final section of the report begins by recognising the shift in the focus of Government policies relating to woodland creation away from strategic considerations of safeguarding timber supplies towards meeting the broader objective of sustainable rural development. This, in conjunction with the recent decline in the relative economic importance of agriculture within the rural economy, may lead to rural landowners moving increasingly towards developing multiple income sources. In this scenario it may be more efficient and productive for funding and other support to be formulated and delivered in a more integrated manner down to a single rural enterprise. This will involve major changes, but the opportunities are considered worth exploring in the course of the mid-term review of ERDP. Eight **policy recommendations** are made to DEFRA and the FC for their consideration and these are:

1. **The Continuation for New Applicants of WGS and FWPS.** We recommend that the WGS/FWPS be maintained as the principal policy mechanisms to encourage the creation and management of forestry, woodlands and tree planting in England. This should be periodically reassessed through evaluation of their continued effectiveness.

2. **Continuing Recognition of the Public Benefits Arising from Woodland Creation.** We recommend that government, through appropriate channels, continues to provide a clear policy commitment to compensating private sector individuals,

enterprises and organisations for providing additional features in the woodlands they create that will deliver public benefits which they would not otherwise have provided.

3. **Restatement of the Objectives of WGS/FWPS in Relation to the Current Policy.** We recommend that DEFRA and the Forestry Commission clarify and restate WGS and FWPS objectives, priorities, components and outputs (both quantitative and qualitative) in the light of policy developments such as ERDP.

4. **The Introduction of Long-Term Monitoring of Woodland Benefits & Impacts.** We recommend that a longitudinal monitoring survey of new plantings funded under WGS, FWPS and associated schemes on a structured sample of plots be introduced by DEFRA and the Forestry Commission to measure and understand the economic, environmental and community benefits and impacts of woodland creation in England.

5. **The Integration of Processing and Marketing Grants and Support for Forestry Related SMEs into the ERDP.** We recommend that DEFRA, with the support of the Forestry Commission, ensures that the importance, contributions and potential of forestry and woodlands; their associated management and infrastructure; and the processing of home-grown timber, all become incorporated in the England Rural Development Programme as fully eligible for financial and other support on the same basis as all other rural sector activities.

6. **Consideration of Options for Influencing Longer Term Woodland Management.** We recommend that, in order to maximise longer term public benefits of woodland creation, such as production of high quality hardwood and increased biodiversity, DEFRA and the Forestry Commission should look at ways of encouraging good woodland management for a longer period than at present.

7. **A Significant Shift Towards Regional Prioritisation & Delivery.** We recommend that DEFRA and the Forestry Commission progressively introduce a devolution of the FWPS, the WGS and associated programmes to the individual English regions within the framework of Regional Expressions of the England Forestry Strategy and a devolution of core budgets.

8. **A Stronger & Better Resourced FC Role.** We recommend that consideration should be given to the potential benefits of strengthening the Forestry Commission's role in the creation and subsequent management of woodlands in England; including an expansion of its Woodland Officers network as an alternative to the provision of funding for partnership delivery.

In addition 9 inter-related operational changes to the WGS, FWPS and related woodland creation schemes are suggested and these are:

9. Encourage Increased Sizes of WGS

Application: We propose that DEFRA and the Forestry Commission give consideration to finding ways to increasing the size of individual new planting applications.

10. A Greater Diversity in Planting Mixes and Spacings:

We propose that the Forestry Commission allow and encourage (within clearly defined limits) a greater diversity of planting mixes and distances as eligible for WGS and FWPS, depending on objectives and size of scheme and that these be established at the level of the Conservancies.

11. The Use of Direct Seeding:

We propose that WGS and associated schemes encourage direct seeding using local genotypes and that the time schedule for grant payments be adjusted to reflect the longer establishment period. Scheme literature should be revised to give greater attention and encouragement to this.

12. Improved Scheme Information, Analysis & Monitoring:

We propose that a central enhanced database be designed and introduced for WGS and FWPS to enable improved monitoring and evaluation of outputs, benefits and expenditure under the schemes, and the joint planning of field monitoring visits by DEFRA and the FC.

13. Continued Availability of Challenge Funding Mechanisms:

We propose that the Forestry Commission continue to have available the Challenge Funding mechanism within the WGS to assist them in the pricing of supplements in situations where they wish to encourage woodland owners to deliver additional public benefits.

14. Plan & Design Preparation Support:

FC with DEFRA should explore paying an additional grant award within WGS to cover the additional application costs generated by the public benefits provision in major or sensitive new woodlands in England, with such funding to be provided out of the new regional WGS budgets

15. Regional Awards for Quality Woodlands:

We propose that the Forestry Commission consider the introduction of a new WGS Challenge Fund grant award to encourage and reward sustained high quality woodland management based on the high quality maintenance and delivery of public benefits 20 years post-planting.

16. Integration With the Environment Agency in Flood Plain Planting:

We propose that DEFRA, the Forestry Commission and the Environment Agency jointly explore the benefits and costs, and possible policy responses to the introduction of an

enhanced WGS grant supplement to encourage larger scale woodland creation in areas subject to flooding, or in upstream areas to ameliorate flooding downstream.

