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POSTER PAPERS

Integration and evaluation of rural policy in a period of rapid change

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1 Environment and society

The question of how far the place where one lives affects social position, values and thought is one of the great recurrent debates. 'Environmental determinism', as it has come to be called, has a long history. From Montesquieu's argument that climate lay behind national character, through Renan's assertion of the role of the desert in forming the monotheistic character of Islam and Christianity, through to Mumford's vision of the city, attempts have been made to tie physical form to social life (Allison 1975; Mumford 1973; Renan 1869; Montesquieu 1978). Sometimes it is explicit, more often it is implicit, as in the well-known assertions by Alice Coleman that certain types of urban form lead to crime and other anti-social behaviour. This view tends to take Newman's concept of defensible space into far more arguable areas (Newman 1973). Sometimes, as in the case of Braudel (1975), that most elegant and synoptic of historians, the interplay of environment and society becomes the epistemological method itself. In his explanation of taking 'the Mediterranean' as a focus for historical study, he argued: 'Geography in this context is no longer an end in itself but a means to an end. It helps us to rediscover the slow unfolding of structural realities, to see things in the perspective of the very long term'.

Thus, when a student of society is told it is possible to relate socio-economic factors to a leading method of classifying Britain's land by the use of primarily ecological, topographical and climatic data, he is bound to be interested. This paper, then, describes work to be undertaken at the Merlewood Research Station of the Institute of Terrestrial Ecology (ITE) to examine the possibilities of using the same sampling framework for land use change and related social factors. The Merlewood land classes (MLCs) are known to be effective in national sampling, eg of data on upland vegetational change; in simple terms, the question arising is whether one could cross-relate that change to, say, the incidence of low-income tenant farmers, if that were required. As a preliminary experiment, it seems particularly suitable to examine applicability for 3 factors. One category, of which those designing the system may not be aware, is the Rural Development Area (RDA); the other categories of land use designation which have since been added are Less Favoured Areas and National Parks. This paper

outlines some of the thinking behind the approach, and describes work being undertaken as part of a joint Economic and Social Science Research Council/Natural Environment Research Council Fellowship established at Merlewood.

2 Social science information, and decision-making: the case of Rural Development Areas

2.1 Policy background

Some readers may be less familiar with RDAs than others because, *inter alia*:

- i. this paper is aimed at a mixed audience, including natural scientists who have no professional connection with local Government or rural development;
- ii. the RDAs are a policy tool of the Development Commission, whose remit does not extend beyond England;
- iii. even some of the participants from local Government may come from areas which were never likely to receive RDA status, and thus have no reason to be involved in the selection process;
- iv. there appears to be no single widely available publication describing the process of RDA selection. (Readers who have been closely involved in selection may wish to move on in the paper. Alternatively, they may find that their view of the process varies somewhat from that gleaned from primarily official sources.)

The Government agency involved is the Development Commission (DC). It was established in 1909 by that reforming Liberal Government pressured by the social interventionism of the new Labour Party, and having lost its Cobdenesque, free enterprise, 'laissez-faire' ideology to the Conservatives (Dangerfield 1970; Pelling 1966). Thus, the DC was born in a steamy political atmosphere and has had to continue to justify its position to different Governments. In ecological terms, at least, survival is a success, and, by way of coincidental celebration of its 75th birthday, the DC moved to grant-in-aid status.

The shift from direct responsibility to the Department of Environment was one element of a general Governmental review of the DC's functions. In

regard to priorities, the review held that the DC should select its own areas, whereas previously the Environment Secretary had reserved the final decision on bids under the DC's system of Special Investment Areas (SIAs).

Responsibility for designation was not utterly untrammelled. It will be remembered that the present administration has pursued a policy of focusing aid on the most needy areas. In the out-turn, RDAs ended up covering an area 95% of that of the SIAs, with some 90% of the population of the predecessor designation. Despite the aggregate reduction, the RDAs subsume part of 28 counties, whereas the SIAs were in only 19.

2.2 Extending the land class system

RDAs look likely to present an admirable and important extension of the land class system's applicability to social issues because of the following.

- i. Although the DC has no formal remit for agriculture *per se*, elements of the Rural Development Programmes (RDPs) drawn up for the RDAs may well focus on forestry and farm diversification (DC 1985; Bell 1985). Thus, such a designation is necessarily an important component of the general project on policy-induced change.
- ii. As will be discussed further below, RDAs were sieved out through a series of socio-economic indicators of deprivation. This concept has generated a considerable literature (Shaw 1979; McLaughlin 1981), and McLaughlin has recently reported to Department of Environment on further work. Thus, RDAs should fit some rational pattern of designation based on prespecified criteria. In being non-random then, that would presuppose that any fit with the land class system should be other than mere chance.
- iii. The process illustrates well 2 elements, quite normal in public administration, which will be of note to those used to more precise sciences. First, the data availability for social indication is imperfect, and has particular difficulties marrying up with the idea of what is 'rural', especially in a time of changing settlement patterns (Clove 1983). Second, conceptions of what the DC themselves call the sensible and pragmatic determined the final decisions on boundaries (DC 1984).

2.3 The mechanics of designation

The Government's 6 criteria for RDAs were as follows.

- i. Unemployment is above average for Great Bri-

tain, account being taken of changes in recent years.

- ii. There is an inadequate or unsatisfactory range of employment opportunities.
- iii. Population decline or sparsity of population is having an adverse effect.
- iv. There is a net outward migration of people of working age.
- v. The age structure of the population is biased towards elderly people.
- vi. Access to services and facilities is poor.

For selection purposes, it will not be necessary for all the criteria to be satisfied, but it is envisaged that most Rural Development Areas will meet the first criterion and one or more of the remainder. However, they may also be selected where a combination of any of the criteria indicates a concentration of problems.

The Commission immediately recognized that boundaries for action and grant assistance would benefit from following administrative boundaries, where possible. A glance at many of the excellent research papers for the Royal Commission on Local Government (Redcliffe-Maud 1969) illustrates the complexity of taking administrative boundaries as surrogates for other social factors. So, understandable administrative imperatives may not conform to other criteria.

As alluded to above, it was decided that 'RDAs should be no more extensive than the SIAs' (DC 1984), and thus an element of comparison between needy areas was imported. It is particularly relevant for using RDAs as a test that the DC undertook its own independent initial search. SIAs — like many similar instruments — had been founded on bids from local authorities.

In its search, the DC utilized 2 rules: minimum size for the areas as a whole, and exclusion of the 'urban area' as beyond its preview. The general guidelines on minimum size were as follows.

- RDAs will be of such an extent, with a sufficient range of social and economic problems, as to justify the implementation of a comprehensive action plan over a period of at least 5—10 years.
- They will not be smaller than an average-sized rural district, or 25—30 parishes, although they might straddle existing county boundaries.
- They will be of such size that, bearing in mind local travel-to-work patterns, job opportunities are unlikely to be significantly affected by changes and developments outside the proposed area.

- They will be of such extent, with such a total population and such a range of social and economic problems, that one or 2 significant events, eg the setting up of a single large factory, the building of a small housing estate at a single location, or the introduction of a more effective public transport service, would probably not solve the problems experienced.
- They will be areas capable of supporting a programme designed to bring into use a significant amount of industrial or business floor space — say 8000 square feet per year over a period of 5–10 years — by both public and private sectors, including conversion of redundant buildings; this capability will mean, amongst other things, that each area will contain a number of settlements likely to be capable of yielding the necessary sites over the period in question.

The taxonomy and functional relations between towns of particular sizes and their hinterlands have been one of the bases of human geography from Von Thunen onward (Chisholm 1979). The DC took their stance on a population of 10 000, and, whilst recognizing that this 'cannot be a hard and fast rule, because the functions in relation to rural areas performed by towns of similar size can be quite different', it was nonetheless 'thought right to apply the 10 000 limit fairly strictly' (DC 1984). This requirement to balance rules and flexibility is a recurrent social policy problem (Forder 1975).

After some 30 local meetings, the boundaries were finalized — and intended to remain guidance on policy for 5–10 years. The Commission drew out a number of general features.

- Compared with the SIAs, there is a slight reduction in coverage in the northern and south-western counties and an increase in priority area coverage in Midland counties, particularly those on the Welsh Marches and the east coast.
- For the first time, the Commission has designated priority areas in metropolitan counties (West Yorkshire and South Yorkshire) and the home counties (Kent). This action reflects the fact that administrative boundaries do not necessarily represent the divide between urban and rural areas and that, even in the relatively prosperous south-east, there are rural areas of severe deprivation.
- There is a general movement away from larger towns and cities, resulting in a 'halo' effect around the more major settlements. This movement, in part, reflects the stricter application of the town size population limit, but also the Commission's view that its resources should, in general, be concentrated on remoter areas less influenced by the fortunes of larger urban centres.

It is for special committees in these areas to draw up RDPs covering their needs and requirements in a time of rural change.

3 Other potential applications of the land classification system within the Fellowship

At its inception, the Fellowship favoured primarily upland work. RDAs often coincide with uplands, but do not necessarily follow such boundaries; and other categories of area for study have been pursued. These other categories both utilize and refine the method as a sampling frame, and permit survey results to be generalized to the 'wider population', ie to convert sample figures into GB, England, Wales or regional statistics as required.

After RDAs, the 2 aspects considered suitable for work within the Common Agricultural Policy (CAP) framework are:

- selection of areas for extended Less Favoured Areas status
- designated National Parks.

Additionally, a farm visiting programme will be undertaken in the hills and uplands. Economic profiles can be developed to compare with regional farm management survey (FMS) data of similar types. The comparable data for alternative enterprises or levels of output can then be used as one input to the modelling of the farm's predicted *economic* reaction to putative EEC change.

From the survey farms, it will be possible to extrapolate back to the wider population, taking note of special (or even unique) social factors, and of the results from earlier work on farmers' actual reactions to changes which have occurred. This information will include standard work on the relationship between size and performance (Britton & Hill 1975), or tenure and performance (Gasson & Hill 1984). A starting point will be work already undertaken, primarily by Richard Tranter at the Centre for Agricultural Strategy (CAS).

4 Work by Tranter on the land availability study

The method has been taken forward in the agricultural field by Tranter, in 2 major contributions.

- Analysis of likely agricultural use of the different land classes leading to a series of gross margin costings.
- Utilization of field records to identify specific occupiers of land for their use in a postal questionnaire for the British Library. This study permitted checks to be carried out to assess the stratification of the sample *vis-à-vis* farm size, tenure and related agricultural criteria.

4.1 Approach to the farm costings in the land availability study (LAS)

The LAS was a collaborative effort between ITE, Dartington Institute, CAS, Aberdeen University and the Forestry Commission (Westonbirt Arboretum). The study was commissioned by the Energy Technology Support Unit, who also collaborated in it.

The principal aim was to identify land in the British Isles which might be available for the production of timber as an energy crop. One of the ultimate outputs was a model allowing an assessment of how much land might convert into forestry on various cost assumptions. It was also important to know in what areas such conversion might occur.

Tranter set out to obtain the best fit of farm system to the appropriate MLC squares in order to assess the physical and the financial performance of agriculture on the various land use/types recorded on the 256 ITE km² sample squares. Such levels of performance would then be compared with values arising from the assessments of potential wood energy plantations on the same parcels of land. Where these latter values exceeded those assessed for agriculture, it was taken that those areas were 'available for wood energy plantations' on financial constraints grounds. In colloquial terms, forestry would 'win' as a potential land use over agriculture.

Tranter used a gross margin (GM) approach to the question of comparing performance, a decision which would win the approval of most agricultural economists. The use of this approach is increasing, and it has been employed by leading consultants at a number of major public inquiries, such as those into Stansted Airport and the A1–M1 Link Road. Its advantages include the following:

- the fact that, for most short-term alterations in cropping or practice, it is not possible for a farm enterprise to alter its fixed costs;
- the concept is understood and employed by many farmers;
- it can, with commonsense and judicious consideration, be applied to performance from specific parcels of land. These data are derived from the gross margins given in MAFF's standard guide.

A number of different values had to be combined in the LAS, and prices, yields, inputs and outputs were therefore tied to 1977–78 levels. A significant element of the Fellowship will be to update these figures.

The most accepted, nationally available, source of GM data is Nix's (Wye College) annual *Farm management pocketbook*, which bravely predicts

for the year ahead. FMS data provide an historic record of actual performance in the year selected as a base, and are available by region from the appropriate universities. These annual records will be one of the prime data sources for the farm modelling aspects of the Fellowship, as they were for Tranter (1985). The major step forward will be that the Fellowship permits the opportunity to visit farms in certain classes and areas to ascertain how closely the model accords with reality.

Tranter himself described his efforts (and some assumptions) in this field as 'heroic'; indeed, they were, in the best sense. He utilized data such as rainfall, related soil moisture deficit, soil type and herbage/crop response, which, for each class, was a major exercise in itself. No attempt was made to allow for management factors, as the data did not permit it.

As well as including management elements, in due course the Fellowship will utilize and extend the data from ITE's survey in another way. The tabulated field records show features such as hedges and ponds which are considered as environmental *desiderata*. It is therefore proposed to identify the types of land, and types of farm, where the most significant environmental gains and losses might take place.

Tranter's exercise drew on a wide body of existing knowledge to predict likely yield ranges for particular crops potentially grown in different ITE classes. He sought a 'financial measure for the performance of agriculture for, say, a particular piece of *Lolium perenne* in a valley in upland Wales, rather than a generalised performance measure for whole farms in that part of the country'. An example will illustrate his approach. From the potential range of grassland enterprises, 4 distinct models were utilized:

- specialist dairying
- livestock rearing
- hill sheep
- lowland fat lamb

The model for hill sheep, for example, was based on work by Lazenby and Doyle (1981). Their results per animal were converted into stocking densities on land of different qualities, and it was found that the different land classes with grassland could be reasonably consolidated into 4 'herbage groups', subsuming a range of different levels of forage yield in terms of tonnes of dry matter ha⁻¹. The eventual gross margins to set against forestry options showed a considerable range (as one would expect). For hill sheep, the range was from £76 ha⁻¹ down to no effective profit at all.

5 The inclusion of non-economic data in the model

One of the principal steps in the LAS work was to try and incorporate factors beyond a straight economic comparison. It was realized that a number of constraints would work against the establishment of forestry on land where it was theoretically economic so to do. The constraints considered were:

- Areas of Outstanding Natural Beauty
- Ancient Monuments (and other archaeological)
- Capital transfer tax
- Exemption agreement
- Common land and crofters' rights
- Country parks
- Forest parks
- Heritage coasts
- National Nature Reserves
- National Parks
- National Scenic Areas
- National Trust (and ornamental gardens)
- Plans (regional, structure, local)
- Private nature reserves
- Sites of Special Scientific Interest
- Water gathering problems

A careful judgement (based on close reading of relevant policy documents) was needed to assess which of these constraints were likely to preclude energy forestry.

The application of particular constraints in the final LAS study was undertaken systematically, with levels of 'scoring' for constraints which — it was considered — would exclude forestry.

Again, this work will help to provide a useful basis for the Fellowship study, which will equally have to take into account policy aspects on potential land use changes — policies which have often altered themselves, eg in the increased support for farm/forestry integration (Forestry Research Co-ordination Committee 1984, 1985). The Fellowship will allow a check 'on the ground' regarding some designations which may influence tree planting.

The LAS recognized that constraints beyond extant land use policies, as well as institutional factors, would necessarily intrude into any large-scale change. The position of tenant farmers, for example, was altered by the recent Agricultural Holdings Act, permitting them to plant trees without the landlord's consent, although it appears that the trees become the property of the landlord. The notional figures for tenanted land (some 40% of farmland) need treating with care, in any case, as many family tenancies are established for taxation and inheritance reasons. Nonetheless, a large area of Britain is subject to farming institutions or tenure systems which are likely to react to land use change in a different way from owner-occupiers.

6 Who farms the land?

In surveying any sample population, a balance must be struck between using the same populations — thus assisting comparability — and bothering people too often.

The farmers and land occupiers in the ITE sample squares have been visited by field surveyors seeking permission to enter for 2 rounds of survey (1977–78 and 1984). To date, they have only once been deliberately used, because they farm within the squares, and this gives a sample framework. Obviously, they may have been used coincidentally by other research workers.

During collection of field data in 1984, ITE was able to collect details of owners and/or occupiers of the land. For a British Library project looking at how farmers gathered, structured and managed information in taking decisions, Tranter requested access to these data to use the farmers as his sample. This project was seen as a useful extension of the system, and will certainly prove helpful when the Fellowship moves into a field work phase, not least because the field-recorded details were not always complete or accurate. Thus, Tranter had to check names and addresses against telephone directories.

Tranter's work (Jones *et al.* 1988) work also refined some of the recording which was unclear regarding agricultural use. For example, records of rye-grass (*Lolium perenne*) leys might prove to be golf courses or reservoir fringes. In the end, from 144 squares (in England and Wales), only some 120 ha from 14 400 ha could not be ascribed to a likely owner or farmer. A total of 509 addresses were mailed and a response of 36% was obtained. There were some differences in completion rates from different land classes, but, on the whole, the pattern was consistent.

The overall conformity of the 21 534 ha farmed by respondents was close to official figures on tenure (62.5% owned, 37.5% rented) and provided a range of farm enterprises. The comparison on farmer age, education and family size was also close to what national data exist on these factors, as were the data on rent levels and off-farm incomes.

7 Current progress

The proportions of different land classes falling within the RDAs have been mapped and compared with national proportions. It is thus possible to utilize, first, the 1977–78 data, and the 1984 data as they become available, to see if farming and land use patterns (including change) are different in RDAs from elsewhere. Combined with modelling exercises and field work (including farm interviewing), it is hoped to move toward a position which will

Table 1. Overlap between LFAs and RDAs

| Area falling within | England & Wales(kha)* | MAFF figure | Percentage of England/Wales* |
|---------------------|-----------------------|-------------|------------------------------|
| RDA only | 2 736 | | 18.0 |
| RDA & original LFA | 1 363.5 | | 8.9 |
| RDA & extended LFA | 373.5 | | 2.4 |
| All RDA | 4 473 | | 29.1 |
| Original LFA | 1 431 | | 9.3 |
| Original LFA & RDA | 1 363.5 | | 8.9 |
| All original LFA | 2 794.5 | 2 443 | 18.2 |
| Extended LFA only | 675 | | 4.4 |
| Extended LFA & RDA | 373.5 | | 2.4 |
| All extended LFA | 1 048.5 | 803 | 6.8 |
| All LFA | 3 843 | | 25.0 |
| All LFA/RDA overlap | 1 737 | | 11.3 |
| Outside of both | 8 797.5 | | 57.2 |
| Total land area | 15 376.5 | 15 120.6† | |

* Derived from Merlewood sampling frame

†Whitaker's Almanack (including water surface)

allow policy integration and evaluation on an established and robust data base.

The use of sample squares for estimation has produced the figures for RDA and LFA given in Table 1.

The principal use of this enhanced sampling frame, and modelling base, has been in a study supported by the Department of Environment/Development Commission. This work, on the countryside implications of CAP changes, was able to calculate some predicted areas of land use change in an era of CAP decline, and to differentiate between land in/out of LFAs or RDAs. The identification of subregions already disfavoured, and which were also likely to be harmed disproportionately by the decline in support for agriculture, makes it possible to begin 'targeting' places likely to be in need of especial assistance in the medium term. It may even throw a little further light on the question of relations between land and the society upon it. It is doubtful, however, whether we will be able to express it as elegantly as Jacquetta Hawkes (1953) did in her classic and elegaic work, but it may be a little more quantitative.

'In the extreme south-west the Doulting quarries gave the material for Wells Cathedral and for Glastonbury, but Gloucestershire is the region where these limestones have done most to create an entire countryside. Men and sheep and the limestone hills have together made the Cotswold

realm, with its small unchanging towns and church-proud villages, its hamlets and country houses, surely one of the most lovely stretches of rural urbanity in the world.'

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