

4 Table T4 – Forest characteristics

4.1 FRA 2010 Categories and definitions

| Term / category | Definition |
|--|--|
| Naturally regenerated forest | Forest predominantly composed of trees established through natural regeneration. |
| Introduced species | A species, subspecies or lower taxon, occurring <u>outside</u> its natural range (past or present) and dispersal potential (i.e. outside the range it occupies naturally or could occupy without direct or indirect introduction or care by humans). |
| Characteristics categories | |
| Primary forest | Naturally regenerated forest of native species, where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed. |
| Other naturally regenerated forest | Naturally regenerated forest where there are clearly visible indications of human activities. |
| Other naturally regenerated forest of introduced species (<i>sub-category</i>) | Other naturally regenerated forest where the trees are predominantly of introduced species. |
| Planted forest | Forest predominantly composed of trees established through planting and/or deliberate seeding. |
| Planted forest of introduced species (<i>sub-category</i>) | Planted forest, where the planted/seeded trees are predominantly of introduced species. |
| Special categories | |
| Rubber plantations | Forest area with rubber tree plantations. |
| Mangroves | Area of forest and other wooded land with mangrove vegetation. |
| Bamboo | Area of forest and other wooded land with predominant bamboo vegetation. |

4.2 National data

4.2.1 Data sources

| References to sources of information | Quality (H/M/L) | Variable(s) | Year(s) | Additional comments |
|---|-----------------|----------------|-----------|---|
| Protected Forest Areas in the UK, Pryor & Peterken 2001 | M | Semi-natural | 1990 | As used for TBFRA 2000. |
| Pryor and Smith, 2002 | M | Semi-natural | 1990 | not used (see text) |
| Forestry Statistics, Forestry Facts & Figures and related databases | H | Semi-natural | 1990-2008 | Broadleaved new planting and restocking, used for calculating and updating. |
| National Inventory 1995-99, Table 10 (MWS + SW) (unpublished) | M | Native species | 1995-99 | NIWT did not distinguish planted from naturally regenerated |

4.2.2 Classification and definitions

| National class | Definition |
|----------------|--|
| Semi-natural | As classified in the report Protected Forest Areas in the UK, Pryor & Peterken 2001. About half the area is Ancient Semi-Natural Woodland, continually wooded since the earliest reliable records. The rest is native woodland that is not obviously planted; i.e. appears to have arisen mainly through natural regeneration. |
| Scots pine | <i>Pinus sylvestris</i> , native conifer. Makes up a large proportion of the native Caledonian pinewood in Scotland (classified as UK semi-natural), but also in extensive plantations. |

4.2.3 Original data

All figures in thousand hectares.

Semi-natural woodland and Ancient Semi-natural woodland (ASNW)

| | UK | England | Scotland | Wales | N Ireland |
|------------------------------------|-----|---------|----------|-------|-----------|
| Pryor & Peterken 2001 semi-natural | 646 | 416 | 133 | 82 | 15 |
| Pryor & Peterken 2001 ASNW | 326 | 206 | 89 | 31 | 0 |
| Pryor & Smith 2002 ASNW | 285 | 193 | 65 | 27 | N/a |

UK Broadleaved New Planting and Restocking,

| | NP | RS | Total |
|-----------|----|----|-------|
| 1990-2000 | 96 | 41 | 137 |
| 2000-2005 | 55 | 13 | 68 |
| 2005-2008 | 23 | 11 | 34 |

Source: databases for Forestry Statistics

4.3 Analysis and processing of national data

4.3.1 Estimation and forecasting

Naturally regenerated

The FRA 2010 category “naturally regenerated” largely corresponds to what was reported in FRA 2005 as “modified natural”, based on the UK category semi-natural in Pryor & Peterken 2001, for which estimates can be taken as relating approximately to 1990 (the Ancient Woodland Inventory (AWI) part was late 1980s). This gives a figure of 646,000 ha for 1990.

The later publication Pryor & Smith 2002 reported the overlap from overlaying digital maps for the Ancient Woodland Inventory and National Inventory of Woodland, reducing the total Ancient Semi-Natural Woodland (ASNW) area by 41,000 ha. However, further investigation of the discrepancies between NIWT and the ancient woodland inventories suggests that some discrepancies are due to differences in spatial registration of woods, and that some areas of ancient woodland are incorrectly omitted from the totals in Pryor & Smith (2002). In consequence, the estimates from Pryor & Peterken (2001) are now recommended for use, until better information becomes available.

The annual loss of ASNW and other semi-natural woodland has not been monitored, but relatively small areas are now thought to be lost for roads and other developments. In recent

years, this is likely to have been balanced by restoration of plantations on ancient woodland sites to ASNW. So estimate no net change since 1990.

Most of the FRA 2005 category “semi-natural” (see below) was planted. The percentage with (assisted) natural regeneration was estimated for the Planted Forests study in FRA 2005, giving the following areas (thousand hectares): 1990: 0, 2000: 2, 2005: 10. This can be extrapolated to estimate 16 (th ha) for 2010.

The criteria for classification as UK semi-natural prevent the inclusion of any areas of introduced species. The new areas (in the preceding paragraph) will also be native species, so estimate zero area for introduced species.

Planted

The planted area is estimated by subtraction from the total area.

In NIWT 1995-99, native species (most broadleaves and Scots pine) made up about 48% of the forest area. The % native would have been lower in N Ireland (not covered by NIWT), but would have increased slightly from the variable NIWT date to 2000, so 48% (1,340,000 hectares) is a reasonable estimate for native species in 2000, implying 1,453,000 hectares introduced. As no introduced species were in naturally regenerated forest, allocate all to planted forest.

For 2000-2005, increase in area of native species will have consisted of most broadleaved new planting and restocking (say 62,000 out of 67,000 hectares) plus 8,000 hectares of Scots pine in Caledonian pinewood, and negligible losses, so estimate 70,000 hectare increase to 1,410,000 hectares. By subtraction from total woodland, this leaves 1,435,000 hectares introduced.

For 2005-2010, increase in area of native species will have consisted of most broadleaved new planting and restocking (say 55,000 out of 60,000 hectares) plus 5,000 hectares of Scots pine in Caledonian pinewood, and negligible losses, so estimate 60,000 hectare increase to 1,470,000 hectares. By subtraction from total woodland, this leaves 1,411,000 hectares introduced.

For 1990-2000, increase in area of native species will have consisted of most broadleaved new planting and restocking (say 125,000 out of 135,000 hectares) plus 16,000 hectares of Scots pine in Caledonian pinewood, and perhaps a few thousand hectares of losses, so estimate 135,000 hectare increase over the decade. Subtracting this from the 2000 estimate of 1,340,000 hectares gives 1,205,000 hectares native, and by subtraction from total woodland gives 1,406,000 hectares introduced.

4.3.2 Reclassification into FRA 2010 categories

Covered in section above.

4.4 Data for Table T4

Table 4a

| FRA 2010 Categories | Forest area (1000 hectares) | | | |
|------------------------------------|-----------------------------|-------------|-------------|-------------|
| | 1990 | 2000 | 2005 | 2010 |
| Primary forest | 0 | 0 | 0 | 0 |
| Other naturally regenerated forest | 646 | 648 | 656 | 662 |
| ...of which of introduced species | 0 | 0 | 0 | 0 |
| Planted forest | 1965 | 2145 | 2189 | 2219 |
| ...of which of introduced species | 1406 | 1453 | 1435 | 1411 |
| TOTAL | 2611 | 2793 | 2845 | 2881 |

Table 4b

| FRA 2010 Categories | Area (1000 hectares) | | | |
|-----------------------------|----------------------|------|------|------|
| | 1990 | 2000 | 2005 | 2010 |
| Rubber plantations (Forest) | 0 | 0 | 0 | 0 |
| Mangroves (Forest and OWL) | 0 | 0 | 0 | 0 |
| Bamboo (Forest and OWL) | 0 | 0 | 0 | 0 |

4.5 Comments to Table T4

| Variable / category | Comments related to data, definitions, etc. | Comments on the reported trend |
|-------------------------------------|---|--------------------------------|
| Primary forest | | |
| Other naturally regenerating forest | | |
| Planted forest | | |
| Rubber plantations | | |
| Mangroves | | |
| Bamboo | | |

Other general comments to the table

In the UK, native species include most broadleaves and Scots pine. Apart from yew and juniper (neither of which cover significant areas), all other conifers have been introduced.