SUBJECT: Environmental Studies

UNIT: Year 9 – Camp Hibernation (Biodiversity)



Factors affecting overwintering birds in the UK.

Weather Conditions

- Cold snaps & snow limit food availability and increase energy demands.
- Mild winters may benefit insectivorous birds but can also impact migratory patterns.

Food Availability

- Scarcity of natural food (insects, seeds, berries) can lead birds to rely on garden feeders.
- Late or failed berry/seed crops (e.g., rowan, hawthorn) can trigger irruptions of species like waxwings.

Habitat Loss & Fragmentation

- Urbanization and agricultural intensification reduce nesting and foraging sites.
- Hedgerow removal and loss of scrubland directly affect species like the dunnock and wren.

Predation

 Increased predation from domestic cats and birds of prey (like sparrowhawks) can affect smaller species.

Climate Change

- Alters migratory patterns; some species arrive earlier or stay longer.
- Changing seasons impact the timing and availability of food sources.

Common UK Bird Species Seen in Winter

Resident Species (stay all year)

- Robin often seen singing even in winter.
- Blue Tit active in gardens, especially around feeders.
- **Blackbird** forages in gardens and woodlands.

Types of Bird Feeders

Feeding birds can significantly aid their survival during winter. Different feeders attract different species based on their feeding habits.

Feeder Type	Suitable For	Food Type
Seed Feeder	Tits, finches, sparrows	Sunflower seeds, mixed seeds
Nut Feeder	Tits, woodpeckers	Peanuts (unsalted)
Suet/Fat Ball Feeder	Robins, starlings, tits	Suet balls, fat cakes
Ground Feeder Tray	Blackbirds, dunnocks	Mealworms, fruits, seeds
Window Feeder	Robins, tits	Seed mix, suet, crushed peanuts
Nyjer Feeder	Goldfinches, siskins	Nyjer (thistle) seeds

Factors Affecting Bird Biodiversity in the UK

Habitat Quality & Diversity

- Rich habitats like woodlands, wetlands, and hedgerows support more species.
- Monoculture farming and urban sprawl reduce habitat complexity.

Climate & Seasonal Changes

- Shifting climates affect migration and breeding patterns.
- Some species adapt, while others decline or disappear.

Pollution & Pesticides

- Insect decline due to pesticides impacts insectivorous birds.
- Pollution in waterways affects water bird health.