

# Forests and Water

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# Introduction

- 10% of land planted
- 1% in 1920
- 6% in 1990
- Gov policy 17% by 2020
- 75% conifer 25% B/Ls
- 60% Coillte 40% private

# Primary forestry pressures

- Sediment
  - Nutrients
  - Acidification
  - Herbicides & Pesticides
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- Are there others?

# Impacting forest operations

- Ground preparation
- Drainage
- Fertiliser application
- Road making
- Harvesting and extraction
  
- Are there others ?

# Nutrients-Particulate - Dissolved

- Fertiliser application
- Weathering of parent material
- Decay of brash and weeds
- Scrubbing of the air
- Over land flow
- Through sub surface

# Nutrients - Solutions

- Buffer strips
- Application rate
- Reduce ground disturbance
- Sediment control
- Phased felling of smaller coupes
- Cultivation techniques
- Silvicultural systems

# Sediment

- Ground disturbance
- Weathering of parent material
- Decay of plant tissue
- Flood event
- Overland flow
  
- Are there others ?

# Ground Disturbance

- Drainage
- Mounding
- Road making
- Harvesting
- Extraction
  
- Is there another activity?

# Sediment Solutions

- Buffer strips – encourage ground vegetation
- Reduce ground disturbance
- Less drains – inverted mounding
- Sediment control
- Weather conditions
- Silvicultural systems

# Acidification

- Planting on acid sensitive soils
- Scrubbing of nutrients from the air
- Natural growth processes

# Herbicides and pesticides

- Pesticide control service of DAF
- Weevil
- Butt rot
- Weed control

# Hydrology

- Drainage – through flow time – peat
- Lower water table – soil air
- Crop stability
- Evaporation from crown
- Natural sponge effect of soils

# Regulation

- Approvals
- Licences – conditions
- Consultations
- Inspections
- Audits
- Financial penalties
- Sustainable Forest Management [SFM]

# Standards

- 1946 Forestry Act
- 1988 Forestry Act
- Code of Best Forest Practice
- Grants and Premiums Specifications
- Environmental Guidelines
- Irish National Forest Standard