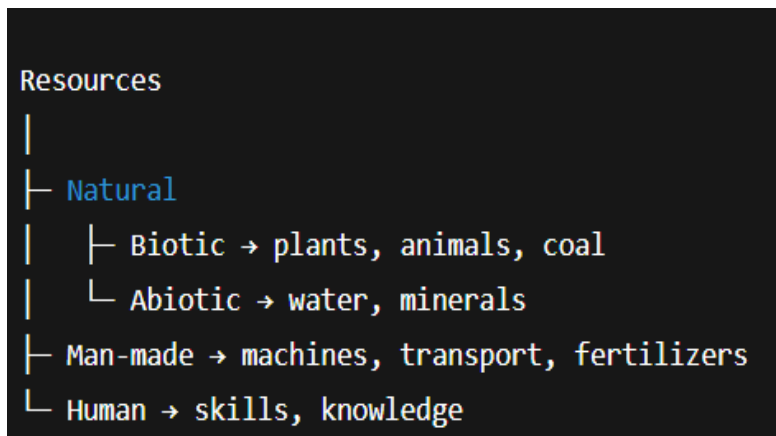


# Resources – Types and Conservation.

## 1 Meaning of Resources

- **Resources** are things (natural or man-made) that satisfy human needs and help in development.
- Examples: soil, water, forests, minerals, machines, transport, human skill etc.
- Resources can change with time and technology (e.g., aluminium became important after aeroplanes were invented).
- **Human beings** are the most important resource because they use knowledge and skill to develop all other resources.



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## 2 Types of Resources

### (a) Biotic and Abiotic

- **Biotic** = from living things → plants, animals, fish, forests, coal, petroleum.
- **Abiotic** = from non-living things → water, air, minerals, metals, rocks.

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### (b) Developed and Potential

- **Developed resources:** already explored and being used for economic benefit
  - e.g., coal mined and used, electricity from rivers.
- **Potential resources:** available but not yet used, or may be used in the future
  - e.g., water in a river before building a dam, minerals still inside the earth.

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### (c) Exhaustible and Inexhaustible

- **Exhaustible (non-renewable):** limited in quantity; get depleted if overused
  - e.g., coal, petroleum, natural gas, minerals.
- **Inexhaustible (renewable):** get replenished naturally and don't run out easily

- e.g., sunlight, wind, water (if used carefully), forests.
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#### **(d) Soil and Land Resources**

- **Soil:** thin top layer of earth, formed by weathering of rocks and decay of plants/animals.
    - Supports crops and plants → basis of life.
    - Types: sandy, clayey, loamy, alluvial, red, black, mountain soil.
  - **Land:** surface of the earth where activities happen (farming, industries, roads, tourism, etc.).
    - Use depends on slope, soil type, drainage, relief, and human needs.
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#### **(e) Marine and Mineral Resources**

- **Marine (from seas & oceans)**
    - 71% of Earth is water.
    - Provide fish, salt, pearls, shells, corals, petroleum near coasts, tidal energy.
  - **Mineral resources**
    - Substances taken from rocks.
    - Two kinds:
      - *Metallic:* iron, copper, gold, silver, aluminium.
      - *Non-metallic:* coal, petroleum, mica, limestone.
    - Most minerals need refining before use → base of industries.
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#### **(f) Human Resources**

- People themselves are the greatest resource.
- Their qualities, education, skills and health decide how other resources are used.
- Countries with skilled people (e.g., Japan) grow even if natural resources are less.

## Types of Resources

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- ├ By Origin → Biotic / Abiotic
- ├ By Development → Developed / Potential
- ├ By Renewability → Exhaustible / Inexhaustible
- ├ Soil & Land
- ├ Marine & Mineral
- └ Human

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### 3 Conservation of Resources

- Conservation = **wise and careful use** of resources so they last for future generations.
- Needed because:
  - Many resources (coal, petroleum, minerals) are **limited** and non-renewable.
  - Overuse → shortage and environmental damage.

#### Methods of Conservation

1. Avoid wastage; use resources efficiently.
2. Recycle materials that can be reused (paper, metals, plastics).
3. Replant forests after cutting trees.
4. Use alternative energy: solar, wind, hydropower.
5. Make laws and rules for proper use of soil, water, minerals, forests, wildlife.
6. Educate people about saving resources.
7. Develop technology to use resources in an eco-friendly way.

## Conservation

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  - ├ wise use (no wastage)
  - ├ Recycle & reuse
  - ├ Laws & rules
  - ├ Education & awareness
  - └ Modern technology
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#### Key Points for Revision

- Resources = things that fulfil human needs and support progress.
  - Classified by origin, use, availability and renewability.
  - **Human resource is central** to development.
  - Conservation ensures that resources remain for future generations.
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#### Quick Exam Notes

- Define “Resource” clearly.
- Learn 6 types: **Biotic–Abiotic / Developed–Potential / Exhaustible–Inexhaustible / Soil–Land / Marine–Mineral / Human.**
- Write at least 3 examples for each type.
- Mention 4–5 measures of conservation.
- End with: *“Resources are gifts of nature; their proper use is necessary for sustainable development.”*