Protecting Earth’s Resources: Our Shared Responsibility

Nonrenewable Energy Resources: Coal, Oil, and Natural Gas

1

Coal Formation

Coal forms from the remains of dead plants and peat, compressed over millions of years into solid rock.

2

Petroleum & Natural Gas

Petroleum and natural gas originate from ancient marine organisms, subjected to intense heat and pressure.

3

Fossil Fuels Defined

These nonrenewable resources are collectively known as fossil fuels, created from the fossilized remains of ancient life.

Advantages and Disadvantages of Fossil Fuels

Easy Transport & Storage

Fossil fuels are highly portable and storable, facilitating widespread distribution and use.

High Energy Output

They provide a significant amount of energy per unit, making them efficient for various applications.

Finite Resources

These resources are nonrenewable and finite, leading to concerns about future availability.

Environmental Pollution

Combustion releases greenhouse gases and pollutants, contributing to air quality issues and climate change.

Ecological Damage

Accidental spills can cause severe and long-lasting harm to marine ecosystems and wildlife.

Renewable Energy Resources

Solar Energy

Uses sunlight to make electricity.

Wind Energy

Wind turbines generate electricity.

Hydroelectric Power

Uses flowing water through dams.

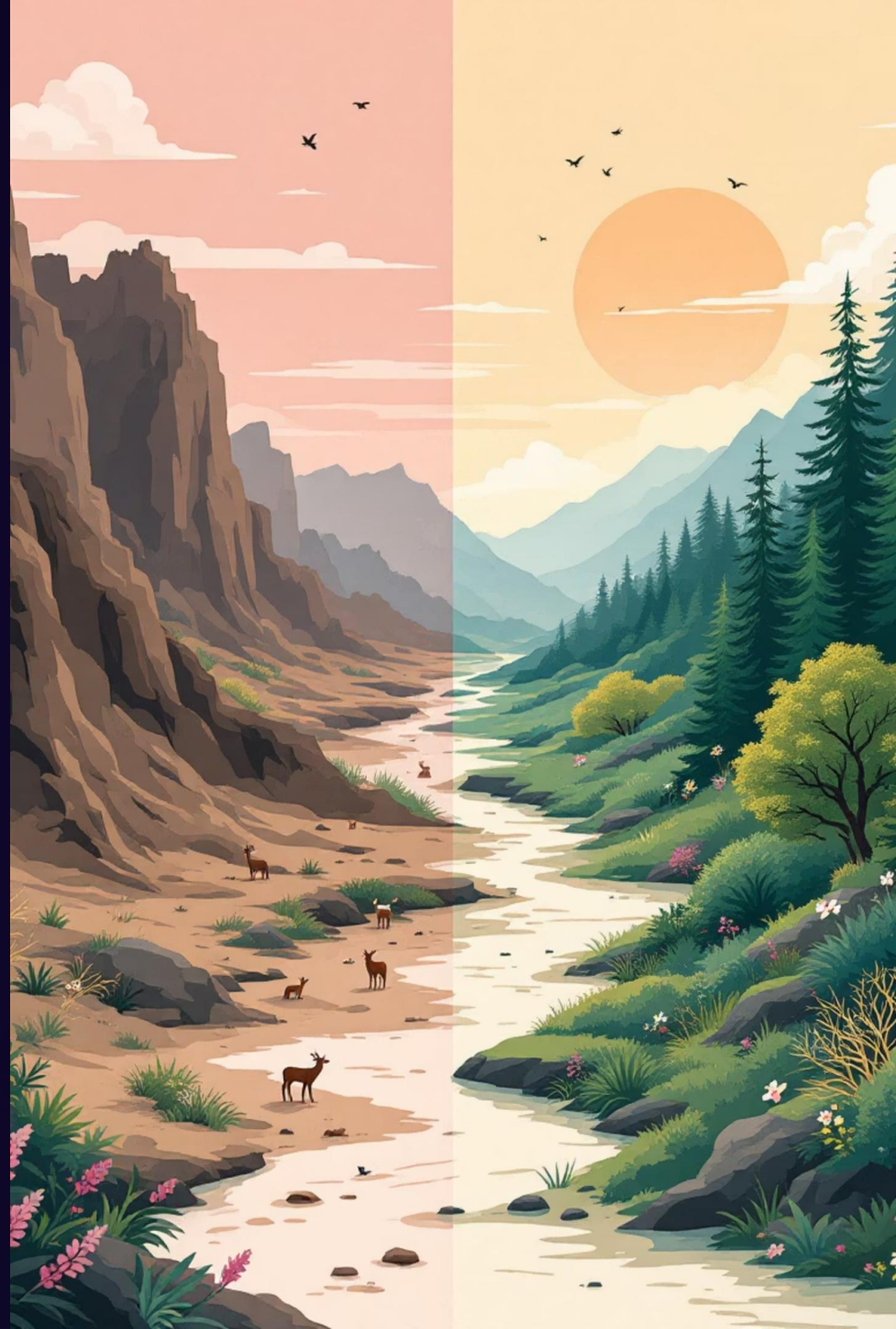
Geothermal and Biomass Energy

Geothermal Energy

Uses heat from inside Earth to produce steam and electricity. Can work 24/7 but is limited to certain locations.

Biomass

Material that was recently alive (wood, waste, garbage) that can be burned for electricity.



Mineral Resources

What are Minerals?

Nonliving materials sourced from Earth, such as gold, iron, copper, and salt.

Diverse Applications

Iron makes steel for buildings and tools, gypsum is used in plaster, and gravel is essential for roads.

Nonrenewable & Impactful

Minerals are nonrenewable resources. Mining for them can cause significant environmental damage, including pollution and habitat loss.

Water, Soil, and Air Resources

Water Resources

Used for drinking, cooking, growing food, and making electricity. Can be polluted by waste and oil spills.

Soil Resources

Contains minerals and nutrients vital for plants. Can be polluted by chemicals and eroded.

Air Resources

Contains oxygen for breathing and nitrogen for fertilizer. Polluted by factories, cars, and mining.

Conservation and Resource Protection

Conservation Laws

Laws require replanting trees, repairing mining damage, cleaning polluted land, and setting aside national parks to protect natural habitats.

Using Less

Saving energy by reducing electricity consumption and fuel use helps conserve valuable resources and minimize environmental impact.

Reusing Resources

Extending the life of materials by writing on both sides of paper and reusing bottles and containers reduces waste and the need for new production.

Recycling

Treating materials like paper, plastic, and aluminum to be used again helps reduce landfill waste and conserves raw materials.

The Power of Collective Action

Individual Impact

Small sustainable habits multiplied by many create global change.

Shared Responsibility

Conservation is a collective effort, not just government's role.

Secure Future

Together, we secure clean air, water, and fertile land for all.

Your Call to Action: Protect Earth’s Resources Today

1 **Start Small, Act Now**

Refuse unnecessary items and compost organic waste.

2 **Support Sustainability**

Choose eco-friendly products and back local conservation efforts.

3 **Educate & Advocate**

Share knowledge and push for policies that safeguard natural resources.

Our planet’s future depends on the choices we make now—be a guardian of Earth’s resources!