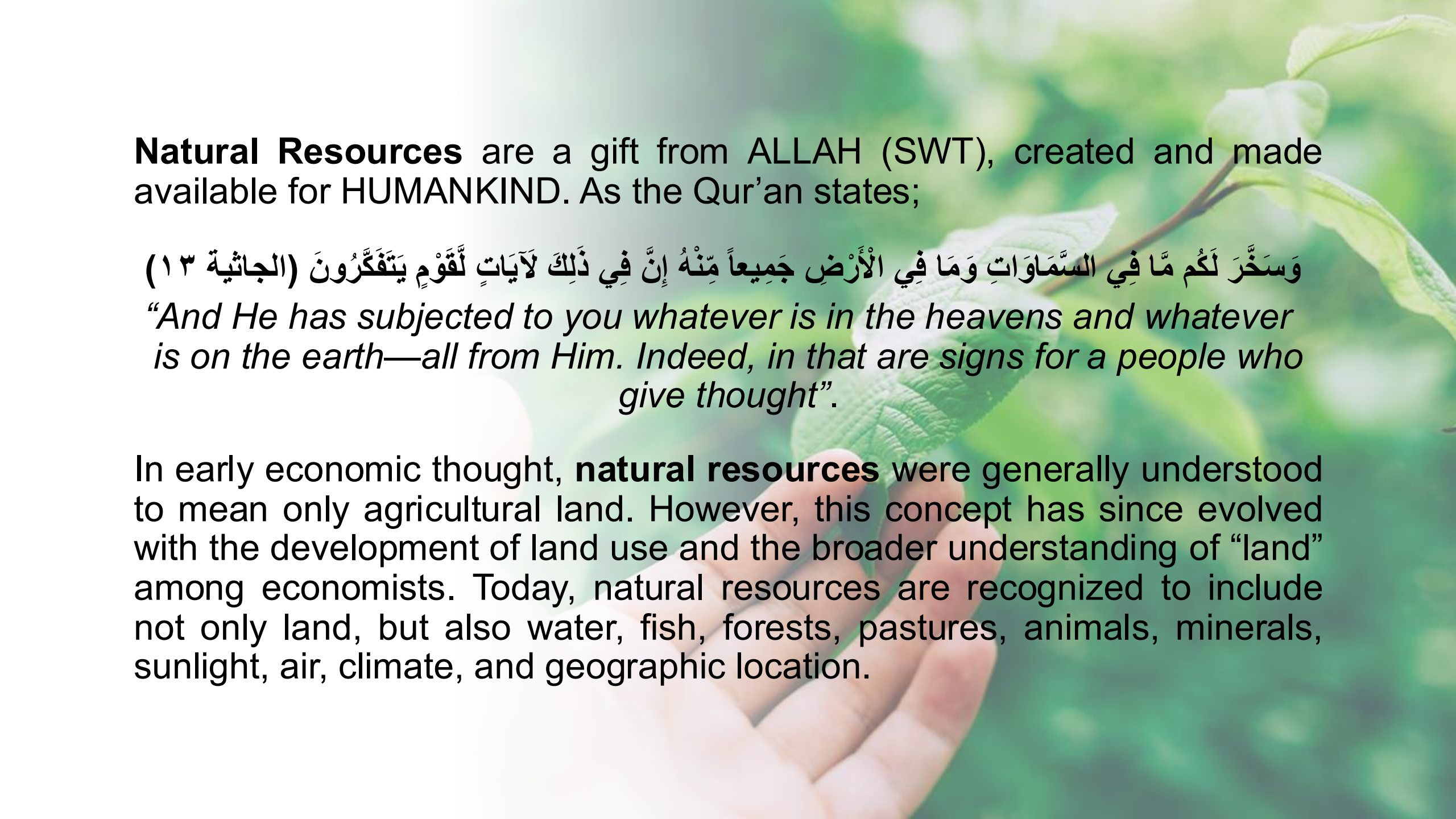


Natural & Regenerated Resources





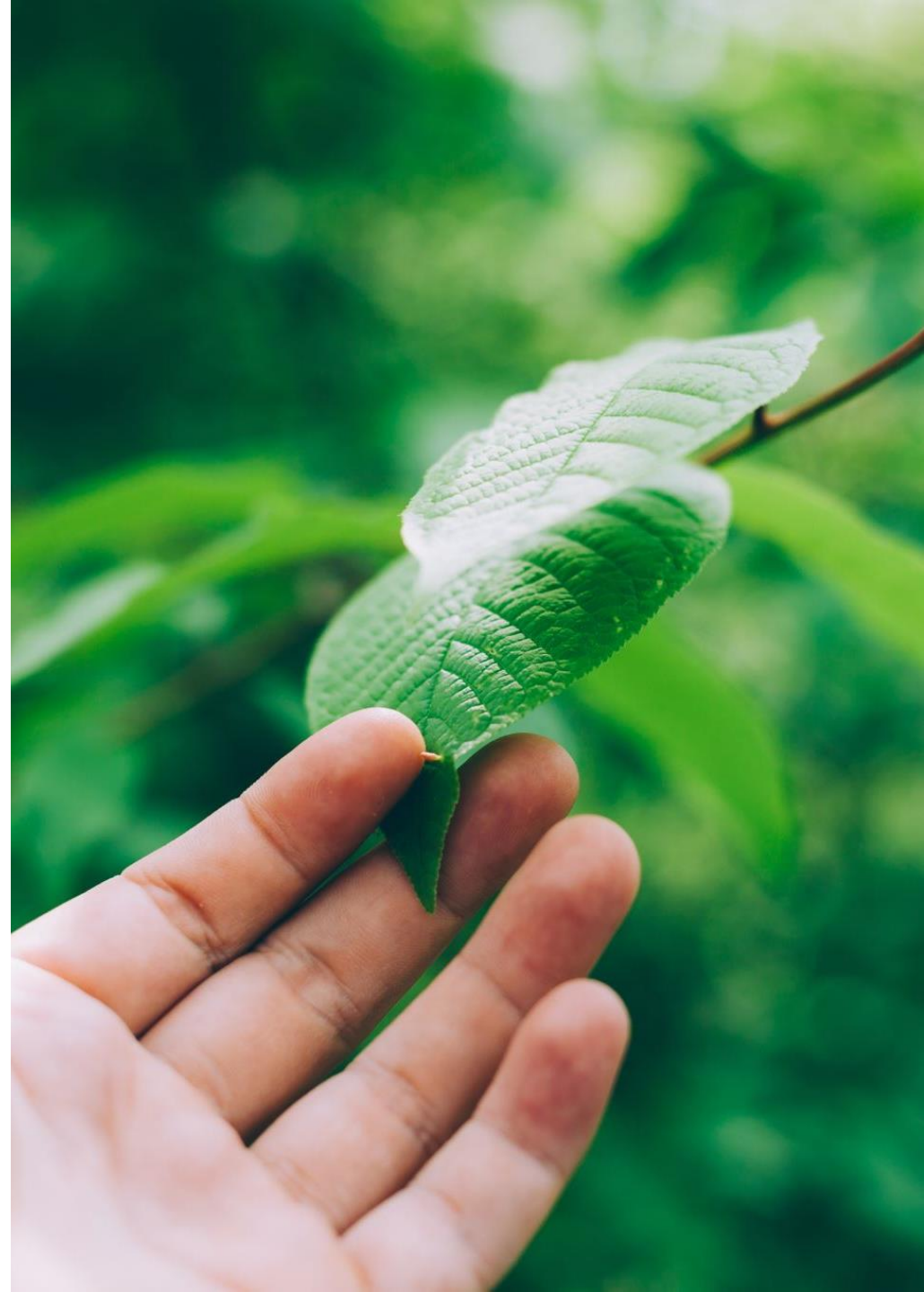
Natural Resources are a gift from ALLAH (SWT), created and made available for HUMANKIND. As the Qur'an states;

وَسَخَّرَ لَكُم مَّا فِي السَّمَاوَاتِ وَمَا فِي الْأَرْضِ جَمِيعاً مِّنْهُ إِنَّ فِي ذَلِكَ لَآيَاتٍ لِّقَوْمٍ يَتَفَكَّرُونَ (الجمعة ١٣)

“And He has subjected to you whatever is in the heavens and whatever is on the earth—all from Him. Indeed, in that are signs for a people who give thought”.

In early economic thought, **natural resources** were generally understood to mean only agricultural land. However, this concept has since evolved with the development of land use and the broader understanding of “land” among economists. Today, natural resources are recognized to include not only land, but also water, fish, forests, pastures, animals, minerals, sunlight, air, climate, and geographic location.

An **Ecosystem's Natural Resources** are defined as all living and non-living materials and their products found in nature that are directly exploited or invested by humans, such as air, water, land, soil, biodiversity, and geological formations of environmental value.





Saudi Arabia's resources include extensive natural reserves of **petroleum, natural gas, and minerals**, along with actively developed **renewable resources** like **solar and wind power**. The Kingdom's geological diversity contributes to its abundance of resources, ranking it second among the **top ten** countries for natural resource reserves, with a value of **USD34.4 trillion**. The Kingdom encompasses the **world's second-largest oil reserves** after Venezuela. It is also the **world's sixth-largest gas market**. The country also focuses heavily on regenerated water through desalination and wastewater treatment to combat water scarcity.



Saudi Arabia's resources can be broadly divided into two categories: **natural (non-renewable and renewable) resources** & efforts toward **regenerated/sustainable resources** as part of national initiatives like Vision 2030 and the Saudi Green Initiative (SGI).



Natural Resources



Regenerated Resources



Natural Resources



1. Non-Renewable Resources (Energy & Minerals)

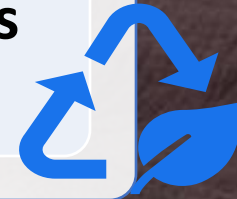
- Oil & Gas
- Minerals Resources
- Water Resources



2. Renewable Natural Resources

- Solar Energy
- Wind Energy & Green Hydrogen

**Regenerated and Sustainable Resources
(SGI & Vision 2030 Initiatives)**



Renewable
Energy
Resources

Water Resource
Regeneration

Land and
Ecosystem
Regeneration
(Afforestation)

Ecosystem
Protection



Oil & Gas



Petroleum (Crude Oil)



Natural Gas



Petroleum (Crude Oil)



- Saudi Arabia holds the world's second-largest proven oil reserves estimated at **268 billion barrels** of oil, concentrated mostly in the Eastern Province.
- Notable fields include the massive onshore Ghawar and the offshore Safaniya fields, managed by the state-owned company, [Saudi Aramco](#).
- Oil production in the nation began in the **year 1933** while documented exports commenced in **1939**. Currently, oil production dominates the nation's economy in terms of revenues generated.



Natural Gas



- Saudi Arabia has the world's fourth largest reserves of natural gas, of 6.8 trillion cubic meters (**240 trillion cubic feet**).
- Production is expanding to meet growing domestic demand for power generation and industrial use, reducing the reliance on oil for these purposes.
- A key focus is the development of unconventional gas fields, such as the massive **Jafurah field**, to provide low-cost, low-carbon energy.
- The country is also among the world's highest consumers of natural gas consuming around **3,813.9 billion cubic feet** of natural gas.



Minerals



Mineral Wealth



Gold & Other Precious Metals



Base Metals & Industrial Minerals



Nuclear & Rare Earth Elements



Mineral Wealth

- Saudi Arabia estimates its untapped mineral resources are valued at approximately **\$2.5 trillion**.
- A crucial component of its economic diversification strategy under [Vision 2030](#). **The [Arabian-Nubian Shield](#)** in the west, rich in gold and copper, and the eastern sedimentary rocks, contain diverse minerals like base metals, precious metals, bauxite, phosphate, and rare earth elements.
- The Kingdom is actively promoting investment and development to become a major global player in the mining sector.





Gold & Other Precious Metals

- **Saudi Arabia** has a long history with precious metals, possessing significant reserves of gold and other valuable minerals, holds the largest gold reserves in the **Middle East and North Africa**.
- Total mineral resources, which include gold, silver, copper, and zinc, were estimated at **\$2.5 trillion** in **2022**.





Gold & Other Precious Metals

- The state-owned **Saudi Arabian Mining Company**, Ma'aden, operates several gold mines, including:
- **Mahd al-Dhahab**: An ancient mine with a history dating back 3,000 years.
- **Ad-Duwayhi**: The country's largest gold-producing mine.
- **Mansourah and Massarah**: A major new project with an annual average production expected to reach **250,000 ounces**.
- Other precious metals: In addition to gold, Saudi Arabia also produces **silver and copper**.





Base Metals & Industrial Minerals

- The country has substantial reserves of copper, zinc, and bauxite, which are crucial for construction, manufacturing, and future energy transition technologies.
- The Arabian Shelf is characterized by sedimentary rocks containing industrial minerals like **bauxite** and **phosphate**.
- Non-metallic minerals like phosphate are also extracted on a large scale in the north for fertilizer production.





Nuclear & Rare Earth Elements

- Minerals such as **uranium**, thorium, niobium, tantalum, tin, yttrium, zirconium, and rare earth elements are found in granite and pegmatite rocks across the Kingdom.
- Significant uranium reserves, potentially over 90,000 tones of uranium, mainly located in the center and northwest of the country. Specific locations are - Jabal Saeed, the Madinah region, and Jabal Qariah in the north.
- Some of the richest uranium reserves are reported to be at or very close to the site selected for the Neom megacity project.



Water Resources

- Due to its arid climate, **Saudi Arabia** relies heavily on **non-renewable fossil groundwater** stored deep in aquifers under **the Arabian Shelf**. It is also supplemented by limited renewable groundwater and surface water collected by dams.
- Rainfall is minimal, making traditional water sources inadequate for the country's needs.
- Desalinated seawater is crucial, accounting for approximately **70% of potable water needs**. Desalination plants also produce electricity as a byproduct of the steam generation process.

