
Resources Management, Utilization & Optimization in the Light of The Holy Quran (A Study to Reveal Qur’anic Guidance on Resource Management and Utilization)

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Abstract

The existence and survival of mankind is dependent on various material resources. These resources fulfill the human requirements ranging from basic needs e.g. water, shelter and food to endless wishes and luxuries of life. Therefore, the importance and necessity of resources in today’s modern world is much more than older ages. Consequently, the quantum of researches on resources and its management has also increased manifold. In the same context, we find numerous discussions in Quran, which are hinted towards various aspects of Resources and Resource Management.

Quran is the last book revealed for guidance of human beings for all times to come. There is no doubt that Quran is basically a book of Hidayat (divine guidance) however, it also provides guidance in other fields of human needs. The Almighty Allah has purposefully illustrated various examples and explained related phenomenon in everyday life to open the eyes and ears of the human beings. It is because providing divine guidance that Allah Almighty has enlightened Hidayat (guidance) in so many different ways that every human can gain guidance as per his own personal mindset. Due to this reason, we see discussions in Quran which are related to Tauheed (Singularity of Allah), Risalat (Prophet hood), Qayamah (Day of Judgment), good and bad deeds, Heaven and Hell and on lot many other topics.

One of the topics widely discussed in the Quran is related to Resources. This is due to the fact that human life and its sustenance against various odds is dependent on availability and adequacy of various resources. This includes both material and non-material resources. Quran being a divine guidance addresses both requirements of human needs. The material resources include water, air, food, shelter, sun light, iron and various other materials. Quran not only mentions and discusses material resources but

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also highlights and indicates their utilization and optimization in their management.

Keywords: Quranic sustainability, Faith-based resource management, Islamic resource management

Introduction & Literature Review

1. The Holy Quran stands as the ultimate guide for humanity, addressing a myriad of essential aspects of human conduct and societal development. Among the various themes explored within its sacred Aayahs, the concept of **resource management, utilization, and optimization** emerges as a critical and divinely emphasized principle. This research seeks to explore the profound wisdom embedded in Quranic teachings regarding the responsible handling of resources—natural, economic, and human. The question arises: why does the Almighty, the Creator of infinite abundance, stress the careful and balanced use of His provisions? The Quran consistently calls upon humanity not only to recognize and benefit from available resources but also to manage them judiciously, avoiding waste, excess, and exploitation. These divine instructions reveal that every resource is a trust (Amanah) and must be handled with accountability, fairness, and foresight. This discourse highlights the Quran's call for moderation, equity, and sustainability, showcasing how divine guidance integrates ethical responsibility with practical action. Drawing upon Maulana Abdul Majid Daryabadi's English translation of the Quranic Aayahs [1], this research aims to uncover the enduring lessons embedded in the sacred text—lessons that inform a framework for sustainable living, social justice, and economic balance. Ultimately, the study emphasizes the transformative potential of aligning human practices with Quranic wisdom, fostering a world where resource optimization serves both spiritual and material progress in harmony. There is an explosion of researches and publications on many aspects of resources, its management and optimization. This includes humongous work performed on Human & Natural Resources management. In succeeding paragraphs, literature review is presented to comprehend the work performed in the fields of Resources Management along with contribution of Religion in this field. The work performed on human resource management is also presented. The contribution of Muslim scholars in different fields of Resource

Management and especially in the perspectives of Quranic guidance has also been highlighted.

2. From the plethora of publications on various aspects of resources management, Alan and Douglas [2] argue that Resource Management has a history as old as mankind. Fikret Berkes and Carl Folke [3] have dilated upon the emergence of Resource Management in response to particular social, ecological, religious, political and economic contexts. Daniel and Warthen [4] have elaborated the evolution of resource management in mankind in four different phases. Various UN bodies and international NGOs, such as IUCN (The International Union for the Conservation the WWF (World Wildlife Federation), added to summarizing the principles of a sustainable society with respect to Resource Management and Utilization (Gilpin,[5]. Goodland and co-workers developed a critical analysis of priorities for sustainable development and usage of Resources. [6]. Cropper and Oates [7] published in their all-inclusive survey of environmental economics a discussion of the troublesome question of assigning numerical values to intangible factors in order to adapt the engineering method of Cost-Benefit Analysis (CBA) to Resources Management. The inadequacy of science and mathematical computations alone, to deal with natural resource problems in an age of globalization, has been argued by a number of authors, such as Schneiderman et al. French, Swanson et al. [8]. Social psychologists Wilke and Levine [9] have dealt with greed, efficiency, fairness, and community involvement in natural resource situations.

3. Gottfried, Dr. Wolfgang and Dr. Harald [10] have very comprehensively discussed fundamentals of resource management and highlighted the shear need of dematerialization in resource consumption in order to leave resources for the future generations. Robin Grimble & Kate Wellard [11] examine the particular characteristics of natural resources management (NRM) which, makes it particularly appropriate for the application of Stake holder analysis. Iratxe Calvo-Mendieta, Olivier Petit and Franck-Dominique Vivien [12] have highlighted the concept of common patrimony relevant for analyzing collective natural resource management. Derek Armitage [13] examines adaptive capacity with reference to Community Based Natural Resource Management (CBNRM), highlighting the process of conceptual and practical limitation in current CBNRM practice. Arun Agarwal and Clark Gibson [14] have argued that

the poor conservation outcomes that followed decades of intrusive resource management have forced policy makers to reconsider the role of community in resource use and conservation. Orjan Bodin and Beatrice I. Crona [15] have deliberated upon role of social network dynamics in the domination of natural resources. Apart from the above-mentioned salient contributions in Resource Management, very little contribution could be traced from religion towards resource management and utilization. The work on these important arenas of today's demanding subjects of RM in the light of Islamic teachings is even lesser. Moreover, little work has been found on Resource Management in the light of Quranic perspective, revelations and teachings. Michel, Serjio and Yasha [15] discussed the contribution of religion including Islam towards environmental safety and argue that religion supports the environmental safety; however, they don't provide any specific teachings from any of the religious books. Ali Yachkaschi & SchirinYachkaschi [16] discusses the historical role of religion in Resource Conservation. They highlight the Zoroastrian religious obligations in protection of trees, animals and other natural resources. Eneji C. V. O and Ntamu G. U [17] have reviewed Traditional African Religion in Natural Resources Conservation and Management. Subrat Sharma, Hem C. Rikhari and Lok Man S. Palni [18] have carried out study for conservation of Natural Resources through Religion via a Case Study carried out in Central Himalaya. Karim Hamdy [19] concludes that, in Islam, the use of Natural Resources for consumption and profit lies at the juncture between individual worship (ibadat), and group transactions (muamalat). Dr. Odeh Aljoyyusi [20] discusses the Islamic perspective of natural resource management and introduces the concept of Hima (community-based management) style in the light of Islamic teachings. However, here again no particular Quranic Aayahs have been referred; rather the work is based on Ahadees. Professor Madya and Dr. Md Golam Mohiuddin [21] have argued that the Muslims have historically created Islamic endowments for the purpose of caring, sharing, providing, controlling, directing, organizing the community of the universe in the context of management sciences. Jeanne E McKay [22] has presented a detailed analysis of Religions' Integration in context of Islamic beliefs in the Natural Resource Management thru a case study of Sumatran Forest Management.

4. Human Resource Management (HRM) is another important area in which numerous publications have been published. In today's world of lean organization concepts and rapidly increasing use of robotics in every field has further intensified work and thoughts on management of human resource. From the research bank of western scholars in the field of Management Sciences, humongous work is visible in the field of HRM. In contrast to other fields of Resource Management, the contribution from the Muslim scholar in the field of Human Resource Management is also significantly higher.

5. Qamar ul Haq, Talat Hussain and Mufti Fahad Quershi [23] have highlighted Islamic principles of Human Resource Management (HRM) in the light of Quranic Aayahs. Nik Mutasim Nik, Abdur-Rahman and Mohammad Adnan [24] have tried to examine the relationship between Islamic HRM practices, and trust in organization based on Islamic principles. Abouzar Zangouinezhad and Asghar Moshabaki [25] had deliberated upon Human Resource Management based on the index of Islamic human development in the light of The Holy Quran's approach. Mohamed Branine and David Pollard [26] have dilated upon Human Resource Management in the light of Islamic Management Principles and highlight the need of a reAayah diffusion in management. Kamel Mellahi and Pawan S. Budhwar [27] have examined the impact of Islamic values on HRM practices and organizational outcomes. Parvaneh Alezadeh [27] has discussed Management of Human Resources from Holy Quran Perspective. Amy R. Poteete and Elinor Ostrom [28] have presented meta-analysis that collective action related to natural resource utilization and governance yielded strong evidence that small-N studies are still the dominant empirical method. Byron K. Williams [29] discusses Adaptive Optimization of Renewable Natural Resources thru Solution algorithms and computer program. Omid Bozorg Haddad and Abbas Afshar [30] have presented Honey-Bees Mating Optimization (HBMO) Algorithm for Water Resources Optimization.

6. From the literature review presented above, it is evident that lots of work has been done in every field of resource management. Most of the work has been done by western scholars. We don't see much contribution towards resource management in the light of religious thoughts. The work done in the context of resource management from religion's perspective is

either concentrated upon the human resource management or non-specific teachings from the religion. In particular, no concrete work in the light of Quranic Aayahs is evident in the field of Resource Management other than some work on Human Resource Management. In the light of aforesaid, the need was felt for research on Resource Management in the light of Quranic Aayahs. Therefore, the area of my research is confined to only Quranic Revelations towards Resource Management without consultation of any other sources of Islamic Wisdom e.g. Hadees, Tafseer etc. This is because that scope of research will exceed due to inclusion of these two sources.

Concept and Classification of Resources

7. The concept of "resources" is fundamental to understanding human development, economic planning, environmental sustainability, and societal progress. In general terms, resources refer to all forms of materials, attributes, or capacities that exist within the environment and can be harnessed by humans to fulfill their needs, solve problems, or achieve specific goals. These needs may range from basic survival and physiological requirements to complex technological and industrial demands. Resources are not inherently useful by themselves; their utility is defined through human knowledge, societal context, and technological capabilities. A substance or phenomenon becomes a resource only when it can be recognized, accessed, and utilized effectively for human benefit.

8. Historically, the definition and perception of resources have evolved in parallel with advancements in human civilization. In ancient times, natural elements such as fertile land, water, and forests were the most valued resources, directly supporting subsistence agriculture and settlement. With the advent of the industrial revolution, emphasis shifted toward coal, iron, and mechanized tools, while the modern technological era has ushered in a reliance on sophisticated resources such as data, information technology, and rare earth metals. Consequently, resources are often characterized as dynamic and context-sensitive; a material considered useless in one era may become highly valuable in another due to scientific discoveries or emerging demands. The classification of resources is essential for analyzing their availability, distribution, utilization, and sustainability. Several frameworks exist for categorizing resources, each based on different criteria. The most widely accepted classification schemes include the following:

8.1 Classification Based on Origin:

- **Biotic Resources:** These are derived from living or once-living organisms. Examples include forests, crops, animals, and fossil fuels (which originate from organic matter). These resources often play a significant role in ecological processes and are central to agricultural and energy systems.
- **Abiotic Resources:** These originate from non-living, inorganic matter. Common examples include water, minerals, metals, and atmospheric gases. They form the foundation of many industrial and construction activities.

8.2 Classification Based on Renewability:

- **Renewable Resources:** These can be naturally replenished over relatively short time spans and include solar energy, wind, water, forests (if sustainably managed), and biomass. They are integral to sustainable development strategies, particularly in the context of climate change and energy security.
- **Non-Renewable Resources:** These exist in finite quantities and cannot be regenerated within a human timescale once exhausted. Examples include coal, petroleum, natural gas, and most mineral ores. Their exploitation must be managed carefully to avoid long-term depletion and environmental degradation.

8.3 Classification Based on the Stage of Development:

- **Potential Resources:** These are resources that are known to exist based on geological or geographical evidence but have not yet been exploited due to technological, economic, or political constraints. For example, tidal energy in some regions remains a potential resource pending viable extraction technologies.
- **Actual Resources:** These are currently being exploited and whose quantity, quality, and usability have been established. For instance, a working oil field or an active iron mine qualifies as an actual resource.
- **Reserve Resources:** These form part of actual resources but are reserved for future use under specific conditions such as economic viability or strategic conservation.
- **Stock Resources:** These are known to exist but cannot be utilized with the existing level of technology. For instance, certain deep-sea mineral deposits or geothermal sources fall into this category.

8.4 Classification Based on Utility and Function:

- **Natural Resources:** These occur in nature without human intervention and include elements like sunlight, water, air, minerals, and land. They are further sub-divided into renewable and non-renewable types and form the backbone of all ecosystems and human development.
- **Human Resources:** These consist of the intellectual, physical, and organizational capacities of individuals and societies. Education, skills, health, leadership, and innovation are crucial components of human resources, often regarded as the most valuable asset in knowledge-based economies.
- **Capital or Man-made Resources:** These are goods produced by human effort to aid further production or service delivery. Machinery, buildings, tools, and transportation infrastructure are examples of capital resources, and their creation and maintenance reflect a society's technological advancement and economic strength.

8.5 In addition to the above, more specialized classifications have emerged in recent academic literature, reflecting the growing complexity of global systems. These include:

- **Cultural Resources:** Language, traditions, and heritage that contribute to identity and social cohesion.
- **Institutional Resources:** Legal, administrative, and political systems that shape governance and social order.
- **Informational Resources:** Data, networks, and digital platforms that drive innovation and connectivity in the information age.

9. Each classification approach offers unique insights and is used according to the analytical requirements of specific disciplines—whether in environmental science, economics, political science, or engineering. Importantly, the classification of resources aids in the formulation of strategies for sustainable development, equitable distribution, conservation policies, and international cooperation. It also serves as a foundation for resource accounting, impact assessment, and long-term planning. To conclude, the multifaceted nature of resources necessitates a clear understanding of their definitions and classifications. By analyzing their types, availability, and developmental status, societies can make informed decisions that balance immediate human needs with long-term environmental sustainability and intergenerational equity.

Resources Mentioned in the Quran

10. Islam places significant emphasis on understanding and utilizing resources. The Quran, as the foundational source of Islamic teachings, frequently references various natural and material resources, underlining their importance in human life and their role as signs of Allah's creation. These references not only highlight the abundance of resources available to mankind but also underscore the importance of using them responsibly, with gratitude and awareness of their divine origin. The Quran describes a wide array of resources—natural and material—that Allah has created for the benefit of humanity. These resources serve multiple purposes, including sustenance, shelter, transportation, and energy, and they play a critical role in maintaining ecological balance. Their mention in The Quran is often accompanied by calls to reflect on the wisdom behind their creation and to utilize them without excess or ingratitude. Some of the key categories of resources mentioned in the Quran include:

10.1 Sun and Moon:

The Quran repeatedly emphasizes the roles of the sun and the moon as vital celestial resources. The sun provides light, heat, and energy essential for life on earth, while the moon influences the tides and serves as a means for calculating time and months. The Quran refers to the sun and moon in several Aayahs, illustrating their roles in the cosmic order and their utility for human beings. For example, in Surah Yunus (10:5), Allah says: "It is He who made the sun a shining light and the moon a derived light and determined for it phases..."

10.2 Earth and Soil:

The earth is presented as a vast expanse that hosts life and provides countless resources such as soil, minerals, and fertile land for agriculture. In Surah Al-Baqarah (2:22), Allah reminds us:

"It is He who made for you the earth a bed and the sky a canopy..."

The soil itself is considered a source of life, as it nourishes plants and crops. Surah An-Naba (78:15) states:

"That We may bring forth thereby grain and vegetation."

10.3 Sea and Marine Resources:

The Quran acknowledges the seas and oceans as rich sources of sustenance and means of transportation. Surah An-Nahl (16:14) declares:

"And it is He who subjected the sea for you to eat from it tender meat and to extract from it ornaments which you wear..."

10.4 Water:

Water is one of the most frequently mentioned and vital resources in the Quran. It is described as the basis of all life. In Surah Al-Anbiya (21:30), Allah says:

"And We made from water every living thing."

It is also emphasized as a blessing that must be preserved and not wasted, as in Surah Al-A'raf (7:31): "Indeed, He likes not those who commit excess."

10.5 Air and Wind:

Although less frequently mentioned explicitly, air and wind are acknowledged as agents of change and as part of the natural order. Winds are depicted as a means of pollination, driving clouds, and as a force of both mercy and punishment. In Surah Ar-Rum (30:48):

"It is Allah who sends the winds so that they raise the clouds..."

10.6 Fire:

Fire, both as a source of energy and symbolic of human development, is noted in the Quran. Its origin from green trees is highlighted in Surah Ya-Sin (36:80):

"[He] who made for you from the green tree, fire, and then from it you ignite."

10.7 Material Resources:

The Quran refers to various material resources such as iron, gold, silver, and pearls, which have practical and economic value. For example, Surah Al-Hadid (57:25) mentions iron:

"We sent down iron, wherein is great military might and benefits for the people."

These materials are also reminders of divine generosity and serve as a test of human stewardship.

10.8 Vegetation and Animals:

Among the most vital resources granted by Allah to humankind are vegetation and animals. Both play a central role in sustaining life and have been repeatedly mentioned in the Quran as signs of divine wisdom and mercy. Vegetation—such as crops, trees, fruits, and herbs—provides food, medicine, clothing, shelter, and countless other utilities. The Quran reminds mankind to reflect upon this blessing:

"Therewith He causes to grow for you the crops, the olives, the date-palms, the grapes, and every kind of fruit. Verily, in this is indeed an evident proof and a sign for people who give thought." (Surah An-Nahl 16: 11)

The revival of barren land through rain is another powerful example of Allah's mercy, as it brings forth sustenance not only for people but also for animals:

“Have they not seen how We drive the water to the dry land, and therewith bring forth crops whereof their cattle eat, and they themselves? Will they not then see?” (Surah As-Sajdah 32: 27)

Similarly, animals have been a critical resource since the beginning of mankind, providing food, transport, clothing, and even lessons. The Quran also draws attention to the diversity and spread of animals as signs for the thoughtful:

“And the cattle, He has created them for you; in them there is warmth and numerous benefits, and of them you eat. And you have a sense of pride and beauty in them as you bring them home in the evening and as you lead them forth to pasture in the morning.” (Surah An-Nahl 16: 5–6)

Animals have also served as transportation and ornamentation:

“And (He has created) horses, mules, and donkeys, for you to ride and as an adornment.” (Surah An-Nahl 16: 8)

Through these references, the Quran establishes a framework that views all resources as trusts from Allah. They are to be used with a sense of responsibility, moderation, and gratitude. Overexploitation, wastefulness, and corruption in their use are condemned, and ethical principles of sustainability are embedded within the Quranic worldview. In essence, the Quran not only acknowledges the existence of diverse resources but also integrates them into a comprehensive spiritual and ethical narrative, reinforcing the belief that proper management of resources is a religious obligation.

Quranic Guidance on Resource Management, Utilization & Optimization

11. The concept of resource utilization lies at the core of human existence and development. A thing becomes a resource only when its usefulness is realized and applied for the benefit of mankind. Throughout history, countless materials and elements existed without being considered resources simply because their potential remained untapped. As human knowledge progressed, many such elements were recognized and employed for various purposes, transforming lives and civilizations. However, even today, there remain countless elements around us whose benefits are still unknown. The Holy Quran not only highlights the purposeful creation of resources by Allah Almighty for the sustenance and comfort of mankind but also urges humans to explore, utilize, and even optimize these resources wisely. From air, water, and food to animals, metals, winds, and celestial bodies, the Quran provides numerous references to encourage beneficial

use and responsible management of these resources—not just for present needs but also with foresight for future generations.

Resource Utilization in the Light of the Quran

12. Resources are inherently meant for utilization to derive maximum benefit. A thing becomes a "resource" only when its utility is realized. This is why numerous materials or phenomena that existed for centuries were not classified as resources until humanity discovered their usefulness. Conversely, many things in our surroundings today may not yet be recognized as resources but could prove to be invaluable in the future. Human life and survival are inconceivable without certain essential resources such as water, air, and food. To meet human needs, Allah Almighty has created countless resources and facilitated their availability. The Quran frequently highlights the purposeful creation and utilization of various resources for the benefit of mankind.

12.1 Utilization of Animals

Allah Almighty says in The Holy Quran:

"And cattle He has created for you: from them you derive warmth, and numerous benefits, and of their (meat) you eat." (Surah An-Nahl, 16:5) This Aayah illustrates that animals are created for human use — a clear manifestation of Allah's mercy. While certain animals like cows and camels have long been utilized for meat, milk, and transport, many animals' potential benefits remain untapped. Today, animal products are widely used not only in food but also in medicine, cosmetics, and even industrial applications. Interestingly, nature has inspired engineering marvels as well — for instance, the wing of the Airbus A380 was inspired by the flight pattern of an eagle. At another Aayah it is stated:

"And in cattle (too) you have an instructive example: from within their bodies, We produce milk for you to drink; there are in them, besides, numerous other benefits for you; and of their meat you eat." (Surah Al-Mu'minun, 23:21)

Here, Allah emphasizes that animals carry many advantages, suggesting that human understanding of these benefits is still evolving. Furthermore:

"And they have (other) benefits from them (besides), and they get (milk) to drink. Will they not then be grateful?" (Surah Ya-Sin, 36:73)

These Aayahs reinforce the diverse applications of animals — beyond food, for transport, emotional comfort, and even economic activities.

12.2 Utilization of Material Resources

Allah Almighty mentions:

"And We sent down iron, in which is strong might, as well as many benefits for mankind."

(Surah Al-Hadid, 57:25)

Iron, referred to as the "mother of all materials," is indispensable in modern civilization. From tools and infrastructure to machines and weapons, it plays a fundamental role in the extraction and transformation of other resources. Today, iron and its alloys are used in thousands of applications across numerous industries. Regarding brass, the Quran states:

"And We made a font of molten brass flow for him." (Surah Saba, 34:12)

This Aayah about Prophet Sulaiman (AS) indicates the advanced material processing granted to him. The Quran here hints at metallurgical processes like melting and shaping materials, a concept extensively developed in modern materials science. A similar reference is found in the story of Dhul-Qarnain:

"Bring me blocks of iron." When he had filled the gap between the two mountain sides, he said, "Blow with bellows." Then, when he had made it (red) as fire, he said, "Bring me molten brass that I may pour over it." (Surah Al-Kahf, 18:96)

This passage indicates a hybrid use of materials — solid iron followed by molten brass — showing early metallurgical techniques to enhance strength and durability.

12.3 Utilization of Natural Elements

12.3.1 Wind and Water

"It is He Who sends the winds as heralds of glad tidings, going before His mercy. When they have carried the heavy-laden clouds, We drive them to a dead land, then We send down rain, thereby producing every kind of fruit." (Surah Al-A'raf, 7:57)

This Aayah portrays how wind serves as a vital agent in water distribution. In the modern age, wind is also harnessed for energy production. Historically, wind-powered ships were a primary means of transport.

12.3.2 Sun, Moon, and Stars

"He it is Who splits the daybreak and made the night for rest, and the sun and the moon for calculation." (Surah Al-An'am, 6:96)

"It is He Who made the sun a shining light and the moon a reflected light, and determined for it phases so that you may know the number of years and account (of time)." (Surah Yunus, 10:5)

These Aayahs emphasize the sun and moon's multiple functions: providing light and heat, and aiding in the measurement of time. Modern usage includes solar energy harvesting — a promising and renewable energy source.

"And it is He Who made the stars for you, that you may be guided by them in the darkness of land and sea." (Surah Al-An'am, 6:97)

Before the invention of the compass and GPS, stars were indispensable for navigation. Even today, they play a role in astronomy, navigation, and timekeeping.

12.4 Optimized Resource Utilization

Another vital Quranic principle is the optimized and sustainable use of resources. The story of Prophet Yusuf (AS) during the Egyptian drought reflects this:

"(Yusuf) said: 'You shall sow for seven consecutive years. Whatever you reap, leave it in its ears, except a little, which you eat. Then will come seven hard years, which will consume what you have saved, except a little you have guarded.'" (Surah Yusuf, 12:47–48)

This reflects an early model of resource conservation and strategic planning — a key principle in modern resource management and food security.

12.5 Utilization for Defense and Preparedness

The Quran also links resource utilization with preparation and national security:

"And prepare against them whatever you can of power and of steeds of war, by which you may terrify the enemy of Allah and your enemy..." (Surah Al-Anfal, 8:60)

This Aayah underscores the strategic use of resources for defense and deterrence, highlighting the need for strength in safeguarding societal interests.

Resource Optimization

13. Resource optimization has become a critical global concern. The realization has emerged that resources are not infinite and must be used wisely and efficiently. Developed nations are increasingly focusing on minimizing resource use, controlling waste, and enhancing sustainability. Many optimization techniques have been developed to manage various types of resources, especially by nations that lack key resources like oil or gas. These efforts aim to reduce environmental impact, manage costs, and ensure long-term availability. The Quran contains numerous teachings that reflect the principle of resource optimization. In Surah Al-Hijr, Allah says:

"And there is not a thing but its (source and) resources are with Us; but We only send down thereof in due and ascertainable measures." (15:21)

Despite owning the treasures of all resources, Allah sends them in measured quantities. This implies that even abundant resources should be managed carefully to benefit more people, reduce waste, and ensure sustainability—especially with non-renewable resources. Surah Al-Qamar reinforces this:

“Verily, all things have We created in due proportion and measure.”
(54:49)

This indicates that everything in creation is optimized—not due to limitation, but as a deliberate design for the well-being of mankind. In Surah Al-Ra’d, Allah says:

“Allah knows what every female bears, by how much the wombs fall short or exceed. Every single thing is before His sight, in due proportion.”
(13:8)

Even rain is optimized:

“He sends down rain from the sky in due measure; and We raise to life with it a land that is lifeless...” (43:11)

This shows that both scarcity and excess of rain can be harmful, and its optimization is vital for the environment and agriculture.

In Surah Yunus, Allah says:

“It is He Who made the sun to be a shining glory and the moon to be a light, and measured out stages for her, that you might recognize the number of years and the count of time.” (10:5)

This Aayah demonstrates precision in cosmic systems, which reflects the larger principle of balance and measurement in resource management. Surah Saba highlights optimized manufacturing:

“And We made the iron soft for him; (saying) ‘Make coats of mail, balancing well the rings of chain armor...’” (34:10–11)

Allah commands Prophet Dawood (PBUH) to optimize ironwork by balancing and measuring. This helps reduce material use and improve efficiency.

Another powerful example is in Surah Yusuf:

“(Joseph) said: ‘For seven years shall you sow as usual, and leave the harvest in the ear, except a little which you eat. Then will come seven hard years which will consume what you stored...’” (12:47–48)

Here, Prophet Yusuf (PBUH) advised optimized storage of food during surplus years to survive the coming drought. This is a classic example of planned and wise resource usage.

Surah Al-Furqan teaches financial resource balance:

“Those who, when they spend, are not extravagant and not miserly, but hold a balance between the two.” (25:67)

This promotes moderation in spending, which applies to financial and all other resources including time, material, and energy.

Even in animal creation, like that of the camel, there is built-in resource optimization:

“Do they not look at the camels, how they are made?” (88:17)

Camels are designed to store and conserve food and water for long journeys in deserts. This is a divine example of natural resource management and optimization.

In modern resource management, these principles align with concepts of sustainability, lean management, and efficiency. Optimization today applies not just to material resources but also human capital and time management. Developed countries have adopted these concepts widely, drawing parallels—perhaps unknowingly—with the wisdom already embedded in Quranic teachings.

Conclusion

14. The study has comprehensively explored the concept and significance of resources and their management by integrating Quranic guidance with modern scientific perspectives. It affirms that human survival and progress are deeply dependent on material resources—such as vegetation and animals—which the Quran repeatedly presents as divine blessings. These natural provisions serve not only for sustenance, clothing, transport, and shelter, but also as signs encouraging reflection, gratitude, and moderation. Both the Quran and modern resource management sciences emphasize the need for optimal utilization, avoidance of waste, and documentation. The Quran links resource management with knowledge, responsibility, and spiritual awareness, while modern approaches use technological tools and scientific methods to achieve sustainability and efficiency. A key convergence lies in the shared call for resource preservation for future generations and equitable distribution. Unfortunately, many Muslim nations, despite being resource-rich, lag in areas of discovery, control, and scientific contribution. Therefore, it is imperative for the Muslim world to develop capable institutions, invest in research, and embrace both Quranic teachings and modern methodologies to ensure self-reliance, sustainability, and global relevance in resource management.

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