



**Editorial**

## **JSDNAREMA Mission – Advancing Knowledge and Scientific Discourse on Natural Resource Management**

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### **ABSTRACT**

Welcome to the inaugural issue of the Journal of Sustainable Development of Natural Resources Management (JSDNAREMA). The journal is dedicated to advancing the knowledge and providing a platform for scientific discourse on Sustainable Resource Stewardship. The multiple and interrelated issues and problems to be addressed by scientific and applied research include pollution reduction, sustained trend of proper quality of life while resource depletion is reduced and eventually overcome. The first issue of the journal publishes three research and one review contributions discussing the issues urban mining of electronic waste, Process Integration for sustainable energy supply, equitable allocation of carbon credits, and water purification. The journal aims at further soliciting, and publishing innovative scientific contributions on technological, technical, business, and societal solutions and implications concerning resource management, that collectively lead to technologies, practices and policies of the sustainable navigation of “Spaceship Earth” through the decades and centuries to come.

### **KEYWORDS**

*Sustainable Development, Interdisciplinary Research, Knowledge Exchange Platform, Scientific Discourse, Responsible Resource Management, Mission Statement.*

### **INTRODUCTION: PRESSING ISSUES AND GLOBAL CHALLENGES**

The current level of economic development of most of the modern World has been the result of many centuries of trials, errors and sometimes inspired deliberate development of human society and technologies. There are undeniable peak achievements in technological development and standards of living in some parts of the world – Europe, North and South America, and South-East Asia, and some regions follow closely. However, this comes at the price of social disparities, frequent resource misuse, and increasing levels of environmental and biodiversity loss threats. This has put humankind and the entire planet on an unsustainable development path. That became apparent at the end of the 1980s and is documented in the well-known Brundtland Report [1].

The triple-bound nature of Sustainable Development – consisting of environmental, economic, and social components [2], inevitably leads to the need to treat jointly and interconnectedly multiple scientific and technological developments, business activities, social interactions, and policies [3]. This includes the need for a clean energy supply, energy-water, and more complex nexuses. A testament to this complexity is the multitude of modelling approaches and metaphors for sustainability [4].

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The realisation of the problem scale, however, is also accompanied by the similarly stark realisation that the planet Earth, on which humanity lives, is essentially a closed system where material flows are always closed – i.e. circular [5]. The main difference between sustainable and unsustainable management of those flows is that careless or inefficient management leads to pollution because of spontaneous mixing. In contrast, deliberate flow management, with careful prevention of mixing (pollution) and residual cleanup of polluted flows, provides the chance for a sustainable environment and sustained quality of life.

Within the overall context of that interlinked multitude of issues, the Journal of Sustainable Development of Natural Resources Management is focused on the responsible and efficient management of natural resources that would facilitate and stimulate Sustainable Development. In this context, the journal emphasises that sustainable management of natural resources is a deliberate activity that must go beyond mere resource conservation. Its scope propagates further to include ecological restoration, resource optimisation, and technology interactions with society at large. The best metaphor for summarising this way of thinking is to liken the Earth to a spaceship, where inhabitants are all interdependent and have to actively and deliberately manage their actions to maintain and improve the conditions on the ship.

## **SUSTAINABILITY RESEARCH AND THE JOURNAL SCOPE**

The outlined landscape of issues, concepts and scientific approaches has led the thinking of the scientific community to the need for not only multi-disciplinary but also for inter-disciplinary research, integrating the fundamental modelling and applied development efforts of natural scientists, physicists, engineers, social and business scientists, as well as practitioners and political decision-makers. Following that logic, the Journal of Sustainable Development of Natural Resources Management has been set up as an international inter-disciplinary journal dedicated to improving and disseminating the knowledge on theory, methods, policies and technologies for increasing the sustainable use and management of natural resources. The journal aims to provide a platform for high-quality scientific discourse on topics related to responsible and sustainable management of natural resources.

The journal publishes innovative ideas, studies, and relevant academic reviews in the field of resource science, reports the latest research results, introduces the cutting-edge trends of the discipline, and serves to establish and develop the theoretical system of resource science and promote the sustainable utilisation and management of resources worldwide, regarding land, marine, water, energy, climate, society, economy, food their many combinations.

The initial journal topics include the following list, subject to periodical updates:

- Efficiency improvement in natural resources utilisation and management
- Natural resources reuse and recycle
- Circular Economy, Industrial Symbiosis, Industrial-Urban-Rural Symbiosis
- Regional energy, water, land and resources management
- Regional low-carbon emissions
- Climate change mitigation
- Environmental footprints mitigation
- Process integration for improving natural resources efficiency
- Ecosystem services
- Ecological products and assets

The journal is looking beyond merely identifying challenges. It encourages submissions bridging the gaps between energy, water, land, and social systems—helping to promote innovative and comprehensive solutions. Since sustainable practices can contribute to improved public health by reducing pollution and providing access to clean water, it is intrinsically linked to improved human health [6]. That opens the journal's scope to neighbouring areas beyond the intermediate resource management practices into the

implications of improved environment stewardship on people's health and business climate and to providing an equitable and just sustainable future for all.

A critical dimension is also policy discourse. The sustainable management of resources requires collaboration across disciplines, sectors, and administrative borders. This leads to the need to publish forward-thinking contributions touching upon policies for responsible and equitable resource management, fostering international dialogue. This multitude of dimensions will be the driver for periodic re-evaluation and potential updates of the journal scope to maximise the benefit to the scientific community and humanity.

## CONCLUSIONS

In conclusion, managing natural resources sustainably in the current complex and dynamic World, while having started as a concern for healthy living conditions, later evolving into a comprehensive environmental concern, has become imperative for the overall sustainable development of "Spaceship Earth", whose components can be grouped into environmental – flora and fauna, human, societal, business and economic – each component containing the next ones in intricate and complex interactions. The main function of Sustainable Development is then to ensure the seamless and symbiotic relationship between those key components, implementing the famous motto [1] *"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."*

Therefore, the Journal of Sustainable Development of Natural Resources Management – JSDNAREMA, is an open platform for knowledge exchange fostering research advancement as well as the conception of strategies, methods and policies. Contributions are welcome concerning technological, business, and governance solutions for responsible steering of "Spaceship Earth". The journal team is looking forward to the innovative contributions of the scientific community.

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