

Abstract. Sustainable development (SD) has become a popular catchphrase in contemporary development discourse. However, in spite of its pervasiveness and the massive popularity it has garnered over the years, the concept still seems unclear as many people continue to ask questions about its meaning and history, as well as what it entails and implies ...

Renewable energy sources, such as wind and solar, emit little to no greenhouse gases, are readily available and in most cases cheaper than coal, oil or gas. Renewable energy - powering a safer ...

This study empirically investigates the impact of renewable and non-renewable energy generation on sustainable development for a balanced panel of 68 developed and developing economies from 1990 to 2019. This is done to scrutinise the intricate interplay between energy sources and sustainable development outcomes at the global level. The estimated ...

The current climate and economic crises call for a swift transition to low-carbon energy systems. According to the Intergovernmental Panel on Climate Change (IPCC) [1], renewable energy must supply 70-85% of the world's electricity in 2050. Annual investments in these energy technologies as well as in energy efficiency must be multiplied by a factor of ...

Sustainable development is most commonly defined as "...development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development 1987).. Renewable natural resources have garnered attention as a potential key component in sustainable development ...

Energy is a prerequisite for development and sustainable energy systems are a prerequisite for sustainable development [1]. While the world has seen rapid development over particularly the last few decades with penetration levels of renewable energy sources reaching double-digit percentages in electricity supply in several countries, many other countries and ...

Germany is recognized a global leader in renewable energy. In the first half of 2018, it was widely reported that Germany had successfully produced enough electricity to meet the country's household energy need for an entire year. ... (2018) Renewable energy and sustainable development in a resource-abundant country: challenges of wind power ...

Historically, economic development has been strongly correlated with increasing energy use and growth of greenhouse gas (GHG) emissions. Renewable energy (RE) can help decouple that correlation, contributing to sustainable development (SD). In addition, RE offers the opportunity to improve access to modern energy services for the poorest ...

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First, previous studies on the effects of renewable and non-renewable energy on the economic growth have employed GDP as a measure of economic activities. ... Renewable energy and sustainable development. An active body of the literature has examined the impact of renewable energy on economic growth and carbon dioxide emissions.

The connection between renewable energy and sustainable development as well as policy recommendations and the way forward to combat the barriers to RE technologies have been discussed. ... The first is the hot, dry tropical continental air mass of the northern high-pressure system, which gives rise to the dry, dusty, Harmattan winds that blow ...

Sustainable energy development ... was founded by 75 different states as an intergovernmental agency to promote the adoption and sustainable use of renewable energy ... within ecosystem boundaries or carrying capacity regarding energy development was emphasized when the concept of sustainable energy development was first introduced in 2000 ...

The role of renewable energy technologies in sustainable development. Renewable energy has an important role to play in meeting the future energy needs in both rural and urban areas ... Proceedings of the first national conference 2001, 55-61. ISBN 978-35533-0-5 ISBN 978-35533-0-5. Google Scholar Sambo AS, Iloeje OCJ, Ojosu OJ ...

Among the sustainable development goals, the theme of the energy transition is particularly important, which translates not only into a move away from energy from fossil fuels in favor of renewable ones but also into an improvement in energy efficiency linked to energy production and greater awareness of energy consumption by citizens.

The Sustainable Energy in America 2024 Factbook (Executive Summary pp. 5-10). Bloomberg New Energy Finance. 2024. ... 27:12 What Factors Affect Renewable Energy Project Development? Lecture slides available upon request. Embed Code. Additional Resources About ... Largest Renewable Energy Producers (World 2022): International Renewable Energy ...

A thematic analysis of these most cited publications led to the identification of four interrelated themes of sustainable energy development; access to affordable modern energy ...

This book aims to address the increasing interest in reducing the environmental impact of energy as well as its further development and will act as a useful reference for engineers, architects, and technicians interested in and working with energy systems; scientists and engineers in developing countries; industries, manufacturers, inventors ...

To encourage sustainable development of biofuels, regulatory policies, such as the RED and RFS, stipulate various sustainability criteria for biofuels. ... most of the studies estimate that the fossil energy consumption

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for first- and second-generation biofuels is below 0.5 MJ MJ⁻¹. ... Renewable Sustainable Energy Rev. 42, 1349-1361.

In recent years, rural areas have become significant battlegrounds for the implementation of energy transitions. Not only are they meaningful as the location for the siting of renewable energy (RE) facilities, but they also hold a great potential for the creation of significant synergies for sustainable rural development (RD) (e.g. Benedek et al., 2018).

The use of clean energy and renewable energy resources--such as solar, wind and hydropower--originates in early human history; how the world has harnessed power from these resources to meet its energy needs has evolved over time. Here's a quick look at how different ...

Energy is at the heart of many of these Sustainable Development Goals - from expanding access to electricity, to improving clean cooking fuels, from reducing wasteful ...

Development of Renewable Energy Map ... This data underscores the accelerating global transition away from fossil fuels and towards a more sustainable, renewable energy future. The global push towards renewable energy is evident in the efforts to integrate a substantial proportion, around 85%, of renewables, predominantly from variable sources ...

This research conducts a comprehensive analysis of the intricate relationship between renewable energy and the sustainable development goals (SDGs). Employing diverse methodologies including latent dirichlet allocation (LDA) topic modeling, bibliometrics, citation analysis, and regression modeling, the study explores the evolving landscape of ...

The 13th International Forum on Energy for Sustainable Development is scheduled to take place on 2-4 December 2024 at the United Nations Conference Centre in Bangkok, Thailand. ... Workshop on the Guidelines and Best Practices for MSMEs in delivering energy-efficient products and in providing renewable energy equipment (in Russian) 01 October ...

The results show that solar power is the most suitable renewable energy for sustainable development, followed by biomass, wind, and hydropower, but the optimal alternative is sensitive to the ...

At present, the international energy situation is in a stage of new changes and adjustments [6, 7]. The basic trend of the global energy transition is to realize the transition of the fossil energy system into a low-carbon energy system, and finally enter the era of sustainable energy mainly based on renewable energy [8]. Therefore, many studies have analyzed the ...

Quantile regression was used for robustness checking across the various distributions of renewable energy. First, we find that natural resources enhance renewable energy development in Africa and that the results are

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robust across alternative specifications of natural resources and governance, except for forest resources, which have a negative ...

The adoption of energy specific sustainable development goals was a milestone in moving the world towards a more sustainable and equitable system. The IEA continues to support this critical goal with unbiased data and projections. ... The United Nations will have the first in-depth review of SDG 7 goals at the High-level Political Forum on ...

Advances in Renewable Energy and Sustainable Development focuses on cutting-edge research areas including renewable energy and sustainable development. As a leader in the global megatrend of science and technology innovation, China has been creating an increasingly open environment for science and technology innovation, increasing the depth and breadth of ...

The sudden surge in energy use and carbon dioxide emission (CO₂) in recent times is alarming. Many believe that the rising population level in urban areas is the brain behind the surge [1, 2], while others argued that goods and services production might be the cause [3, 4]. Whatever may be the case, energy has come to stay as a factor that determines ...

United Nations Sustainable Development Goals - Time for Global Action for People and Planet ... with the number of people living without electricity growing for the first time in over a decade ...

Given the key role renewable energy plays in averting the impending climate crisis, assessments of the sustainability of renewable energy systems (RESs) are often heavily skewed towards their...

Hydropower Vision Roadmap Topic 2: Sustainable Development and Operation - An integrated approach to hydropower project development that incorporates environmental objectives, metrics, and methodologies is required to balance environmental, social, and economic factors in a future in which climate change may influence water resources and ...

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