

Dear readers,

When talking about sustainability, we are referring to a series of aspects that have become key elements in development planning across all levels globally for approximately four decades. Sustainability, or sustainable development, is a current paradigm that must be considered by all sectors, as it entails establishing a balance between the economic, social, and environmental aspects when addressing the development of societies.

Since its origin, there have been distinctions made regarding the use of either terminology. However, both terms are certainly valid, as stated in existing literature. They both constitute a concept coined in 1987 by Dr. G.H. Brundtland, head of the United Nations (UN), in the report titled "Our Common Future," and who introduced the term "sustainable development" (also referred to as "sustainability" in other texts). This expression encompasses the economy, the environment, and society as an interdependent trilogy, with the environment being the pivotal factor in decision-making (Gobierno de México, 2018).

Over the decades, sustainability has evolved in its theoretical understanding and has been the subject of analyses based on perspectives that weigh the existence of facts and circumstances. These circumstances, when not addressed or prevented, were not perceived as real until the consequences of such neglect became evident. These consequences manifest in various domains but are particularly perilous when overlooked by governments.

"...Omitting the issue of sustainable development in governmental systems' programs and strategic plans implies excessive expenditure, use, and abuse of environmental resources essential for the survival of living beings. Consequently, as the demand for products and services increases to meet the vital and common needs of society, coupled with the escalating lifestyle in large metropolises and various social strata, we observe how the longevity of human beings is being altered and affected (Alvarado-Peña and Echeverri De la Hoz, 2020, p. 14)."

In theory, and with the correct use of both concepts and terminologies, in Latin American companies or organizations, it is increasingly being acknowledged and understood, more so than in the past, that sustainable practices bring a set of benefits, both for the company itself (increasing and enhancing its value, performance, finances) and the significant economic and social im-

pact for all parties involved. Therefore, the ultimate goal should always be to establish and strengthen objectives aimed at environmental conservation.

However, in practice, sustainable development is an aspect that has had little significance, even in the current era, mainly in those organizations whose resources, activities, production, and services are based on the exploitation of the environment. Organizations that inevitably move in a direction contrary to sustainable development "pose a clear threat to nature... but also to the humans who coexist with it" (Alvarado-Peña and Echeverri De la Hoz, 2020, p. 14).

Given the aforementioned, the aim of this work addresses the demands of the environment in terms of knowledge generation and scientific production, as well as the dissemination of research works in the social area that ultimately provide the necessary results for resolving various existing issues.

Research work on the topic of sustainable development, especially in the contexts of developing countries in the region, is a priority and a compelling reason to present some documents, products of researchers' concern and interest in disseminating information that precisely contributes to the solution of situations inherent in the promotion and strengthening of sustainability in organizations from various fields of knowledge. Therefore, we hereby present the different scientific articles, their titles, authors, and a brief description of their content:

ETHNOEDUCATION AS AN INSTRUMENT FOR THE PROMOTION OF SUSTAINABLE DEVELOPMENT. AN ANALYSIS FROM SCIENTOMETRICS

Presented by Hugo Semanate Quiñonez and Ciro Serna Mendoza, researchers from the University of Manizales and the National Training Service SENA, Colombia, this study comprises a comprehensive literature review of the most cited publications from 2017 to 2021, focusing on an analysis of ethno-education, contributions, and promotion of "sustainable development" through the pedagogical practices of Indigenous Peoples. The study yielded a total of 1,124 scientific documents annually, covering topics related to pedagogy, teaching, culture, and ancestral knowledge by prominent authors. The authors conclu-

de that educational processes in ethnic communities arise from ancestral practices, thereby fostering sustainability. This approach allows for educating the “being” without conforming to developmentalist doctrines and educational models.

WILLINGNESS TO PAY FOR URBAN SOLID WASTE INTEGRAL SYSTEM IN SEMI-URBAN POPULATIONS

Researchers Francisco Iván Hernández Cuevas, Diana Estefanía Castillo Loeza, Javier Becerril García, and María Pía Mc Manus Gómez from the Universidad Autónoma de Yucatán and the Universidad Marista de Mérida in Mexico present a study, as described by the authors themselves, aimed at determining the socioeconomic factors associated with willingness to pay for the MIRSU (Integrated Management of Urban Solid Waste) among users in semi-urban municipalities of Yucatán (Mérida, Mexico). The study involved 1,144 surveys conducted in 6 semi-urban localities of Yucatán. The results revealed that respondents were willing to pay an average of 17.65 pesos for the integrated management of solid waste. It was observed that willingness to pay decreases when the Maya language predominates and when households have fewer physical assets and rooms. Among other findings, the study concludes that there are cultural and social elements ingrained in this behavior.

CHARACTERIZATION OF THE ENVIRONMENTAL ATTITUDES AND PRACTICES OF THE URBAN POPULATION OF PUNO, ANDEAN PLATEAU

Presented by Jesús Evaristo Tumi Quispe from the National University of the Altiplano Puno in Peru, this study aimed to characterize the pro-environmental attitudes and behaviors of the population of the city of Puno concerning sanitation, pollution, and environmental management. This non-experimental study was conducted among a population of 97,264 urban residents aged 18 and older. The results revealed that the environmental attitudes of most of the residents are positive regarding pollution factors, sources, and their effects on human health. The study concludes that new public policies in environmental education are required to effectively engage civil society, based on a system of incentives.

A HYDROPOWER DEVELOPMENT PERSPECTIVE IN ECUADOR: PAST, PRESENT, AND FUTURE

Researcher Sebastián Naranjo Silva from the Polytechnic University of Catalonia in Spain presents this research

which aims to critically analyze the development of hydroelectric energy in Ecuador in recent years and establishes general energy projections for 2030 to expand knowledge fields and perspectives. Using a quantitative methodology, information was gathered from scientific publications, articles, research documents, and databases of governmental agencies regarding hydroelectric development in Ecuador and its regulations. As a result, through projection calculations, it is inferred that Ecuador will need around 43 TWh, 47 TWh, or 52 TWh by the year 2030 to supply the energy grid, depending on the proposed scenarios (low, medium, high). The study concludes that hydroelectric energy will indeed be fundamental to meet this requirement. However, there is a barrier for the country as hydroelectric energy is highly sensitive to external factors (climate effects), leading to an uncertain future.

ENVIRONMENTAL REGULATIONS IN ECO-INNOVATION AND SUSTAINABLE PERFORMANCE IN MEXICAN AUTOMOTIVE INDUSTRY

Conducted by Gonzalo Maldonado Guzmán, Víctor Molina Morejón, and Raymundo Juárez del Toro from the Autonomous University of Aguascalientes and the Autonomous University of Coahuila in Mexico, this study addresses a gap in the literature concerning the relationship between environmental regulations, eco-innovation, and sustainable performance in manufacturing companies. They aim to fill this gap and generate new knowledge through an extensive literature review. After analyzing data from a sample of 460 manufacturing companies in Mexico, the study concludes that environmental regulations have positive effects on eco-innovation, which in turn positively impacts the sustainable performance of automotive manufacturing companies. The study suggests that compliance with regulations leads to improvements in eco-innovation activities.

As a comment regarding the aforementioned studies, research on organizational sustainability is inherently complex and requires considerable effort, initiative, partnerships, and various inter-institutional relationships. It is crucial to recognize the valuable work done by researchers in this field, as they provide valuable information for general readers' understanding while disseminating new knowledge and laying the groundwork for future studies, which is already a significant achievement.

Furthermore, as *La Granja* is a miscellaneous journal covering Life Sciences, it also presents articles on various topics, including Earth Sciences, Veterinary Sciences, and Agricultural Sciences, which will be presented below.

CARIHUAIRAZO GLACIER RETREAT AND ITS PERCEPTION IN THE CUNUCYACU COMMUNITY

In this research carried out by David Hidalgo, Jean-Carlos Ruíz, Luis Maisincho, Bolívar Cáceres, Verónica Crespo, Christian Domínguez, David Piedra, and Marcos Villacís, researchers from the IRD (Institut de Recherche pour le Développement), Sorbonne University, University of Grenoble, France; the Salesian Polytechnic University, the National Polytechnic School, the Andean University Simón Bolívar, and the National Institute of Meteorology and Hydrology of Ecuador, the retreat of glaciers in the Andes mountain range is analyzed, focusing on the significant loss of the remaining ice mass in Carihuairazo, which by 2021 has lost 99% of its total glacier surface. This comprehensive article not only analyzes meteorological and climatological data but also contrasts satellite images with interviews of community members from the surrounding area of Cunucyacu and mountaineers who work and frequent the area. Thus, it demonstrates how the Carihuairazo glacier is in a situation of inevitable disappearance and reveals the vulnerabilities of the communities facing this phenomenon.

LANDSLIDES SUSCEPTIBILITY ANALYSIS EMPLOYING ANALYTICAL HIERARCHY PROCESS ON AN AMAZONIAN ROADWAY IN ECUADOR

In the realm of Earth sciences, this article, presented by Cristian Cargua, Ronny Espin, Bryan Valencia, Marco Simbaña, Sebastián Araujo, Anderson Ocampos, and Carolina Cornejo, researchers from the National University of San Marcos in Peru, the Ikiam Amazon Regional University in Ecuador, and the Yachay University of Experimental Technology Research in Ecuador, addresses one of the most common issues in the Andean and Amazonian regions: landslides. Due to increasingly frequent heavy rains, exacerbated by the effects of climate change, indiscriminate logging, and the inherent geodynamic characteristics of the area, landslides and lahars are incurring a growing toll on infrastructure, roads, and even human lives.

This research focuses on the case of the Puyo-Tena Road, for which a cartographic model of landslide susceptibility was developed using variables such as slope, geological formations, land cover and use, as well as distances to faults, roads, and rivers. Handling multiple variables can pose a complex decision-making challenge. Therefore, an analytical hierarchy process, a semi-quantitative method that categorizes variables into five susceptibility categories easily understandable to decision-makers and the community at large, is employed. This approach enables relevant decisions to be made to mitigate potential events that could endanger the com-

munity.

MOLECULAR DETERMINATION OF THE ETIOLOGICAL AGENT OF BOVINE MASTITIS FROM ANDEAN PRODUCTION UNITS

In the field of veterinary sciences, Nancy Bonifaz, Ximena Galarza, Byron Fuertes, and Janss Beltrán, researchers from the Salesian Polytechnic University and the National Institute of Public Health Research in Ecuador, present one of the most comprehensive studies on bovine mastitis in the Andean regions of Ecuador. This study was conducted at the molecular level using the polymerase chain reaction (PCR) technique, which allows for the recognition of microbial family, genus, and species, as well as the detection of antibiotic resistance genes. This is crucial for diagnosing and treating diseases effectively. As a result, nine etiological agents causing the disease were identified, along with cases of resistance to several of the identified species.

RESPONSE OF FLOUR CORN (*ZEA MAYS* L. VAR. *AMYLACEA*) TO THE INOCULATION OF *AZOSPIRILLUM* AND *PSEUDOMONAS*

In the field of agricultural sciences, José Sangoluiza, José Zambrano, Misterbino Borgues, and Kang J. Cho, researchers from the Korea Program on International Agriculture (KOPIA), the National Institute of Agricultural Research (INIAP) of Ecuador, and the University of Granma in Cuba, present an agroecological alternative for fertilizing INIAP-101 flint corn. This alternative involves the use of beneficial bacteria residing in the plant rhizosphere due to their ability to produce phytohormones. These phytohormones promote greater nutrient absorption in the plant, leading to rapid vegetative growth and increased production without the need for chemical fertilizers. Thus, they propose a sustainable alternative for cultivating this corn variety in the region.

EFFECT OF PLANT DENSITY ON YIELD COMPONENTS OF COMMON BEAN GROWN UNDER INTER-ANDEAN MOUNTAIN CONDITIONS OF ECUADOR

Researchers from the National University of Loja and the Technical State University of Quevedo in Ecuador, including Santiago Vásquez, Edwin Villavicencio, Alex Guamán, Marlene Molina, and Camilo Mestanza, present a study on the factors determining bean yield by modifying grain sowing density. They found that density is a crucial factor in determining yield, including the number and weight of the grains studied.


We know that this selection of articles will be useful not only in the research conducted by our readers but also

as an overview of the scientific advancements in the field of Life Sciences occurring in the region. Scientific journals, such as La Granja, play a vital role in dissemination and disclosure, and being indexed in important databases poses certain challenges but also positions them as models of institutional integrity. These journals encompass sustainability and social responsibility, which are intriguing themes for the creation of research lines that explore studies evaluating and comparing high-quality dissemination platforms like La Granja journal.


We conclude by sharing an excerpt from an article

that expresses and summarizes the relationship between the journal and the capacities it develops based on responsible practices, visible to all. It discusses the evolution of the concept of Corporate Social Responsibility (CSR) from philanthropy to sustainability, becoming a more elaborate concept that associates CSR with “responsible management of externalities, incorporating stakeholder expectations into management, creating shared value, and taking a leading role in building sustainable development...” (Daniel Licandro et al., 2019).

Sincerely,

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