

## Guest Editorial Preface

# Special Issue on Industry 4.0 & Sustainability

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Industry 4.0 refers to the sophisticated transformation of manufacturing, value-creation activities, and linked businesses. Industry 4.0, also known as the fourth mechanical uprising, refers to a new stage in the organisation and management of the contemporary value chain. The fourth Industrial Revolution is disrupting nearly every industry in every country at an exponential rate rather than a direct one. These developments signal the alteration of entire governing, executive, and creative systems. Others are making changes and preparing for a future where intelligent robots will amplify their businesses in anticipation of how Industry 4.0 may effect theirs. This meeting will look at how the Fourth Industrial Revolution has changed infrastructure, ecosystem, efficiency, and competitiveness in the discipline of mechanical stream. Examined as well is how IoT and computerized reasoning that affect the development and support of the value chain. Industry 4.0's operational and development challenges on particular projects that are evolving into cunning activities involving checking and regulating information will be offered. The main goal of Industry 4.0 is to accelerate the pace of manufacturing and closely linked businesses like coordinations while simultaneously moving beyond robotization and technological improvement and discovering new market opportunities. However, Industry 4.0 won't become as well known worldwide without supportability. Industry and services sectors growing divisions make sustainability a severe problem. It controls the ecological limitations that influence both the social and financial viability of businesses. Support capacity causes a lot of divisions to be underprepared and a lot of enterprises to lose profit and productivity. Each industry must handle its waste administration component properly to maintain maintainability. Any extremely lucrative industry or division would be a completely disappointment without security issues. Word related health security is frequently dealt with by the environment, approaches, and looking out for protection, motivators, etc. The *International Journal of Social Ecology and Sustainable Development* (IJSESD) has published six updated papers in this special edition that discuss topics like sustainability, industry 4.0's application to the healthcare industry, thermal power plants, the MSME sector, and human factors.

This special issue of the *International Journal of Social Ecology and Sustainable Development* (IJSESD) contains the articles related to sustainability, industry 4.0 applied to ergonomics, service sector, human factor and MSME sector etc.

The first article explained how recent years witnessed lots of advancements in Internet of Medical Things (IoMT), Innovations in Artificial Intelligence (AI), Big Data Analytics and Fog Computing based health care practices. Adoption of these intelligent technology based solutions could help Health Care Establishments to improve their sustainable operational performance. However, success of implementation of smart technology enabled Health 4.0 practices depends upon the coordinated efforts from all the stakeholders including patients, physicians, Health care workers, Health care administrators, policy makers and technology service providers towards its adoption. In this regard this research has been conducted to investigate the current status of Health 4.0 implementation in

India and readiness of Indian health care sector towards its adoption. This paper further employs the SWOT analysis to identify the current areas that need immediate improvement to facilitate Health 4.0 adoption.

The next article in this issue, shows the basic determining elements of healthcare centre is the patient's satisfaction provided by the hospitals, behavioral and psychological aspects, quality and efficiency of the hospitals. The imprecise response of patients add to the complexity in evaluation of quality. On the other hand, in order to have a sustainable service quality in healthcare centre, environment issues related to patient wellness play a greater role. The major indicator in this regard is the disposal of medical waste and the cleanliness of the centre. Thus, the involvement of multiple criteria, uncertainty and qualitative factors make the quality evaluation of healthcare facilities very complicated. In this research, a pilot study has been carried out. The ranking of dimensions as well as the hospitals are established using fuzzy analysis. The outcome of this study can be helpful to choose a better service from the range of service provider options and secondly, managers can locate their area of weakness for continuous improvement and sustainability in health service quality.

The next article of this special issue is focused on the challenges of Sustainable MSME are money, policies, environmental regulation, Supply chain etc. But during & post Covid 19 problems and challenges are tackling financial issues of companies, restart Supply chain mgmt, new start ups etc. Although government endeavors have been made for the smooth progression of credit to MSMEs areas yet, MSMEs require more research. Hence in this article an attempt is taken to prioritize challenges of MSME during and post covid

The last article explained about coal and the connected issues present significant dangers to the nation's financial development, experts caution. In spite of the fact that India has the world's fifth-biggest coal saves, it is bringing in coal at an incredible cost in light of the mounting difficulties keeping down the flexibility of its homegrown assets. More energy imports make an extreme current record difference prompting monetary shortfall in a nation where inflationary weights are devastating the average person. There is a need to empower improvement and send advances which include extraction, transportation, and consuming of the dark gold in the most productive and climate neighborly way and simultaneously keep up the quick exhausting green spread in the country. So an exertion is taken to concentrate on the Sustainable flexible chain issue of the Indian warm force area by basic condition demonstrating (SEM).

As the official journal of the ***International Journal of Social Ecology and Sustainable Development*** (IJESD) is proud to bring you this special issue. We hope that reading these top quality papers will inspire you to send your own submissions to future issues. May these contributions be helpful to all or any for research and academic growth.

In the end, we would really like to greatly appreciate the reviewers who have dedicated their considerable time and expertise to review papers. The suggestion and comments help to enhance the content, which will definitely motivate readers of this special issue. We would wish to thank the Associate Editors of the special issue of IJESD, without them the timely review and completion are impossible. We are very glad and fortunate that our Special issue is accepted in IJESD, IGI Global. We would wish to thank our Editor in Chief Prof. (Dr.) Elias Carayannis sir for giving me the chance to Edit the Special Issue in IJESD. I got all guidance and help when i needed it during our Special issue editing process. Thanks to Alexis Miller sir and Managing Editor Armando Papa sir for helping me. It is a very smooth and delighting experience to Edit the special Issue of the IJESD journal.

Thanks to all for your help and guidance. In the future definitely, it'll add value to my editorial experience.

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