Article Type (Article, Review, Communication, etc.)

TITLE of the article

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Abstract

Provide a concise, single-paragraph summary (150–250 words) describing the purpose, key findings, and implications of the study. The abstract should clearly state the research problem and objectives, methodology employed, principal results, and major conclusions regarding sustainable systems. Write a single paragraph without citations, abbreviations, or references to the main text.

Keywords: keyword 1; keyword 2; keyword 3; keyword 4

(Use 4–6 keywords, including general and specific terms.)

1. Introduction

The Introduction should present the background, context, and importance of the research topic in a clear and logical manner. Define the research problem, identify gaps in the existing literature, and articulate the aims and main contributions. Summarize related work to situate the research within academic and practical contexts. End with an overview of the paper's structure or the central research questions or hypotheses.

2. Literature Review or Theoretical Framework

This section should provide a critical, organized review of relevant research. Identify key theories, models, and empirical findings, emphasizing what is already known and where gaps remain. Analyze, compare, and synthesize the literature to highlight the novelty and necessity of the study. If a theoretical framework is used, explain and justify how it guides the study's hypotheses, research design, or analytical approach.

Overview of the Research Area. Briefly explain the broader field and its relevance.

Summary of Major Studies. Discuss influential and recent studies, their findings, and contributions.

Identification of Research Gaps. Identify unanswered questions, inconsistencies, and limitations.

Conceptual or Theoretical Basis. Define key theories, models, and concepts.

Connection to Current Study. Explain how the proposed study builds upon or differs from prior work.

Logical Flow and Clarity. Organize the discussion thematically and use clear transitions.

3. Methodology

Provide a transparent, step-by-step description of the design, data collection, tools, and procedures so that the study is reproducible.

3.1. Research Design and Approach

Define the research strategy (e.g., experimental study, case study, simulation, or systematic review) and the theoretical framework (e.g., circular economy or life cycle assessment) that informs the approach.

3.2. Data Collection and Materials

Identify data sources, sampling, scope, timeframe, geographic or technical boundaries, and instrumentation. Where applicable, report exact equipment model names and manufacturers.

3.3. Technical Procedure

Describe preprocessing and the workflow step by step. For AI-based methods, give model architecture, programming language, and libraries. Quantify sustainability key performance indicators (e.g., energy in kWh, emissions, or cost-benefit ratios).

3.4. Analytical Methods and Validation

Report statistical analyses (e.g., t-tests, ANOVA, p-values) and validation designs (e.g., k-fold cross-validation, control groups, or baseline comparisons).

4. Results

Present and interpret findings relative to research objectives and hypotheses. Explain what was found, how results compare with prior studies, and why they matter.

4.1. Subsections

4.1.1. Subsubsection

Bulleted lists can be written as follows:

- Bullet 1;
- Bullet 2;
- Bullet 3.

Numbered lists can be written as follows:

1. Number 1;
2. Number 2;
3. Number 3.

4.2. Figures, Tables, and Schemes

Refer to figures and tables in the text as Figure 1 and Table 1. Place them near their first citation.

For multiple related plots, use separate figure environments or the `subcaption` package. Keep figure captions descriptive and place tables close to first mention.



Figure 1: This is a figure. Schemes follow the same formatting.

Table 1: This is a table. Tables should be understandable without referring back to the main text.

Title 1	Title 2	Title 3
Entry 1	Data 1	Data 3
Entry 2	Data 2	Data 4

4.3. Editing of Mathematical Components

4.3.1. Displayed Equations

Introduce and discuss each equation in the text. For example:

$$E = mc^2. \tag{1}$$

Refer to Equation (1) in the text.

4.3.2. Inline Expression

Short equations should be included in the sentence, for example $C = FC + VC(q)$, where FC is fixed cost and $VC(q)$ depends on output q.

4.3.3. Symbols and Units

Use SI units consistently throughout the manuscript: kWh (kilowatt-hour), m^3 (cubic metre), s (second), kg (kilogram), and mol (mole).

4.3.4. Theorems, Lemmas, Propositions, and Corollaries

Use numbered environments such as the following:

Theorem 1. *This is a sample theorem statement.*

Proof. This is the corresponding sample proof. □

Corollary 1. *This is a sample corollary.*

Lemma 1. *This is a sample lemma.*

Table 2: Example of a table with four columns.

Title 1	Title 2	Title 3	Title 4
Entry 1	Data	Data	Data
Entry 2	Data	Data	Data
Entry 3	Data	Data	Data

5. Discussion

Discuss the main findings in relation to research objectives and existing literature. Explain theoretical and practical implications, compare results with previous work, and clarify the contribution to intelligent and sustainable systems.

6. Conclusion

Synthesize the study's insights without introducing new data, analyses, or references. A brief discussion of future research directions may be included.

7. Patents (if applicable)

If the research involves patented technology, processes, or inventions, provide accurate patent information. Remove this section if not applicable.

Author Contribution

Describe contributions using the CRediT taxonomy. Example: Conceptualization, A.A.; Data curation, B.B.; Formal analysis, A.A.; Funding acquisition, A.A.; Investigation, B.B.; Methodology, A.A.; Project administration, A.A.; Resources, A.A.; Software, B.B.; Supervision, A.A.; Validation, B.B.; Visualization, B.B.; Writing—original draft, A.A.; Writing—review and editing, A.A. and B.B.

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Abbreviations (if applicable)

INSS	International Natural and Social Science
AI	Artificial Intelligence
SDGs	Sustainable Development Goals
ICT	Information and Communication Technology
WTO	World Trade Organization

References

1. Author 1, A.B.; Author 2, C.D. Title of the article. *Journal Name*, Year, **Volume**(Issue), Pages, DOI link.
2. Author 1, A.; Author 2, B. Title of the chapter. In *Book Name*, 2nd ed.; Editor 1 and Editor 2, Eds.; Publisher: City, Country, Year; Vol. 2, pp. 110–120, DOI link.
3. Author 1, A.; Author 2, B. *Book Title*, 3rd ed.; Publisher: Location, Year; pp. 110–120.
4. Author 1, A. (Affiliation, City, Country); Author 2, B. (Affiliation, City, Country). Personal communication, Year.
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