

# LITERATURE SURVEY

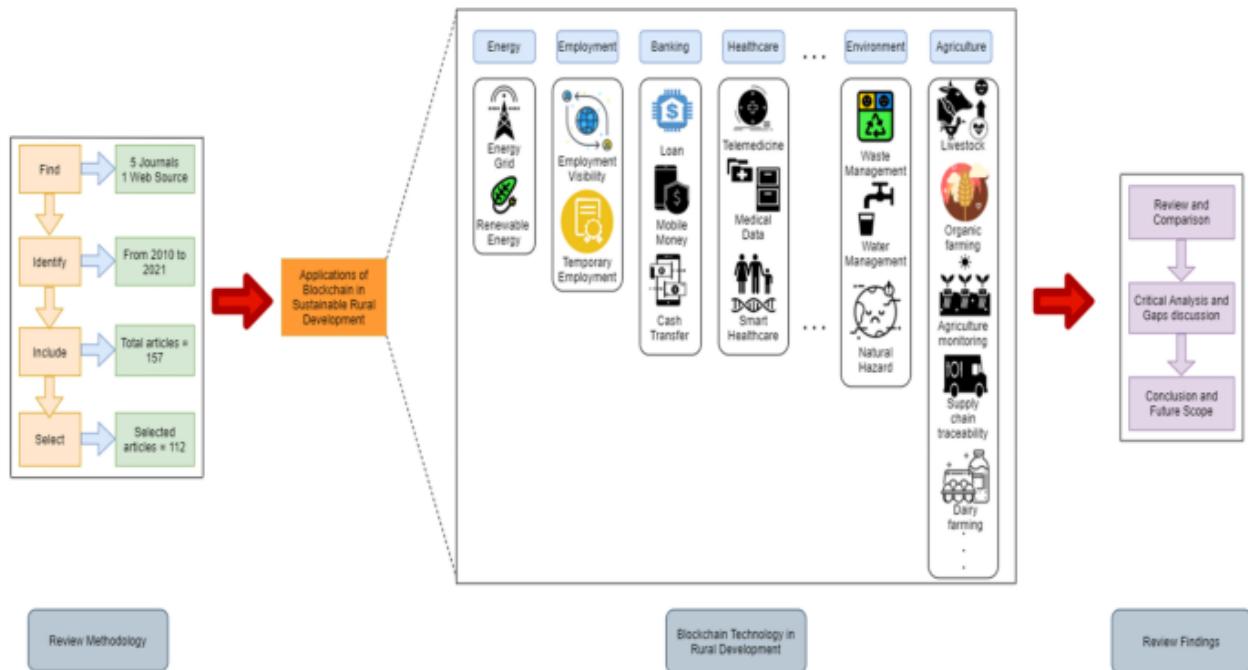
## Abstract:

- According to the United Nations, Sustainable Development Goals are framed for improving rural health, hunger, poverty issues, environmental conditions, and illiteracy globally.
- With the upcoming technology, there have been many advances in the lifestyle of people all around the world.
- Comparatively, more emphasis has been given to the development of urban areas than rural.
- The sustainable development of a country depends on the growth of its rural areas.
- Countless technological and theoretical models, projects, and frameworks have been proposed and implemented to help overcome sundry issues and challenges faced by rural people in quotidian life.
- New technological methods are deemed to be the future of livability, therefore; a technologically advanced solution for sustainable rural development is called for.
- Blockchain Technology is the next step for innovation and development and it has far many applications in

sustainable rural development that are yet to be discovered.

- The objective of this paper is to explicitly review research conducted in rural development to fill the undone work in the future with better research ideas, to make rural areas a livable and advanced place while also maintaining their integrity leading to sustainable development.
- To conduct such a review, a systematic research methodology is applied following regulations in the conduction of standardized but explorative analysis.
- Within the timeline of 2010–2021, 112 papers are carefully selected to perform the systematic review.
- This review will provide a comprehensible as well as concise research compendium for all applications proposed, implemented, and possible in the future to realize the concept of smart villages for the development of rural areas using blockchain technology.

## Graphic Abstract:



## Introduction:

- The development of a country partly depends on how well connected are its rural areas to the global chain and how technologically advanced they are.
- Rural areas as we know of are geographical locations sited outside town or cities with fewer populations.
- Essentially, we also know it as a place unprivileged of vital necessities, stricken by poverty , and unemployment.
- For many years, rural areas have been developing consecutively in Technology, Education, Housing, Governance, Human rights.
- Accordingly, the world's rural population has dropped from 66.389 percent in 1960–44.286 percent in 2019 due to various transformations.

- Years ago, people in rural areas were deprived of necessities such as water, electricity, and education.
- Even getting a reliable source of electricity was a strenuous effort.
- Moreover, female rights, reliable healthcare and subsequently securing a job were more of a dream.
- According to the United Nations, there can be seen a steady drop in the percentage of people residing in rural areas from 1960 to 2019 .
- What was the core reason behind it? A general example of the reason can be migration, rural decline, demographic qualities, natural disasters, and infrastructure: transportation or socio-economic.
- These can further be exploited into many explanations as to what leads to those choices.
- Rural–Urban migration itself directs catastrophic changes in the environment and economy.
- Rural Decline is another consequence of migration that drains the area of services, businesses, and social capital forcing the development of the rural area to halt or probably diminish .
- Even then, almost half of the world’s population comes under rural areas and it consists of many more issues than resolvable.

### ***Rural Development:***

- Sustainable Development Goals (SDGs) were framed for improving rural health, hunger, poverty issues, environmental conditions, and illiteracy globally.
- The present situation of rural areas brings us to a list of issues that can further promote the eradication of

rural areas from the global chain if not technologically.

- Beginning with poverty which has been an issue unresolved regardless of the various monetary schemes provided by the government drives the young generation out of the community to find jobs to sustain daily needs.
- Many of them fail to finish even high school, which leads to securing menial jobs in urban regions.
- This brings us to the second issue in the rural community, illiteracy .
- Education that plays a vital role in the overall development of humans, as well as the community, is often disregarded to fulfill contemporary requirements such as money.

- In many cases, the parents exploit their children into working on the farm or small businesses.



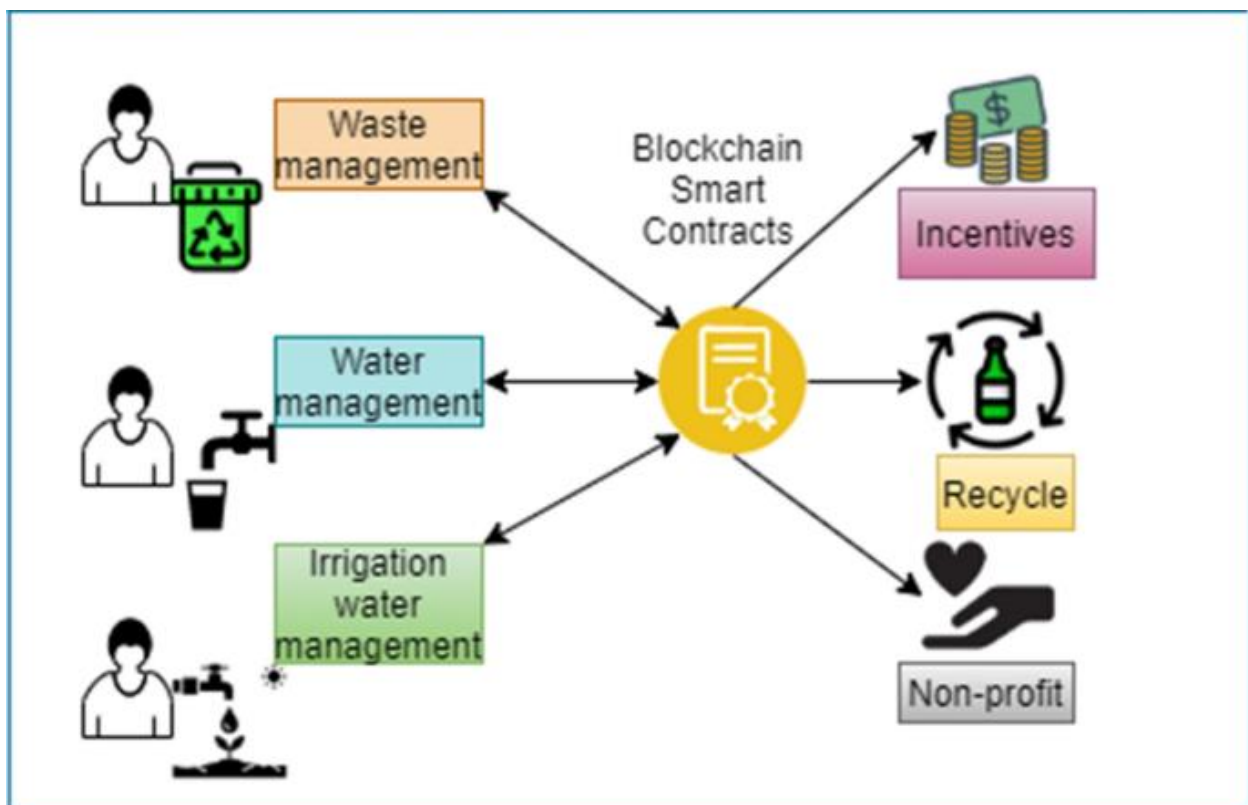
### Remix IDE:

- Remix Integrated Development Environment is open-source software for web or desktop development.
- An intuitive and appealing interface remix allows smart contract development and Ethereum interaction .

- Remix IDE has multiple plugin options such as Web3 integration, embedded Web3, and Javascript for running the contract locally.
- Solidity smart contract programming language is used for development in Remix IDE.

## Smart Contracts:

- Simple programs stored on the blockchain comprise some predefined conditions .



- Upon meeting the conditions the contract is self-executed giving the edge of non-intermediary processes as well as time efficiency.

- *Solidity* : A highly preferred object-oriented design-based, high-level language conveniently made for developing smart contracts.
- Most of the solidity syntax inspiration came from C ++ , Javascript, and Python programming languages.
- Solidity, along with being the top smart contract language focusing on EVM in certain also supports inheritance and user-defined types.

## **Conclusion:**

- Blockchain Technology has presented a considerable amount of work in the rural sector.
- While its implementation was few, the ideology is enough to motivate people into changing the lifestyle of rural people leading to the overall country's development.
- In this systematic literature review, numerous applications of blockchain technology in sustainable rural development were discussed with diverse areas in each application.