ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26may1508

Ecolonomy in Practice

Thangavelu Chinnasamy[1]

[1]Pathivar Seyalmantram Website
ORCID ID:0000-0003-0888-5440
https://www.seyalmantram.in/

Publication Date: 2026/06/03

Abstract: Ecolonomy, the needful term captures the fusion of ecology and economy. "Ecolonomy" is a powerful and necessary term that encapsulates the essential fusion of ecology and economy. It addresses the critical need to transition from a model where economic growth often comes at the expense of environmental health, to a system where they are mutually reinforcing. Ecolonomy pushes for regenerative practices are actively improving the ecolonomy system through economic activity for maintaining current resources. Ecolonomy reinforces the idea that true value creation must balance Profit, People, and Planet. A core component of ecolonomy is moving away from a linear "take-make-waste" system to a circular one, where resources are reused and waste is designed out of the system. Ecolonomy Practice in Tiruchirappalli in the following list is piloted locally in Tiruchirappalli Tamil Nadu. The practice emphasizes the real-world testing of the above principles, but substantive text is limited. It demonstrates minute-yield tracking in a community setting — for example, recording small sustainable outputs from local nature position like trees, soil, water systems etc., on a continuous basis to prove climate-stability benefits and equitable stakeholder outcomes. It prioritizes measuring and valuing nature's small, ongoing contributions while correcting historical oversights for e.g., unaccounted sea erosion to a large extent. Implementation relies heavily on local observation and tracking rather than complex software or formulas. The approach is still in the conceptual/practical stage and is yet to be formalized in peer-reviewed academic literature or standard accounting bodies. Combining ecology and economics is crucial for realistic reasons in many countries. Ecology is the Constant network for economic activities. The natural world provides resources, services, and a sustainable environment that supports human economic activity.

Keywords: *Ecolonomy, Climate Changes, Ecology, Practice.*

How to Cite: Thangavelu Chinnasamy (2026) Ecolonomy in Practice. *International Journal of Innovative Science and Research Technology*, 11(5), 3001-3004. https://doi.org/10.38124/ijisrt/26may1508

I. INTRODUCTION

Ecolonomy is a transdisciplinary field that integrates ecology and economy to treat the human economy as a whole to value the Earth resources. It places the economy inside on the core of operative system. It requires to operate economic activities which is governed by the laws of Thermodynamics. Energy which is transformed to fuel our systems with low-grade waste heat dissipated into the atmosphere. The total amount of energy and matter remains in accordance with its activities, but it's quality with our ability to do further more is permanently degraded. It restricts our biophysical limits and it's implementation with the preservation of natural existence [1]. We may define 'ecolonomy' definition as ' Earth cares onto layering objects naturally overall maximising yearlong.', in accordance with Acrostic definition. Ecolonomy, we can say on Acrostic Words[2], by quoting Christopher Martz, 'to value the Earth's resources places the economy inside earth core operative system.'

II. PUBLIC FINANCE FUNDS RESTORATION

Hallegate plans to integrate long-term sustainability to "build back better," focusing on job creation, climate resilience and avoiding carbon-intensive Industries. Public Finance Restoration is the primary driver for ecosystem restoration, currently producing 80% of the global funding for nature based solutions [3]. The World Bank Report (2016), furnished a report to cover nearly employment guarantee scheme supported primary resources for nearly 80 million people. Many such public work program focus on irrigation, soil conservation etc., to facilitate the long-term economic transformation. A green stimulus approach encourages investing in renewable energy, sustainable transport and nature preservation to ensure both short-term Ecolonomy gains and long-term, low carbon situation [4].

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26may1508

India's Rural Job scheme guarantees carbon sequestration readily offers Ecolonomy in Practice resilience to the most difficult situation against the climate crisis[5]. The Taskforce on Nature-related Financial Disclosures is one such initiative to help businesses also to understand and manage the risks posed to natural ecological systems. A shift towards green investment funds and bonds is to have moving capital. The 'take-make-waste' system, also known as the Linear Economy [6], is a traditional model of production and consumption where raw materials are extracted to create from the waste products.

- *Regenerative Practices:*

Regenerative Practices for Ecolonomy the interference of ecology and economy should move beyond sustainability which should actively restore peace to natural and social systems. Regenerative Practices in agriculture method is to restore landscapes in order to maintain soil conservation.

- *Practice in Tiruchirappalli :*

Decentralized Nature Based monitoring, water systems, soil management, climate stability and data tracking, Unaccounted for water, the Action Tracker Equitable stakeholder outcomes, Community-led Waste Management, pilot testing are provided in Practice in the Tiruchirapalli City Corporation (TCC). The circular business model product design should focus for longevity. With the current estimated population of Tiruchirappalli city, approximately 555.06 tonnes of municipal solid waste is generated daily. Tiruchirappalli City Corporation highlighted this challenge in its Sustainability Framework [7]. This initiative directly addresses the "Associated characteristics of land" by mitigating environmental degradation through scientific waste processing. Solid waste management, as noted, in the Institutions Deemed to be University – IIHS supported efficiency improvements in 40 micro-compositing centres of the Tiruchirappalli City Corporation, 2024-2025, promoting waste segregation, upgrading processing facilities, and building stakeholder capacity. The project also helped the corporation to improve to update the monitoring this system and increase the waste processing capacity by about 50,000 tonnes annually. It included integrating informal workers and providing enterprise development and livelihood support. The project was funded by GIZ's, a German Funding Project, Circular waste solutions initiative. It shows in its year 2024.

Biodiversity:

Trichy's urban landscape is currently defined by steady expansion alongside stagnant natural growth, as highlighted by the latest land use estimates. Between 2019 and 2023, the city's built-up area grew by 1.19%, covering an additional 1.99 square kilometers. While this reflects physical development, it has negatively impacted the environment by reducing surface permeability, which can lead to increased runoff.

Efforts to mitigate these effects include green initiatives, such as the planting of 21,864 saplings in 2021; however, this added only 0.006 square kilometers of greenery. Meanwhile, critical environmental features remain unchanged, with water bodies and dense tree cover (0.63) showing no significant growth during this period.

- *Sea Erosion:*

The historical oversight of sea erosion at Poompuhar underestimated the combined impact of climate-driven sea-level rise, tectonic shifts, and long-term coastal erosion over the last 20,000 years [8].

Recent satellite imaging and underwater archaeological surveys have provided evidence of substantial shoreline changes and submergence in the region. The ancient city, believed to have served as an important Chola port capital approximately 2,500 years ago, was often explained in early historical narratives as having disappeared due to sudden natural calamities, as reflected in the Recent Global National Satellite System Through MBES by reading GEBCO through Digital Elevation Model (DEM), through tools like Azimuth Angle Explanation. The Historical oversight regarding sea erosion at Poompuhar stems from underestimating the cumulative impact of long-term climate-driven sea-level rise, tectonic movements, and coastal erosion over the past 20,000 years, which have been documented through recent satellite and underwater surveys [9]. The submerged city, once the Chola port capital, around 2,500 years ago, was largely ignored in early historical narratives, which attributed its disappearance solely to sudden "natural" calamities [10]. Due to Global warming, vast expansion of coastal lowlands were shifted laterally hundreds of kilometres. Erosion on such scale will destroy most parts of the Coastal areas regularly [11].

- *Poompuhar Study:*

The Associated characteristics of the earth core system was in practical experience ever since the human evolutionary period [12]. The 1987 paper by K.H. Vora, available via the NIO Digital Repository, outlines early geophysical techniques (such as sub-bottom profiling and side-scan sonar) used to identify submerged archaeological features off the Tamil Nadu coast, India[13]. Marine Archaeology in India provides a comprehensive overview of underwater archaeological findings along the coastline, documenting sites like Poompuhar. The study highlights discoveries of stone anchors and shipwrecks, essential for reconstructing ancient maritime trade routes and coastal infrastructure [14].

The Following Table Showing Year Wise Breakup between 20000 Years to 7,000 Years Depth of Sea Level of Submerged Poompuhar City - Sea Erosion Level Past to the Present Level in meters.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26may1508

Table 1 Sea Erosion Level Past to the Present Level in Meters

Year Ago	Past in m	Present in m
20,000-15,000	125	110
15,000-11,000	110	50
11,000-9,000	50	25
9,000-8,000	25	20
8,000-7,000	20	5

The present location of GEBCO in the year 2019 explains the needful location Submerged Poompuhar City notification for the Sea Erosion Poompuhar Study. The Associated characteristics of the earth core system was noticed and revealed the background details of Poompuhar in Tamil Nadu.

The Following recent studies carried the bathymetry data derived from the coast past shorelines depth of the possibilities of submerged region the digital elevation model DEM.)

It contributes to mapping ancient port sites, structural remains, and potential shipwrecks in the Bay of Bengal. This interdisciplinary field investigates human interaction with the ocean through submerged structures, shipwrecks, and port installations to reconstruct historical maritime system. Marine archaeology in Tamil Nadu has played a significant role in understanding the submergence of Poompuhar through underwater exploration and the study of coastal processes [15]. Researchers have discovered submerged structures, pottery, and ancient settlements beneath the sea near Poompuhar, which support literary references to the ancient Chola port city. These investigations suggest that the coastline underwent major changes due to sea-level rise, coastal erosion, tectonic movements, and natural disasters such as tsunamis over thousands of years. Marine archaeological studies combine underwater surveys, sediment analysis, and coastal geomorphology to reconstruct the historical landscape and understand how environmental changes led to the gradual submergence of this historically important settlement [16].

III. CONTINUOUSLY OPERATING REFERENCCE SYSTEM ON POOMPUHAR - REAL TIME MONITORING SYSTEM

COR Stations are permanently installed with high-precision GNSS equipment that continuously collects data to form the National Spatial Reference Framework. This framework provides a consistent, millimeter-to-centimeter level accuracy for vertical measurements, essential for detecting subtle sea level changes [17].

The Reliability of distance of Accurate position is important for homogeneous positioning of Stations. The availability of continuous implementation is designed and dependent upon monitoring datum records. The documents outline that this is necessary for a national spatial reference structure needed to ensure consistent, high-precision, three-dimensional positioning of hydro meteorological stations. [18].

The Seyalmantram appears on an educational and literary blog that features articles explaining technological concepts, including the “Careful Operational Reference System” – CORS and how it tracks the Earth’s Movement [19]. This can be collected data through online processing capacity to the Survey of India. It will update data with the Continuous Operating Reference Station will provide high-precision, real-time GNSS positioning corrections, enabling centimetre-level accuracy for surveying, mapping and navigation. [20] This Multi-Beam Echo Sounder data combined with GIS Visualisation study reports several submerged sites located at about 30-50 km offshore at depths of roughly 30-80 m possible ancient harbour structures, large extent of settlement clusters with different ancient habitation periods.

IV. CONCLUSION

In short, economic integration must be achieved through practical alignment of economics with nature-based solutions and citizen science, creating real value with a balance between profit, people and an earth-centered system. Necessary action for the emerging ecolonomy of practice, minute yield monitoring of net-zero climate resilience projects, decentralized data sufficiency is really needed. The relevant characteristics of the earth's level of local renewable energy should help and maintain adequate testing methods for cost models. The Taskforce on Nature-related Financial Disclosure should preserve Ecolonomy system in practice, by embedding climate action into every transaction. By embedding climate action review in every transaction, the Task Force on Nature-Related Financial Disclosures must protect the prevailing ecolonomy system. Regenerative practices for agriculture method should promptly analyse and preserve soil erosion. GNSS Real-time Ecolonomy Geological Survey of India CORS network requires real-time analysis of structural sea levels below the tectonic plate level, along with accounting values. The Ecolonomy contributes by assessing long-term coastal vulnerability and necessary action to update the destructive coastal activities. In nutshell, Ecolonomy transforms archaeological and remote sensing data into systematic actionable knowledge for sustainable coastal governance, climate resilience and heritage conservation.

REFERENCES

[1]. Tabitha Jayne, Earth connection is a subjective sense of feeling part of the Earth and also promotes a reciprocal relationship between an individual and the Earth Exploring our Human relationship with the Earth Journal Middlesex University with Self Trust org 2020 Volume pp 49-61 (references)

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26may1508

[2]. A Citation from Chrisphe Martz (2003) - Thangavelu Chinnasamy defines the term Ecolonomy- a blend of ecology and economy, Acrostic Words Book - page no.116-'Earth climate overall levelling offers nomenclature on minute yield',
[3]. The world Bank United Nations Decade on Ecosystem Resolution 2021-2030 Progreen – A Stocktake Report Page No.19.
[4]. Stephane Hallegatt Thinking ahead: For Sustainability recovery from COVID-19 Coronavirus WB(Online) https://blogs.worldbank.org/en/climatechange/thinking-ahead-sustainable-recovery-covid-19-coronavirus
[5]. Moudgli, Manu .2021. Rural Job scheme guarantees carbon sequestration Mongabay(online)
[6]. Linear Economy – ellenmacarthurfoundation organisation-Centre National Institute of Oceanography Dona Paula, Goa, 403 004 Email: sila@darya.nio.org
[7]. International Council for Local Government Initiative ICLEI – Net-Zero Climate Resilient City Action Plan Tiruchirapalli July 2024 - econcept National Institute of Urban Affairs -To achive net zero well before of over reducing carbon by over 95% by the year 2070.
[8]. Indian Journal of Geo-Marine Sciences Vol. 43 (7), July 2014, pp. 1292-129 Mapping of spatial and temporal variation of shoreline in Poompuhar using comprehensive approach.
[9]. Global Warming, Sea Level Rise, and Endangered Maritime Heritage. John M. Erlandson, Department of Anthropology, Museum of Natural and Cultural History University of Oregon, Eugene, OR 974031234 USA jerland@uoregon.edu
[10]. Intergovernmental Panel on Climate Change 2007 Impacts, Adaptation, and Vulnerability. (http://www.ipcc.ch/ipccreports/ar4wg2.html)
[11]. Ministry of Environment and Forests Notification, Inserted as per S.O.383(E), dated 04-02-2015 GOI No.295, dated 06-02-2015. https://crz.elaw.in/crz2011.html
[12]. Global Mean Sea Level https://sealevel.nasa.gov/understanding-sealevel/global-sea-level/overview/
[13]. Vora, K.H., A note on geographical explorations for maritime archaeology off Tamil Nadu coast India. Int. Naut. Archaeol., 1987, 16(2), 159-164. Wiley Online Library International Journal of Nautical Archaeology/ Volume 16, Issue 2 pp. A note on geophysical explorations for marine archaeology off Tamil Nadu India K.H vora First published: May 1987
[14]. Sila Tripati et al. Man and Environment XXIX(l) : 2841 [2004]. © Indian Society for Prehistoric and Quaternary Studies Marine Archaeology in India Sila Tripati, A.S. Gaur and Sundaresh Marine Archaeology
[15]. Athiyaman, N., Two wharves at Poompuhar: a technical study. Paper presented at the Second International Conference on Marine Archaeology, Thane, India, 1999, pp. 8–10.
[16]. Jayakumar, S., Gaur, A. S., Chandramohan, P. and Jena, B. K., Submergence of Poompuhar study based on underwater explorations and coastal processes. Marine Archaeological Investigations on Tamil Nadu Coast, India: An Overview Sundaresh and A.S. Gaur1 National Institute of Oceanography, Council of Scientific & Industrial Research, (CSIR), Dona Paula, Goa 403 004.
[17]. CORS on Poompuhar Real Time Monitoring System https://surveyofindia.gov.in/pages/continuouslyoperating-reference-stations-cors-
[18]. National Hydrology Project, Ministry of Jal Shakti, DoWR, RD & GR Shri Rakesh Kashyap, SJC-I NHP, Shri Kushagra Sharma, SJC-II Dr. D. Gnanasunder, SJC-III Shri Harendra Tiwari, GIS & RS Expert Ms Neetumeeta, GIS & Technical Assistant
[19]. CORS@thangaveluchinnasamy https://youtu.be/3nGSG430cfs?si=_2T3o0DcumxJsENp—
[20]. Journal of the Indian Society of Remote Sensing://doi.org/10.1007/S12524-024-02112-9 ISRS - Digital Processing and GIS Visualisation and of Multi-Beam Echo Sounder (MBES) Data and the Mapping of Submerged Man-made Structures, off Shore Region of Poompuhar/Cauvery Delta, South India