



# A Framework For Learning Environmental Ethics Through Domestic Environmentalism – The Core Of Sustainable Development And Women Empowerment

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## Abstract

This paper covers an overview of the writer to frame a theoretical and proactive environmental approach to popularise environmental ethics among the common people who engaged in the grassroot level activities of social life. For that, the author analyses a story written in the Malayalam language named *Bhūmiyuṭe Avakāśikaḷ* by the famous writer Vaikom Muhammed Basheer using discourse analysis in terms of Environmental Ethics on gender perspectives to visualize the same in a philosophical and sociological manner as the discipline comprises axiological aspects of Philosophy. Further to make the practices of environmental ethics in real life and to popularise it among the public by highlighting the role of women in environmental ethics. Some of the policy implementation experiences in the Amballoor Panchayath in Ernakulam district of Kerala state wherein the author resides were analysed using qualitative research methods to exemplify the connection between Domestic environmentalism, environmental ethics and women empowerment. For that, different environmental activities implemented by Amballoor Panchayath in Ernakulam district and the involvement of women practitioners of Kudumbasree units of the Panchayath were studied and found its role in developing environmental ethics. Also, it covers several contemporary events evidencing the relationship between sustainable development activities and environmental ethics. Thus, the paper tries to synthesize the theoretical and practical approach of environmental ethics through outcome-based pedagogy and to develop a framework for Domestic Environmentalism the habitual practices of sustainable development which is enabled to promote women's empowerment as the two sides of a coin.

**Key Terms:** Environmental ethics, Discourse analysis, Outcome-based pedagogy, Women empowerment, Sustainable Development, Domestic Environmentalism

## INTRODUCTION

Environmental Education is a philosophy, an evaluative and affective stance, a mode of inquiry, a way of progressively developing conceptual structures, cutting across disciplines, and an instructive community. Hence, Environmental ethics can be considered as a discipline of that philosophy that studies the relationship of human beings with the environment and its non-human contents based on their values and moral status. Relation and symbiosis of the non-human world with human beings is one of the most sensitive environmental issues of the current scenario. Human-animal conflict and disputes in the surroundings of western and eastern ghats are some of the most sensational news on social media in the current scenario. Animal rights in the earthly habitat have been pleaded eloquently by litterateurs, philosophers, scientists, humanists, pacifists, and environmentalists worldwide. From the time of the Stockholm Conference on the Environment (1972) onwards, international attention too has been attracted to this issue.

The intellectual stimulus written by Vaikom Muhammad Basheer, in his 'dialogic' story entitled *Bhūmiyuṭe Avakāśikaḷ* is provided with the account of environmentalist, legal, humanistic, universal-love-proclaiming, survivalist, and existentialist stands. It opens a way of environmental jurisprudence to model-making frames of education in teaching and learning in pedagogic lines. There are even appeals to the deity when the human mind cannot resolve the contradictions involved in this clash of values. *Bhūmiyuṭe Avakāśikaḷ* can be read from many perspectives, one of which is environmental conservation and sustainability. Dialectics of conservational concerns with developmental concerns can also be discerned in the text. When the text is analysed closely, education through the environment echoes also can be read in the work. Thus, the first phase of the study is identifying the environmental issues imbibed in the story *Bhūmiyuṭe Avakāśikaḷ* through discourse analysis and connecting them with the teaching model Jurisprudential Inquiry Model (JIM) for the resolution of the issues identified, in a classroom situation.

The second phase of this research study is on Environmental Ethics which is Pragmatic in nature and lifelong in effect. A globally accepted democratic movement named Kudumbasree which originated in the State of Kerala in 2001 has reference in this criterion study. One of the best policy measures implemented at the local community level through the Kudumbasree project is a notable action in environmental sustainability which is very much promotional for developing environmental ethics. Because it is a vibrant model of participatory

approach at the grassroot level, attaining sustainable development goals. Kudumbasree is a program aimed at the economic and social development of Kerala highlighting environmental ethics and women empowerment as the core objectives of it along with poverty eradication. The lifelong learning effect of the Kudumbasree project is very much emphasized and marked in the adult and continuing education scenario since the activities of the project are at the community level without excluding even a single family in the jurisdiction of each local self-government. Also, the project is followed by a wing of sustainable actions exclusively to ensure and monitor the green objectives of the Kudumbasree project which is named *Harithakarmasena*. The Haritha karma sena- a green action movement- under the Kudumbasree project implemented by the Government of Kerala is taken as a model grassroot level activity in this study. As the name indicates, it acts as a sena(force) in discipline and action for the sustainable development of the whole Panchayath.

The third phase of the study is to develop a framework for Domestic Environmentalism using the theoretical background of issue-based learning, and pedagogical implementations of critical pedagogy as a teaching-learning strategy in outcome-based education. Identification of JIM as the teaching model to transact environmental jurisprudence and value conflicts emerged from the discourse analysis of the story Bhūmiyuṭe Avakāśikaḷ act as a prerequisite for resolving value conflicts in social situations. The futuristic contributions expected to happen as the curricular objective from the learners taught through outcome-based pedagogy has been taken as a basis for developing the hierarchy in the framework for Domestic Environmentalism.

### **NEED AND SIGNIFICANCE OF THE STUDY**

Environmental Education became the accepted policy for lower primary education in India in the early 1970s. The ten-year curriculum framework prepared by the National Centre for Education Research and Training (NCERT) New Delhi envisaged that in the primary classes, the sciences should be taught as environmental studies; in classes I and II as a composite course including both the natural and the social environment, and later as tool subjects, viz., environmental studies (natural science) and environmental studies II (social science). One need not lay down how much of this should be covered in a particular class. The purpose should be not to stuff the minds of children with facts and information, but to sharpen their senses, to enable them to observe their environment and to enrich their experience. Issue-based learning and critical pedagogy have been expanded and focused on the ways of constructive learning in Higher Education.

Now, the frontline curriculum envisaged by the National Policy of Education 2020 of India is also in line with the same objective but far ahead in practice by integrating entrepreneurial and skill-based orientations in environmental sustainability. The relevance of ethical concerns may be compromised with the entrepreneurial outcomes while attaining the objectives of the frontline curriculum in a profitable business and again it is the choice of educational practitioners to follow ethical pedagogy in practice to fulfill the real outcome expected by the frontline curriculum. The recommendation focuses on the revision of the curriculum every five years to centralize the changing needs of society in an interdisciplinary and multidisciplinary mode that demands best-suited pedagogical approaches. The analytical approach adopted in this qualitative study is a way of approaching the narrow tasks of schooling in a more interesting and meaningful manner, it is an effective bridge between the school and the outer world, and it is a way of envisaging and seeking to build a worthy future world.

## **RATIONALE FOR THE STUDY**

One of the national conferences held in Goa in April 2024 convened by a College of Teacher Education has specifically mentioned the objective that the conference was intended to serve as a vital platform to explore intricate relations between higher education and Ethics primarily from the background of literary studies. This was the focus point that encouraged the investigator to write a research paper on the topic “*A Framework for Learning Environmental Ethics through Domestic Environmentalism- The Core of Sustainable Development and Women Empowerment*”. It is also a matter of concern that the earlier research conducted by the same author using mixed methods of quantitative and qualitative research to find out the effectiveness of the Jurisprudential Inquiry Model in Teaching Malayalam Language and Literature at the Secondary Level has a pertinent role in leading the study into a sustainable development model like Domestic Environmentalism. It is a mix of various subcomponents enrooted in the curricular components of environmental ethics, research-oriented pedagogical approaches in literary studies to justify outcome-based education, and holistically NEP and paradigm shift in contemporary education. Hence, the paper starts with the discourse analysis of a famous Malayalam short story written by Vaikom Muhammed Basheer through the qualitative research design using discourse analysis as a technique to explore episodes of environmental ethics imbibed in the literature. Identification of environmental issues demands an apt pedagogy to transact it to attain the curricular objectives. The jurisprudential Inquiry Model was identified as the best-suited pedagogy

as it is a model for developing civic sense among the students. Further, the second and third phases of the study justify outcome-based education in the long run and help the author to frame a sustainable development model.

## **REVIEW OF RELATED LITERATURE**

Chandra, Akbar & Roy (2023) in their study titled Impact of Outcome-Based Education (OBE) on Learners' Performance in Business Courses aimed to introduce a new format of education called outcome-based education (OBE), its importance, and its impact on learners' performance in business courses and was done through qualitative methods. Also, it studied the evolutionary results of outcome-based education by introducing crucial implementation criteria. As a result, they evaluated the outcome of OBE and concluded that OBE develops a learner's Fundamental knowledge, problem-solving skills, research skills, technical skills, social skills, ethical values, communication skills, project management skills, and life-long skills that have a significant impact on one's career according to the changing society and its trends. As the important findings of the study, it was stated that through OBE learners will learn how to bridge the gap between tutoring and results-based mastering techniques and the investigators were hopeful that OBE would help to enhance management, encourage innovation, and boost performance.

Bousslama, et.al (2003) were studying in their research paper "A Novel Outcome-based Educational Model and its Effect on Student Learning, Curriculum Development, and Assessment" describe how learning outcomes are used in the development of an information system in the curriculum and how technology could be used to facilitate the learning and assessment processes in the outcome based learning. This study became more learner-centred by providing the learners ample opportunity to assess themselves by making e-portfolios to demonstrate their achievements. As a product of this study, the investigators developed a framework that constitutes an academic model composed of course-embedded and higher-order learning outcomes, students and faculty equipped with laptops, and campus-wide networked classrooms, a centre for teaching and learning assessment and learning communities. The findings of this study helped the present investigator to think of a framework for domestic environmentalism which includes the whole formal education system of outcome-based education, lifelong education patterns of the community, and the policies of government at the local level to integrate with the sustainable development model and to promote environmental ethics proactively.

Saline A, et. al (2011) describe the contemporary benefits of Outcome Based Learning (OBL) to make learners entrepreneurs especially learners of management studies by utilizing cheaper and improvised learning materials for information processing. They think that "the objective of the learning is achieved when the students do, not only understand and can explain merely in general the theories in management but also capable to give recommendation and solution to the business problems given by the lecturers in the class. Besides, OBL provides ample opportunity for educators to use their own rather than specified approach as long as the students can demonstrate their understanding of the subject matter. The objective of the paper was to propose a new method for teaching management and accounting-related papers to students. A popular outcome-based method was blended with a modified problem-based method by a respondent who taught professional accounting papers. The major finding of the study was that compared to the traditional method of teaching, outcome-based learning and modified problem-based learning offered a new and exciting climate of understanding business and accounting knowledge, and at the same time it offered some benefits to the students, educators, and also learning institutions.

### OBJECTIVES OF THE STUDY

- To analyze the literary discourse *Bhūmiyuṭe Avakāśikaḷ* (The rightful heirs of the Earth) in terms of environmental value conflict.
- To link the model-making process based on environmental jurisprudence with the literary discourse *Bhūmiyuṭe Avakāśikaḷ* in pedagogic lines.
- To exemplify the extent of outcome-based pedagogy with participatory learning and lifelong education in line with environmental ethics.
- To synthesize the theoretical and practical framework of Domestic environmentalism as a pedagogy for Environmental ethics using the findings of the discourse analysis and participatory observation.

### OPERATIONAL DEFINITION OF KEY TERMS

Environmental ethics, Discourse analysis, Outcome-based pedagogy, Women empowerment, Domestic Environmentalism

- **Environmental ethics:** A particular discipline in Philosophy that studies the relationship of human beings with the environment and its non-human contents based on their values and moral status (Stanford

Encyclopaedia of Philosophy). In the present study, the investigator analyses the famous Malayalam short story *Bhūmiyuṭe Avakāśikaḷ* written by Vaikom Muhammed Basheer using discourse analysis to identify the value conflicts based on Environmental Jurisprudence and thereby locates Models of teaching as the Pedagogy for Environmental Ethics.

- **Discourse Analysis:** According to Katula (1991), language teachers can help to enhance the quality of public dialogue by teaching their students how to engage in class discussions that require them to paraphrase as well as to respond to the points made by others. To identify the environmental issues and the other value conflicts, discourse analysis was found as the best method in the present study so that it could enable the investigator to link the pedagogical aspects in an easiest and meaningful way for effective classroom transaction.
- **Outcome-based pedagogy:** According to Mc Neir & Gwennis (1993), outcome-based pedagogy is the pedagogy framed for education in which an emphasis is placed on an articulated idea of what students are expected to know and be able to do and what skills and knowledge they need to have when they leave the school system. In the present study, the Jurisprudential Inquiry Model (JIM) has been selected as the teaching model for apt pedagogical transaction as the criterion text includes a lot of value conflicts to be discussed in the line of value conflict resolution. Later in life, the Model-based learning experience will result in sustainable development activities.
- **Women Empowerment:** The role of women in sustainable development activities at the domestic level and societal level observed in the study is undeniable and inevitable. Their role makes them powerful in their performance not only in sustainable development activities but in several platforms in their individual, familial and social life. Hence, it can be stated that Domestic Environmentalism and environmental ethics are the processes of raising the status of women for a comfortable and credible personal, familial and social life through literacy, education, awareness and training in sustainable development activities at the domestic level.
- **Sustainable Development:** Sustainable development has been defined in the Brundtland Report as "Sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs.". Hence, the activities initiated in the same vision by the local self-government of Amballoor Panchayath in Ernakulam district in Kerala as a government policy were taken for study in the present research.

- **Domestic Environmentalism:** In this study the operational definition of the term Domestic Environmentalism is given as “A domestic system that maintains the habituated knowledge of sustainable practices in resource utilization, environmental protection, logistic management, health and hygiene, and symbiosis with non-human beings”. Hence, the present study is an effort to develop a framework for Domestic Environmentalism through the identification of value conflicts in the criterion text selected for discourse analysis, the grassroot level environmental activities taking place in the Kudumbasree project of the Government of Kerala, and from the participatory observation done by the investigator with the Harithakarmasena, the complementary component of sustainable development activities at local self-government of Amballoor Panchayath in Ernakulam district in Kerala.

## **METHODS ADOPTED IN THIS STUDY**

### **Qualitative Research Designs**

Qualitative researchers do not insist on statistically measured varieties such as predictive validity, construct validity, concurrent validity, etc. They give high priority to internal validity. Researchers demonstrate that they present the reality of participants through a coherent storyline and excerpts from interviews, detailed description of the decision trail and field notes. External validity is enhanced when researchers choose a situation, which lends itself to thick description, based on which the reader can form, his/her judgement. Rather than using terms such as validity and reliability, qualitative researchers use the notions of trustworthiness and authenticity. Qualitative research designs were adopted in the study such as discourse analysis, Document analysis and Participatory observation. Considering the objectives of the study, a continuous observation and analysis of the data were essential to synthesize in this study as the information the researcher obtains from various sources into a coherent description of what she has observed or otherwise discovered. Each method is described as follows.

- (1) **Discourse Analysis:** Discourse Analysis is an analysis of text and language which draws on ‘accounts’ for action which participants present. ‘Accounts’ refer to forms of ordinary talk and reasoning of people, as well as other sources of text, such as historical documents, diaries, and reports and literary works. Discourse analysis can be applied to any instance of written or oral language, as well as non-verbal aspects of communication such as tone and gestures. Unlike the usual linguistic approaches focusing on language uses, discourse analysis emphasizes the contextual meaning of language and conversations in discourses or literary



texts. It focuses on the social aspects of communication given conflict management. Using discourse analysis as a qualitative research method in this special context of education for environmental ethics aims to examine how language and literature function and how it creates meaning in different social contexts based on issue-based learning.

## (2) Jurisprudential Inquiry Model (JIM)

As our society undergoes cultural and social changes, the jurisprudential inquiry model is especially useful in helping people rethink their position on important legal, ethical and social questions. The citizenry needs to understand the current critical issues and share in the formulation of policy. By giving them tools for analysing and debating social issues, the jurisprudential approach helps students participate forcefully in the redefinition of social values.

The Jurisprudential Model of teaching based on environmental jurisprudence is a pragmatic philosophical approach to life. It considers that values are subjective and relative. Values change with time and circumstances. Human experience is the main determinant of values in life. Men value different objects differently and may value the same object for different reasons. In other words, the consequences or outcomes are the basis of the selection of all types of values. If the consequences are useful, the value selection is appropriate, otherwise not. The values are dynamic and changing and are created by men with intelligence and creative power.

The affirmative position was tacitly accepted by the investigator while taking Bhūmiyuṭe Avakāśikaḷ as the criterion text for JIM. However, the explicit justification of animal rights of a legal nature came to the investigator's notice.

## (3) Document Analysis

- As another method in Qualitative research, the documents published in the Kudumbasree website of Govt. of Kerala was taken for analysis to explore the sustainable development activating taking over by the members all over Kerala. It was a secondary data created by the Local Self Government Department (LSGD) of government of Kerala (<https://kudumbashree.org/>) wherein all the developmental activities under social welfare, women empowerment, etc. are depicted. The investigator selected the sustainable development activities only for the purpose of the study and listed in the Table No. 1 under the findings of the study.

#### (4) Participatory Observation

**Observation** is another area developed in depth by qualitative methodologists. Participant observation is a methodology, which had its origins in anthropology. It comes very handy in qualitative research in many disciplines. Immersion in a setting is the first step in observation. It permits prolonged engagement, which generates more in-depth knowledge of a culture or a sub-culture. The settings for participant observation can vary in a continuum from open settings (public, visible settings like the street), to closed settings (management meetings or institutions). Gold (1958) identified four types of observer involvement in the field.

- ◆ The complete participant, who is part of the setting, and takes an insider role which often involves covert observation.
- ◆ The participant as observer, who has negotiated his way into the setting as part of the working group under study.
- ◆ The observer as participant, only marginally involved in the situation.
- ◆ The complete observer who does not take part in the setting and uses a 'fly on the wall' approach.

#### Analysis of the Participatory Observation

The task force Harithakarmasena, deputed as the sub-project of Kudumbasree is supervised by a team of Village extension officers, the Panchayath Secretary and the Health inspector. The ward members of each Panchayath are entitled to work with the sena hand in hand. The ward members communicate in advance through WhatsApp groups about the date of the visit of the sena members in each household. For this study, the Harithakarmasena of Amballoor Panchayath in Ernakulam District in Kerala state was selected as it is the investigator's native Village. This purposive sampling technique helped the investigator to do a participatory observation with the members of the Harithakarmasena wherein the practitioners and the beneficiaries are from the same local communities. The whole programmes under the Kudumbasree project of Govt. of Kerala and the specially focused activities of the Harithakarmasena have been analysed in terms of environmental activities resulting in remarkable contributions to policy development for sustainable development goals. The activities for sustainable development in which the members of the Kudumbasree units are involved all over Kerala are listed in Table No. 1 of the findings. The activities done by the Harithakarmasena of the sample Panchayath are listed below in Table No.2 of the findings.

**Development of the Framework of Domestic Environmentalism:** The third phase of the study was linking the findings of the discourse analysis, document analysis of the Kudumbasree Project of the Government of Kerala, and the findings aroused from the participatory observation among the Harithakarmasena of Amballoor Panchayath in Ernakulam District, to frame a learning hierarchy of Environmental Ethics and hierarchy of outcome-based learning towards Domestic Environmentalism.

## FINDINGS OF THE STUDY

### Findings from the discourse analysis:

The Malayalam text *Bhūmiyuṭe Avakasikaḷ* (The Rightful Heirs of the Earth) by the brilliant Malayalam writer Vaikom Muhammad Basheer presents a hypothetical dialogue with his caring wife, himself taking a stand that the Earth belongs equally to all creatures and man has to share the Earth's bounties on equal terms with the other beings. His wife opposes his stand not because she was cruel to the animals but because she has the responsibility to run the household and she cares for the life and well-being of her children and husband.

The husband originally is in a contented and happy mood having acquired a large piece of land, and executed all the documents, assuring that he is the sole possessor and legally protecting him from encroachers. He even soliloquises about it happily. But when he finds that most of the fruits are eaten away or destroyed by birds, bats, and other pests he is worried. Snakes and other creatures invade the house. Now the wife comes into the scene and asks why he did not kill the snake. The husband talks the language of universal co-existence. The snake too is God's creation, and has a right to live on earth, and is one of the rightful heirs of the earth. The wife points out that this is the place where their children move about and so such dangerous creatures should be killed. A series of such dialogues follow between husband and wife in rapidly unfolding contexts. One of the contexts is the biting of the husband by a centipede. Now the wife talks through performance – killing of the centipede and treating the husband successfully with native medicine. At this point the husband 'talks' only through silence. He further debates within himself about conflicting values, even bringing them before God's Judgement seat. Thus, the discourses based on rights and values conflict is the major theme. The masculine-feminine discourse component too is another strand, which runs through.

The Values/ urges/ rights gleaned from the text discourse

1. The right of man to enjoy the fruits of the earth within set limits
2. The right of man to live free from unwarranted encroachment by other beings
3. The value of non-violence at any cost.
4. The value of individual ownership and property rights:
5. The right of primordial beings to exist in the earth. Within the Geosphere, these organisms were the first to have created a biosphere.
6. The urge of the altruistic man to help other beings.
7. The duty of a wife and mother to protect and nurture the family.
8. The duty of the head of the family to provide the material and financial support to the family.

### **Conflicts between values/rights/ urges**

1. The right of man to develop his land and enjoy the fruits can conflict with the action of other lower organisms which may not have a legal right but which may have ‘evolutionary’ occupancy rights
2. The value of survival Vs the value of non- killing even under provocation.
3. Primordial and biological values Vs political and economic values of man.
4. Anthropocentric values Vs universal values.
5. Matriarchal values Vs Patriarchal values
6. The rights of the ‘haves’ often conflict with the needs of the ‘have-nots’

As a deliberate attempt to integrate critical pedagogy with curricular content identified for issue-based learning, discourse analysis makes justification by contributing several value conflict instances mentioned above. An effective teacher must move through teaching strategies with value conflict resolution to attain the intended objectives or implemented objectives to synthesize the skills of the learner ultimately for problem-solving.

Though falling within the purview of Education for the Environment, Animal Rights Awareness is spelled out separately because Vaikom Muhammed Basheer’s text started with this issue and developed it into a value conflict stance, which enables educational practitioners to adopt information processing and model-making practices like Jurisprudential Inquiry Model (JIM) coming under the category of the social family of Models

of Teaching. In *Bhūmiyuṭe Avakāśikaḷ* the criterion text is used to trigger the JIM debate with the learners since the surface dialectic is between the legal right of a man who has bought a land and the conservation rights of the primordial inhabitants of the Geosphere. But underneath this surface debate, the issue of Environmental Ethics seems to be embedded in subtle ways.

The strategic approaches based on apt teaching models like JIM can be adopted by the teachers to implement critical pedagogy and constructivism for imbibing environmental ethics as a habituated knowledge.

### Findings from the Document Analysis

The data needed about the sustainable development activities of the Kudumbasree was taken from the website of Kudumbasree developed by the Government of Kerala which is published in the public domain and hence, the data was collected as secondary data. The findings aroused from the secondary data is given in Table no.

1

**Table No. 1**

#### **Activities of Kudumbasree for Environmental Sustainability in Kerala**

S.No	Head of activity	Activities under the head
1	Clean Water	Maintenance, Cleaning and Grill covering of public wells in various wards
2	Bio Waste management	Installation of Biobin Creation of compost pits for individual Households
3	Plastic Waste Management	Collection of Plastic Waste Services of Collection & Transportation of waste from household to treatment site
4	Bio-medical waste management	Purchase of Sanitary Pad Incinerator

### Findings from the Data Collected Through Participatory Approach

The data collected through the participatory observation with the Harithakarmasena of Amballoor Panchayath in Ernakulam District and by an interview with the Village extension officer and the ward members of Amballoor Grama Panchayath were analysed in terms of sustainable development activities and are listed in Table No. 2.

Table No. 2

**The Sustainable development activities of Harithakarmasena of Amballoor Panchayath in Ernakulam District**

S. No.	Head of Activity in Amballoor Panchayath	Details of activities under the head
	Management of Bio-degradable waste at its source	Installation of Bio-bin Training for compost pits for individual Households Guidance & Monitoring of Bio-bin every month
	Plastic Waste Management	Collection of Plastic Waste Collection and accounting of Services Charge Transportation of waste from household to treatment site Segregation of Plastic into six categories Making Plastic Bales Handing over to the recycling Unit
	Solid Waste Management	Collection, segregation and recycling of all household wastes except plastic waste
	Placing Haritha Mitram QR codes	Placing the QR code of the Haritha Mitram App in every household for the proper monitoring of the activities of Harithakarmasena
	Management of Haritha protocol	Managing public places where festivals and other celebrations take place to follow Haritha protocol.
	Monitoring of Haritha Protoco	On-the-spot communication with the competent authority on notice of violation of Haritha protocol
	Women-friendly Waste Management	Purchase and distribution of Sanitary Pad Incinerator

Based on the sustainable development activities taking place in Amballoor Panchayath, it is observed that the involvement of women in balancing ecosystem is a fruitful idea as they are active homemakers and managers. For example, we can examine the consumption and wastage of water and energy, the crucial areas in sustainable management in the current scenario. As a decentralized policy practice, each home must protect water and electricity by minimizing the level of usage. At the same time, it is pertinent to restructure the statement as reducing the wastage at a minimum is more important than the usage at a minimum. Only through reducing wastage the whole nation can be safeguarded for the conservation of resources, especially non-renewable resources. The discussions and arguments on self-sufficiency will be vague if the domestic practices in this area are fashioned with wasting resources rather than usage. We can prove it experimentally at residence- especially in Kerala where many families have their water resources like wells compared to the other states in India- by placing a bucket under the running tap while brushing their teeth. With one litter of

water, anybody can brush their teeth perfectly and neatly. Instead, we use almost ten times of it by practicing brushing in running tap. This is an example of a single event in our daily life where water usage is essential and at the same time casualty needed in management. Imagine, how much our water usage is totally for our household routine activities and other activities in public life. Further, we calculate the actual usage plus the quantity of water we waste while using it without proper care. Every household and personal activity must be analyzed using utility and wastage parameters and needless to state wastage will be more than usage. If we continue this experiment with all our domestic needs and the number of occurrences and users worldwide, it will be horrible and beyond our imagination and excuses. The case of utilization of electricity is also in the same way. The most important thing we must remember in the case of the utilization of electricity is that the production of electricity is proportionate to the consumption of it. That is why minimizing electricity at peak times is recommended as one of the measures of energy conservation. Economic wastage due to overconsumption and resource wastage are the biggest challenges in modern times. General meetings or public speeches are not enough to solve these problems. But from families, the involvement of women in the role of mothers, wives, etc. as strong managers of sustainable development practices can be started by attitudinal changes resulting from the policy implementation of local self-governments through Kudumbasree and Harithakarmasena which are capable of influencing the public at grassroot level and thereby developing environmental ethics.

Environmental ethics plays a crucial role in sustainability management. The growth of entrepreneurialism linked with educational objectives leading to skill development and start-ups open avenues for innovations both in business models and in resolutions of the challenges complemented by businesses. Hence it chains together and moves ahead in a blended manner compromising with environmental ethics. Awareness-creating programmes and knowledge-generating research become supplementary and complementary to each other. Then what is the effective approach to attain a standard level of sustainable life?

**Domestic environmentalism** will create a roadmap to live a sustainable life supported by culturally rooted environmental ethics which has evolved from value conflict resolution from critical pedagogy and constructivism as envisaged in this multilevel outcome-based study.

*Domestic environmentalism is a familial system in which individuals think sustainably by habituated knowledge, and innovate life with sustainable domestic actions by following legally and scientifically*

*approved orientations and practices with the support of government policies and logistics managed and supervised by trained persons from the same local communities.*

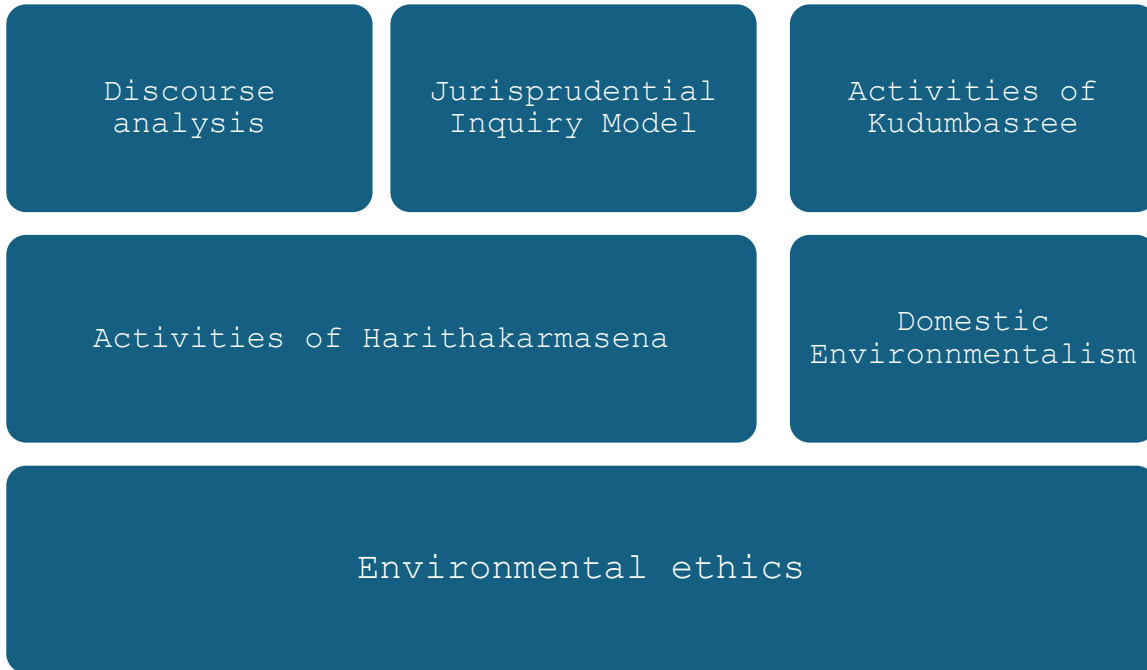
To link the life of each person who has benefited from outcome-based pedagogy of environmental ethics with the sustainable practices of social learning supported by government policies can follow an environmentally benign lifestyle. Hence, the habituated knowledge deeply rooted in environmental ethics is the platform for domestic environmentalism.

### **The Major Finding of the Study Leading to a Framework for Domestic Environmentalism**

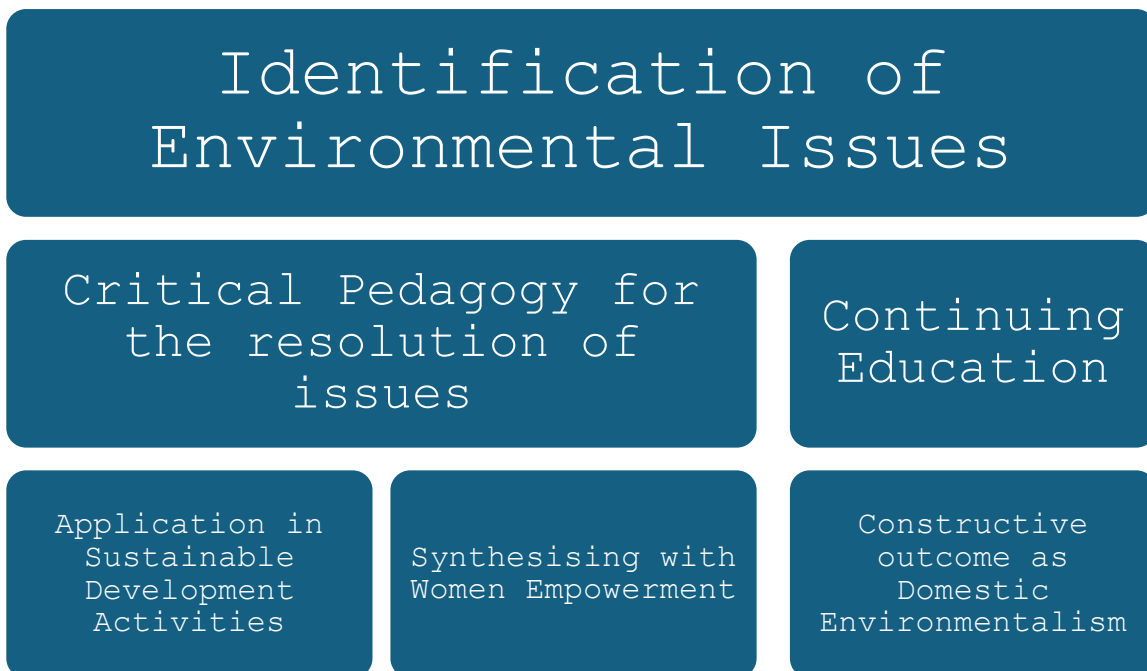
Thus, the third phase of the study was linking the findings of the discourse analysis, document analysis of the Kudumbasree Project of the Government of Kerala and the findings aroused from the participatory observation among the Harithakarmasena of Amballoor Panchayath in Ernakulam District to frame a learning hierarchy of Environmental Ethics and hierarchy of outcome-based learning towards Domestic Environmentalism. The pedagogy of outcome-based education starts from the school level and its implications continue throughout their life if provided with ample opportunities in higher education and thereafter in the form of lifelong education. Critical pedagogy and model-based learning strategies of social education encourage each learner to practice and synthesize the learning outcomes suitably in their later life. The discourse analysis of the criterion text Bhumiyyute Avakasikal included in the school curriculum and the integration of JIM can help them to think critically about social and legal conflicts to reach a justifiable solution for the issues. The role of teachers to encourage the learners by selecting suitable teaching-learning strategies is equally crucial in this phase. The talents of the teachers to make or select a suitable technique that focuses on the constructive side of the teacher education of the preservice and in-service teachers is also equally important. The learning hierarchy of environmental ethics followed in this study is framed in Figure 1, the hierarchy of outcome-based learning leading towards domestic environmentalism in Figure 2 and the hierarchy of outcome-based education through issue-based learning in Figure 3

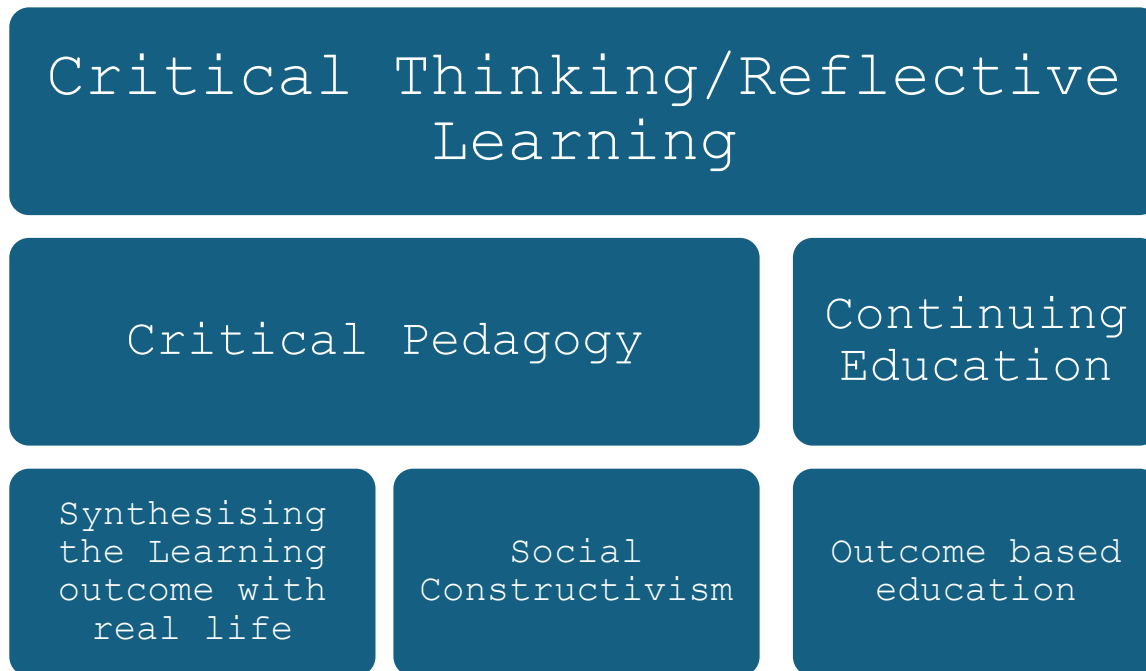


**Figure 1: Learning Hierarchy of Environmental Ethics**



**Figure 2: Hierarchy of Outcome Based Learning Leading Towards Domestic Environmentalism**



**Figure 3: Hierarchy of Outcome-Based Education through Issue-Learning**

## CONCLUSION

The framework of the Sustainable Development Model (SDM) named by the investigator Domestic Environmentalism is routed through various teaching-learning processes based on Outcome Based Education (OBE). The instructional designs of the proposed model represent a paradigm shift in hierarchy as envisaged in the National Education Policy 2020 (NEP 2020) by linking education from an institution to a system of family-institution-society. At the same time, it follows the psychology of learning and psychology of instruction with the application of cognitive, affective and psychomotor domains of education in a balanced and integrated fashion for the all-round development of the personality of the learner. Thus the framework of the model developed in different phases justifies the potential of Domestic Environmentalism - the Model making process-in achieving Environmental ethics and to attain the core elements of sustainable development and women empowerment as the goal of outcome-based education.

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