



REREADING THE 'CONCEPT OF CONSERVATION' IN ENVIRONMENTAL ETHICS: THE EIA OF UPPER KOTHTHMALE HYDRO-POWER PROJECT IN SRI LANKA

Charitha Herath*

Department of Philosophy, University of Peradeniya, Peradeniya, Sri Lanka

ABSTRACT

Environmental Ethics and Environmental Philosophy are two different areas in the subject stream of philosophy that deal with environment and environmental issues. These two traditions can also be discussed as two sides of a same coin. Nonetheless, many tend to argue that the Environmental Ethics and Environmental Philosophy differ significantly from each other. Hence, the development of two solid disciplines seems to be possible. Environmental Ethics mainly focuses on the relationship between human and nature and re-tracking this relationship within a moral ground, the ethical dimension of environmental conservation falls within this and become one of the central concerns. The concept of conservation is a late development in the field of environmental ethics. Conservation means to take care of the atmosphere, eco-systems, bio-systems with humans and cultural development. Hence, the technical dimension has to be intermingled with ethical dimension. This article focuses on the issue of conservation not merely as a technical issue but also as an ethical issue with reference to specific concrete cases in Sri Lanka.

Key words: Environmental ethics, conservation, EIA, environmental philosophy

INTRODUCTION

Environmental Ethics and Environmental Philosophy are two different sections in the subject stream of philosophy, which deal with environment and environmental issues. These two traditions can also be discussed as two sides of a same coin. But, many

argue that the Environmental Ethics and Environmental Philosophy differ from each other significantly. These arguments have paved the way for the development of two solid disciplines as named above. When analyzing the subject scope of Environmental Ethics one can say that it mainly focuses on the relationship between human and non-human (environment) substances and re-tracking of this relationship within a moral ground. Further, Environmental Ethics pays attention to defining the environmental concepts,

Author e-mail: charith9@yahoo.com

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such as environmental conservation, which is the central theme of the current study, in the context of creating a realistic picture on existing world. In addition, this subject also makes a platform for formulating environmental policies.

The historical evolution of the concept of environment in the subject of philosophy has led to the birth of new discipline; Environmental Ethics. It is based on the traditional theoretical background and develops theorizing the process, extending the boundaries of traditional moral foundations into non-human domain.

The concept of conservation has been a later development in the discussion of environmental ethics. Conservation means to take care of the atmosphere, eco-systems, bio-systems with humans and cultural development. The later developed subjects of environmental studies and the environmental sciences have included the technical aspect of the concept conservation in the sustainability discourse.

The broader objective of this study was to develop a philosophical analysis on the "Concept of Conservation" which is identified as a basic theoretical position of practical reasoning in the environmental ethics.

In order to achieve this objective, this paper focuses on (a) revisiting the concept of conservation in Environmental Ethics, (b) examining the level of ethical considerations in the environmental conservation and (c) analyzing the procedure of Environment Impact Assessment (EIA) as a case, which is considered as a conservational tool in Sri Lanka.

METHODOLOGY

Since this study is mainly engaged with both theoretical and practical domains, several research methods for collecting data and analyzing them were used. Therefore, the

qualitative data (ex: through a literature survey) were used in gathering information and theorizing the conceptual framework developed in the study. In some section of the study, the quantitative methods of data handling were employed to examine the objectives mentioned above. Collected data were analyzed using (a) conceptual analysis, (b) content analysis, (c) phenomenological methods and (d) statistical tools.

The outline of this paper was mapped in order to achieve the objectives of the study. The sequence of the sections was mainly lined up from (a) the examination of the concept of environment in the history of philosophy, (b) revisiting the evolution and development trends of the subject of environmental ethics in terms of conservation, (c) exploring the theories and practices of the concept of environmental conservation and (d) evaluating the cases of Environmental Impact Assessment (EIA) which is considered as a tool of conservation in Sri Lanka, and elsewhere from a philosophical perspective.

The EIA process for approving the Upper Kothmale Hydro-Power Project has been selected as the case for this study.

NOTION OF NATURE

As explained by some prominent experts on the subject (Callicott:1986, Cohen, 2006) one of the main conceptual bases of this study is to reinvestigate the "idea of nature" from its very existing and the later forms of development in different contexts. Eminent expert on Cultural Studies, Raymond Williams, in his book named Problems in Materialism and Culture (1980), provides an interesting historical account on coherent changes of the usage of the word "Nature" in western European cultures. The chapter under the name of "Idea of Nature" in his book, Williams states that the concept of nature gets its meaning varying from position of "nature – gods" to "nature as a human-instrument" (Williams,

1980). According to him, the end result of such treatment into the nature in the western civilization paves the way to the new process of “nature became singular, abstract and personified phenomenon” (Williams 1980: 69). Tom Jagtenberg and David McKie in their book named *Eco-Impacts and the Greening of Post Modernity* argue that it was through this epistemological process of the Western civilization, which directs to “the death of nature in scientific positivism” (Jagtenberg and McKie, 1996:6). It can be seen that this process has continued throughout the later centuries too. Carolyn Merchant in her book called, *The Death of Nature* claims that the nature died due to the “changes in human attitudes and behavior towards the earth” through anthropocentric positivistic worldview (Merchant, 1980: 2).

It can also be seen that this “changing attitude towards the earth” of the Western civilization was empowered by the “scientific development” which emerged after fifteenth century. The fundamental social and intellectual problem raised within the academic cultures of the seventeenth century was the “problem of order” of the world. This fundamental issue of “order” was solved by the Western academia, replacing the new “order” which dominates human over nature. The epistemic archeology of creating this new “world order” was also based on the thinking of two prominent philosophers, Rene Descartes and Francis Bacon in that time.

Descartes’ approach of “anthropocentrism” and Bacon’s doctrine of “scientific method” were the two philosophical views that created the theoretical foundation for the “new world order” as mentioned in elsewhere (Herath, C 2016), this process was supported by the development of mechanical technology in one hand and rising of the capitalistic market system in the other. “New world order” developed as a result of this process, paves the way to forming a Mechanical foundation

for the human-natural relationship, which devalue “organic cosmos” system of the nature. Therefore, it can be argued that this is the idea of nature that was created in post-Baconi and post- Decatesian world. According to Carolyn Merchant, the new mechanical philosophy of the mid-seventeenth century achieved a reunification of the “cosmos”, “society” and the “self” in terms of a new metaphor- “the machine” (Merchant, 1980:276).

When considering the development of the idea of nature in the Western civilization, it can be seen that “the machine governed” world view redefined the concepts related to “nature”. As a result of this process many other nature related concepts and discussion have emerged. For an example, the “concept of environment” and the “concept of conservation” in present form can be seen as by-products of the newly created world-view as mentioned above.

CONCEPT OF CONSERVATION IN ENVIRONMENTAL ETHICS

Concept of conservation in environmental ethics has been a core concept, which will be discussed in detail within this study. In overall assessment, this study argues that the subject of conservation discussed in environmental ethics should be identified as a moral framework driven policy.

When revisiting the concept of conservation through Philosophical analysis in environmental ethics, this study revealed that there are three conceptual pillars that dominate the theoretical discussions.

- a. Anthropocentrism
- b. Bio- centrist and
- c. Eco- centrist

There are different ways of interpreting the concept of anthropocentrism in the history of academic discussions. Concept of anthropocentrism in environmental ethics

represents the position of human governed and human controlled world view on environment. Further, according to this view, all human- and only human – stand within the intrinsic value frame and domain of direct moral standing. Therefore, non-human nature possesses only the instrumental value which could be made use of for the well-being of human. Ethics governed by anthropocentric world view suggests non-human or “others” have only a “use value”. Accordingly, the environmental ethics and policies, which are motivated and justified solely on the basis of anthropocentrism proposes ‘one dimensional approach’ as a conservational framework.

The concept of bio - centism in environmental ethics discusses the moral stands, which extend ethical responsibility beyond the limitation of the human centric perspectives. As defined in the discussions of Environmental Ethics, the term bio-centrism consist with the notion of extended intrinsic value towards all individual living beings. According to the position of bio - centric base of conservation in environmental ethics, the base line for considering ethical reasoning and value platforms rest on both human and non- human but all living beings. That means, the “non-living things” such as rivers, waterfalls, mountains and rocks and non-living environmental collectives such as trees, eco-systems represent either an instrumental value or no value at all.

Eco- centric base of conservation in environmental ethics stand on the view of the anthropocentric and bio-centric position of environmental ethics is limited in valuing the nature. It further brings the basic principle in ecological studies by suggesting that the human has intrinsic-type of relationship with the environment. That means the eco-centrism further stands on the biological totality of the world such as species, ecosystem, and natural resources such as wetlands, lagoons, forests. Therefore, this position of conservation in

environmental ethics maintains collective co-existence with all beings, ecosystems and physical processes that help to sustain those ecosystems. Thus, eco-centric ethical positions such as Deep Ecology argues that value and ethics do not need human to get meaning in the environmental domain.

There is an important conceptual issue in the foundations of the current context, which gives a picture as ‘conservation comes through “policies” and “regulations” while ethics functions through “premises” and “norms”’. Since the current conservation strategies rest on the basis of ethical foundations derived from anthropocentrism, bio- centism and eco- centism, the concept of “conservation” in Environmental Ethics can be defined as the examination of the contradictions existing between “policies” - “regulations” (conservation) and “premises” -“norms” (ethics).

The broad objective, as mentioned above, of this paper is to examine the contradictions between conservational tools and ethical framework. The historical understanding on environmental conservation shows that it has gone through an important dynamic evolution in the human history. Robert J Whittaker and Richard J Ladle in their paper “The Roots of Conservation Biogeography” in the book name Conservation Biogeography (2011) states that the modern conservation movements emerged in the late 19th century. According to Whittaker and Ladle, trend of emerging modern conservation movements influenced to change the fundamental worldviews that concerned the relationship between humans and natural world. Further, they believe that this view developed largely within the elite society of the American East coast and Western Europe (Whittaker et el 2011:5).

The philosophical bases on the engagements with conservational practice were raised by many different studies. Richard J Ladle et

al through their paper on “Social Values and Conservation Biogeography” argue that the cultural connection to nature has a role to play in the process of conversation. They further state that “the practice of conservation of the natural world in this context is clearly a social phenomenon, and one that often becomes strong political when conservation ideals conflict with other societal aspirations such as poverty alleviation or economic development. In the broadest sense, conservation is about asserting (re asserting) certain values in society concerning the human/nature relationship” (Whittaker, R.C. & Ladle, R.J. 2011).

Environmental Impact Assessment (EIA) has been considered and recognized widely as a conservational tool, which is practiced in the environmental domain in the contemporary world. Since revisiting the concept of conservation through philosophical analysis is the main objective of this study, examination of the theoretical ground of conservation, assessing the applicability of EIA as a conservation tool and investigating whether there are theoretical “gaps” in the existing conservational strategies are the central areas of inquiry in this. Developing this inquiry in order to search ethical conceptual framework concept of environmental conservation through philosophical analysis would be the main task of this study.

REVISITING THE CONCEPT OF CONSERVATION: THROUGH CASE STUDIES

As mentioned above, there are two main reasons that can be given for selecting four EIA's as case studies in this study. One of them is to identify and examine the “meaning crisis” that EIA faces in its decision making process. This study therefore, discusses the issues related to the “valuing” of the natural resource in one hand and the issues related to making “non-material value judgment” through their evaluating process on the other hand. These

issues, further, relate with the main theoretical argument of this study. Moreover, the issue of “making meanings and value on non-material entities” gives theoretical influences for developing several different philosophical questions, which are related to the field of ethics and moral philosophy.

Those moral questions can be presented as follows:

- What would be the criteria for identifying “ethical base” for environmental justifications?
- What would be the criteria that should be used in valuing the non-human biological entities in the environmental domain?
- What would be the base for making “non-material value judgment” in the field of environmental conservation?

The observations and possible answers for above questions could be made through analysis in this section. This discussion is mainly based on the literature review consists with qualitative data. Further, data collected from reviewing relevant literature on EIA based cases or projects were taken into consideration in this paragraph. And also, this analysis links with discussion of existing moral theories of field of environmental ethics.

There are three segments that could be identified as important areas of interests in the EIA based cases, when examining EIA as a conservation tool. In order to develop the discussion on revisiting the concept of conservation in the environmental ethics, these three sections will be discussed through content analysis and phenomenological analysis.

Those three segments are;

1. Analyzing the nature of the objectives, procedures and format of the EIA (Format).
2. Analyzing the contents of the selected EIA's

in this study, by using phenomenological methods for examination of the meanings in the given discussions (Content).

3. Anthropocentric and positivistic epistemic contents created through the EIA process as a tool of conservation as “order of things” and “discourse of powers” in the society as a result of this process (Outcome).

CONSERVATIONAL IDEAL IN THE FORMAT OF ENVIRONMENTAL IMPACT ASSESSMENTS (EIAs)

When analyzing the procedures and format of the process of the EIA, few significant characteristics can be identified. One of the main identifications in current form of EIA is the over-focusing on the technical aspect. Secondly, it can be seen that the socio-cultural and economic characters, which are related to the development initiatives are significantly forgotten in the current form of EIA. Thirdly, the environmental consequences, which are related with the cultural aspects of the projects, are also given a minor consideration in the contemporary setting of EIA (Cashmore, 2003). This observation is further confirmed by analyzing the legal submission and judgments relevant to EIA approval process.

Further, another considerable issue that can be traced in the evaluating process of the EIA reports is the use of more scientific and technical evaluation methods than socio-economic and cultural evaluation tools. The questionnaire, which aims to collect basic information of the project and the environmental screening for gathering knowledge of the ground stage, are two essential sections of the EIA process. The objective of filling the “questionnaire” and processing the “screening”, therefore is considered as an introductory step in the EIA process. The objective of these activities are to provide the basic conceptual foundation for “mapping the study location” physically and conceptually in the current EIA study. The theoretical expectation of such “mapping”

includes the development of “sustainability plan” and “conservational approach” in the project through EIAR findings. Further this exercise is designed with the expectation that the Project Proponent (PP), who seeks the approval for their project within the arrangement, would “locate” the environmental conservational approach of the proposed project using this knowledge of screenings and brainstorming meetings.

However, the examination of the format of current EIA and experiences of using it, show that this expectation of – locating the environmental conservational approach- is not substantively covered by the existing structure of the EIA

As mentioned above, the data collecting methods that are complying with the current format of the EIA for the preparation of the report have created several issues. The ambiguity and unclearness of a “commonly accepted method” for collecting required data are a significant issue in the methodology. Because of this reason ‘assessing the existing level of environmental’ which is vital in taking proper decisions would be misinformed. This situation may lead the whole process of the development project which is based on current format of EIA into a disastrous situation.

In Sri Lanka, the Central Environmental Authority, as an institution established by the National Environmental Act No 47 of 1980 has the regulatory power in developing “questionnaires” and “chapter outlines” for the EIA and designating the project approving agencies (EIA Reg/ 772/22 CEA). Examining the chapter outline issued by the CEA, which has eight subsections, shows that the central focus of the study is directed towards technical and mathematical outcome of the given environment. According to the ‘assumed’ meaning of environment generated through the methodological settings of current formation of chapter outline and questionnaires, show that the environment means mainly the

“material object” of the nature. The human aspect and socio-cultural issues such as “historical values” of the given environment “cultural meanings” of the given environment and “aesthetic meaning” of the given environment are not considered adequately in the format of the EIA.

The eight chapters in the format of EIA report can be grouped into four segments of information’s based on the highly “mechanized” definition on the environment such as;

- i. Physical and objective data collection
- ii. Evaluating physical geographical background and
- iii. Considering the undue recognition into the environmental balance within the time of construction of the project than overall impact of it.
- iv. Disregarding the envisage entire spectrum of socio-economic and cultural impact after commenting the project activity.

It can be argued that each section of the existing chapter out-line of the current EIA can be incorporated into either of the above four segments. For example, the standard chapter outline of the current EIA, which comprises Introduction, Analysis of alternatives and project details, Description of the existing environment, anticipated environmental impacts, proposed mitigation measures, monitoring Programme, financial commitments, conclusion and recommendations- mainly indicates that the definition of the term of “environment” is only a physical/sensory experiential phenomenon. No value based phenomenon such as “cultural reasons”, “religious reasons” and “regional knowledge” based on habitual are not taken into consideration in the EIA chapter outline. It is visible that this lacuna at the first stage of the EIA process develops an understanding that the “expected

conservation” is something, which is only focused on “internal matter in the project” but not on the “relational matter in the cultural totality”

CONSERVATIONAL ISSUES IN THE CONTENTS OF EIA

The evaluation of the EIA report shows that there are fundamental issues in analyzing the findings in those studies. The philosophical history of the concept of environment shows that the “interpretation” of environmentally related concepts such as environmental conservation, sustainability are not unique into different philosophical traditions (McDonald 2014). For example, the current debates of “meanings” and “meaning criteria” between Analytical Philosophical tradition and the Continental philosophical traditions show that there are fundamental differences in the nature of interpreting the given conceptual frame works in a sentence and in a language system (Biletzki and Matar, 1998).

Continental philosophical theories suggest that meaning is “intentional” and “contextual” (Moran, 2000). More precisely, the meaning is not based on the positivistic way of thinking. According to continental view a meaning of given sentences or system is not something there to “discover” but a thing that the human engagement could “create” (Kearney 1994). Thus, according to continental philosophy it is not discovering the meaning but creating a meaning in the given contexts (Plesants, 1999). Some argue that this way of explanation mainly acknowledges the role of the human understanding in more focused manner and the inclusive way in meaning creation process (Winch, 1958 and Staten, 1984).

Making a meaning in any given environmental concepts such as environmental conservation, sustainability, according to continental philosophers are based on the phenomenological meaning where the valuing process of given

environmental object is located within the same parameters. The human knowledge on environment cannot be separated from the human interest and valuing system of that object.

It can be argued that the attention given for the “meaning” in the content of the current EIA process is not significant. Yet, in order to develop the content related examination of the EIA projects, theoretical framework given by the Analytical and Continental philosophical theories on “meaning criteria” is important.

The main case that this study focuses is to examine the conservational practice of Upper Kothmale Hydro-Power Project (UKHP), which uses EIA process in advance to the project.

As a main objective of this study, it is important to examine how these concepts are treated in the evaluation process in the EIA reports. Such discussion would give a critical examination into the “Meaning Crisis” that could be highlighted within this process. It can be argued that the meaning of environmental conservation, which is an important aspect of the EIA evaluation process, relates with the interpretations of these main concepts in the EIA reports.

UPPER KOTMALE HYDRO POWER-PROJECT- A CASE STUDY

The Upper Kothmale Hydro Power Project was initiated by the Ceylon Electricity Board (CEB) in 2001. The main objective of the project was to develop and to commission the electric power generation plant with projecting capacity of 150 MW and generation of annual energy of 531 GWh. The site is located on the Western slopes of Nuwara Eliya mountain range and extends over an altitude of 700 ~ 1200 m on the upstream of the Kothmale Oya. This project intends to harness the water resources from seven rivers and tributaries: Devon Oya, St. Andrew's Stream (Kuda Oya), Pundal Oya, Puna Oya, Ramboda Oya,

Dusinane Oya and Kotmala Oya and diverts water above from the following waterfalls: Ramboda Falls (from the upper side), Puna falls (from the left strand), St. Clair falls, Devon Falls, Pundal Falls, Dunsinane falls and St. Andrews falls.

The project aims to develop 34 m high dam (1194m MSL) across Kotmaka Oya at Talawakelle, above St. Chair Falls, divert water through a 12.8 KM long headrace tunnel to an underground power house with two units of 77 MW turbines, which is located up stream of Kothmale Oya. In order to seek the approval of the project, the CEB has submitted an Environment Impact Assessment Report (EIAR) to the Project Approving (PA) agency, which is the Ministry of Power and Energy. The concurrence of the CEA was sought of the project approval in 1995. According to the EIAR, number of 2017 persons belong to 432 families in 12 communities are affected and have to be resettled.

VALUING THE WATERFALLS - UPPER KOTMALE HYDRO-POWER PROJECT

Among the four concepts mentioned above the concept derived from the Upper Kothmale Hydro-power Project (UKHP) has become central due to the reasons of the gravity and complexity of the process and the project-approving path. Further, it can be argued that the core issue of the discussion, which was developed based on that EIA report of UKHP is related to the “value reason” than the environmental scientific reasoning. In a nutshell it can be viewed that the basic theoretical ground of the UKHP discussion goes beyond the anthropocentric, bio-centric and eco centric reasoning in environmental epistemology.

With regard to the EIA process of the UKHP project, there are two important aspects that need to be taken into consideration. One aspect is to see the ‘complications’ and ‘complexities’ that were shown through

the evaluation process of the EIAR. The second aspect of this complexity is based on the final approval. The final evolution report was rejected by the CEA on the basis of “negative impacts for the environmental beauty of the waterfalls. Then, the PP (CEB) on the legal grounds appealed the decision. Later the previously “rejected EIA report” was reconfirmed and the approval was granted by the secretary of Ministry of Forestry and Environment on the basis of “Economical use-value of natural resource” argument.

The UKHP Project started in 1994. Since the approving arrangement was very complicated in this project, it is important to note the sequences of events. The process of this project goes as follows;

- (a) June 1994 – Scoping and brainstorming meeting,
- (b) October 1994 draft EIAR was handed over to the PA,
- (c) June, July, August, September, October, December 1994, TEC committee meetings,
- (d) November 1994 public hearings start,
- (e) 7 February 1995 final report of the TEC rejecting the report submitted.
- (f) 20 February 1995 PA’s Committee rejected the TEC decision.
- (g) 23 February 1995 Sec Ministry of Power and Energy (MIPE) requested the concurrence from the CEA.
- (h) 25 February 1995 the CEA rejected the request by the MIEP.
- (i) 15th January 1997 Appeal by the Sec/ MF&E. 27th March 2000 Secretary/ MF&E made final approval of the project.

The nature and procedures of the approving process of the UKHP project shows difficulties of considering the conservational relation decision-making in Sri Lanka. The

environmental approving process of the project has started in 1994. The CEA’s decision to reject the project on the basis of matters related to the environmental conservation was made in 1995. However, the re-applying for the approval by CEB and interventions by many agents and institutions in reconsidering the project has taken another five years’ time. It is important to examine the argument raised by the decision, which has presented the Result- Coast-Benefit- Argument (RCBA) as the main tool for environmental decision-making.

This decision to reconsider the EIA report and to grant the environmental clearance into the project has raised a counterproductive argument of the establishment of the existing legal framework. It can be seen that the theoretical foundation, which was laid in making the reconsidering decision by the Appeal Board headed by the Secretary of the Forest & Environment was based on anthropocentrically driven RCBA Argument on the value of the environment and its conservational need. Analyzing above decision and the approving process, gives an important exploration into the main argument of the current study.

The Appeal Board functions according to the current environmental legality governed by the National Environmental Act No 47 of 1980. The act says under the section 23 DD (1) that,

“Any applicant for a license under this Part who is aggrieved by the refusal of the Authority to grant a license may, within thirty days after the date of the notification of such decision appeal in writing against such refusal, suspension, cancellation or refusal to renew, as the case may be to the Secretary to the Ministry, of the Minister” (NEA 1981).

Accordingly, the proponent of the UKHP project submitted the appeal for the rejection of the environmental clearance by CEA on the

EIA report. Then, the Secretary to the Ministry of Forest & Environment heard the appeal and released the final Appeal Decision (AD).

The center of the discussion of the EIA report on the UKHP project was mainly related to the "valuing of waterfalls" with respect to "economic benefit" for the human being. The Secretary to the Ministry of Forestry and Environment (MoFE) raised the issue in the AD and explores the intention of the decision as follows.

"How to rationalize the basis for conservation of naturally related, historically recognized, set of national heritages such as waterfalls comparatively to the instrumental requirement which has satisfaction of the economically benefited basic human need such as electricity generation" (AD/Sec/MoFE).

The Secretary (MoFE) has listed fifteen major issues in his AD. Though the main reasons for rejecting the EIA of the UKPP by CEA was based on impacts on waterfalls. However, the list in the AD made by the Secretary (MoFE) has given number 6 and 7 for the issues related to waterfalls. This shows the less importance given to waterfalls by the AD. It further indirectly indicates the intention of marginalization of waterfall or main fact from the decision yet to come. And also, after considering the CEA decision to reject the EIA of the UKHP project, the AD of Secretary (MoFE) requests to examine further the following two issues;

- (a) Has adequate weightage been given to the impacts on 7 waterfalls that form an integral part of the national heritage?
- (b) Waterfalls have not been assigned economic values. It has been suggested that a contingent valuation exercise on waterfalls could have given a better indication according to the decision makers.

In this list of major issues, there is another important issue raised on the very existence

of the waterfall. The AD document questions the matter as follows:

"The report of the TEC of the CEA states that those waterfalls 'form an integral part of the national heritage and as such should be preserved for present as well as future generations'. Does this mean these Waterfalls should not be used at all?" (No. 10 of major issues in AD /Sec/MoFE.).

The questions raised by the Secretary (MoFE) "Does this mean these Waterfalls should not be used at all?" can be regarded as a considerable psychological ground that has governed the decisions making process relevant to environment conservation. Questioning the Technical Evaluation (TEC) report of Central Environmental Authority (CEA) and inquiring the validity of the CEA position of "protecting waterfall as integral part of national heritage", can also be argued as that the Secretary (MoFE) is in the opinion that "protecting and conserving waterfall" (as CEA suggests), means "NOT" using the waterfall at all.

This question itself represents the anthropocentric and reductionist positions given on environmental entities by the conservation policy makers. This indicated one of the critical issue, which governed the market driven value system on environmental conservation.

Further, the analysis section of the AD shows that the real meanings of the term "USE" that the Secretary of the Ministry of Environment mentioned with regard to the conservation of natural resource. He argues that the development projects cannot be sacrificed to conserve "environmental objectives which are less importance". This AD further claims that "We should not be romantic and emotional about the environment, forgetting the national priorities of poverty alleviation". Pointing the conservational aspect that was stated in the CEA's document, which declares

the waterfalls as a part of national heritage system, AD has put a counter-argument emphasizing “future generation” would not be the base for conserving the waterfalls. The AD says, “If we are too conscious about strict preservation thinking about future generation, the present generation will be worse off” (AD).

As an important section in this discussion, AD states ways of valuing the natural resource from economic point of view, and stands for Results-Cost-Benefit-Argument (RCBA). AD rejects the rationale that the CEA has given for rejecting the approval of the UKHPP. The rejection of CEA based on the claim that costing environmental assets such as waterfalls, using the available economic methodological tools, are “insufficient and imperfect”. Yet, the AD claims that “total economic value systems” should be taken into account when considering the “individual well-being” (AD)

The “value argument” on the environmental assets is the key in this discussion. More than other issues related to it, one important issue in this case is the fact that the current form of the EIA used as a conservation tool leaves a room for devaluing the socio-cultural aspects of environmental assets. According to the explanation of AD, the cultural value of a waterfall, which is based on “aesthetic” and “heritage” meanings, cannot be considered in environmental conservational decision-making.

Further, it can be argued that there are some other methods, which are considered as the evaluation regarding the environmental assets, which go beyond mainstream of the economic valuation methods. One such method is called Contingent Valuation Method (CVM). The CVM means the valuing system that could be developed and deployed, estimating “passive use of assets” which are considered on the basis of “not personally use but pay for existence” (Beteman,

1999:2). The CVM, however basically aims to select one alternative among available two options. And later it aims to convert into the physical mainstream value system. Though this method was indicated in the evolutionary process of the UKHP by the CEA, the AD disregards such alternative tool for making a value based decision (AD Sec/MoFE page12).

According to AD, the total economic value of an environmental resource is sum of actual use value, options value and existence value. Thus, the AD states that first, the Waterfall has actual use value, which means to use it as an environmental object based on RCBA. Secondly, AD mentioned that waterfall has an options value, which means to keep the potentiality of waterfalls for future consumption. The third point of the AD has noted that the moral and ethical assessment of the waterfalls as an “object to be conserved”. However, in order to use the waterfalls as a productive environmental object, the AD maintains that the value of the waterfalls should be based on actual use value and it should be evaluated through the RCBA.

At the end of this process, the CEA position of waterfalls as historically recognized, set of national heritage which should be conserved was rejected while the anthropocentric decision making based of RCBA by the Secretary of the Ministry of Forest and Environment was accepted as the conclusion of the AD. The acceptance of AD led to issuing a special Gazette notification, No 1283/9, to undergo a special monitoring committee. This process leads to the commencement of the UKHP project activities,

a). Without having due approval from the existing format of the EIA process b) Without considering the “aesthetic” and “heritage” values of waterfalls.

The approval of the UKHP without considering the total value of environment

lead to paying a heavy price to the natural heritage of the country by allowing waterfalls to die. This situation of the waterfalls can be seen in the two photographs of one of the waterfall named St. Clair waterfall which died

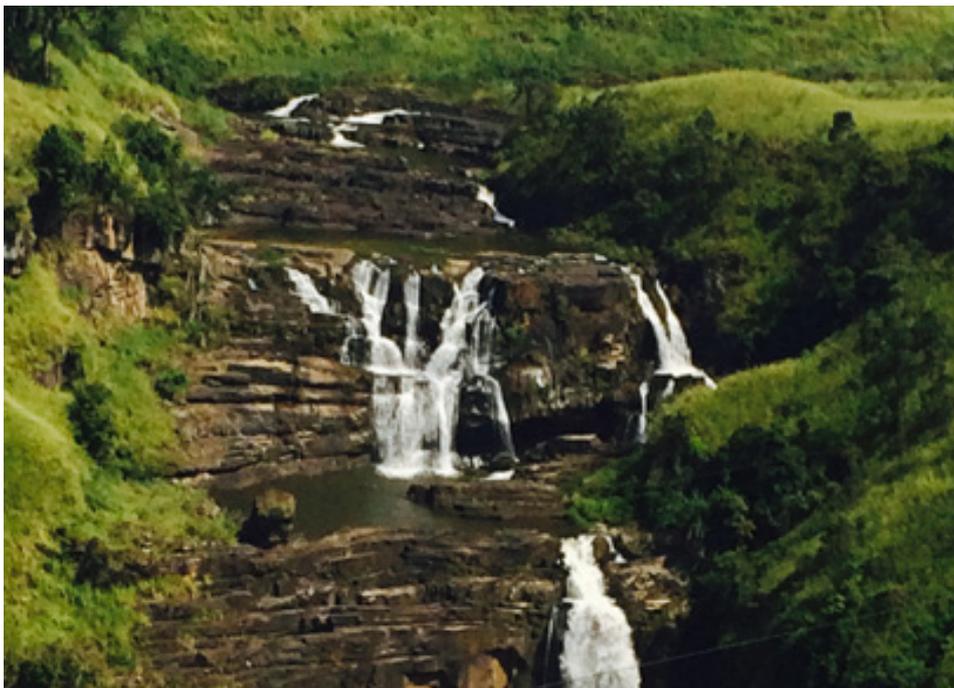
after the commencement of the UKHPP (Figure 1 and 2 indicate photographs of the St. Clair's Water fall before and After Operating the Activity of the Upper Kotmale Hydro Power (UKHP) project.

Figure 1: The St. Clair's Water fall before



Source: Central Environmental Authority, 2009

Figure 2: The St. Clair's Water fall after



Source: Photograph by Dr. Charitha Herath, 2015

CONSERVATION, RCBA METHOD AND OUTCOME OF EIA

As mentioned above, exploring the “meaning issues” in environmental valuing process is an important question in the discussion of the concept of conservation. This discussion assesses the possibility and the applicability of the Result - Cost-Benefit Analysis Argument (RCBA) in the field of environmental ethics. The RCBA is mainly applied for evaluating the financial investment related projects in the contemporary world. Applying such method for evaluating the environment resources is problematic. In outset, it can be argued that the theoretical foundation of RCBA is based on the positivistic philosophical settings. Further, it can be seen that the RCBA relates to basic theoretical background of modern economic policies, which are presented on Adam Smith’s modern classical economics theory (1723-1790) and Jeremy Bentham’ (1748-1832) Philosophy of Utilitarianism.

The basic concepts in the RCBA go as follows. The argument aims to count the benefit that the human being gains as a result of the cost (the investment). Benefit defines in this argument as “value of goods or services that we received” and Cost defines as “value of goods or services that we have given up”. It can be seen that there are some irresolvable issues that would arrive if the RCBA would be used to analyze the relationship between human being and the natural resources.

One of the issues in that nature, based on the question of “considering the value of natural resource” as “use value” that can be considered as cost and benefit. Can a river or a mountain be valued depending on the “cost” of preserving and “benefit” we receive? Can someone measure the “quality of livelihood” and “beauty of a landscape” of a forest based on the cost and benefit-sharing basis? This kind of non-consideration of the “value of natural resources” and the value, which is based on the human relationship to the

environmental object, cannot be accessed through the RCBA. Further it can be seen that the “relational meanings” of environment were created through the existence of the environmental resources and the human society in cultural, aesthetic and historical terms.

Alan Randall in his article under the name of “Cost-Benefit Analysis” in *The Encyclopedia of Environmental Ethics and Philosophy* mentions that “the Cost – Benefit criterion gives voice to human preferences for environmental goods and services that would likely to be ignored or undervalued in ordinary accounts of private gains and losses” (Randall, 2009: 192).

In ethical and moral philosophical point of view, the RCBA process is based on anthropocentric position in justification of ethics judgments. Some of the moral philosophical concerns on this method can be mentioned as follows:

(a) Damage for the coexistence of environmental through ill-informed preference of RCBA based decision making – This argument says that the decision making on the basis of human preference, sometime depending on the ill-considered observations and RCBA principles, would commit to “long-lived out-come” to the natural eco-systems and socio-cultural systems. Further to that, such project initiation would change the eco-socio and cultural setting losing some environmentally valuable objects forever in the history. For example, the argument based on the Damage for the coexistence of environmental through ill-informed preference, can be seen through analyzing the background that led to the death of St- Clair waterfall due to UKHPP.

(b) Value is more important than the preference—As Immanuel Kant argues (Kant, 1951) that aesthetic judgments are more valued than personal preference.

In other words, those judgments can make a claim which can be considered as “interpersonal” “historical” value based agreement. Further such agreements would enhance the value of those environmental objects developing “shared experience” vertically among the people and horizontally among the historical periods. For example, the argument Value is more important than the preference can be seen when analyzing the impacts of the UKHPP.

(c) Valuing process in environment should be based on moral principle not on the economic interests – This issue searches the deontological foundation for values system. It further suggests that valuing the nature from human perspective should be dependent upon the “duty” base than the human “interest” base. This philosophical argument would be seen in the practical ground when examine the impacts of NCFPP.

CONCLUSIONS

A. Dilemma of Conservation: Questioning the One Dimensional Approach

The theoretical discussions and the empirical data of the environmental ethics show that the prominent aspect of conceptualizing environment conservation in the contemporary world was mainly governed by the anthropocentric worldview mentioned above. This worldview was further shaped by the positivistic methodological approach of the twentieth century in the Western Philosophy. In addition to that, the developments of the capitalistic mode of production also aggregate the socio-economic foundation of the positivistic way of life in the contemporary world. This view further creates a social ontology of the field of epistemology.

According to some findings of this study, it can be observed that there is a requirement of a “complete account” of the conservational definition. And also, such definition should be

based on the inter-disciplinary range from the environmental science to the environmental ethics.

As mentioned in this paragraph, one dimensional approach of conservation as discussed above has led to create “theoretical lacunas and practical gaps” in the contemporary process of environmental conservation. The dilemma based on the “theoretical lacunas and practical gaps” of conservation was identified through analyzing the contemporary theoretical foundations of environmental conservation in environmental ethics and investigating the EIA based cases which were considered as practical conservational tools in this study. The discussion that would pave way to identify possible solution that can be applied to address the dilemma mentioned above is to be suggested in this study. The framework of this suggestion is discussed in the following paragraph.

B. Solutions for the dilemma in Conservation- Cultural Centric Approach

The theoretical interpretation of the concept of conservation and analysis of data related to four cases explain the “missing” link to “theoretical lacunas and practical gaps” which can be identified as the “cultural” aspect in the process of conservation. And also, this study suggests that gaps mentioned above, which are based on the environmental epistemic process that is grounded on “valuing system in culture”. It can be argued that the “value and culture related reasoning” could be identified through five deferent philosophical concepts. Those are;

1. The Bio-cultural base of conservation in environmental ethics
2. Value of Pluralism
3. Non-Material value judgment in environmental conservation
4. Conservation Practice and Conservation Ethics
5. “Inter-connected” Systemic Approach.

Bio-cultural base of conservation in environmental ethics differs from anthropocentric ethics. The bio-cultural aspect aims to connect human life with the environment through “totalistic” “contextual” existence. It should be mentioned that, this is not simply an extension of utilitarian or deontological ethics that include animal, plants and other living beings, but it is an ethic that involves with “non- material value system” suggested by cultures.

This study suggests that the concepts such as “social – cultural changes”, “the worldviews”, “forms of knowledge”, “values”, “ecological practices of cultures” and “adaptation of the intercultural meanings” should be redefined in order to expand the framework of the concept of conservation. Therefore, it can be argued that the concept of conservation in the environment ethic should be re-read considering the Bio-Cultural Base of Conservation through a Philosophical analysis.

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