

# An Environmental Cultured School Model Around Protected Forest Areas

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**ABSTRACT---** Deforestation that occurred in several protected forest areas was triggered by population growth and socio-economic activities of the people living around the forest area. The degradation of protected forest areas is increasingly high due to the conversion of protected forests to horticultural agriculture, looting and timber theft carried out by rural communities around the forest as well as accelerating the occurrence of forest destruction which impacts natural disasters such as landslides and floods. Another important problem is the participation of the community and the support of stakeholders in efforts to rehabilitate and conserve forest areas so that the efforts made to reduce the conversion of forest areas have not been optimal. Environmental management of forest areas needs to get the attention of all parties, including schools in the vicinity of forest areas. Schools are effective means of changing the behavior of young people to care and love the environment, and actively participate in preserving the forest environment. An environmental cultured school model through multi-stakeholder partnership is an alternative forest management system that is comprehensive, participatory and sustainable by fostering an environmentally caring attitude for the young generation through learning and habituation processes and considering aspects of environmental sustainability in every life. Strategies implemented through the development of environment-based curriculum, the development of extracurricular fields, management of environmentally friendly supporting facilities and environment-based school management.

**Keywords**—Deforestation, Environmental Cultured School Model, Environmental Sustainability, Protected Forest Area.

## I. INTRODUCTION

Existing conditions occur continuously deforestation in protected forest areas triggered by population growth and socio-economic activities of people living around forest areas. In addition, the conversion of protected forest areas into horticultural agriculture that occurs massively in the upstream areas of the river flow correlates to the increasing environmental damage to the forest, environmental pollution, and natural disasters.

As a result of the continuous land conversion, the land cover in the forest area is very low. This condition is very dangerous for the environment because it is done by

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reducing the vegetation of forest and understored trees, and is replaced with horticultural crops. People plant horticultural crops on critical slopes with high slope. The current condition of horticultural farming activities carried out by forest village communities is increasingly pressing into conservation forest areas. This condition is very dangerous because the area is prone to natural disasters such as erosion, landslides, and floods. In addition, the degradation of forest areas is worsened by the increasingly rapid development of tourist areas without regard to spatial functions and plans.

By paying attention to these problems, it is needed an effort to an early awareness of the community in forest management through an approach or model, one of which is a school model of environmental culture.

A school model of environmental culture is a school that systematically develops programs to implement environmental values into all school activities. In other words, the green school is a real effort from the school in saving the environment [1][2].

This is necessary because saving the environment must be planted early on both at home and at school, and implemented in daily life. So that people can be efficient in using energy resources and consider environmental aspects in every life [3][4] in line with the goals of Sustainable Development (SDGs).

Environmental management in protected forest areas needs attention from all parties. Universities can encourage efforts to collaborate between stakeholders in environmental management, especially in the effort to manage community-based environment as a disaster prevention preventive effort[5][6]. Because if the handling of the environment in protected forest areas does not immediately get treatment from various parties, it will impact the ongoing degradation of forest resources, and people living in protected forest areas are increasingly unaware that their activities in the environmental management of forests contribute to natural disasters that will occur[7][8][9].

The school model developed is a multi-stakeholder synergy from Universitas Islam Nusantara through a community service program with Star Energy Geothermal Darajat II, Ltd. through the Corporate Social Responsibility (CSR) Program, the Garut Regency Education Office, Perhutani Public Corporation Garut Forest Management Unit, the HutanMekar Lestari Village Society, and the Village Community who live around the forest area as



beneficiary communities who wish to change their destiny to become empowered communities and independent.

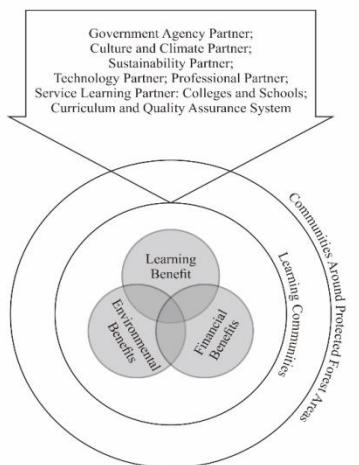
The goal is a systematic, comprehensive and sustainable social engineering effort in the field of education and environment with multi-stakeholder participation. Making young people living around forest areas can live healthy and creative lives while maintaining and preserving forest areas.

## II. METHOD

The development of the school model was carried out for three years using research and development (R & D) methods, starting with conducting a preliminary study, namely by analyzing internal conditions, namely inventory of school resources, human resources, conditions of educators, students, school administrators, natural resources, forest resources, and the conditions of the community around the forest through social mapping, as well as external analysis, especially the analysis of stakeholders who have the opportunity to carry out partnerships in the implementation of a school-style environmental model.

The school model development system was carried out in two elementary schools located around the Darajat Forest area, with purposive sampling.

## III. RESULT



**Fig 1. An Environmental Cultured School Model in the Sustainability Context of Protected Forest Areas**

### *The development of environment-based curriculum*

The environmentally cultured school curriculum is structured based on the principles of effectiveness, efficiency, and sustainability based on the vision and mission to keep the community connected to the local environment and the local culture. This is necessary because the curriculum will affect the soul and mindset of the community in interacting with their environment.

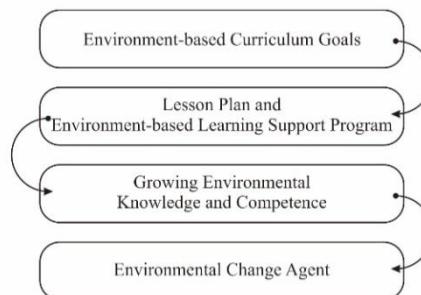
The implementation is a manifestation of one of the components of the "Adiwiyata" Program because basically the school has a big influence on environmental sustainability and students will get knowledge related to the environment through school.

The environment-based curriculum is conducted in an integrated manner with existing subjects. The integration is in accordance with the components, standards, and implementation of the Ministry of Environment's

"Adiwiyata" School in 2014 which means that environmental education is not a new subject or area of expertise, but the environmental material is integrated into relevant subjects.

The development of the material in this model is carried out to provide students with an understanding of the environment that is associated with environmental problems in the local community. And the teacher is encouraged to carry out the learning process that leads to efforts to shape the behavior of students who care about the environment through applicable learning and touching everyday life.

The process of implementing an environment-based curriculum can be seen in Figure 2 below.



**Fig 2. The Process of Implementing an Environment-Based Curriculum**

The process of applying the curriculum in Figure 2 if appropriately implemented can produce environmental education materials that are organized, internally consistent, and valid for each learning group. Furthermore, this can be applied to various grade levels and any content area. The most important thing is the fact that the process of implementing this curriculum can be applied by a team of professional educators who are trying to implement effective environmental education instruction for elementary school students.

### *The development of extracurricular fields*

How to integrate Environmental Education in curricular activities starts from analyzing the ability/sub-ability of each area of expertise/program expertise to produce a material related to the environment. This activity is carried out so that students have the competence or professional attitude in accordance with their expertise and in line with the demands of sustainable development. For example,

1. Habit of students in various disciplines of activities related to environmental health by utilizing human resources in the school environment, such as the implementation of clean and healthy lifestyles, caring attitude towards the environment with garbage collection movements, garbage disposal in place, energy efficiency, plastic diet, snacks healthy, green camp, and greening;
2. Development of school creativity in building a healthy environment by utilizing natural resources based on environmental values and ethics;



3. Increased active participation of all school residents in managing the school environment, ranging from cleanliness to safety;
4. Establishment of environmental ambassadors who are representatives of each class, capacity building of environmental ambassadors through training in waste management (Reuse, Reduce, Recycle) and utilization of waste into creative industries, composting, making local micro-organisms, biopori, and eco-brick; and
5. Involvement of community members and parents to tackle environmental problems.

#### *Environment-based school management*

Environmental-based school management is carried out in five strategic steps, namely: (1) curricular field: environmental learning is carried out in an integrated manner with existing subjects; (2) the extracurricular field leads to the formation of students' concern for environmental preservation; (3) the field of management of capacity building for human resources (education and non-education personnel) in the field of environmental education; (4) the field of environmental management of educational infrastructure facilities in schools; and (5) school policies for allocation and use of funds for activities related to environmental issues.

#### **IV. CONCLUSION**

An environmentally cultured school model is designed to educate the community about the importance of environmental stability to needs so that it will have control of behavior in seeing the advantages and disadvantages of environmental use. In addition, provides a practical approach to understanding behavioral intentions and identifying opportunities for targeted interventions aimed at changing behavioral. Furthermore, it is hoped that it can build the mindset of the community on the importance of protecting and preserving the environment for the sustainability of a better life.

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#### **AUTHORS PROFILE**

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