

# CHAPTER I

## PRELIMINARY

### 1.1. Problem Background

Indonesia as one of the developing countries in the world has very rich and abundant resources. This wealth of resources exists in every region of Indonesia. However, resource wealth, especially natural resources, also creates the potential for environmental pollution and damage. Industrial activity is the biggest contributor to environmental pollution which directly results in a decrease in the carrying capacity of the environment (Rusdiyanto, 2015).

In the era of globalization threats related to environmental damage are very common. For example, forest and land fires, floods, landslides, illegal logging and others. All of these damages affect human life. When the environment is damaged, human activities will be disrupted. For this reason, an environmental attitudes concern is needed from each individual, especially students (Qodriyanti, 2022).

Education is one aspect of life that is very important as an effort to develop one's abilities. To be able to compete in the era of globalization, it is necessary to have quality education so as to create intelligent humans. Education plays a very important role in the formation of character and the development of science and intellectual a child so that they can then interact with their environment and grow into adults who do a lot with their environment. The process of education in Indonesia is usually always related or inseparable from the environment. The aim of implementing education should be to have a good environmental impact, but currently there are many environmental problems which are marked by increased environmental damage (Sarumaha, 2021).

Environmental problems are a serious problem and must be addressed as early as possible. The way that can be done to overcome this is education in schools. The environmental attitudes is an attitude that must be implemented for schools at every level of education. This attitude must be instilled in students from an early age in order

to be able to manage the surrounding natural resources wisely and develop a sense of responsibility for the benefit of the next generations. Environmental concern at school will have an impact on the community (Lestari, 2018).

The environmental attitude is an action that always seeks to prevent environmental damage and repair natural damage that has occurred (Daryanto, 2013). Education should foster dynamic thinking in students who can find solutions to real-world problems (Husna, 2013).

School is the most important form of education. Biology is one of the subjects in school. Biology is closely related to nature and the environment (Husna, 2013). Biology studies living things, the environment and the relationship between the two. Biology learning focuses on direct experience to develop students' ability to recognize and understand their environment through discovery and action (Lestari, 2020). One of the materials in biology that discusses the environment is environmental change material. One of the materials in biology that discusses the environment is environmental change material. In this material students will learn about the environment around them and also indirectly be able to emphasize the importance of environment attitudes. In addition to understanding the concepts, students must be able to apply their values in everyday life (Khoiruddin, 2019).

Based on the results of initial observations at SMAN 1 Pangururan, researchers found several things such as the school rarely holding routine activities or special programs to increase environmental attitudes such as mutual cooperation, planting plants/trees and other environmental activities. Regarding the learning process on environmental change material carried out in the dominant class using textbooks. In addition, the biological learning outcomes of grade X students in the environmental change material still need improvement, as approximately 40% of the students have not yet achieved the learning ability with the Minimum Completeness Criterion of 73. According to Hotimah (2020), learning outcomes are the skills that students have after completing the learning, which are characterized by behavioral changes and which can be measured by numerical tests.

Teachers must choose the right learning method. By using appropriate learning methods, teachers can keep students' attention focused on learning. One learning model that can be used to improve student learning outcomes and attitudes towards the

environment is the application of the guided inquiry learning model. The guided inquiry learning model is an educational model that emphasizes the process of discovering concepts and relationships between concepts, in which the teacher acts as a facilitator for the student in learning, while the student's role becomes more dominant (Sukma, 2016). By learning guided inquiry, students can enhance their creative ability to solve the problems (Wahyuni, 2022). In guided inquiry learning students are given several activities, starting from exploring phenomena, focusing questions, designing investigations, carrying out investigations, describing information, building knowledge, and communicating knowledge (Llewellyn, 2012). Guided inquiry learning models also lead to changes in students' attitudes in response to everyday events, promoting personality traits, decision-making skills, responsibility and discipline (Putri, 2014).

The implementation of the inquiry learning model can help bring out character values, namely caring for the environment based on the character values of curiosity, independence, discipline, creative, innovative and hard work (Darminatun, 2013). Similar research on the guided inquiry learning model conducted by Ratnasari (2015) in his research showed that the application of the guided inquiry learning model can increase environmental attitudes towards the environment in the concept of environmental pollution. In addition, research conducted by Widhiastuti (2019) classes that are taught through the guided inquiry model show that the average value of learning outcomes is higher, compared to classes that learn through conventional models. The conclusion from this study is that there is an influence of the guided inquiry model on biology learning outcomes.

Implementing an inquiry-based learning model can help emphasize personality values, especially environmental considerations, based on the personality values of curiosity, independence, discipline, creativity, innovation, and hard work (Darminatun 2013). A similar study on the guided inquiry model conducted by Ratnasari (2015) in the study showed that the implementation of the guided inquiry learning model can improve the environment's attitude towards the environment in the pollution concept. Furthermore, her Widhiastuti (2019) study of classes taught according to the guided inquiry model shows that average learning outcomes are higher than classes taught

according to the traditional model. The conclusion of this study is that the guided inquiry model influences learning outcomes in biology.

Based on the above description, teachers should design interesting learning models to achieve desired learning outcomes and environment attitudes related to environmental change topics. The researcher is therefore interested in writing a research paper titled **“Implementation Of The Guided Inquiry Learning Model On Students Learning Outcomes and Environmental Attitudes In Environmental Change Topics Of Class X SMAN 1 Pangururan”**.

### **1.2. Problem Identification**

From the above background, we identify the following problems:

1. The process of learning biology in class related to environmental change material tends to be carried out theoretically using textbook media.
2. Routine school programs to improve environmental care attitudes are rarely implemented.
3. Learning outcomes of biology in class X environmental change topics are low.

### **1.3 Problem Scope**

The scope of this study was to determine the impact of implementing a guided inquiry learning model on learning outcomes and students' environmental attitudes in environmental change topics taught to students in Class X of SMAN 1 Pangururan.

### **1.4. Problem Limitation**

To limit this research not to be too broad, the researcher limits the problems, namely:

1. The subjects in this study were limited to class X students at SMAN 1 Pangururan for the 2022/2023 academic year.
2. The material tested in this study is even semester topics, namely environmental changes in Basic Competency 3.11 and 4.11.
3. The guided inquiry learning is the model used.

4. Variables that want to be researched are student learning outcomes and the factors that influence them (physical, psychological, and physical maturity, social, physical environmental factors) and students environmental attitudes with questionnaires and observation sheets.

### **1.5. Problem Formulation**

From the limitations of the existing problems, the formulation of the problem in this study is as follows.

1. Is there an improvement in learning outcomes after the application of the guided inquiry learning model to environmental change topics in three different classes?
2. Is there any effect of learning outcomes on environmental attitudes based on questionnaires in three different classes?
3. Is there any effect of learning outcomes on environmental attitudes based on observation sheets of three different classes?
4. How many students do their learning outcomes reflect environmental attitudes according to questionnaires and observations of three different classes?

### **1.6. Research Purposes**

Based on the formulation of the problem above, this research was conducted to find out:

1. Knowing whether there is an improvement in learning outcomes after the application of the guided inquiry learning model on environmental change topics in three different classes.
2. Knowing whether or not there is an influence of learning outcomes on environmental attitudes based on questionnaires in three different classes.
3. Knowing whether or not there is an influence of learning outcomes on environmental attitudes based on observation sheets of three different classes.
4. Knowing the number of students whose learning outcomes reflect environmental attitudes according to questionnaires and observations of three different classes.

### 1.7. Research Benefits

Benefits that can be obtained from research:

1. For students as research subjects can improve student learning outcomes in learning and students' sense of responsibility and care for their environment.
2. For teachers, the results of the research are expected to serve as guidelines and input or one of the references in the application of learning in the classroom especially regarding the environment attitude and student learning outcomes with the influence of the guided inquiry learning model.
3. For researchers can add insight regarding the use of the guided inquiry learning model in improving learning outcomes and environmental attitudes as well as add experience as a teacher candidate.

