**Sanidine, the Stone of Wakayama**

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1. **Introduction**

A: Hello, everyone. We are students at NIT, Wakayama. Today, we will talk about sanidine, which is the “stone of Wakayama Prefecture.” And through this consideration, we will examine the revitalization of our prefecture and the protection of its environment.

First, we will introduce a jewel moonstone and the stone of our prefecture, sanidine. Next, we will suggest ways to help revitalize Wakayama by utilizing the stone. Then, environmental problems caused by these sanidine projects are considered, referring to the United Nations’ Sustainable Development Goal 15, known as SDG 15. Finally, the importance of appreciating and discussing the terrestrial ecosystem is stated.

In this presentation, a “stone” means a small piece of mineral matter. “Mineral” is a chemically homogenous substance with a crystalline structure.  It is called a “mineral stone" in its natural state, and a “jewel" after being beautifully cut and polished.

1. **Sanidine and Moonstones**

B: As we mentioned, the stone of Wakayama Prefecture is sanidine. It is a kind of silicate mineral and alkaline feldspar crystalized by rapid quenching from a high temperature. It is transparent or translucent, and its color ranges from a bright gray to a bright brown. The most beautiful stones are made into moonstones, which are milky-white, translucent feldspar with a pearly luster, and are believed to represent feminine energy and aid fertility.

C: Sanidine is native to Germany, but it is also mined in Japan, especially in Wakayama. According to our research, however, most local people don't know that sanidine is the prefectural stone or even what sanidine is. Its nature and even its existence are not known to everyone. -- It seems to be in the same situation as Wakayama Prefecture itself is in Japan. So, if sanidine could become famous as a stone or a jewel, it could help the revitalization of Wakayama.

A: Then, how can we let sanidine win fame all over Japan? As we mentioned earlier, moonstones imply feminine energy. Then, to begin with, how about making the most of the feminine energy to popularize sanidines?

1. **The Feminine Energy to Promote Sanidine**

A: Mai, Hanami, what do you think is the best way to make sanidine popular all over Japan?

B: Well, our research shows most women love jewelry. Putting it on, they look more beautiful and feel more confident. In addition, through SNS, they can easily spread information in an instant, can’t they? So, if we can produce something appealing and instagrammable using sanidine moonstones, I think that they will appreciate the beauty of sanidine. Moreover, if we can provide pretty and cool sanidine figurines related to Wakayama such as pandas or mandarin oranges, information about Wakayama will reach people all over Japan and the world through SNS.

A: Wow! That’s a great idea!

C: Now for my idea. In my view, women tend to be attracted to beautiful or cute things.

A: Yes, I agree.

C: How about selling reasonably-priced accessories with tiny sanidine stones aimed at female students? Even if the gems are small, these accessories will sell well since they are cute and instagrammable. Also, we can limit the number of sanidine gems sold each day. The more limited they are, the more girls will long for them, I guess.
A: Good idea!

B: I would buy them!

1. **Other Ways to Popularize Sanidine and the Revitalization of Wakayama Prefecture**

C: Well, what about you, Ayaka? Have you thought of another way to make sanidine famous?

A: Yes, I have two plans. Because sanidine is the stone of Wakayama, my plans are inspired by well-known figures and places in Wakayama.

 One of the most famous historical figures in our prefecture is Minakata Kumagusu. He had encyclopedic knowledge about natural resources in Wakayama. So, with his reports and specimens of minerals, I suggest establishing a museum of mineral stones. In this museum, sanidines would be permanently exhibited. In addition, parents and children could try quarrying and polishing sanidine stones for themselves.

B: That’s a fantastic idea!

A: Also, one of the most famous places in Wakayama is the *Kumano-kodo* trail. What do you think of an event for experiencing the mystical and spiritual nature of moonstones on the *Kumano-kodo*?

C: It sounds cool! But what do you mean by “the mystical and spiritual nature”?

A: Well, I’ll show you an example. There are different birthstones for your birth month and your birth day, and each of them has its own stone language. It’ll be so much fun if we could practice lithomancy by using these stone languages with sanidine and other moonstones on the *Kumano-kodo*.

B: That’s very interesting. And *Kumano-hongu-taisha* on the *Kumano-kodo* is the grand head temple of all *Kumano* shrines in Japan. I think using stones on this road could have a miraculous effect.

1. **Problems Caused by Sanidine and SDG 15**

C: Well, we have just proposed four ideas. If we achieve these projects, however, we will need a vast amount of sanidine. Unplanned digging of sanidine would surely destroy the terrestrial ecosystem in Wakayama Prefecture. Deforestation and an eventual lack of sanidine due to excessive mining are cases in point.

B: The Sustainable Development Goals were adopted by United Nations in 2015 in order to fulfill the sustainable societies globally. In Wakayama we should never ignore the 15th goal, that is, to “protect, restore and promote sustainable use of terrestrial ecosystems” and to “sustainably manage forests.”

1. **The Necessity of Environmental Consideration**

A: Now, speaking of the deforestation due to excessive mining, one of the solutions is to make use of the soil after mining. Though the ground before digging is hard for trees to become rooted in, the ground will become soft after digging by being loosened. Reforesting by planting trees on the loosened ground would be helpful in restoring the environment.

B: On the other hand, what about grubbing up the roots of the trees instead of cutting them down? Planting these trees again on the coastal areas in Taiji-cho, where sanidine is chiefly mined, would reduce the risk of *tsunami.* A *tsunami* would reach the Taiji-cho coast within seven minutes of an earthquake, according to municipal government data. By this afforestation, we could prevent the loss of forests and also prepare for a possible Nankai Trough earthquake.

C: In addition, to discover where in the ground sanidine lies, historical or mineralogical studies must be explored at institutes such as universities and colleges of technology. Accurate prediction of places and amounts of sanidine would minimize deforestation and disruption to the ecosystem.

1. **Conclusion**

B: So far, we have tried to find ways to let people know about sanidine, the stone of Wakayama, and to use it to help revitalize the prefecture. With the help of women’s love of jewelry and their use of SNS, or with things associated with Wakayama, sanidine has let us appreciate the significance of its mining.

A: To tell the truth, it will take years to realize the benefits of popularizing sanidine and revitalizing Wakayama. Nevertheless, we can be positively involved in protecting the terrestrial ecosystem in Wakayama even now. We will try to work on SDG 15 in Wakayama, and if you have a chance to visit Wakayama, please remember about sanidine, moonstones and especially, the global environment. Thank you.

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