PAPER FROM SEAWEED, WHY NOT?

http://deeppaper.com/paper-from-seaweed-why-not.html

“No more cutting trees for paper, no more cutting of trees to make paper. We will produced paper from red seaweed, ” said You H Churl, from South Korea, with serious facial expression.

I meet You accidentally in early May 2007. At that time, speedboat that we were riding ran into the waters of Nusa Lembongan, Bali (about 45 minutes of air-speedboats from Sanur Beach.)At that time, You ready to dive to take a sample of sea grass in the waters as deep as five meters. While we stopped for a moment, seeing the sea grass from the surface of the waters of Nusa Lembongan.

In the evening, at a hotel in Kuta, You, a chubby man with crew-cut hair cut thrusting a piece of **paper**. Clean white paper. When touched, it has a smooth surface, such as expensive paper, which used Time magazine.You educated literature. Prior to cultivate the red seaweed, he had a software company. However, three years ago, when the gelatin to be eaten as part of the diet fell on the kitchen floor, his life changed orientation.

“I see it scattered jelly-like pulp. Why are not made as paper? “He said. He contact the various agencies and researchers. Luckily, You live in a country with a government that supports the innovation so he got help and management with referrals to experts.

Now the patent on his behalf, about the process of paper production from red seaweeds (Gelidium amansii and Pterocladia lucida), registered in Korea and United States since 2003. He is still waiting for a similar patent in 45 countries, including patents from Indonesia.

Making Process

The process of making **paper from seaweed** is no different than making paper from wood. There are five main processes, namely (1) preparation of raw materials, (2) cooking seaweed, (3) seaweed extract, (4) bleaching, and (5) printing.

In general, the production process starting from the red seaweed harvested, then dried, cleaned and cut into pieces. Then put in oven and cooked at high temperatures (boiling) so that extract “core” will came out in a form of jelly for food. Seaweed pulp that have been taken its jelly then bleached and then crushed into pulp red seaweed (pulp). The pulp then processed to the paper.

As a result, operational paper mill made from raw wood is almost always collide with the interests of the environment. In 2003, for instance, social upheaval even occurred in North Sumatra, involving the pulp mill and the local community.

In contrast, processing of paper production from seaweed is processed with almost no chemicals, except bleaching with chlorine. More importantly, according to You, there is almost no waste that comes out so it does not affect health.

Was You just simply theorizing? No! In 2004, in the forest products laboratory Chungnam National University Korea, You have made a porridge of seaweed. Then he proved capable of producing paper from pulp slurry by hiring seaweed paper mills.

The successful key of seaweed transformation to be paper is the discovery of fiber. If wood cellulose fiber, seaweed contains agalosa fiber with 3-7 micrometers wide and 0.5 to 1 millimeter long, with high flexibility, no trace of lignin, and contain liquid adhesive substance.

Research

From the research microscope seen the size and shape of fibers agalosa more homogeneous, unlike the cellulose fibers which are round, oval, or flattened. This homogeneity makes the paper quality is better, more flexible, more subtle, more easily writable, it can even be used as photo paper.

Mass growth of red seaweed is extraordinary, ie 5-10 percent a day. With the harvest 70 days, growth is very rapid compared to the tree as raw material for conventional timber, which had to be cut after 15 years.

“In addition to conventional paper as a means of writing, this paper also good for cigarette paper since its toxic content is a bit. This happy news for smokers, “said Grevo S Gerung, marine researcher Sam Ratulangi University, which accompany You during in Indonesia.

In Korea, each sheet of cigarette paper which they imported from Europe contains 40 toxic components, while the red seaweed paper after tested only contain 17 toxic components. “This paper not only can be used for cigarette paper, but has opportunity to be used for packaging fast food like Kentucky Fried Chicken,” said Grevo.

Packaging paper more likely to be used in United States, which prohibits the use of plastic packaging because it is difficult to be recycled naturally. “When the paper from the red seaweed can be mass produced, the world’s forests can be saved. The positive impact of prevention of cutting tress is to minimize the global warming, “You says persuasively.

Saving forests, high value-related reasons to maintain water quality, air quality, and prevent melting glacier in the bi-polar world which could submerge coastal areas around the world. In addition to positive news for the preservation of the world, the possibility of the use of red seaweeds for paper materials will also be welcomed by paper industry to obtain alternative materials out of wood raw materials, whose prices keep rising.

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Source: Kompas Online, 23 July 2007