

August 1 - 7, 2005

## Mass. Scientist Wins Blue Planet Prize

*Mangroves provide sustainable economy for African Country*

By **YVONNE MARCOTTE**

*Epoch Times New England Staff*

Dr. Gordon Hisahi Sato of Wenham, Massachusetts, has been awarded the 2005 Blue Planet Prize for his unique contribution in helping to solve Africa's poverty and starvation problems. His help differs from the aid of developed countries in that he does not give goods or money but provides a means of food production together with a means for people to become self-sustaining.

Dr. Sato shares the prize with British researcher Sir Nicholas Shackleton for his work in paleoclimatology in predicting future climate changes. The approximately \$5000,000 prize to each winner will be awarded in Tokyo this October. Started in 1991 by the Asahi Glass Foundation, the Blue Planet Prize honors scientist who have made significant contributions to ensuring environmental sustainability.

Since 1978 Dr., Sato has worked with the people of Eritrea, one of the poorest countries in the world, to build a sustainable economy using resources of the Red Sea's shores. Although the project has been supported by charitable donations and a small subsidy by the Eritrean government, he has provided much of the funding himself. He soon understood that building up wealth in this region could benefit the entire country.

In accepting the prize, Dr. Sato said: "I share this honor with the wonderful people of Eritrea. I began traveling to their war-torn, impoverished country in 1987, with the goal of establishing a sustainable economy to bring famine relief. Since then, we have established the only profitable, self-sustaining seawater agricultural program in the world."

Born to a Japanese immigrant father, and second-generation Japanese mother who were sent to a relocation camp in the California desert during WWII, Dr. Sato became interested in how to grow food in harsh environments. After a distinguished scientific, he left academia to find sustainable solutions in what has been called the world's driest area, Eritrea.

Honored with the 2002 Rolex Award for Enterprise, he was the subject of a Rolex documentary – "The Mangrove Man" – about his work in Eritrea, called the Manzanar Project. The Manzanar Project website, [www.manzanarproject.com](http://www.manzanarproject.com), describes his work and welcomes support.

As the website describes it, "Mangroves, *Avicennia marina*, grow in the inter tidal area of tropical countries and are watered only by sea water. This is important in countries where fresh water is insufficient for a robust agriculture. Conventional agriculture cannot produce enough

food to feed the people of Eritrea and, when the frequent droughts occur, widespread death from famine is only prevented by international food aid. At the moment Eritrea is suffering from last year's drought.”

Dr. Sato firmly believes the mangroves can eliminate famine in Eritrea. His team plants mangroves in the Red Sea tidal areas where they are not found naturally, such as the barren mud flats. By adding nitrogen, phosphorous and iron fertilizers – minerals missing in seawater – to the mud-flat planting area, he has found the mangrove can survive in areas outside the “mersas,” or the narrow seasonal rain channels where the trees naturally grow because they receive these nutrients from rainwater running into the sea.

Villagers are trained to plant, grow, and harvest the mangroves themselves. Every part of the mangroves is used. Leaves and stems are fed to sheep and goats. Seeds are harvested and sun-dried and can be stored as grain for animals. Dr. Sato says, however, that mangrove seeds and leaves are not a complete food for animals with fishmeal. He notes that this practical application of using a fishmeal supplement to make mangrove a complete food has never been done before. Villagers acquire fish waste from the local fish market, dry and grind it into a powder which then is added to mangrove seeds and leaves.



**PROVIDING SUSTAINABILITY:** *Dr. Gordon Sato (center) a scientist from Wenham Massachusetts, instructs Eritrean villagers on how to plant mangrove seedlings in the muddy inter tidal zones of the Red Sea, where they do not naturally grow.*

Dr. Sato has helped the village of Hargigo plant over 8000,000 mangrove trees. The trees provide food for village flocks during the dry season, when many animals die from starvation – and the animals seem to prefer it over other foods. Not only are mangrove forests a sustainable source of food for animals, which in turn sustain the population and the economy, but they also

provide shade and beauty as well as shelter for fish, crabs and oysters in areas where once there was only mud.

Dr. Gordon Sato's Manzanar Project has given him a rich personal experience and Eritrea a more hopeful future. He is confident that the application of his methods could benefit other countries with extended seashores. Preliminary talks have begun with Abudahbi, Dubai, Somalia, Haiti and Mexico. He believes these countries can also build prosperous and sustainable economies by planting mangroves.

It's been said that if you give a man a fish, you feed him for a day. If you teach him to fish, you feed him for a lifetime. And perhaps, if he plants a mangrove forest, he can build a flourishing economy and feed a nation for years to come.