

World Cultural Heritage Temple Pond Became Clean

Japan

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One of the most remarkable reports in EM application case studies in Japan is the Todaiji Temple, which was built in the beginning of the 8th century and is famous for the "Great Buddha in Nara".

They are using EM Technology with excellent results not only for water treatment of the pond inside the Temple but also for the recovery of pine trees and elimination of foul odor of septic tanks and deer excreta.

EM Technology is also used for environmental protection of shrines and temples near Todaiji Temple and even in some other areas registered as the World Cultural Heritage.



Good effect of EM Technology made Todaiji Temple very serious

The manager in charge of general affairs at Todaiji Temple had tried many methods to find the best system to improve the water condition of the pond before he came to know about EM Technology through Ms. Kazuko Goto, the representative of Non-Profit Organization U-net for Nara Prefecture to him.

Ms. Goto, together with other U-net members, had been involved in purification programs by way of EM Technology with good result at Class A *Komo* River which is a part of *Yamato* River System running in the City of Nara.

After the manager of Todaiji Temple received some advices from Ms. Goto, he did some research by himself on cases of EM application. Occasionally he visited the actual sites to investigate the effect of EM Technology, and 6 months later, in December 2007, he concluded that EM could contribute to the environmental purification. Therefore, he purchased and installed an EM Bio-reactor and a fermentation tank to introduce EM Technology in the temple facilities.

From January of 2008, Activated EM•1 was poured into 3 ponds (*Ooyuya-Ike*, *Naga-Ike* and the most downstream, *Kagami-Ike*) but mainly into *Kagami-Ike* alongside of the approach to Buddah's Hall from *Nandaimon* (Great Southern Gate).

During this project, 3 staffs from Todaiji Temple were allocated to the actual work for EM application and EM Suketto-Net Co., Ltd. (in Nagoya City represented by Mr. Masanori Oka), which was experienced in EM Technology application, was in charge of device management and work planning.



Activated EM · 1 was poured into Kagami-Ike directly from the tank on the lorry.



Activated EM · 1® was poured into the water channels connecting each pond as well.

***Kagami-Ike* sparkled like a mirror**

Approximately 500 L of Activated EM•1 was poured into each Pond weekly. The result was remarkable. No E. coli bacteria were detected at *Kagami-Ike* and the transparency improved to 50 cm about 3 months after the application.

As a result of the continuous efforts such as placing EM Ceramics at water channels, the summer troubles such as freshwater red tide and foul odor produced by algal blooms were solved. In the meantime, volunteers and children of Todaiji Temple Gakuen Kindergarten made about 2,500 EM mud balls and threw them into the ponds and water channels.

Kagami-Ike



Before: 20 October 2007

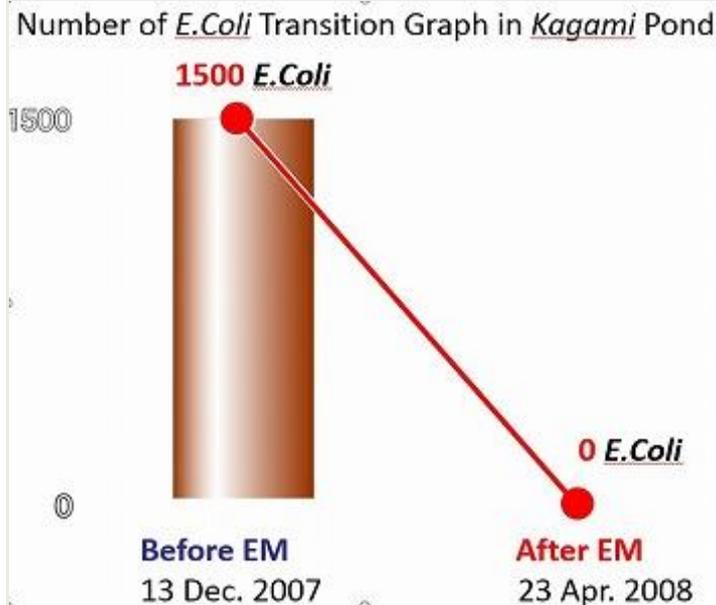


After: 19 December 2008

At first Mr. Oka expected that it would take at least 3 years to have a good result; however, it turned out to be only 1 year. *Kagami-Ike* is usually muddy when it rains to soiled water flowing from the upstream when it rains, but apparently, it returns to normal in a shorter time than before. The quality of the soil at the bottom of the pond is getting better thanks to the 5,000 EM mud balls thrown into the pond in 2 batches one year before.

Kagami-Ike used to have a stage in Japanese-garden-style, sticking out towards a small island (*Nakanoshima*) in the middle of the pond and it was necessary for the water to be cloudy to a certain extent in order to screen off the ground of the stage. However, the water tended to remain muddy for a longer time than is necessary. Moreover, an artificial waterfall that is to circulate and to filter the water located in the northwest of the pond dug up the algae deposited at the bottom of the pond, which diffused a foul odor. Approximately 300kg of EM Ceramics were placed at this location this spring, and as a result, the foul odor disappeared and the water clarity improved up to 0.5-1 m.

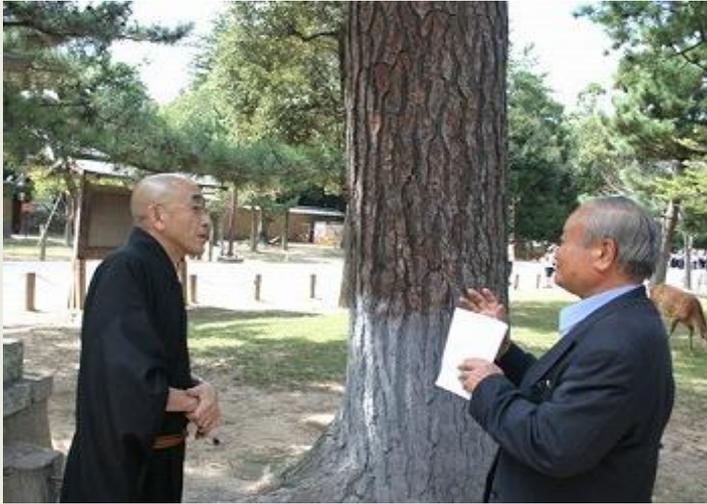
Now ripples like fine wrinkles sparkling on the surface of the pond can be seen anytime. This is a typical found only in a pond with a good water quality. The reflection of Buddah's Hall and pine trees at the pond can be seen on the surface of the water which brought *Kagami-Ike* back to what it was supposed to be in a sense that "Kagami" means "mirror" in Japanese. Todaiji Temple requested a third party to compare pre- and post-data of the water quality. Also, Mr. Oka and Ms. Goto collect water samples a few times a month to analyze water clarity and quality.



(E.Coli values per ml)



Kindergarten children and volunteers threw EM mud balls into Kagami-Ike.
(27 March 2009)



Prof. Higa also visits the temple and gives advices personally

EM Revitalizes Pine trees at the Temple

New shoots came out from stand dead pine trees....



Activated EM•1 mixed with EM Ceramic powder is sprayed to pine trees

Other than the water improvement project, last year, they tried to revive approximately 200 pine trees, planted along the road from Great Southern Gate to Buddah's Hall as a countermeasure against pine wilt disease. As a result of the continuous efforts in applying EM Ceramic Powder to trunks of the trees and spraying Activated EM•1 to the roots and the entire trees, "The tip of the branches grew and new shoots sprouted up in April to May this year with the smell of fresh green plants", said Mr. Oka. They have a plan to give this tree treatment twice a year on more trees from now on.



There were a lot of dead leaves before EM was applied.



Leaves became greener after 3 months.