

Shimane Industrial Promotion Foundation

Techno ARC Shimane, 1 Hokuryocho, Matsue City, Shimane 690-0816 JAPAN
Tel: +81-852-60-5112**Core Research Organizations**Shimane University, Matsue National College of Technology
Shimane Institute for Industrial Technology

Shinjiko and Nakaumi Area

Model of Industrial Symbiosis for Recycling-oriented society
-Development of Water Environment Restoration Technology-**Major Participating
Research Organizations**

Industry...KANATSU. ENGINEERING Co., Ltd., Fujii consulting Engineer & associates Co., Ltd., Matsue Doken, Inc., IZCON Co., Ltd., IZUMO DOKEN Co., Ltd., Mishima Co. Ltd., SAN-IN KENSETSU KOGYO Co., Ltd., Komatsuelectric Industry Co., Ltd.

Academia...Shimane University, Matsue National College of Technology

Government...Ministry of Land, Infrastructure and Transport Chugoku Regional Development Bureau izumo river office, Shimane Institute for Industrial Technology, Shimane Prefectural Institute of Public Health and Environment Science, Shimane Prefectural Inland Fisheries Experimental Station

Typical result of City Area Program**1. Success in Productizing P-CON, High Performance Phosphorus Adsorption Concrete**

P-CON is the aqueous environment purification material which incorporates a specific phosphorus adsorbent of hydrotalcite (HT) and a special kind of form in concrete. If P-CON is used with waterside plants such as Yoshi, it will facilitate the growth of the plants with providing them the phosphorus absorbed from the water. While small island-type samples of P-CON are placed for trial in Muchi-no Ike Pond in Shinjuku-ku, Tokyo, underwater-type samples with Yoshi planted are also tested in Shinjiko Lake.



Ex.1. Trial installation of floating-type samples of P-CON

2. Finding Agricultural Availability of Residue Remaining after Decomposition

We launched a committee to study recycling of residue remaining after decomposition in agriculture in Higashiizumo Town, which was well known as a production center of cabbage. The committee conducted experimental cultivation applying the residue as fertilizer in Iya district of Nakaumi reclaimed land in the same town. The experiment suggested that we could obtain the equivalent amount of harvest as that of the chemical fertilizer district. Based on the result, the committee developed a usage standard for safety and quality improvement of the crops.



Ex.2. Demonstration cultivation to examine the availability of residue remaining after decomposition in an agricultural field of Nakaumi reclaimed land

About the approach after the project**1. Proposal and Adoption for Regional Regeneration Consortium R & D Program by the Ministry of Economy, Trade and Industry**

Our proposed project "Development of batch processing system for mixed waste of liquids and solids" was adopted for fiscal year 2005-2006.

Our proposed project "Development of a high performance phosphorus removal and retrieval device for mid and small-sized wastewater treatment facilities" was adopted for fiscal year 2006 and the following year (s).

We conduct R & D projects on wastewater treatment and water purification aimed at commercializing innovative products by local companies, facilitating a local network of industry-academia-government cooperation.

2. Proposal and Adoption for Challenge Support Program for Small and Medium-sized Enterprises and Ventures by the Ministry of Economy, Trade and Industry

Our project "Development of a low-cost and simple advanced water treatment system for nitrogen phosphorus, and COD removal by an ecological engineering method" was adopted for fiscal year 2005.

This project was designed to develop a simple and low-cost advanced water treatment system, with combining the special material which removed phosphorus and nitrification, one of our achievements for Metropolitan Area Project, with a unique water purification method of the soil type developed by a local company. In fiscal year 2006 a long-term feasibility study on this system is going on in Shimane Eastern Water Purification Center.

3. Continuous Discussion by Water Purification Society

We assist water purification related companies in the prefecture in an effort to expand and to activate their research network and promote commercial development of achievements of local R&D projects, subsidized by the Ministry of Economy, Trade and Industry.