

"Project Formulation Survey" under the  
Governmental Commission on the  
Projects for ODA Overseas Economic  
Cooperation in FY2012  
Summary Report

Republic of Indonesia

A Potential Survey for Development and  
Wide Deployment of Technologies  
concerning Disaster Prevention and  
Environmental Regeneration

March, 2013

Takino Filter Inc. and  
Yamaguchi University Joint Venture

## Introduction

The objective of this survey is to assist a developing country under various ODA schemes by deployment of the proposed products of Takino Filter Inc. (hereinafter referred to as the “Company”), Takino filter sheets (hereinafter referred to as the “Product(s)”).

In particular, the Company will work for prevention of erosion, muddy water and blown sand, and also work for fertilizing the soil and regeneration of the land in the devastated land beneath Mt. Batur, Bali, Indonesia. This survey will be conducted not only by the Company and Yamaguchi University Joint Venture, but also conducted based on the agreement of academic exchange between Udayana University and Yamaguch University.

### **I. Description of the current situation and development needs of the development issues concerned in the surveyed country(ies)**

While Indonesia is driving forward infrastructure development and natural resource development for further economic growth, sufficient measures have not been taken against natural disasters such as earthquakes and flood and environmental destruction. There is a national need for manpower, technologies, or investment, in the area of disaster prevention and environmental restoration in Indonesia. With regard to ODAs, Indonesia has shifted away from dependence on ODAs against the background of its recent remarkable economic growth. Indonesia is now conducting developing programs/projects utilizing its tax revenues, domestic savings, and domestic and foreign private investments. On the other hand, ODA projects such as science and technology cooperation, cooperation between universities/research institutes and related human resource development are becoming more important.

### **II. Possible applicability of the SME's products and technologies, and prospects for future business development**

The various demonstration experiments are beginning to prove the Products very effective even in the unique weather conditions in Indonesia. The Products adapt effectively to the environmental rehabilitation and disaster prevention in Indonesia. While aiming at the establishment of a manufacturing plant of the Products using domestic materials, with the joint research and development among Yamaguchi University, Udayana University, and Takino Filter Inc., it is necessary for the Company to develop a long-term business model for projects in the private sector such as slope greening in toll roads besides ODA schemes,.

### III. Expected development impact and effect on business development of the proposing SMEs in the surveyed country(ies) through proposed ODA projects

In order to prove the effectiveness of the Products for soil erosion and revegetation in Indonesia, the Company verified the product performance based on the experiments in pilot sites. First of all, the Company applied the Products (Type: SP-60) for 2,000 m<sup>2</sup> (Area A) and 500 m<sup>2</sup> (Area B) of the devastated land in the foothills of Mt. Batur, Bali, Indonesia in December 2012. For verification of the effects of the Products, soil erosion step at the sheet boundary plots, which was installed in mid-December 2012, was investigated in mid-January 2013 in order to see the effect of one month. 10mm to 25mm long gaps in area A and 20mm to 90mm long gaps in area B were observed. This means that soil erosion prevention by sheets is effective for the Indonesian land. Steady germination and growth from buried seeds was observed, e.g.; jackfruits grew up to 9cm for a month. As a result of the analysis, it was found that application to a relatively small grant aid, such as grass-roots grant assistance projects of ODA may be very useful. Obtaining ODA projects is effective for winning the trust of local residents and the government through the improvement of environmental awareness. The possible ODA projects will strongly assist the startup of our business. Since small grant aid ODA itself cannot be a continuing business, it is important to seek a solid and steady business plan in parallel with ODA projects.

### IV. Proposals for formulating ODA projects

Based on meetings with NGOs both in Japan and Indonesia regarding the use of ODAs, we have attempted a concrete proposal with regard to (1) Grass-Roots Technical Cooperation Project being conducted by JICA (Grass-Roots Partner Type, (Grass-Roots Cooperation and Support Type, and Local Government Support Type), (2) Grant Assistance for Grass-Roots Human Security Project being conducted by the Ministry of Foreign Affairs, and (3) The Grant Assistance for Japanese NGO Projects being conducted by the Ministry of Foreign Affairs. In any case in the use of the above schemes, the purpose and the content of activities are the same. In essence, the objectives are to prevent soil erosion of degraded lands resulting from the volcanic eruption of Mt. Batur in Bali, Indonesia, to restore the vegetation, and to reduce the water pollution of Lake Batur. Our proposal also includes the education, training and technology transfer for revegetation activities with the participation of local residents, educational activities for disaster prevention, and environmental protection for improving livelihood by cultivating cash crops, vegetables, and fruit trees.

Type (Project Formulation Survey)  
Republic of Indonesia, A Potential Survey for Development and Spread of Technologies  
concerning Disaster Prevention and Environmental Regeneration

### SMEs and Counterpart Organization

- Name of SME: Takino Filter Inc.
- Location of SME: 2-904-16, Hayama, Kudamatsu-shi, Yamaguchi 744-0061 JAPAN
- Survey Site • Counterpart Organization: The foothills of Mt. Batur, Bali • Yamaguchi Univ. & Udayana Univ.

### Concerned Development Issues

- Policies leaning to infrastructure development or Natural resource development have been taken in order to maintain its economic growth while natural disasters such as an earthquake, a flood, or eruption, often occurs besides serious destruction of natural forests in Indonesia.
- There is a potential national need on manpower, technologies, or investment, in the area of disaster prevention and environmental restoration in Indonesia, as the area has not been sufficiently established yet, in terms of capacity.

### Products and Technologies of SMEs

- The SME owns core technologies which are applicable for the needs of environmental restoration of devastated areas by a heavy rain, a flood or an eruption of lava concerning disaster prevention and environmental restoration.
- The products such as “Takino filter sheets”, “Takino filter bags”, which the SME manufactures, has a superior ability for soil keeping and tree planting.



### Proposed ODA Projects and Expected Impact

- **Grass-Roots Technical Cooperation Projects**” for realizing activities of international cooperation composed mainly of community and promoting broad-ranging citizen participation.
- **“Grant Assistance for Grass-Roots Human Security Projects”** for contributing to raising a livelihood of residents near the project area.
- **“The Grant Assistance for Japanese NGO Projects”** for intensifying a sense of disaster prevention and environmental regeneration for residents in an intended area.

### Future Business Development of SMEs

- Will try to establish a manufacturing capability with local materials and employees, based on the obtainment of trust from organizations/institutes related with the project in Indonesia.

