



## New Action Plan to Enhance JSCE's Visibility in the International Arena



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The International Activities Committee (IAC) considers it essential to build the environment in which JSCE members continuously improve their professional performance and services in and outside Japan, resulting in making good contributions to the sustainable development of the global community. In order to attain that more effectively, the IAC formulated a new action plan taking into account the achievements and remained issues in the previous "Action plan for JSCE's internationalization drawn in 2002, which was publicized in the Civil Engineering, September 2002. The new action plan was approved at the Board Meeting on 23 March 2007.

The IAC will take detailed approaches and implement the action plan steadily under the following slogan and three pillars together with the JSCE members. Their understanding and support would be most appreciated.

### Outline of the Action Plan

#### Slogan

We shall promote seamless\* service across borders in the civil engineering field and contribute to global infrastructure development.

#### Three pillars

1. Expansion of the JSCE network and

2. Dissemination of information and promotion of the Japanese civil engineering technology to be employed wider in the global community
3. Acquisition of information overseas and supply it to the public at home

#### Possible achievements

By implementing the action plan steadily, the IAC will build access to and fro the international arena for the JSCE members to enable them to perform professional duties both at home and overseas, and as the result, will contribute:

an overseas society's sustainable development by means of developing human resources, exchanging technical information and operating projects successfully.

further advancement of civil engineering at home: promotion of international recognition of civil engineering and practitioners and expansion of business operations overseas

\*Seamless: the original meaning is having no seams. In this action plan, the term is used to imply minimizing the differences between the national and international societies which may influence the civil engineers who work in those societies.

### Background to the Formulation of the New Action Plan

The IAC has taken several approaches in the framework of the previous action plan: utilizing the experiences of those who have worked outside the country, disseminating information timely and widely, introducing other divisions and committees' activities, reviewing the services and benefits to overseas

members, developing JSCE's network with the overseas members who have experienced in studying or working in Japan, improving international exchange programs, inviting the agreement of cooperation societies in the Asian region to Asian Civil Engineering Coordinating Council (ACECC)\*.

However, our actions have not produced fruits as many as we wished for yet, we have just come to half way to the goal.

In the following year after the previous action plan was drawn, the JSCE 2005: Reform Plan for JSCE was published in May.

In the JSCE 2005: Reform Plan, it is pointed out that there are some tasks unfinished. The advanced Japanese civil engineering technology has not been introduced to other countries widely enough to gain international recognition yet, and this fact has hindered the JSCE members' efforts to transfer knowledge and technology to engineers in another country. Besides, the environment surrounding us, civil engineers has been more complicated than ever because of such factors as continual reductions in public investments, reconsiderations of ODA activity, rapid increase of investments in infrastructure construction in China, ASEAN countries, India and other Asian countries, East European and Arabic countries and republics in the Soviet Union, and diversified order systems in and outside the country.

\*ACECC was launched as an intra-regional association of civil engineering in the Asian region with the efforts of ASCE, JSCE and three other societies in 1999. Current member societies/institutions are from seven countries and one region: USA, Taiwan, Korea, Philippines, Viet Nam, Australia, Mongolia and Japan. The association has engaged in wide-ranged activities: the Great Mekong Sub-region project and tsunami disaster investigations are examples. It also holds the triennial international conference called Civil Engineering Conference in Asian Region (CECAR) to discuss the issues on civil engineering arisen in those countries.

As talked above, reviewing the last action plan, we have identified its outcomes and remained issues, and gained a direction to take in drawing a new action plan. While following the direction set in the past action plans, we have widened a scope to picture the future Japanese civil engineering - the technology will have been employed more widely in infrastructure development in the world, and the engineers will play a significant role in the scene by 2020.

The slogan and three pillars summarize what we should and would do now for the future civil engineering.

## Slogan and Three pillars

The advanced Japanese civil engineering technology has been introduced to several countries through ODA activities and various collaborative activities, and more countries shows interest in acquiring the technology.

In order to achieve the aforesaid future of civil engineering, the JSCE/IAC has to create a basis in which Japanese civil engineers will be able to perform services in education, business, and technical cooperation and support without being discouraged by social differences arisen between their home and other countries. With the slogan, we will move ahead towards the future.

In terms of international contribution, the Japanese engineers and private sectors are expected to play an active role in developing national and regional infrastructures through providing various forms of assistance in social and economic development, poverty reduction, post-disaster reconstruction and rehabilitation and information exchange. With the aim of making international contribution centering civil engineering technology, JSCE should provide the forum where the Society and its members can explore public's needs to respond them properly, make suggestions and advice on government policies, where the government, industry and academia can cooperate together to undertake scholarly activities overseas, and where private-sector corporations can contribute to the welfare of the world through business activities.

Accordingly, the Society should strengthen the three activities, expanding its network to promote international cooperation, promoting the Japanese civil engineering technology to be employed overseas widely and collecting overseas information to disseminate to public at home. These activities stand as three pillars of the action plan.

### 1. Expansion of JSCE's Network and Promotion of International Cooperation

It is essential to expand JSCE's network by organically linking the personal-level network built among the members, the network of foreign students studying in Japan and the returnees who have studied in Japan, and the network developed through the JSCE members working overseas together. Also, increasing

*Also available on web: <http://www.jsce-int.org/>*

international members and establishing overseas sections- there is a section in Taiwan, Korea, UK, Mongolia and Turkey respectively - should be considered in that respect. Furthermore, joint seminars and other collaborative activities with the agreement of cooperation societies, ACECC technical committees' activities - the Great Mekong Sub-region project and studies on tsunami disaster for example, the registration of civil engineering technology to ISO are some of the opportunities that Japanese civil engineers can make contribution to the world through working with engineers from other countries and regions, and that will assist the Japanese civil engineers to acquire wider opportunities to engage in overseas projects.

## **2. Promotion of the Japanese Civil Engineering Technology overseas through Information Provision**

The Japanese civil engineering in several disciplines such as tunneling, seismic engineering, bridge engineering, transportation, disaster mitigation and prevention, environmental protection and energy is acclaimed as the world-class technology; nevertheless, there are not many occasions that the technology is employed in projects in other countries. Considering that each country has its own needs for civil engineering technology, it is not always appropriate to say that the Japanese civil engineering is the best technology to be applied anywhere.

However, to promote that technology to be utilized more often in the world, understanding each country's technological needs, what is called for is providing relevant information and involving the Japanese civil engineers in introducing the technology. To be more precise, industry, academia and government have to work together to promote the technology in translating Japanese engineering standard specifications, guidelines and relevant information, locally holding discussions and symposiums on the relevant topics to people's needs, requesting the JSCE members who have gained experience abroad use their network.

Besides disseminating information, the JSCE should more actively engages in studies and reconstruction activities at the event of natural disaster and strengthen the communication and collaboration with civil engineers of other countries so as to continually create the opportunities in which the Japanese civil engineering technology is used more and wider in the world.

## **3. Provision of International News to Public**

It is an important factor that the Japanese civil engineers become interested in what is happening outside the country in order to let them work anywhere in the world, regardless of whether they are at home or abroad, and for that, it is of great importance to supply those engineers more information about other countries, which can be made with such examples as introducing reports, papers and other written materials about foreign countries and their peers making significant contributions to overseas projects in JSCE's journals, seminars, symposiums, etc. Exposing the home engineers to the information about other countries will get them interested in working abroad, resulting in expanding civil engineers' seamless services in and outside the country. Also creating discussion forums with international students studying in Japan is another method to push forward the seamless service of civil engineers.

## **Future Civil Engineer characterized in the Action Plan (Scenario)**

Mr. A is a seasoned civil engineer from Japan who has been working in mainly the Southeastern Asia for several years in his professional career. Today he is standing on the platform of the bullet train running between the countries K and J, who is one of the guest engineers to the opening ceremony. While seeing the first train standing by for a whistle signal for departure, he is having every scene of the construction of that train's railways coming back in his mind; at the same time, is feeling that all his effort made for the success of the construction has been rewarded at this exact moment.

Mr. A, after having worked in field at home, went to an overseas office of his company and engaged in various constructions such as subways and expressways more than twenty years. About ten years ago, he retired from the company to return to Japan. Although having considered going back home, he chose to stay there, and in the meanwhile, he got a job offer from a civil engineering consulting firm because of his managing skills as a project manager and decided to take it with the hope of enabling to utilize his experience and skills gained in filed.

After that, he came very busy with the new job. As getting involved into it, he wondered how he could further expand his career using the network of contacts he had built through his work abroad and professional skills and knowledge built up through the work done in the home country, which is prone to natural disasters. Then, he recalled that at one time when his qualification as civil engineer was questioned relating to his engagement in a project in a certain country, his

JSCE membership had saved him from the awkward position, and then he visited the JSCE website to review for the first time in quite some time.

“Wow, changed a lot. Much better than the one I used to see,” searching for the information about the JSCE’s relationship with Country K on the homepage, he was impressed with the improved contents. On it, he could learn that the society had made the agreement of cooperation with a civil engineering association and established a section in Country K as well, in which he was residing, and since then, the Society’s research committee and the civil engineering association occasionally held joint seminars between them, and that the Society published design standards and specifications in English and sold overseas. “It is impressive that the JSCE has been making good efforts to expand its activity. But why have I not ever heard much about it? I don’t understand it.”

Recently, the Country K has been building close economic ties with its neighbor country J, and as that so, more demands have arisen for the construction of express train to run between these two countries. Especially, among the countries’ civil engineers, a construction of bullet train railways has been seriously discussed; however, due to the technical difficulties of the long and big tunnel situated on the route and soft ground under the mouth of a river, the construction seems have not progressed as it should be.

“The construction in the Country K, whose climate and geographical features are similar to those of Japan, could be completed with the Japanese civil engineering technology, overcoming those difficulties.”

Then, Mr. K questioned himself how the Japanese civil engineering technology would be able to contribute to the construction of bullet train railways to be run between the two countries, and came to the answer that he would take actions centering around JSCE to assist that railway construction. For example, he organized a symposium on bullet train with the cooperation of the Country K’s civil engineering association and JSCE via his old friend Mr. C and contacted a college professor via the Society to invite to the country as a lecturer to discuss the Japanese design standards, who was known well among the students from the country to Japan. Thanks to more Japanese civil engineers working at home and abroad than ever, the efforts of his had been answered in the form of cooperation and assistance rendered from many people and organizations. While feeling appreciation to them, Mr. A recalled the first time when he left the country to seek for a professional career overseas. Furthermore, due to the Japanese advanced skills of geological survey and cooperative railway engineers, which made it possible to attain innovative approaches to design long and big tunnels in the mountainous areas and bridges on soft ground around the river mouth,

based on the studies carried out in cooperation between colleges in Country J and Japan, the construction of bullet train railways came into view.

The two countries came to have the bullet train railways to be laid between them with the assistance given by JSCE and other organizations from other countries after some years at last. It was exactly what Mr. A wished for. The Japanese civil engineering technology was highly rated, which had developed under the similar environment to the two countries’; as a result, Japanese contractors were entrusted the task of planning and designing the railways where European counterparts were thought stronger out there, and made a great contribution to the development of the countries in the Southeastern Asia region.

In the construction of the bullet train railways, many civil engineers came from Japan and many other countries to work together and share information with each other. The information including the Japanese latest engineering technology brought with the construction was transferred to the engineers from the countries K and J successfully.

The today’s inauguration of the bullet train symbolizes exactly the civil engineers’ cooperation beyond borders. Looking it, Mr. A is convinced that the Japanese civil engineers, continuously contributing to the sustainable development of the Southeastern region, would take on an increasingly important role, and he could not help feeling proud of himself being one of those engineers.

\*This article is excerpt from the JSCE monthly magazine Civil Engineering, Vol. 92, June 2007.

**Publications**

**ARTICLES (From Feb. 2007 to May 2007)**

**JSCE Guidelines for Concrete No.10:**

EXAMPLE OF DESIGN CALCULATIONS BASED ON JSCE STANDARD SPECIFICATIONS FOR CONCRETE STRUCTURES –REINFORCED CONCRETE SUPERSTRUCTURE OF OPEN-TYPE WHARF- March 2007, Pages 98, Price: JPY1,890-, ISBN4-8106-0558-7

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