

<b>Polycymaking of Water Environmental Management in Middle East, and African countries</b> <b>中東・アフリカ地域 水環境管理政策</b>		<b>PRTD Solution 1084297</b> Sector : Water Resources / Disaster Management Sub-Sector : Comprehensive Water Resources Management	
Target Countries : Middle East and Africa		10 participants / English	
<b>OBJECTIVE</b> Objective A provisional policy plan to secure safe and stable water resources, and improve water environment shall be proposed by the participating organizations in the model area in the target countries. Expected Results1 : To deepen understanding on water sources, safe and stable water supply system and environmental management policy Expected Results2 : To deepen understanding on methodologies of non-conventional alternatives Expected Results3 : To understand the methods on environmental assesment, monitoring, analysis, and clarify the issues needed for sustainable planning. Expected Results4 : To propose an action plan to secure safe and stable water resources, and improvement of water environment based on its problem analysis. Expected Results5 : To submit a progress report and final report which are further considered at the respective organization based on the action plan		<b>TARGET ORGANIZATION / GROUP</b> Target Organizations: This program is designed for ministries and agencies in charge of water resources & supply and environment management. Target Group: -Current Duties: be the government official in planning and policy making in the field of water resources development or environmental management in central government bodies and associating agencies. (Target Level (year): Director Level (1st year) , Young Officer Level (2nd year; this year), Section Manager Level (3rd year)) -Experience in the relevant field: have more than 5 years' experience in the field explained above	
<b>CONTENTS</b> 1. Lecture and Practice on (1)Development and management of surface water and groundwater, (2) Distributed type of safe water supply system and ecological sanitation, (3)Eco-engineering applications to conserve and restore aquatic eco-system and water quality environment, (4)Water policy with non-conventional alternative strategies including recycling waste water, desalination and rainwater harvesting 2. Lecture, Practice and Field Observation on (1)Rainwater harvesting and infiltration to recharge groundwater, (2)Advanced wastewater treatment and recycling reclaimed water applying simple and low cost technologies, (3)Conservation and restoration of aquatic eco-system and water quality environment applying bio-manipulation, (4)Appropriate technology of ecological slow sand filtration and bio-toilet 3. Lecture, Practice and Workshop on (1)Methods on planning and evaluation based on Project Cycle Management(PCM), (2) planning and evaluation of projects 4. (Before training) Making of Inception report and issue analysis sheet, (In Japan) Updating issue analysis sheet and making action plan		<b>PROGRAM PERIOD</b> Aug / 1 / 2010 ~ Aug / 29 / 2010	
		<b>IMPLEMENTING PARTNER</b> JICA Shikoku	
		<b>JICA CENTER</b> JICA Shikoku	
		<b>COOPERATION PERIOD</b> 2009~2011	
		<b>REMARKS and WEBSITE</b>	

<b>Waterworks Engineering</b> <b>水道技術者</b>		<b>PITD Trainers 1080763</b> Sector : Water Resources/Disaster Management Sub-Sector : Urban Water Supply	
		8 participants / English	
<b>OBJECTIVE</b> <b>【Objective】</b> Each participant shares and implements its action plan in respective organization, and reports progress to JICA <b>【Expected Outputs】</b> (1)To acquire knowledge and experiences to improve water treatment facilities and water treatment method in the participant's country (2)To acquire knowledge and experiences to improve water distribution, service installation, maintenance, and water charge systems in the participant's country (3)To acquire knowledge and experience to improve leak prevention in the participant's country. (4)To acquire knowledge and experiences to improve water quality control in the participant's country (5)To draft an action plan to clarify how to apply training in japan		<b>TARGET ORGANIZATION / GROUP</b> <b>【Target Organization】</b> Governmental, semi-governmental, or corporate organizations in charge of public water supply. <b>【Personal Qualification】</b> <b>&lt;Current Duties&gt;</b> Be Waterworks engineers <b>&lt;Experience&gt;</b> At least three (3) years of practical experience for those university graduate or equivalent; OR at least seven (7) years of practical experience for those polytechnic graduates or equivalent <b>&lt;Age&gt;</b> Under 40 years old	
<b>CONTENTS</b> <b>【preparatory phase】</b> each participant prepares country report to identify issues <b>【core phase】</b> (1) visit/structure/design/operation of water purification plant, advanced water purification (membrane, desalination) (2) distribution resorvoir/pipe laying plan, pumping station, maintenance, design & quantity calculation for new installation, construction site, networks analysis, manufacturing plant, metering, charge collection, call center, metering site, environmentally conscious management (3) leak prevention/planning/detection/on-site prevention method, block metering (4) water quality control, water source & algae, design/pump/drilling of pumping station, bioassay (5) country repot, problem analysis, discussion, AP consultation/presentation <b>【finalization phase】</b> share the knowledge based on action plan, then report its progress to JICA		<b>PROGRAM PERIOD</b> Jun / 29 / 2010 ~ Sep / 18 / 2010	
		<b>IMPLEMENTING PARTNER</b> Waterworks Bureau, City of Sapporo	
		<b>JICA CENTER</b> JICA Sapporo	
		<b>COOPERATION PERIOD</b> 2008~2010	
		<b>REMARKS and WEBSITE</b>	Candidates are strongly required to actively participate the training course, with strong will to improve their water supply system.

Urban Waterworks Engineering 都市上水道技術者養成		PITD Trainers 1080083 Sector : Water Resources/Disaster Management Sub-Sector : Urban Water Supply	
		10 participants /	English
OBJECTIVE	TARGET ORGANIZATION / GROUP		
<p><b>【Objectives】</b> Participants acquire wide knowledges about waterworks and get abilities to improve the waterworks in respective countries with integrated views, and also share those with colleague after completion of the training in Japan.</p> <p><b>【Outputs】</b> (1) To understand the system of purification plants and purified water processes (2) To understand water transmission and distribution system, and maintenance including water leakage control (3) To understand securing good water resources and water quality control (4) To get ideas on the effective management of waterworks considering environmental condition (5) To prepare and present an Action Plan using what have been acquired through the course</p>	<p><b>【Target Organizations】</b> Organization of mainly managing waterworks <b>【Target Group】</b> Current Duties: be senior technical officers in charge of waterworks engineering in central or provincial government, or in local bodies. Experience in the relevant field: have at least ten (10) years of practical experience. Age: recommended to be between thirty-five (35) and fifty (50) years.</p>		
CONTENTS	PROGRAM PERIOD	Sep / 28 / 2010 ~ Oct / 23 / 2010	
<p>(1) Lectures and practices regarding the techniques of purified water processes and design of purification plant for operating and maintaining purification plant (2) Lectures and practices by providing the examples of water transmission and distribution system, and maintenance method including water leakage control. (3) Lectures and practices for securing good water resources and water quality control (4) To learn examples in Japanese knowledge and know-how for effective management of waterworks considering environmental condition (5) To prepare and present an Action Plan to be approved by participants' organization by the effort of each participant, using knowledge, techniques, and ideas acquired through the course</p>	IMPLEMENTING PARTNER	Yokohama Water Works Bureau	
	JICA CENTER	JICA Yokohama	
	COOPERATION PERIOD	2008~2010	
	REMARKS and WEBSITE		

Operation and Maintenance of Urban Water Supply System 都市上水道維持管理		PITD Trainers 1080870 Sector : Water Resources/Disaster Management Sub-Sector : Urban Water Supply	
		12 participants /	English
OBJECTIVE	TARGET ORGANIZATION / GROUP		
<p>&lt;Course Objective&gt; Applicable knowledge techniques are shared among engineers in the organizations which implement operation and maintenance of urban water supply system in participating countries. &lt;Expected Module Outputs&gt; (1) Participants will be able to explain maintenance technologies of pipelines and service installations used in Osaka City. (2) Participants will be able to explain maintenance technologies of intake, treatment, distribution facilities. (3) Instruction plan about techniques of water supply which is applicable to participant's organization will be drafted. (4) Engineers in participant's organization will receive the instruction from the participant by 5 months after the training.</p>	<p>&lt;Target Organization&gt; Organization in charge of urban water supply system and in relation with Japanese bilateral cooperation program &lt;Target Group&gt; -Engineers working in organizations in charge of urban water supply system, and responsible for the training of other engineers -more than 5 years' experience in the above-mentioned field</p>		
CONTENTS	PROGRAM PERIOD	May / 24 / 2010 ~ Jul / 24 / 2010	
<p>&lt;Activity in Preliminary Phase in home country&gt; (1) Discuss the issues and clear assignments for the participants among participating organizations. (2) Submit Inception Report and Questionnaire &lt;Activity in Core Phase in Japan&gt; Lectures (1) Maintenance of pipelines and water supply (2) Management of intake, treatment and distribution facilities Practice (1) Management of pipelines and water supply, technical trainers' training (2) Management of intake, treatment and distribution, trainers' training (3) Draft the instruction plan Observation (1) Factory of water supply equipments (2) Water origin, Facilities of water intake, drainage, purification Discussion -Applicable techniques in participating organizations &lt;Activity in Finalization Phase in home country&gt; Instruction to engineers in participating organizations by 5 month after the training</p>	IMPLEMENTING PARTNER	Osaka City Waterworks Bureau	
	JICA CENTER	JICA Osaka	
	COOPERATION PERIOD	2009~2011	
	REMARKS and WEBSITE	Osaka City Waterworks Bureau <a href="http://www.city.osaka.lg.jp/content/s/wdu030/english/">http://www.city.osaka.lg.jp/content/s/wdu030/english/</a>	

Water Supply Administration for Better Management of Water Supply Services 水道管理行政		PITD Solution 1080915 Sector : Water Resources/Disaster Management Sub-Sector : Urban Water Supply	
		24 participants / English	
OBJECTIVE	TARGET ORGANIZATION / GROUP		
<p>[Objective] To understand water supply administration, management and operation and maintenance in Japan, in particular, water quality control, measures against non-revenue water and water supply standards, to clarify the future subjects through sharing information and to draft improvement plan on the feasible basis.</p> <p>[Expected Results] 1. Sharing information on current situations and key problems in the participating countries 2. To be able to understand water supply administration, management and operation and maintenance in Japan 3. To be able to understand water quality management, in particular, Water Safety Plans 4. To be able to understand the countermeasures for reduction of non-revenue water (leakage, illegal connections) 5. To be able to understand the water supply standards including water supply management guidelines and performance indicators</p>	<p>[Target Organization] The division / department in charge of administration on management of water services in central / local government</p> <p>[Target Group]</p> <p>(1) To be executive officers or senior administrative officers in charge of water supply administration,  (2) To be expected to continue their careers in the water supply field,  (3) To have a sufficient command of both discussion and presentation in English,  (4) To be in good health, both physically and mentally to participate in all of the program in Japan,  (5) Not to be serving in any form of military services</p>		
CONTENTS	PROGRAM PERIOD	Jul / 4 / 2010 ~ Jul / 17 / 2010	
<p>[Preliminary Phase] Formulation of the Country Report</p> <p>[Core Phase]</p> <p>1. Country report presentation, Improvement plan formulation</p> <p>2. Water supply administration in Japan</p> <p>3. Water Quality control, Water safety plan (WHO/WPRO), Public Health and water supply</p> <p>4. Measures for non-revenue water</p> <p>5. Appropriate management of water supply management.</p> <p>[Finalization Phase]</p> <p>Introduction of the idea of the improvement plan in their organization and Submission of the report on the result / progress of the Improvement Plan within six months after the end of the Core Phase</p>	IMPLEMENTING PARTNER	JAPAN INTERNATIONAL CORPORATION OF WELFARE SERVICES	
	JICA CENTER	JICA Tokyo(Economy&Env.)	
	COOPERATION PERIOD	2010~2012	
	REMARKS and WEBSITE	This course will be held three times in the Fiscal Year 2010.	

Engineering on Water Supply Systems 上水道施設技術		PITD Solution 1080944 Sector : Water Resources/Disaster Management Sub-Sector : Urban Water Supply	
		12 participants / English	
OBJECTIVE	TARGET ORGANIZATION / GROUP		
<p>[Objective]</p> <p>To draw basic plan drawings for a purification facility and pipeline network, and to formulate an action plan to solve problems that respective organizations have encountered</p> <p>[Expected Result]</p> <p>(1) To sort out the necessary technology for improvement of their water supply systems</p> <p>(2) To sort out the necessary functions and roles of related entities for improvement of their water supply management</p> <p>(3) To master the skill of basic planning and design for pipeline network and water purification systems</p> <p>(4) Through information and skill from this training, to formulate an "action plan draft that solves problems their organizations have encountered, and to share the plan in respective organizations</p>	<p>[Target Organization] Departments responsible for water supply planning or designing in a water supply utility, national or local government</p> <p>[Target Group] (1) To be presently in a management position or a senior engineer who is currently or expected to be engaged in the formulation of waterworks plan</p> <p>(2) To be engineers with more than 5 years of experience in water supply and to be university graduates from the faculty of engineering such as civil, sanitary, environmental, or have equivalent academic background</p> <p>(3) To be between 30 and 45 years of age</p> <p>etc.</p>		
CONTENTS	PROGRAM PERIOD	May / 12 / 2010 ~ Jul / 28 / 2010	
<p>[Preliminary Phase] Formulation of Action Plan on Water Supply Systems</p> <p>[Core Phase]</p> <p>(1) Pipeline Network Analysis(hydrologic), Water Demand Forecasting, Basic Planning and Design (Pipeline Network, Water Purification Facility), Basic Planning and Design for Water Supply Systems</p> <p>(2) Water Purification Process, Operation and Maintenance of Distribution Facilities, Construction of Water Supply Facilities, Countermeasures of Water Leakage Prevention</p> <p>(3) Waterworks Management and Tariff System in Japan, Observation of Manufacturing Factory, Sanitation Research Organization, Small-scale Hydraulic Power Generation Plant</p> <p>(4) Country Report Presentation, Formulate Information list for improving water supply, Action Plan draft Presentation,</p> <p>[Finalization Phase]</p> <p>Sharing of Action Plan draft in their organization</p>	IMPLEMENTING PARTNER	Japan Water Works Association	
	JICA CENTER	JICA Tokyo(Economy&Env.)	
	COOPERATION PERIOD	2010~2012	
	REMARKS and WEBSITE		

Water Supply in Small and Medium Scale Cities in Central Asia 中央アジア地域 中小規模都市給水		PRTD Leaders 1084027 Sector : Water Resources/Disaster Management Sub-Sector : Urban Water Supply	
Target Countries: Central Asia		10 participants / Russian	
OBJECTIVE	TARGET ORGANIZATION / GROUP		
<p><b>【Objectives】</b> 1. Participants from different countries will share their experiences in tackling their common problems with a limited budget, i.e. the management of complicated waterworks facilities constructed under the former Soviet Union. 2. Participants will gain a significant understanding of their problem in management and technical aspects and will prepare and present a Study Report to improve their waterworks management.</p> <p><b>【Outputs】</b> 1. Gain knowledge about the management of the water supply system in Japanese local cities, by studying the case of Yokohama City 2. Enhance general waterworks techniques 3. Through the above, find the keys to solve the problems on water supply systems in participants' country</p>	<p><b>【Target Organizations】</b>Waterworks Utilities at Small and Medium Scale Cities in the following areas; Kazakhstan: North Kazakhstan Province and Akmora Province Tajikistan: Dushanbe and Khatlon Oblast Uzbekistan: Tashkent Province, Fergana Province, and the Republic of Karakalpakstan Kyrgyz: Issik-Kul Province and Osh Province <b>【Target Group】</b> Senior engineers of the target organizations.</p>		
CONTENTS	PROGRAM PERIOD	Nov / 15 / 2010 ~ Dec / 15 / 2010	
<p>This year, the curriculum is mainly focused on technical matters (No. 3 of the below), and in general the curriculum covers the followings; 1. Lectures; Management of Yokohama waterworks bureau (Japan's waterworks services, water rights, water resource and water quality control in Yokohama City, and the management of sewage) 2. Lectures; Planning, operation, and administration of Yokohama waterworks bureau (tariff, operation, and human resource development) 3. Lectures; Waterworks Techniques of Yokohama waterworks bureau (control of water purification plant, water purification, water quality control, water distribution control, and water leakage control) 4. Observations; Waterworks facilities, construction place, and sewage plant in Yokohama City and others 5. Presentations; Country report at the first stage of the course and Study Report at the final stage of the course</p>	IMPLEMENTING PARTNER	Yokohama Water Works Bureau	
	JICA CENTER	JICA Yokohama	
	COOPERATION PERIOD	2006~2010	
	REMARKS and WEBSITE	<p>A maximum of three per country will be able to participate in the course. The target group shall be changed as follows: 2006: Executive Manager 2007: Manager 2008-2010: Senior engineer</p>	

Waterworks Engineering in Cold Climate Regions 寒冷地上水道技術		PRTD Trainers 1084143 Sector : Water Resources/Disaster Management Sub-Sector : Urban Water Supply	
Target Countries: Those in Cold Climate Regions		8 participants / Russian	
OBJECTIVE	TARGET ORGANIZATION / GROUP		
<p><b>【Objective】</b> Each participant shares and implements its action plan in respective organization, and reports progress to JICA <b>【Expected Outputs】</b> (1) To acquire knowledge and experiences to improve water treatment facilities and water treatment method in the participant's country (2) To acquire knowledge and experiences to improve water distribution, service installation, maintenance, and water charge systems in the participant's country (3) To acquire knowledge and experience to improve leak prevention in the participant's country. (4) To acquire knowledge and experiences to improve water quality control in the participant's country (5) To acquire particular knowledge and experiences in cold climate regions to improve water supply system in the participant's country</p>	<p><b>【organization】</b> Public corporation/governmental bodies in charge of water SUPPLY in cold climate regions <b>【Personal Qualification】</b> &lt;Current Duties&gt; senior waterworks engineers (WATER SUPPLY ONLY; NOT for sewerage work) &lt;Experience&gt; at least three (3) years for those university graduate; OR have at least seven (7) years of practical experience for those not &lt;Age&gt; Preferably, between twenty-five (25) and thirty-five (35). In principle should be under forty (40) years old</p>		
CONTENTS	PROGRAM PERIOD	Jan / 12 / 2011 ~ Mar / 5 / 2011	
<p><b>【preparatory phase】</b>each participant prepares country report to identify issues <b>【core phase】</b> (1) visit/structure/design/operation of water purification plant, advanced water purification (membrane, desalination) (2) distribution reservoir/pipe laying plan, pumping station, maintenance, design &amp; quantity calculation for new installation, construction site, networks analysis, manufacturing plant, metering, charge collection, call center, metering site, environmentally conscious management (3) leak prevention/planning/detection/on-site prevention method, block metering (4) water quality control, water source &amp; algae, design/pump/drilling of pumping station, bioassay (5) country report presentation, problem analysis, discussion, action plan consultation/presentation <b>【finalization phase】</b> share the knowledge based on action plan, then report its progress to JICA</p>	IMPLEMENTING PARTNER	Sapporo Waterworks Bureau	
	JICA CENTER	JICA Sapporo	
	COOPERATION PERIOD	2010~2012	
	REMARKS and WEBSITE	<p>participants will be strongly required to actively participate the training course to solve the issues in waterworks engineering in their countries.</p>	

Community Empowerment through Safe Water Management for Arid Regions in French Speaking African Countries 仏語圏アフリカ乾燥地域 村落飲料水管理		PRTD Solution 1084248 Sector : Water Resources/Disaster Management Sub-Sector : Rural Water Supply	
Target Countries: Arid Region in French Speaking African Countries		13 participants / French	
OBJECTIVE	TARGET ORGANIZATION / GROUP		
<p><b>[Objective]</b> The official plan to establish a sustainable operation and maintenance system for safe drinking water supply in a small-scale community is improved or formulated by participant's organization based on the respective Action Plan proposed in Japan.</p> <p><b>[Outputs]</b> 1. Acquire knowledge and skills necessary for safe drinking water supply in small-scale community (quantity, quality, treatment and distribution of water) 2. Acquire knowledge and skills to organize a community participation system for sustainable safe drinking water supply 3. Propose "Action Plan" for a community participation system for sustainable safe drinking water supply in a small-scale community</p>	<p><b>[Target Organization]</b> Central/local government and NGOs engaged in safe drinking water supply and/or management in small-scale communities</p> <p><b>[Target Group]</b> 1. Administrative officials/NGO staffs engaged in safe drinking water supply and/or management in small-scale communities 2. Have more than three (3) years of practical and/or research experiences in field of planning and implementation for safe drinking water supply, sanitation and/or community development 3. Be fluent in French (spoken and written)</p>		
CONTENTS	PROGRAM PERIOD	Oct / 17 / 2010 ~ Dec / 17 / 2010	
<p><b>[Preliminary Phase]</b> Prepare and submit a Country Report and Gender Report</p> <p><b>[Phase in Japan]</b> 1. Safe drinking water supply in small-scale community: Health services and drinking water supply in small-scale communities, Appropriate technology for drinking water supply, Groundwater utility, Sanitation, Biomass circulation &amp; environmental management, Environmental contamination, Drinking water utilization patterns 2. Knowledge and skills to organize a community participation system: Community development, Gender mainstreaming, Micro-credit, Communication for community participation 3. Action Plan: Project Cycle Management (PCM), Country Report presentation, Preparation and presentation of "Action Plan"</p> <p><b>[Finalization Phase]</b> Submission of the Final Report describing the progress/result of sharing Action Plan within 3 months after completion of the program in Japan</p>	IMPLEMENTING PARTNER	Fuji Women's University	
	JICA CENTER	JICA Sapporo	
	COOPERATION PERIOD	2010~2012	
	REMARKS and WEBSITE		

Local Emergency Operation Plan with Flood Hazard Map 洪水ハザードマップを活用した地域防災計画		PRTD Solution 1084064 Sector : Water Resources/Disaster Management Sub-Sector : Wind and Flood Disaster (Flood Control)	
Target Countries: Country with frequent flood disasters		18 participants / English	
OBJECTIVE	TARGET ORGANIZATION / GROUP		
<p><b>[Objective]</b> To be developed the direction and schedule to make local disaster management plan combined with flood hazard map and flood forecasting/warning system.</p> <p><b>[Expected Results]</b> 1. To identify the current problems and issues on flood disaster countermeasure. 2. To develop a training plan to set the direction for a local disaster management plan and a mid-term operation schedule. 3. To identify the current problems and issues for obtaining data to conduct hydrological and flood analysis. 4. To develop a flood hazard map and sample anticipated inundation area map for solving the current problem and issues in each country. 5. To identify the relationship among flood hazard mapping, forecasting/warning systems and an evacuation plan in a local disaster management plan. 6. To develop an outline of the direction for a local disaster management plan and a mid-term operation schedule for a target area.</p>	<p><b>[Target Organizations]</b> This program is designed for government officials to make the direction and schedule for planning local disaster management plan combined with flood hazard map and flood forecasting/warning system in each country.</p> <p><b>[Target Group]</b> 1. Target Person: Government officials in the field of flood disaster management plan. 2. Experience: in the flood disaster management and/or relevant field.</p>		
CONTENTS	PROGRAM PERIOD	Oct / 31 / 2010 ~ Dec / 4 / 2010	
<p><b>[Preliminary Phase]</b> To make an Inception Report on present situation in the field of local emergency operation plan in each country.</p> <p><b>[Core Phase in Japan]</b> To understand the overall view of local emergency operation plan through lectures, practical exercises and site visits. (1) General knowledge of flood disaster countermeasures (2) Awareness-raising of local residents' groups, Interviews with municipalities and local residents on disaster awareness, etc (3) Fundamentals of flood hazard mapping (Inundation analysis, GIS, etc.), "Town Watching" exercises, Production of a sample anticipated inundation map (4) General knowledge of flood disaster countermeasures (5) Project Cycle Management exercise training Making an "Action Plan" for making a local disaster management plan</p> <p><b>[Finalization Phase]</b> To share the Interim Report in the participants' organization, and develop/submit the Final report to JICA.</p>	IMPLEMENTING PARTNER	Public Works Research Institute (PWRI)	
	JICA CENTER	JICA Tsukuba (Training & Partnership)	
	COOPERATION PERIOD	2009~2011	
	REMARKS and WEBSITE	This course is planned to build your capacity up to prepare local emergency operation plan, joining in three-years' spirally stepped up sequences. So Continuous participants in the same department or in its collaborated organizations in your country are expected.	

Disaster Risk Management Technology on Volcanic Eruption, Debris Flow and Landslide 火山学・総合土砂災害対策		PITD Leaders 1080876 Sector : Water Resources/Disaster Management Sub-Sector : Soil and Water Disaster	
		13 participants /	English
OBJECTIVE	TARGET ORGANIZATION / GROUP		
Participants of this course are expected to improve their technology on volcanic observation or comprehensive sediment management and be able to enhance their capacity on making countermeasures to the disaster prevention / mitigation of their countries. 【Common Program】to understand and be able to explain: (1) the basic common knowledge of volcanology and erosion & sediment control engineering (2) the administration of disaster management in consideration of inhabitants' participation. 【Volcanology Course】to understand and be able to explain: (1) basic knowledge of volcanology (2) and to be able to carry out volcano observation data analysis and interpretation 【Sabo Course】to understand and be able to explain: (1) basic knowledge of erosion and sediment control engineering (2) basic mechanism of sediment-related disasters such as debris flow (3) comprehensive sediment-related disaster prevention measures, structural and non-structural measures (4) the environmentally sound comprehensive sediment management	Ministry of Public Works, Ministry of Water Resources, Institute of Volcanology, Seismology, Geology or Geophysics.		
CONTENTS	PROGRAM PERIOD	under planning	
This course consists of 3 components, i.e. common program, thematic program (volcanology or sabo) and individual program. The key component of this course is the individual program. Each participant will conduct 3/4 months individual training / research at university, volcano observatory, institution or foundation based on interests of the participating personnel and their organization. The theme of individual program will be set by the needs clarification form. As a result of individual training/research, each participant will be required to make a final report and present to the curriculum committee members. 【Common Program】(1)Basic common knowledge of volcanology and sabo 【Volcanology Course】(1) Basic knowledge volcanology (2) Methodology of observation 【Sabo Course】(1) Basic knowledge of sabo engineering (2) Structural measures (3) Non-structural measures 【Individual Program】(1) Individual training / research and making a final report	IMPLEMENTING PARTNER	Sabo Technical Center	
	JICA CENTER	JICA Tokyo(Economy&Env.)	
	COOPERATION PERIOD	2009~2011	
	REMARKS and WEBSITE	Throughout the whole training period, "Review and Discussion" session will be arranged on the turning point of the training. Each participant makes the report on the situation / status after returning to the country,	

Development and utilization of mitigative technologies for slope-induced disasters in developing countries (Master's or Doctor's Degree:Engineering) 開発途上国のための斜面災害軽減技術の構築と普及(長期)		LONG-TERM Leaders 1081113 Sector : Water Resources/Disaster Management Sub-Sector : Soil and Water Disaster	
		3 participants /	English
OBJECTIVE	TARGET ORGANIZATION / GROUP		
【Objectives】 Trainees complete course-work requirements, with an emphasis on geotechnical engineering, and carry out research which proposes technology and social systems that facilitate such self defense as mitigation of slope-failure disasters. Accordingly, the trainees become able to push forward the said disaster mitigation framework after coming back to home countries. 【Expected Result】 (1) Course work on subjects such as geotechnical engineering (2) Case study on real slope failure (3) Research work on slope failure by model tests or material strength tests (4) Study on practical self defense against natural disaster, conducted in trainee's home country	【Target Organizations】 University or public research institute which develop young researchers and/or engineers and also are involved in disaster administration in the country 【Target Group】 Age: under 30 years old. Application for Master's (two years) or Doctor's (Three years) can be acceptable.		
CONTENTS	PROGRAM PERIOD	Mar / 15 / 2011 ~ Mar / 31 / 2013	
(1) Foundation Engineering, Principles of Soil Mechanics, Geotechnical Engineering, Geotechnical Earthquake Engineering etc. (2) Case study on real slope failure with special attention on topography and soil conditions. Laboratory tests, if necessary, on soil samples collected from sites. Case study on real slope failure, assisted by specialists, gives the trainee a good opportunity to learn the reality of slope failure and to develop a professional capabilities. (3) Model tests and/or material tests are carried out in order to propose the use of inexpensive field monitoring equipments as well as logics of warning of urgent slope failure. The output from this work constitutes the main body of a master (doctoral) thesis. (4) The self defense against natural disaster is the final goal of the program. The self defense is supported by local people in such aspects as installation, maintenance, and operation of field monitoring equipments as well as execution of emergency warning and evacuation. This study also becomes a part of thesis.	IMPLEMENTING PARTNER	Department of Civil Engineering, The University of Tokyo	
	JICA CENTER	JICA Tokyo(Economy&Env.)	
	COOPERATION PERIOD	2008~2010	
	REMARKS and WEBSITE	Website <a href="http://www-e.civil.t.u-tokyo.ac.jp/">http://www-e.civil.t.u-tokyo.ac.jp/</a>	

Seismology, Earthquake Engineering and Disaster Management Policy 地震・耐震・防災政策		PITD Leaders 1080875 Sector : Water Resources/Disaster Management Sub-Sector : Earthquake Disaster	
		20 participants / English	
OBJECTIVE	TARGET ORGANIZATION / GROUP		
<p><b>[Objective]</b> To enhance the participant's capacity to contribute to the development and dissemination of earthquake disaster mitigation techniques under consideration of actual conditions, regulations in their countries and region.</p> <p><b>[Expected Results]</b> 1. To be able to explain basic concept and theory on Earthquake Mechanism and Earthquake Resistant Design inevitable to establish the Seismic Disaster Mitigation. 2. To be able to explain basic concept and theory on Seismic Hazard Evaluation, Seismic disaster Mitigation Policy and Earthquake Countermeasures inevitable to establishing Seismic Disaster Mitigation Scheme. 3. To improve participant's capabilities to apply techniques and knowledge acquired through their studies on individual topics and to make Master Thesis / Action plans in order to solve problems in their respective countries.</p>	<p><b>[Target Organizations]</b> This program is designed for the governmental organization concerning to seismology, earthquake engineering and disaster mitigation.</p> <p><b>[Target Group]</b> 1. Target person: Administrative officers and/or engineers and/or researchers in charge of seismology, earthquake engineering and disaster mitigation. 2. Experience in the relevant field: more than 3 years' experience. 3. Academic ability: be university graduates in seismology, earthquake engineering or seismic disaster mitigation, or be university graduates in science and technology.</p>		
CONTENTS	PROGRAM PERIOD	Sep / 28 / 2010 ~ Sep / 17 / 2011	
<p><b>[Preliminary Phase]</b> To make an Inception Report on current situation related governmental policy on seismology, earthquake engineering and disaster mitigation in their countries.</p> <p><b>[Core Phase in Japan]</b> To acquire the necessary skill and technique related governmental policy on seismology, earthquake engineering and disaster mitigation through lectures, discussions, research, practical exercises and site visits, etc.</p> <p>(1) Introduction to Seismology, Earthquake Engineering Earthquake mechanisms, Structural analysis, Basic concept of Seismic design (2) Seismic design, Seismic evaluation &amp; retrofitting, etc. (3) Technologies on seismic hazard assessment, Damage and risk assessment, etc. (4) Disaster Management Policy: Policy making on earthquake disasters, Disaster Risk Management, etc. (5) Others: PCM, On-site-visit, Practice of earthquake disaster prevention</p>	IMPLEMENTING PARTNER	Building Research Institute (BRI), National Graduate Institute for Policy Studies (GRIPS)	
	JICA CENTER	JICA Tsukuba(Training&Partnership)	
	COOPERATION PERIOD	2009~2011	
	REMARKS and WEBSITE	Participants, who have successfully achieved required credits, will be awarded a Master's Degree, 'Master of Disaster Mitigation', by GRIPS and BRI.	

Global Seismological Observation グローバル地震観測		PITD Leaders 1080887 Sector : Water Sub-Sector : Earthquake	
		8 participants / English	
OBJECTIVE	TARGET ORGANIZATION / GROUP		
<p><b>[Objective]</b> To be acquired knowledge and advanced techniques of global seismological observation for playing important roles in the monitoring system of nuclear tests under the CTBT.</p> <p><b>[Expected Results]</b> 1. To acquire knowledge of the CTBT regime and the role of seismology in the International Monitoring System (IMS). 2. To understand global seismological observation technologies for monitoring nuclear tests and earthquakes. 3. To acquire data analytical techniques to discriminate nuclear tests from natural earthquakes. 4. To Make an Action Plan (Project Proposal) which they should do in their country after a homecoming.</p>	<p><b>[Target Organization]</b> This program is designed for a governmental organization which is expected to play important roles in a global monitoring network on nuclear tests.</p> <p><b>[Target Group]</b> 1. Target Person: Administrative officers who are expected to play important roles in a global monitoring network on nuclear tests. 2. Experience in the relevant field: more than 3 years' experience 3. Others: be well versed in basic mathematics such as differentiation and integration.</p>		
CONTENTS	PROGRAM PERIOD	Jan / 6 / 2010 ~ Mar / 6 / 2010	
<p><b>[Preliminary Phase]</b>To make an Inception Report on the current situation of the global seismological observation in their country.</p> <p><b>[Core Phase in Japan]</b> To understand the overall view of the global seismological observation through lectures, practical exercises and site visits.</p> <p>(1) Outline of CTBT &amp; IMS • Introduction of CTBT Regime concerning seismology, etc. (2) Seismological Observation, National Data Center • Seismometer, Seismic Network, Design of Seismic Network, National Data Center (3) Data Processing, Data Analysis, Nuclear test identifying method • Retrieval of Digital Seismic Data and Disposal of Format, Introduction to UNIX, Analysis of Teleseismic waves, Seismic Array Data Analysis, Discrimination by mb-Ms, Seismicity and Tectonics, etc. (4) Formulation and Discussion on Action Plan. • Making an Action Plan, and Presentation of Action Plan</p>	IMPLEMENTING PARTNER	Building Research Institute (BRI)	
	JICA CENTER	JICA Tsukuba(Training&Partnership)	
	COOPERATION PERIOD	2009~2011	
	REMARKS and WEBSITE	Building Research Institute (BRI) Web Site: <a href="http://www.kenken.go.jp/english/index.html">http://www.kenken.go.jp/english/index.html</a>	

Operating Management of Earthquake-Tsunami-Volcano Eruption Observation System 地震津波火山観測システムの運用・管理		PITD Leaders 1080035 Sector : Water Resources/Disaster Management Sub-Sector : Earthquake Disaster	
Target Countries: Countries located in the vicinity of plate subduction belt or plate collision area		6 participants / English	
OBJECTIVE	TARGET ORGANIZATION / GROUP		
<p>[Course Objective] This program will enhance the potential of experts in target countries by improving earthquake observation technology and the understanding of earthquake generation mechanisms, thus contributing to the implementation of the observation network on earthquake and others.</p> <p>[Expected Module Outputs]</p> <ol style="list-style-type: none"> <li>1) To understand the fundamental theories of Earthquake, Tsunami and Volcano eruption and principles of seismometer, observation system</li> <li>2) To learn the field practices, the Tsunami early warning system and observation methods used in the case of emergency</li> <li>3) To understand the international cooperation observation and joint observation in plate subduction zones</li> <li>4) To improve participants' capacities to apply knowledge and techniques learnt in lectures and practices through their studies on individual topics, and to make Action Plans in order to solve problems in their respective countries</li> </ol>	<p>[Target Organizations] Meteorological offices, geographic observatories, seismic research institutes and universities, etc. in charge of earthquake, tsunami and volcano eruption observation</p> <p>[Target Group]</p> <ol style="list-style-type: none"> <li>1) middle class managers or researcher</li> <li>2) possess a good knowledge on observation technology and analysis. Field work in regular basis is preferred.</li> <li>3) be at university graduate level in the field with enough enthusiasm, experience and academic skills to make Action Plan based on their independent research by themselves. In order to understand the contents of this training program, geophysical basics are necessary.</li> <li>4) be proficient in speaking and writing English</li> <li>5) be computerate enough to make reports and PPT.</li> </ol>		
CONTENTS	PROGRAM PERIOD	Jul / 5 / 2010 ~ Mar / 31 / 2011	
<p>The training program consists of lectures, practical exercises, and observation trips on the following:</p> <ol style="list-style-type: none"> <li>1) An earthquake, tsunami and volcano eruption observation system</li> <li>2) Principles of earthquake, tsunami and volcano eruption</li> <li>3) Analysis of earthquake, tsunami and volcano eruption records</li> <li>4) Crustal movement observation and its analysis</li> <li>5) Real-time observation and its operation</li> <li>6) Plate tectonics</li> <li>7) Earthquakes and tsunamis in the plate subduction zone</li> <li>8) Volcanic eruptions in the plate subduction zone</li> <li>9) Earthquakes, tsunamis and volcanic eruptions as global disasters</li> <li>10) Great disasters due to earthquakes, tsunamis and volcanic eruptions and their effects on people's lives</li> <li>11) Others</li> </ol>	IMPLEMENTING PARTNER	Research Center for Siesmology, Volcanology and Disaster Mitigation, Nagoya University	
	JICA CENTER	JICA Chubu	
	COOPERATION PERIOD	2006~2010	
	REMARKS and WEBSITE	<p>This course is mainly based on individual research to find solutions for the problems in the respective countries.</p> <p><a href="http://www.seis.nagoya-u.ac.jp/index_e/">http://www.seis.nagoya-u.ac.jp/index_e/</a></p>	

DRR (Disaster Risk Reduction) Strategy for Urban Earthquake 都市地震災害軽減のための総合戦略		PITD Solution 1080892 Sector : Water Resources/Disaster Management Sub-Sector : Earthquake Disaster
16 participants / English		
OBJECTIVE	TARGET ORGANIZATION / GROUP	
<p><b>[Objective]</b> DRR (Disaster Risk Reduction) strategy for urban earthquake, which is based on a pro-active approach of DRR utilizing various tools and knowledge in risk assessment, risk management, and risk communication, is to be studied and built at each organization to implement urban earthquake DRR.</p> <p><b>[Expected Results]</b></p> <ol style="list-style-type: none"> <li>(1) Risk Assessment and its Tools and Knowledge</li> <li>(2) Risk Management and its Tools and Knowledge</li> <li>(3) Risk Communication and its Tools and Knowledge</li> <li>(4) International Activities for Urban DRR and Education for Leaders</li> <li>(5) DRR strategy for urban earthquake is to be studied and built at each organizations to implement urban earthquake DRR &lt;Finalization Phase&gt;</li> </ol>	<p><b>[Target Organizations]</b> Organizations which conduct urban earthquake disaster risk reduction (DRR) (government, research institution, medical institution etc.)</p> <p><b>[Target Group]</b></p> <ol style="list-style-type: none"> <li>1) Current Duties: be a public officer, technical specialist, researcher, engineer or medical staff presently engaged in practical service of DRR of urban city.</li> <li>2) Experience in the relevant field: have more than 2 years' experience in the field of DRR.</li> </ol>	
CONTENTS	PROGRAM PERIOD	May / 10 / 2010 ~ Jul / 1 / 2010
<p><b>[Preliminary Phase]</b> Preparation for country report</p> <p><b>[Core Phase]</b></p> <ol style="list-style-type: none"> <li>(1) Earthquake Mechanism, Seismic Ground Motion &amp; Hazard Map, Building Codes, Lifeline Damage Assessment.</li> <li>(2) Recovery of Kobe City &amp; Community, Disasters Medical Response &amp; Public Health, Environmental Impacts of Disasters, Economic Impacts of Earthquake</li> <li>(3) IT for Emergency Management, Disaster Information Sharing, Education for DRR</li> <li>(4) Int. Collaborations for DRR, Inter-national Organization on DRR and Educational System</li> </ol> <p><b>[Finalization Phase]</b> Formulation and submission of the action plan and its progress report within 3 month.</p>	IMPLEMENTING PARTNER	Research Center for Urban Safety and Security, Kobe University
	JICA CENTER	JICA Hyogo
	COOPERATION PERIOD	2009~2011
	REMARKS and WEBSITE	<p>The participants will attain work credit to be counted toward completing an internationally-accredited professional certification program as "urban DRR specialists" being formulated by several organizations including WBI, UNDP, UNISDR, and others. <a href="http://www.audrrkobe.org/">http://www.audrrkobe.org/</a></p>



Safer School against Disasters (Dissemination of Anti-Seismic Building for Communities) in South West Asian Countries 南西アジア地域 災害に強い学校(コミュニティへの耐震建築の普及に向けて)		PRTD Trainers 1084151 Sector: Water Resources/Disaster Management Sub-Sector: Earthquake Disaster	
		10 participants / English	
OBJECTIVE	TARGET ORGANIZATION / GROUP		
<p><b>[Objectives]</b> To build capacity of government officials and engineers to develop action plan and to implement school earthquake safety for their respective countries</p> <p><b>[Outputs]</b> (1) To understand the importance of school safety and role of schools in disaster risk reduction (2) To understand the technologies and provisions for design, construction and maintenance of school buildings to ensure their safety (3) To understand the vulnerability assessment of existing school buildings (4) To understand the concept and technologies for retrofitting (5) To understand country strategic plan for school safety (6) To prepare an action plan to promote school safety in respective countries</p>	<p><b>[Target Organizations]</b> Ministry of Education or regional educational committee</p> <p><b>[Target Group]</b> Current Duties: Engineering or administrative official engaged in examination or design of school building, and engaged in disaster mitigation in school Experience in the relevant field: have experience in architecture and/or system on construction - more than 7 years experience is preferable</p>		
CONTENTS	PROGRAM PERIOD	Oct / 24 / 2010 ~ Nov / 27 / 2010	
<p><b>[Preliminary Phase]</b> Preparation of County Report <b>[Core Phase]</b> 1-1 Disaster risk reduction and school 1-2 School and communities in DRR 1-3 Country report on school safety 2-1 Construction of safe schools (seismic codes, philosophy, design) 3-1 Vulnerability assessment methodologies 3-2 Prioritization for intervention 4-1 Retrofitting technology for different types of school structure (RCC, wooden) 5-1 Case studies (experience of Japan) 5-2 National policy and country strategic planning 6-1 Action plan and Group work <b>[Finalization Phase]</b> Implementation of Action Plan</p>	IMPLEMENTING PARTNER	United Nations Centre for Regional Development (UNCRD), Disaster Management Planning Hyogo Office	
	JICA CENTER	JICA Hyogo	
	COOPERATION PERIOD	2008~2010	
	REMARKS and WEBSITE	UNCRD has conducted projects in seismic-prone countries on safer school against disasters since 2001. The experience of the UNCRD projects will be shared and the experience of Hyogo prefecture and Kobe city will also be shared with participants.	

Tsunami Disaster Mitigation 津波防災		PRTD Solution 1084165 Sector: Water Resources/Disaster Management Sub-Sector: Earthquake Disaster	
Target Countries: Tsunami disaster prone countries in Asia and Oceania Region		7 participants / English	
OBJECTIVE	TARGET ORGANIZATION / GROUP		
<p><b>[Objective]</b> To develop and propose a draft for Tsunami Early Warning system and a draft for Tsunami Hazard Assessment in their countries.</p> <p><b>[Expected Results]</b> 1. To sort out the problems concerning to tsunami disaster mitigation for establishment of Tsunami Early Warning System and Tsunami Hazard Maps. 2. To acquire basic concept and theory of generation, dispersion and regurgitation of tsunami caused by earthquake as a basic knowledge inevitable to tsunami disaster mitigation. 3. To acquire basic concept and theory of Tsunami Early Warning System, Tsunami Hazard Evaluation (maps), Tsunami Disaster Mitigation Policy, Tsunami Disaster Mitigation Countermeasures. 4. To make the improvement plan of both Tsunami Early Warning System and Tsunami Hazard Evaluation/maps.</p>	<p><b>[Target Organizations]</b> This program is designed for the governmental organization concerning to earthquake and tsunami disaster mitigation.</p> <p><b>[Target Group]</b> 1. Target person: Administrative officers and/or engineers and/or researchers in charge of tsunami disaster mitigation. 2. Experience in the relevant field: more than 3 years' experience. 3. To be university graduates in Seismology, Tsunami or Their Disaster Mitigation, or be university graduates in Science and Technology other than the above mentioned subjects.</p>		
CONTENTS	PROGRAM PERIOD	Sep / 28 / 2010 ~ Sep / 17 / 2011	
<p><b>[Preliminary Phase]</b> To make an Inception Report on current situation related governmental policy on tsunami disaster mitigation in their countries. <b>[Core Phase in Japan]</b> To acquire the necessary skill and technique related to tsunami disaster mitigation through lectures, discussions, exercises and site visits, etc. (1) Information Technology Related with Earthquake and Disasters: * Earthquake Phenomenology, Earthquake Circumstance, etc. (2) Tsunami Simulation, Tsunami Generation and Propagation, etc. (3) Tsunami Hazard Assessment, Tsunami Countermeasures: * Tsunami Hazard Map, Tsunami Early Warning System and Dissemination, etc. (4) Disaster Management Policy: Seismic Disaster Mitigation Policy, etc. (5) Others: PCM, On-site-visit, Practice of earthquake disaster prevention <b>[Finalization Phase]</b> To share the technical report (Action Plan) in the participants' organization, and develop/submit the Final report to JICA.</p>	IMPLEMENTING PARTNER	Building Research Institute (BRI), National Graduate Institute for Policy Studies (GRIPS)	
	JICA CENTER	JICA Tsukuba (Training & Partnership)	
	COOPERATION PERIOD	2009~2011	
	REMARKS and WEBSITE	Participants, who have successfully achieved required credits, will be awarded a Master's Degree, 'Master of Disaster Mitigation', by GRIPS and BRI.	