

Country Name		Japan-China Cooperation Plan of Earthquake First-aid Capacity Training			
People's Republic of China					
I. Project Outline					
Background	Earthquake disaster prevention had been China’s important policy since 2006. At the time of ex-ante evaluation, China Earthquake Administration, which is responsible for handling emergencies during earthquake disasters, was promoting human resource development of junior researchers at National Earthquake Response Support Service (NERSS), which is a direct subordinate organization of the Administration, and planning to strengthen emergency response capacity ¹ of regional staff through trainings. The Chinese government also constructed China National Training Base for Urban Search and Rescue (CNSART) in the suburb of Beijing City as a training base under NERSS, and was making efforts to strengthen rescue capability of local earthquake emergency relief teams through trainings. However, there was a room for improvement regarding the training implementation system and guidance system. Moreover, after the Wenchuan Great Earthquake (Sichuan Earthquake) in May 2008, it was reaffirmed that strengthening of emergency response capacity and rescue capability is the most important and urgent issue.				
Objectives of the Project	Through activities aiming at strengthening teaching ability of core staff and instructors of rescue techniques at NERSS, strengthening emergency response capacity of local administrative officers in model provinces, and strengthening training capacity on rescue techniques of top officials in local earthquake emergency relief teams in model provinces, the project aimed at strengthening training capacity of NERSS on emergency response capacity and rescue techniques (Project Purpose), thereby contributing to dissemination of a system and a mechanism of emergency response and relief to provinces other than model provinces (Overall Goal). The project objectives set forth are as follows: 1. Overall Goal: The system and know-how for emergency response and relief is spread to provinces other than the model provinces. 2. Project Purpose: The capacity of the NERSS for emergency response and rescue skills training is strengthened.				
Activities of the project	1. Project site: Beijing City (where NERSS is based), Yunnan Province/Hebei Province/Jiangsu Province (the emergency response area), the Inner Mongolia Autonomous Region/Shandong Province/Shaanxi Province/Guangdong Province (the rescue area) (the sites other than Beijing City are model provinces) 2. Main activities: activities to strengthen teaching ability of core staff and instructors of rescue techniques at NERSS, trainings for administrative officers in model provinces, and trainings for top officials in local earthquake emergency relief teams etc. 3. Inputs (to carry out above activities) Japanese SideChinese Side 1) Experts: 4 persons (long term), 36 persons (short term)1) Staff allocated: 50 persons 2) Trainees received: 116 persons2) Assignment of administrative staff 3) Equipment: fire pumps, life detection systems using electromagnetic waves, underground sound detectors, ladders etc.3) Project office 4) Cost for trainings in China, overseas activities cost4) Training expenses, project implementation cost				
Ex-Ante Evaluation	2009	Project Period	October 2009 – March 2013	Project Cost	(ex-ante) 360 million yen (actual) 361 million yen
Implementing Agency	China Earthquake Administration (National Earthquake Response Support Service (NERSS), China National Training Base for Urban Search and Rescue (CNSART))				
Cooperation Agency in Japan	Fire and Disaster Management Agency, Tokyo Fire Department, departments of disaster management in local governments				

II. Result of the Evaluation

<Constraints on Evaluation>

- Evaluation Judgment was made by analyzing the information/data collected by questionnaire and interviews through telephone/email. Site surveys were not conducted under this ex-post evaluation. Reasons are that admittance of foreign stakeholders in model provinces requires complicated procedures, accompanying by staff of China Earthquake Administration is also required, and trainings on emergency response and relief are not always conducted and thus it was difficult to control the timing of field visit.

1 Relevance

<Consistency with the Development Policy of China at the time of ex-ante evaluation and project completion>

The project has been consistent with China's development policy on 'strengthening capacity to deal with earthquakes' and 'provision of appropriate services to disaster victims' etc. as set forth in "the National Plan for Seismic Isolation and Disaster Reduction (2006-2020)"

¹ Emergency response capacity is an overall capacity to handle a situation from immediately after an occurrence of a disaster until functions of administrative agencies recover from the disaster. China and Japan have different systems, as an agency in charge of emergency handling needs to handle wide range of disasters such as human-caused disasters as well as natural disasters including wind and flood damages and earthquakes in Japan, on the other hand, in China, China Earthquake Administration needs to respond to disasters limited to earthquakes only according to the country's laws.

and “the National Earthquake Contingency Plan (revised in December 2012)”.

<Consistency with the Development Needs of China at the time of ex-ante evaluation and project completion>

The Law of the People’s Republic of China on Protecting Against and Mitigating Earthquake Disasters was amended at the end of 2008, which states that China Earthquake Administration has the centralized control over earthquake emergency response and relief and coordinates with relevant organizations as a head office. However, there was a room for improvement in its emergency response capacity and rescue capability, particularly in intangible aspects. At the time of project completion, China was in process of starting evaluations of rescue agencies in each region, based on which the continuing needs for trainings were expected from organizations related to emergency response and relief in provinces.

<Consistency with Japan’s ODA Policy at the time of ex-ante evaluation>

The project was consistent with Japan’s ODA policy on ‘cooperation to cope with global issues including environmental problems’, as stated as one of priorities/economic cooperation policies in the “Economic Cooperation Program for China (2001)”.

<Evaluation Result>

In light of the above, the relevance of the project is high.

2 Effectiveness/Impact

<Status of Achievement for the Project Purpose at the time of Project Completion>

The Project Purpose was achieved by the time of project completion. The standard curriculum for emergency response capacity and rescue techniques was completed (Indicator 1), and the number of fostered senior instructors who can teach other instructors emergency response techniques (Indicator 2) and that of fostered senior instructors who can teach other instructors rescue techniques (Indicator 3) increased to 19 and 16, respectively, at NERSS.

<Continuation Status of Project Effects at the time of Ex-post Evaluation>

After project completion, trainings on emergency response capacity and rescue techniques have been conducted by NERSS for regional provinces, in which the curriculum produced under the project (including prompt estimation of the extent of damages caused by an earthquake, preparation and validation of a list of assumed emergency response (time scheduling), method of map simulation, and rescue rope technique etc.) has been utilized. At the time of ex-post evaluation, there are 17 senior instructors of emergency response techniques and 15 senior instructors of rescue techniques at NERSS. Moreover, in model provinces of the emergency response area (Yunnan, Hebei and Jiangsu Provinces), a map simulation has been conducted by local administrative officers more than once a year, in which a scenario of a map simulation has been revised every time, and an earthquake emergency response plan at each level in these provinces has been revised based on the concept of time scheduling learned under the project and a map simulation has been conducted based on the plan. In model provinces of the rescue area (the Inner Mongolia Autonomous Region, Shandong, Shaanxi and Guangdong Provinces), trainings for staff of local earthquake emergency relief teams have been conducted by top officials more than once a year, in which search techniques, rescue techniques and medical aid techniques etc. learned under the project have been utilized.

<Status of Achievement for Overall Goal at the time of Ex-post Evaluation>

The Overall Goal has been mostly achieved by the time of ex-post evaluation. While NERSS conducted overall post-earthquake evaluations of the Gansu Earthquake (2013) and the Ludian Earthquake in Yunnan (2014) etc., a verification result of emergency response and relief in the Sichuan Earthquake could not be obtained, which makes it unable to conduct a comparative verification (Indicator 1). However, emergency response in the Ludian Earthquake was evidently improved compared with that in the Sichuan Earthquake and Relief teams were promptly mobilized in order, while volunteer workers rushed to affected areas, which created a confusion in a part of affected areas and thus, a problem was observed in terms of management of volunteer workers. Regarding the exercise on emergency response in provinces other than model provinces, it was confirmed that the exercise was conducted for nine times in total from 2015 to 2016 in Guangdong Province, Xinjiang, Guangxi, Tianjin City and Fujian Province (Indicator 2). Regarding the rescue training in provinces other than model provinces, it was conducted in 2015 and 2016 in Fujian Province and Gansu Province (Indicator 3). The training was conducted based on systematized techniques and evaluation criteria of the International Search and Rescue Advisory Group (INSARAG), however, a part of the curriculum, manuals and teaching materials produced under the project was also utilized.

In this way, although one of the three indicators was not verifiable, an improvement of emergency response, the aim of that indicator, was confirmed to a certain extent, and the other two indicators met the targets. Therefore, it can be said that the Overall Goal was mostly achieved as a whole.

<Other Impacts at the time of Ex-post Evaluation>

No negative impact on natural or social environment has been occurred under the project.

<Evaluation Result>

In light of the above, through the project, the Project Purpose was achieved by the time of project completion, project effects have been maintained to the time of ex-post evaluation, and while an issue was found the Overall Goal has been mostly achieved. Therefore, the effectiveness/impact of the project is high.

Achievement of project purpose and overall goal

Aim	Indicators	Results
(Project Purpose) The capacity of the NERSS for emergency response and rescue skills training is strengthened.	1. The standard curriculum for emergency response capacity and rescue techniques is prepared.	Status of the achievement: achieved (continued) (Project Completion) The standard curriculum for both emergency response and rescue techniques was completed. (Ex-post Evaluation) NERSS conducted training on emergency response capacity for Shanghai City Earthquake Administration in April 2014, and training on rescue techniques for armed police, firefighters and provincial earthquake administrations nationwide in March, June and July 2015. Moreover, trainings on emergency response capacity and rescue techniques for top officials have been conducted in Shandong Province and the Inner Mongolia Autonomous Region with provincial or autonomous region’s budget. The curriculum produced under the project is utilized in these

		trainings.																							
	2. More than 15 senior instructors who can teach other instructors emergency response techniques are fostered.	Status of the achievement: achieved (continued) (Project completion) In the emergency response area, 19 senior instructors were cultivated to be able to teach other instructors. (Ex-post Evaluation) There are 17 senior instructors in total.																							
	3. More than 15 senior instructors who can teach other instructors rescue techniques are cultivated.	Status of the achievement: achieved (continued) (Project completion) 16 senior instructors who can teach other instructors rescue techniques were cultivated. However, among them, two instructors were transferred to Gansu Province Earthquake Administration and Sichuan Province Earthquake Administration, and thus the number of senior instructors belonging to NERSS at the time of terminal evaluation was 14. (Ex-post Evaluation) There are 15 senior instructors in total.																							
	(Supplemental Information 1) In model provinces, a map simulation is conducted more than once a year, and a scenario of a map simulation is revised every time.	Status of the achievement: (continued) (Ex-post Evaluation) Frequencies of map simulation conducted by regional administrative officers in model provinces are shown below. The exercise has been conducted more than once a year and a scenario has been revised every time in all provinces. In Jiangsu Province, simulations led by the provincial earthquake administration are conducted particularly at a high pace in a number of locations following the new revision of the earthquake emergency response that started at the end of 2012. <table><tr><td rowspan="2">Model Province</td><td colspan="3">Number of Times Map simulation Implemented</td></tr><tr><td>2013</td><td>2014</td><td>2015</td></tr><tr><td>Yunnan Province</td><td>3</td><td>3</td><td>4</td></tr><tr><td>Hebei Province</td><td>4</td><td>3</td><td>2</td></tr><tr><td>Jiangsu Province</td><td>3</td><td>20</td><td>23</td></tr></table>	Model Province	Number of Times Map simulation Implemented			2013	2014	2015	Yunnan Province	3	3	4	Hebei Province	4	3	2	Jiangsu Province	3	20	23				
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Jiangsu Province	3	20	23																						
	(Supplemental Information 2) In model provinces, trainings for staff of local earthquake emergency relief teams are conducted more than once a year.	Status of the achievement: (continued) (Ex-post Evaluation) Frequencies of trainings for staff of local earthquake emergency relief teams conducted by top officials in model provinces are shown below. The training has been conducted more than once a year in all provinces. <table><tr><td rowspan="2">Model Province</td><td colspan="3">Number of Times a Training Implemented</td></tr><tr><td>2013</td><td>2014</td><td>2015</td></tr><tr><td>The Inner Mongolia Autonomous Region</td><td>3</td><td>5</td><td>5</td></tr><tr><td>Shandong Province</td><td>Several</td><td>Several</td><td>Several</td></tr><tr><td>Shaanxi Province</td><td>1</td><td>1</td><td>2</td></tr><tr><td>Guangdong Province</td><td>2</td><td>1</td><td>2</td></tr></table>	Model Province	Number of Times a Training Implemented			2013	2014	2015	The Inner Mongolia Autonomous Region	3	5	5	Shandong Province	Several	Several	Several	Shaanxi Province	1	1	2	Guangdong Province	2	1	2
Model Province	Number of Times a Training Implemented																								
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Shaanxi Province	1	1	2																						
Guangdong Province	2	1	2																						
(Overall goal) The system and know-how for emergency response and relief is spread to provinces other than the model provinces.	1. Overall post-earthquake evaluations of actual earthquakes (evaluation on emergency response and relief) receive higher results compared with a validation result of the Sichuan Earthquake.	(Ex-post Evaluation) Not achieved (not verifiable) While a validation on handling of the Sichuan Earthquake was conducted comprehensively at the national level, a validation result on emergency response and relief could not be obtained, and thus there is no criterion to evaluate handling of earthquakes that occurred after project completion, which makes it unable to conduct a comparative validation.																							
	2. An exercise on emergency response is conducted more than once in provinces other than model provinces.	(Ex-post Evaluation) achieved NERSS developed a training software in 2015 utilizing the concept of time scheduling and the technique of a map simulation exercise learned under the project. Trainings on emergency response were conducted utilizing the software for nine times in total for 370 participants in Shenzhen City in Guangdong Province, Changji City in Xinjiang, Nanning City in Guangxi Province, Tianjin City and Yancheng City in Fujian Province from 2015 to July 2016.																							
	3. Rescue training is conducted more than once in provinces other than model provinces.	(Ex-post Evaluation) achieved Simulated exercises of earthquake emergency rescue were conducted by Fujian Province Earthquake Administration for approximately 200 participants including armed police, firefighters, officials of Earthquake Administration and volunteer workers etc. in the province in 2015. Technical exercises of earthquake rescue were conducted by Gansu Province Earthquake Administration for approximately 100 participants including armed police, firefighters and officials of Earthquake Administration etc. in the province in 2016.																							

Source : Terminal Evaluation Report, Questionnaire survey to NERSS and earthquake administrations of model provinces (Shandong Province, Hebei Province, Jiangsu Province, the Inner Mongolia Autonomous Region and Shaanxi Province)

Note: While there is no item on emergency response and relief in model provinces are set as indicators of Project Purpose in PDM of this project, a continuation status of effects in model provinces should be checked in evaluating a continuation status of project effects and an achievement level of Overall Goal, and thus supplemental information above was also checked in this ex-post evaluation.

Indicator 3 of Overall Goal is stated as “rescue training is conducted more than once in provinces other than model provinces” in PDM version 0 (prepared during ex-ante evaluation), and “rescue training is conducted more than once in provinces other than model provinces and where an exercise on emergency response is conducted more than once” in PDM version 1 (revised during the project, and was used for this ex-post evaluation). However, in parts which explain about revisions of PDM in existing project reports, there is no description that Indicator 3 of Overall Goal was ever revised, and moreover, through the project, emergency response and relief were treated as separate contents and activities for each content were conducted in different model provinces. Thus, it was judged that Indicator 3 in PDM version 1 is a mistake and Indicator 3 in PDM version 0 was used instead.

3 Efficiency
Both project cost and project period were within the plan (the ratio against the plan is 100% for both). Therefore efficiency of the project is high.
4 Sustainability
<p><Policy Aspect></p> <p>“The National Plan for Seismic Isolation and Disaster Reduction (2006-2020)” mentioned above is still effective at the time of ex-post evaluation.</p> <p><Institutional Aspect></p> <p>The Technical Department of NERSS is in charge of trainings on earthquake emergency response, and 11 staff are actually assigned in the department, while the number of quota (the required number of staff) is 10. The Training Department of NERSS is in charge of trainings on emergency relief (rescue), and both the number of quota and the actually assigned number of staff in the department are 18. According to NERSS, the number of staff is sufficient in the Technical Department, as their tasks are properly conducted. On the other hand, in the Training Department, while the number of quota is filled, the professional qualification system as a training implementation system has not been developed, and classifications, levels and responsibilities of each rescue technique are not clear, which makes it difficult to expand trainings and guidance in the rescue area nationwide. Moreover, NERSS is responsible for conducting trainings as requested by provinces, and there is no institutional system for NERSS to obtain information on exercises and trainings conducted in provinces other than model provinces, and thus it is considered to be difficult to actively promote the expansion of project effects to provinces other than model provinces, as aimed in the Overall Goal. Regarding institutional systems in model provinces, among model provinces of the emergency response area, the number of highly professional administrative officers was reported to be insufficient in Jiangsu Province, and among model provinces of the rescue area, the number of highly professional top officials in the earthquake emergency relief teams was reported to be insufficient in the Inner Mongolia Autonomous Region and Shandong Province. Nonetheless, exercises and trainings have been conducted by the currently assigned staff in these provinces, and thus the above is considered to be an issue to make exercises and trainings more professional by assigning selected staffs.</p> <p><Technical Aspect></p> <p>At the time of ex-post evaluation, project counterparts still work for NERSS. The technical level of staff is sufficient in the Technical Department (emergency response), as their tasks are properly conducted. On the other hand, staff in the Training Department (rescue) lack wood shoring technique, rescue technique in underground space, rescue technique in enclosed space, vehicle rescue technique and quickwater rescue technique etc. Among model provinces of the emergency response area, the technical level of administrative officers was reported to be sufficient, as their technical skills have been strengthened through a lot of map simulations, simulation trainings which are conducted under a situation closer to actual disaster situations have been conducted, and a speed of emergency response has been improved in Hebei, Jiangsu and Yunnan Provinces. Among model provinces of the rescue area, the technical level of top officials in local earthquake emergency relief teams has reached a sufficient level through a lot of trainings and actual rescue activities in Shaanxi and Shandong Provinces, while the technical level of top officials in earthquake emergency relief teams was reported to be insufficient in the Inner Mongolia Autonomous Region, as training materials for rescue and normative rescue operating procedures that take into account geographical characteristics of the Region have not yet been prepared. Nonetheless, in all provinces, in case supports are requested from these provinces to NERSS regarding training techniques and know-hows etc., supports can be provided by NERSS.</p> <p>Equipment procured under the project (fire pumps, life detection systems using electromagnetic waves, underground sound detectors, ladders etc.) are utilized at the time of ex-post evaluation, and regular inspections and repairs are conducted as necessary in NERSS and Shaanxi Province, while in Shandong Province, the frequency of use of equipment is not so high, as there have not been many disasters, and thus regular inspections are not conducted (irregular inspections and repairs are conducted).</p> <p><Financial Aspect></p> <p>At the time of ex-post evaluation, a certain amount of budget is allocated from China Earthquake Administration to NERSS every year, and NERSS conducts trainings and guidance for regional provinces with the budget. Among model provinces of the emergency response area, a budget for exercises has been included in a budget plan every year in Jiangsu Province, and the budget has been sufficiently secured, as exercises have been conducted for 20 times a year in recent years. Among model provinces of the rescue area, a certain amount of budget has been secured and trainings have been steadily conducted in Shaanxi and Shandong Provinces. On the other hand, the budget amount was reported to be insufficient in Yunnan and Hebei Provinces and the Inner Mongolia Autonomous Region².</p> <p><Evaluation Result></p> <p>In light of the above, slight problems have been observed in terms of the institutional, technical and financial aspects of the implementing agency. Therefore, the sustainability of the effectiveness through the project is fair.</p>
5 Summary of the Evaluation
<p>The project achieved the Project Purpose, “strengthening training capacity of NERSS on emergency response capacity and rescue techniques”, as planned. As for Overall Goal, while a verification of emergency response and relief in the Sichuan Earthquake could not be obtained and a comparative verification between the Sichuan Earthquake and earthquakes occurred after project completion cannot be conducted, Overall Goal can be said to have been mostly achieved, as it was confirmed that trainings have been conducted in provinces other than model provinces. Regarding sustainability, some problems have been observed in terms of the institutional, technical and financial aspects of NERSS and model provinces. For Efficiency, both the project cost and the project period were within the plan.</p> <p>Considering all of the above points, this project is evaluated to be highly satisfactory.</p>

² Data on the amount of budget in all organizations could not be obtained, as it cannot be made open to public.

III. Recommendations & Lessons Learned

Lessons learned for JICA:

It was observed in the ex-post evaluation that NERSS is mainly responsible for conducting trainings upon receiving requests from regional provinces, and it does not have the responsibility to promote the expansion of project effects to provinces other than model provinces as aimed in Overall Goal³. There should have been sufficient communication between Japan and China on the contents of Overall Goal that should be achieved after project completion through project planning, implementation and terminal evaluation.



Training for Earthquake Emergency Relief Team in Gansu Province by NERSS



Joint Exercise by Wuxi Earthquake Administration of Jiangsu Province and Government of Nanchang District

³ Among three indicators of Overall Goal, the implementing agency did not recognize that Indicator 1 is used to evaluate project effects. For Indicator 2 and 3, while data on cases to prove that targets were achieved was obtained, comprehensive data collection was difficult, as NERSS does not have a system to collect information and maintain statistics.