

Mid-Term Review Report of Japanese ODA Loan Project for FY2012

External Evaluator: Hiroshi Oita (OPMAC Corporation)

Field Study: October 2012

Project Name: Indonesia “National Geo-Spatial Data Infrastructure Development Project” (L/A No. IP-544)

[Project Description]

Loan Amount / Disbursed Amount : 6,373 Million Japanese Yen / 2,852 Million Japanese Yen (as of 31 July 2012)

Loan Agreement Signing Date : March 2007

Original Date of Project Completion : June 2014

Project Completion Date after review : June 2015

Loan Expiry Date : July 2017

Executing Agency : The National Coordinating Agency for Survey and Mapping (BAKOSURTANAL) (The name of the organization has been changed to Badan Informasi Geospasial (BIG))

Operation and Maintenance Organization : (1) BIG for the Geo-spatial data of Sumatra
(2) BIG and relevant organizations (Ministries of Agriculture, Marine Affairs and Fisheries, Forestry, Public Works, Energy and Mineral Resources, and Environment; Central Statistics Agency, National Land Agency, Province of DKI Jakarta, Province of West Java) for the network system development
(3) National Development Planning Agency (BAPPENAS) for supporting regional planning

[Project Objectives]

The objectives of the Project are to achieve good governance of central as well as local governments, efficient administrative works and evasion of duplicated investments and works in the production of geo-spatial data through (1) acquisition and production of geo-spatial data of Sumatra island, (2) development of National Geo-Spatial data Infrastructure (NSDI) networking system and (3) utilization of NSDI to support Regional Development Planning for provincial governments, thereby contributing to the appropriate management of natural resources, protection of environment and mitigation of natural hazard, and ultimately contributing to overall economic development of Indonesia.

Consultant : Yachiyo Engineering Co., Ltd. (Japan)/ Aero Asahi Corp.(Japan)/ PT LAPI ITB (Indonesia) (JV), Oriental Consultants Co., Ltd. (Japan)/ PT Demensi Ronakon (Indonesia) (JV)

Contractor¹ : PASCO CORPORATION (Japan)/ ITOCHU Corporation (Japan) (JV), NTT DATA Corporation (Japan)

¹ The names and nationalities of consultants and contractors are entered only when they have been made public in JICA’s annual statistical report, “List of Names of Major Companies

Item	Ex-Ante Evaluation (2006)	Mid-Term Review results and Ex-Post Evaluation results estimated at the time of Mid-Term Review (2012)
Relevance	<p>(1) Relevance to development policy</p> <p>1) In the National Medium Term Development Plan (RPJM: 2004-2009) the Government of Indonesia indicated to utilize Geo-spatial data.</p> <p>2) Law No.24/1992 stipulates that geo-spatial data must be used for regional development.</p> <p>3) Law No.10/2000 stipulates the scale for regional development; Scale 1:50,000 or more for municipalities, 1:100,000 or more for Kabupaten.</p> <p>4) Law No.32/2004 stipulates that regional development planning must be based on maps with the scale in accordance with the decentralization law.</p>	<p>(1) Relevance to development policy</p> <ul style="list-style-type: none"> · After the signing of the Loan Agreement (hereinafter “L/A”), Presidential Regulation No.85/2007 was issued in August, 2007. This stipulated the sharing of geo-spatial data by a national network among government agencies and local governments. · With regard to geo-spatial data, Law No.4/2011 dated April 2011 stipulated the use of a unified basic map as a framework for the nation together with the sharing of the same at the time of surveying. · Presidential Regulation No.94/2011 dated December 2011 recognized the National Coordination Agency for Survey and Mapping (hereinafter “BIG”) as the only agency for the provision of basic maps and as the coordinating agency regarding geo-spatial data. · In addition, Presidential Regulation No.6/2012 dated May 2012 stipulated that BIG should cooperate with the National Institute of Aeronautics and Space for providing the Ortho-rectified High Resolution Satellite Imagery. <p>Thus, the status of BIG has strengthened in tandem with the implementation of the Project and the importance of the role of BIG has been recognized. The development above shows the importance of the Project as well as that of the government stance which utilizes geo-spatial data as a policy measure. Therefore the Project is well in accordance with the development policy of Indonesia.</p>

and their Contract Amount of Japanese ODA Loan” (these are names for which the contract amount is not less than 1 billion Japanese Yen for contractors and not less than 100 million Japanese Yen for consultants were entered). Where the names have not been entered in JICA’s annual statistical report, they are described only as “local contractors/consultants” or “Japanese contractors/consultants”. These names can be provided by JICA.

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	<p>(2) Relevance to development needs</p> <ol style="list-style-type: none"> 1) The basic data for the 10,000:1 to 50,000:1 scale maps which contain basic spatial data including inhabitation, traffic, vegetation, rivers, contour lines, administrative boundaries, geographical names, etc. (“Geo-spatial data”) of Sumatra, Papua, Maluku and other regions is not complete. 2) Sumatra in particular is growing at an especially rapid pace and there is an urgent need for the compilation of basic map data which is absolutely essential for appropriate regional development to proceed. 3) In the past, failure to utilize Geo-spatial data when undertaking regional development and failure to coordinate development between sectors and regions has resulted in a deterioration of the environment and the inappropriate use of natural resources.(RPJM:2004-2009) 4) A number of government and research institutions have individually produced and maintained map data which has superimposed spatial information from various industries and research fields onto the basic map data (“thematic map data”). To avoid duplication in investment of work and money, the development of a network system that enables the sharing of basic map data and thematic map data (“national geo- spatial data”) is becoming a pressing issue. 	<p>(2) Relevance to development needs</p> <ul style="list-style-type: none"> · Through discussions regarding the Project between BIG and the related agencies, communication between BIG and the related agencies has been strengthened. BIG exchanged memorandum of understanding concerning the areas of cooperation with the Central Statistics Agency, the Ministry of Agriculture, the Ministry of Public Works, and so on. Based on the laws and regulations mentioned above BIG will act at the center of the agencies which share Geo-spatial data through connections to National Spatial Data Infrastructure (hereinafter “NSDI system”). It is expected that there will be an increase in the need for Geo-spatial data provided by BIG. · Geo-spatial data is one form of basic data for a nation. For Indonesia it is a continuing issue to revise the existing data and to prepare basic data for underdeveloped areas because Indonesia is a large country with many islands. · BAPPENAS considers that it is necessary to develop a social and economic database in a region before making a regional development plan. Although Geo-spatial data is the basis for a development plan, so far, ministries or agencies have not used a common standard. BAPPENAS has high expectations that various databases will be developed based on the unified basic map data.

Item	Ex-Ante Evaluation (2006)	Mid-Term Review results and Ex-Post Evaluation results estimated at the time of Mid-Term Review (2012)																		
Effectiveness	<p>(1) Quantitative Effects <u>Operation and Effect Indicators</u></p> <table border="1" data-bbox="432 448 1200 703"> <thead> <tr> <th data-bbox="432 448 831 563">Indicator</th> <th data-bbox="831 448 999 563">Baseline (2006)</th> <th data-bbox="999 448 1200 563">Target (2016) 2 years after completion of the Project</th> </tr> </thead> <tbody> <tr> <td data-bbox="432 563 831 647">The number of request to the Geo-spatial data of Sumatra Island, which is created under the Project</td> <td data-bbox="831 563 999 647">N.A.</td> <td data-bbox="999 563 1200 647">2,000</td> </tr> <tr> <td data-bbox="432 647 831 703">The number of newly registered meta data* in NSDI Networking System</td> <td data-bbox="831 647 999 703">5,000 records</td> <td data-bbox="999 647 1200 703">20,000 records</td> </tr> </tbody> </table> <p>Note: * Metadata: text data which describes attribute information pertaining to national geo-spatial data (target areas, scale size, creator, date created, etc.) and which is utilized when searching for national geo-spatial data.</p> <p>(2) Qualitative Effects</p> <ol style="list-style-type: none"> 1) To carry out administrative works efficiently and to upgrade them by using geo-spatial data 2) To avoid duplication in investments and works by sharing geo-spatial data 3) To make a national mid-term development plan and a regional development plan by using geo-spatial data 4) To make a contribution to the management of natural resources, the conservation of environment, the prevention of disasters, etc. 5) To improve the various public services of government authorities and local governments 6) To vitalize economic activities through a policy to stimulate private investments 	Indicator	Baseline (2006)	Target (2016) 2 years after completion of the Project	The number of request to the Geo-spatial data of Sumatra Island, which is created under the Project	N.A.	2,000	The number of newly registered meta data* in NSDI Networking System	5,000 records	20,000 records	<p>(1) Quantitative Effect <u>Operation and Effect Indicators</u></p> <p>BIG has no intention of changing the indicator set at the ex-ante evaluation.</p> <table border="1" data-bbox="1223 448 2000 703"> <thead> <tr> <th data-bbox="1223 448 1621 563">Indicator</th> <th data-bbox="1621 448 1805 563">Baseline (2006)</th> <th data-bbox="1805 448 2000 563">Target (2017) 2 years after completion of the Project</th> </tr> </thead> <tbody> <tr> <td data-bbox="1223 563 1621 647">The number of request to the Geo-spatial data of Sumatra Island, which is created under the Project</td> <td data-bbox="1621 563 1805 647">N.A.</td> <td data-bbox="1805 563 2000 647">2,000</td> </tr> <tr> <td data-bbox="1223 647 1621 703">The number of newly registered meta data* in NSDI Networking System</td> <td data-bbox="1621 647 1805 703">5,000 (estimate)</td> <td data-bbox="1805 647 2000 703">20,000</td> </tr> </tbody> </table> <p>Acquisition of raw data for the production of the basic map was completed. Development of basic map data was on-going at the time of the mid-term review.</p> <p>(2) Qualitative Effects</p> <p>It is expected that the qualitative effects mentioned left will be achieved by widely utilizing Geo-spatial data produced by BIG.</p> <p>Consultation between BIG and the 10 participating ministries and agencies regarding the introduction of NSDI system has just started. Cooperation between BIG and those parties will be strengthened through discussions about the concrete operation system and data sharing method.</p> <p>BIG, together with central ministries and local governments will initiate workshops for the improvement of public services through the utilization of Geo-spatial data.</p>	Indicator	Baseline (2006)	Target (2017) 2 years after completion of the Project	The number of request to the Geo-spatial data of Sumatra Island, which is created under the Project	N.A.	2,000	The number of newly registered meta data* in NSDI Networking System	5,000 (estimate)	20,000
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	<p>(3) Impact Impact on 1) and 2) of (2) above, including the possibility of setting indicators, will be studied through the consulting service of the Project using case studies.</p> <p>(4) Other items influencing effectiveness 1) Project implementation structure, technical and financial aspects of the Executing Agency A project office will be set up under the supervision of BIG in order to implement and manage the project. Special Assistance for Project Implementation (SAPI) will be arranged, taking into account the fact that BIG does not have any experience in receiving Japanese ODA loan.</p> <p>2) Cooperation with NGO, universities etc. University staff in the target region with training will be provided.</p>	<p>(3) Impact At present, to increase the utilization of Geo-spatial data through an increase in connections with NSDI system and succeeding policy measures, based on the correct assessment of a current situation, will be counted as an impact of the Project. There is no plan to conduct surveys by consultants of the Project on the impact of the Project due to budget cuts.</p> <p>(4) Other items influencing effectiveness 1) Project implementation structure, technical and financial aspects of the Executing Agency The present implementing structure in BIG has not changed since the ex-ante evaluation. SAPI has not yet been carried out by JICA. All the contracts corresponding to each component under the Japanese ODA loan have been concluded and are smoothly under implementation.</p> <p>2) Cooperation with NGO, universities etc. · Bandung Institute of Technology (ITB) has a GIS course and many staff members in BIG are from ITB. BIG has concluded agreements with the regional core universities including Gadjah Mada University (Yogyakarta), Syiah Kuala University (Aceh), Padang State University (Sumatra), Sepuluh Nopember Institute of Technology (Surabaya), Mulawarman University (East Kalimantan) and ITB for cooperation on technical and personnel aspects. In the future, it is expected that NSDI system will connect with these universities. · With regard to the regional development plan, BAPPENAS has gained knowledge from Prof. Taslim of ITB.</p>

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	<p>3) Cooperation with Japanese grant aid and/or technical cooperation Cooperation with JICA's technical cooperation and cooperation with other ongoing and new projects for disaster prevention will be taken into account.</p> <p>4) Cooperation with other donors Nothing to mention.</p> <p>5) Effect on the natural environment Category C in accordance with JBIC Guidelines for Confirmation of Environment and Social Considerations. (2003)</p> <p>6) Land acquisition and resettlement Nothing to mention.</p> <p>7) Operation and maintenance structure and the technical and financial aspects of the executing agency BIG will manage and maintain the basic data for Sumatra. BIG and 10 participating organizations will operate and maintain the network system. Each province for which a development plan is made using the data is responsible for the operation and maintenance of such data.</p>	<p>3) Cooperation with Japanese grant aid and/or technical cooperation Nothing to mention.</p> <p>4) Cooperation with other donors Nothing to mention.</p> <p>5) Effect on the natural environment Nothing to mention.</p> <p>6) Land acquisition and resettlement There was no land acquisition at the Project site. The expansion of the GIS data center is as a part of the existing building within BIG.</p> <p>7) Operation and maintenance structure and the technical and financial aspects of the executing agency BIG is responsible for the operation and maintenance of Geo-spatial data. There will be a need to increase the number of personnel from an operational point of view. On the technical side, BIG's staff members have sufficient experience, and BIG are experiencing no difficulties. In the future, it will be necessary to renew data and equipment and to buy new software. Such additional costs will be covered by the Government budget. After the completion of NSDI system, the number of participating agencies, local governments, universities, etc. which connects with the system will increase. Discussion will take place about the equipment to be procured for the connection and about cost sharing.</p>

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Efficiency	<p>(1) Project Outputs</p> <p>1) Acquisition and production of spatial data Mapping in Sumatra Island:</p> <p>a) 411,000 km² : scale 1: 50,000</p> <p>b) 2,250 km² : scale 1: 10,000 (Seven cities: Bandar Lampung, Bengkulu, Jambi, Medan, Padang, Pangkalpinang, Pekanbaru)</p> <p>2) -a) Development of NSDI networking system</p> <ul style="list-style-type: none"> · To construct a data sharing system between BIG and 10 participating institutions · To strengthen the existing GIS data center at BIG, including the back-up system · To organize training and to conduct capacity building for officers in BIG and the 10 institutions 	<p>(1) Project Outputs</p> <p>1) Acquisition and production of spatial data Mapping in Sumatra Island:</p> <p>a) 303,439km² : scale 1:50,000</p> <p>The reason for the decrease in the target area was that the target area at the ex-ante evaluation was based on the original ex-ante evaluation. The actual area had to be reduced because the loan amount was greatly reduced from the estimated amount at the time of the original ex-ante evaluation.</p> <p>The areas excluded from the original scope were the provinces of Ache, Lampung, and a part of Riau and Jambi. These excluded areas are covered by maps which were previously made by the scale 1:50,000 map.</p> <p>b) 2,252km² : scale 1:10,000</p> <p>The target cities were (1) Medan, (2) Pekanbaru, (3) Padang and (4) Jambi. The remaining 3 cities were out of scope because of the same budgetary reason as mentioned above. The reason why the target areas were almost same as the original ones is that the city boundaries have become wider than those at the time of planning</p> <p>2) -a) Development of NSDI networking system</p> <ul style="list-style-type: none"> · NSDI networking system is under development. Coordination for connection between BIG and the 10 participating institutions is on-going. · Since the status of BIG has risen according to Presidential Regulations, the number and size of data processing is expected to increase. In addition, because of the necessity to expand the GIS data center, additional contracts to increase servers are under the review of JICA for concurrence.

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	<p>2) -b) Support for regional development planning To establish a spatial data base unit in BAPPENAS</p> <p>3) -a) Consulting service (I)</p> <ul style="list-style-type: none"> · Detailed design of 1) and 2)-a) above · Tendering assistance of 1) and 2) -a) and 2)-b) above · Supervision for 1) and 2)-a), 2)-b) above and 3)-b) <p>3) -b) Consulting service (II)</p> <ul style="list-style-type: none"> · Development of National Technique Guidance · Development of a regional development scenario, a strategic scenario and an investment plan for one major island in Indonesia · To organize training and workshops for local government officers and university staff members in the region 	<ul style="list-style-type: none"> · With regard to the back-up systems of GIS data center for Disasters Recovery (DRC), a proposed site is to be selected. The site must be more than 60 km away from BIG. · Training for BIG and the 10 participating entities will be carried out according to the progress of installation of equipment. <p>2) -b) Support for regional development planning This component has not been implemented because the budget was cut. The data base unit in BAPPENAS was set up using a part of the equipment used under the Consulting service (II) of the Project.</p> <p>3) -a) Consulting service (I) Detailed design and tendering assistance were completed. Supervision work is on-going.</p> <p>3) -b) Consulting service (II)</p> <ul style="list-style-type: none"> · Consultants have established the data base necessary for the making of a regional development plan by BAPPENAS, the development scenario, Technical Guidance necessary for regional development, and Spatial Dynamic Modeling which predicts the spillover effects of infrastructure investment on the economy by using a computer simulation model. The Technical Guidance will be used as a guide for the preparation of regional development in BAPPENAS. · Because of a large cut in budget, the target islands where training for regional development plans by Spatial Dynamic Modeling was to be conducted were reduced from the original 5 to just Kalimantan and Sulawesi islands. · A workshop for development modeling was carried out in Jakarta.

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	<p>(2) Project Inputs</p> <p>1) Project Cost (Million yen)</p> <table border="1" data-bbox="432 485 1202 778"> <thead> <tr> <th>Item</th> <th>Total cost</th> <th>Japanese ODA Loan</th> </tr> </thead> <tbody> <tr> <td>Data acquisition</td> <td>1,612</td> <td>1,612</td> </tr> <tr> <td>Data production</td> <td>968</td> <td>968</td> </tr> <tr> <td>NSDI networking system</td> <td>2,282</td> <td>2,282</td> </tr> <tr> <td>Price escalation</td> <td>600</td> <td>600</td> </tr> <tr> <td>Physical contingency</td> <td>273</td> <td>273</td> </tr> <tr> <td>Consulting services</td> <td>638</td> <td>638</td> </tr> <tr> <td>General administration</td> <td>510</td> <td>0</td> </tr> <tr> <td>Tax</td> <td>637</td> <td>0</td> </tr> <tr> <td>Total</td> <td>7,520</td> <td>6,373</td> </tr> </tbody> </table> <p>2) Implementation Schedule</p> <p>a) Selection of consultants From March 2007 to November 2007</p>	Item	Total cost	Japanese ODA Loan	Data acquisition	1,612	1,612	Data production	968	968	NSDI networking system	2,282	2,282	Price escalation	600	600	Physical contingency	273	273	Consulting services	638	638	General administration	510	0	Tax	637	0	Total	7,520	6,373	<p>The consulting services (II) were concluded in July 2011.</p> <p>(2) Project Inputs</p> <p>1) Project Cost (Million yen)</p> <table border="1" data-bbox="1225 485 2000 831"> <thead> <tr> <th>Item</th> <th>Total cost</th> <th>Japanese ODA Loan</th> <th>Actual</th> </tr> </thead> <tbody> <tr> <td>Data acquisition</td> <td>1,612</td> <td>1,612</td> <td>2,225</td> </tr> <tr> <td>Data production</td> <td>968</td> <td>968</td> <td></td> </tr> <tr> <td>NSDI networking system</td> <td>2,282</td> <td>2,282</td> <td>1,968</td> </tr> <tr> <td>Price escalation</td> <td>600</td> <td>600</td> <td>—</td> </tr> <tr> <td>Physical contingency</td> <td>273</td> <td>273</td> <td>—</td> </tr> <tr> <td>Consulting services</td> <td>638</td> <td>638</td> <td>CS-(I) 363 CS-(II) 186</td> </tr> <tr> <td>General administration</td> <td>510</td> <td>0</td> <td>—</td> </tr> <tr> <td>Tax</td> <td>637</td> <td>0</td> <td>—</td> </tr> <tr> <td>Total</td> <td>7,520</td> <td>6,373</td> <td>4,742</td> </tr> </tbody> </table> <p>(“Actual” shows the Japanese ODA loan portion only as of August 31, 2012 based on the JICA procurement monitoring sheet. The additional contract for NSDI system is not included here.)</p> <p>So far the Project has been implemented within the estimate for each item. Even including the additional contract for the expansion of the GIS data center, the total cost is covered within the Japanese ODA loan amount.</p> <p>2) Implementation Schedule</p> <p>a) Selection of consultants Consultant (I): Detailed design, Tendering Assistance, Supervision of implementation From March 2007 to May 2008</p>				Item	Total cost	Japanese ODA Loan	Actual	Data acquisition	1,612	1,612	2,225	Data production	968	968		NSDI networking system	2,282	2,282	1,968	Price escalation	600	600	—	Physical contingency	273	273	—	Consulting services	638	638	CS-(I) 363 CS-(II) 186	General administration	510	0	—	Tax	637	0	—	Total	7,520	6,373	4,742
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	<p>b) Consulting services From December 2007 to June 2013 With regard to Consultant (II): From August 2008 to December 2009</p>	<p>Consultant (II): Support services necessary for the making of a regional development plan by BAPPENAS, Elaboration of a regional development model From March 2007 to March 2010</p> <ul style="list-style-type: none"> · From March 2007 to April 2008: Delay was caused by an incident in which the original consulting firm was involved with subsequent legal action in Japan. The consulting firm declined the contract and re-bidding took place. · From August 2008 to March 2010: Since the highest evaluated proposal could not meet technical demands, re-re-bidding was called. <p>Consultants (I) and (II) were originally scheduled to procure at the same time. However, as a result of the delay, consultant (II) was procured 3 years and 4 months behind the original schedule which had been set at the time of the ex-ante evaluation.</p> <p>b) Consulting services Consultant (I): From June 2008 to January 2014 (schedule) Since the consulting services started late, their completion will be late also depending on the progress of the development of geo-spatial data.</p> <p>Consultant (II): From April 2010 to July 2011 (completed)</p> <p>Consultant (I) started with a 6 months delay from the original schedule and completion will be delayed by 7 months from the January 2013 date of the ex-ante evaluation. Consultant (II)</p>

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	<p>c) Bidding and contract From June 2007 to June 2009</p> <p>d) Data acquisition From August 2009 to July 2011</p>	<p>completed its services with a one year and 7 months delay compared to the original schedule.</p> <p>c) Bidding and contract</p> <ul style="list-style-type: none"> · Acquisition of Geo-spatial data: From January 2009 to December 2010 3 (Three) firms participated in the pre-qualification (hereinafter “PQ”) but only 1 (one) firm passed PQ. Re-PQ was required and this caused delay. · Development of NSDI system: From February 2009 to December 2010 3 (Three) firms participated in PQ but only 2 (two) firms passed PQ. Re-PQ was required and this cause delay. The ex-ante evaluation estimated that the contract would be concluded in June 2009. There was a delay of one year and 6 months. <p>d) Data acquisition From April 2011 to December 2012 (schedule) It is indispensable that data is acquired by airplane for the production of the 1:50,000 map. It took a long time for officials in the relevant agencies in Indonesia to understand the need for the use of a foreign airplane with a foreign pilot. Because of this, there was a 6 (Six) months delay in obtaining flight permission. There was a further 3 (Three) months delay in obtaining flight permission because the original permission was applicable to each province only and did not cover the borders between provinces. At the time of the ex-ante evaluation data acquisition would be complete in July 2011. There will be a one year and 5 months delay</p>

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	<p>e) Data production From January 2010 to December 2012</p> <p>f) NSDI networking system From August 2009 to June 2013</p> <p>g) Guarantee period From July 2013 to June 2014</p> <p>(3) Internal Rate of Return Quantitative analysis of the Internal Rate of Return is difficult as this project is aimed at contributing to the formulation of plans for development projects rather than at the generation of direct benefits.</p>	<p>from the original schedule for the completion of data acquisition at this moment.</p> <p>e) Data production From October 2011 to June 2014 (schedule) The 9 months delay in the acquisition using Airborne IFSAR technology for the development of basic map affected data production. The acquired data has been validated in the field. In order to catch up with the original schedule, the contractor has increased the number of operators. At the time of the ex-ante evaluation, data production was to be complete in December 2012. There will be a one year and 6 months delay compared to the original schedule.</p> <p>f) NSDI networking system From January 2011 to February 2014 (schedule) Since the expansion of the GIS data center was ordered as an additional contract, the completion of NSDI networking system will be extended by 9 months from the original date of June 2013 which was scheduled at the ex-ante evaluation</p> <p>g) Guarantee period From February 2014 to February 2015 (schedule) (Maintenance period will be up to May 2015)</p> <p>(3) Internal Rate of Return Because of difficulties in quantitative analysis, IRR has not been calculated.</p>

Item	Ex-Ante Evaluation (2006)	Mid-Term Review results and Ex-Post Evaluation results estimated at the time of Mid-Term Review (2012)
Lessons learned and Recommendations	<p>Recommendations to the JICA operation</p> <p>(1) Understanding of the Procurement Guidelines of JICA</p> <p>The Indonesian executing agency lacks an understanding of the procurement rules stipulated in the Loan Agreement (L/A) which shall take precedence over the national procurement rules, if any procurement rule in Indonesia is in conflict with the provision of L/A. Under the Indonesian procurement rules, if there are not more than 3 entities who passed the prequalification (PQ), PQ should be re-executed. Under JICA's Guidelines for Procurement under Japanese ODA Loans even if one entity should pass PQ, such an entity is regarded as qualified through competition. Such executing agencies as have received several Japanese ODA loans have no problem with the procurement procedures with JICA. Therefore JICA should confirm the contents and method of procurement with the executing agency before it starts procurement. In addition, JICA should give some tips on understanding its procurement guidelines and procedures to any executing agency like BIG who is receiving its first Japanese ODA loan.</p> <p>(2) Procurement Appraisal</p> <p>With regard to geo-spatial business, the number of firms who participate in the market is very limited. Under such circumstances there is a need for verification of whether or not it is necessary to conduct PQ. JICA should study in advance the procurement method and international business and market conditions, taking into account consistency between the requirements of the STEP loan, such as ratio of Japanese origin of goods and services to be procured, and the needs of the executing agency who wants to use the common equipment and software used so far and who wants to receive technical transfer from Japanese firms. Otherwise, a project will be delayed at the procurement stage of PQ or at bidding due to unexpected coordination. In the process of project formation, not only for STEP loans but also for other Japanese ODA loan projects, procurement issues may have not been sufficiently discussed between JICA and executing agencies. Therefore it is necessary for JICA to make an appraisal specifically for the procurement aspect on a case by case basis.</p> <p>(3) What a STEP loan should be</p> <p>A STEP loan is provided selectively on a tide basis taking into consideration the advantages of the technical aspects, high quality etc. of Japanese firms which are highly appreciated in the world market. In the case of system design, such as in this Project, which has great promise in future, JICA's cooperation through a STEP loan should not be transient but should include a follow-up stage after the completion of the Project. The Project covers the development of NSDI system only, but at the operation stage the system will form a large network, including not only central government agencies but also local governments and universities. In the case of projects to be assisted by STEP loan which have the possibility of greater impact in future, JICA's cooperation should be not only to support the basic system or the production base but also to maintain cooperative relations, including technical support, with the agencies relevant to the projects. Through this kind of continuous support the reliability of Japanese technology and equipment can be expected to be further strengthened.</p>	

Item	Ex-Ante Evaluation (2006)	Mid-Term Review results and Ex-Post Evaluation results estimated at the time of Mid-Term Review (2012)						
Indicators for the Ex-post Evaluation	<p>Indicators assumed at the Ex-ante Evaluation</p> <p>(1) The number of request to the Geo-spatial data of Sumatra Island, which is created under the Project</p> <p>(2) The number of newly registered meta data in NSDI Networking System</p>	<p>The following can be added as an indicator.</p> <p>(3) The number of entities to be connected to NSDI system</p> <p>From the point of view of the effective use of NSDI system, it is expected that many entities will connect to the system. The Presidential Regulation No.85 will enhance the dependence of BIG data in future.</p> <table border="1" data-bbox="1227 555 2002 639"> <thead> <tr> <th data-bbox="1227 555 1615 587">Indicator</th> <th data-bbox="1615 555 1807 587">Baseline (2006)</th> <th data-bbox="1807 555 2002 587">Target (2014)</th> </tr> </thead> <tbody> <tr> <td data-bbox="1227 587 1615 639">No. of entities to be connected to NSDI system</td> <td data-bbox="1615 587 1807 639">0</td> <td data-bbox="1807 587 2002 639">10</td> </tr> </tbody> </table> <p>Note: The system is subject to operation in June 2014. The 10 entities in the “Target” mean the original participating entities.</p>	Indicator	Baseline (2006)	Target (2014)	No. of entities to be connected to NSDI system	0	10
Indicator	Baseline (2006)	Target (2014)						
No. of entities to be connected to NSDI system	0	10						