

**BENEFIT EVALUATION OF HUMAN SETTLEMENTS
DEVELOPMENT FUNDED BY SPL JBIC INP-23 IN INDONESIA**
(Evaluasi Manfaat Pembangunan Permukiman atas Biaya SPL JBIC INP-23 di Indonesia)

Oleh:

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ABSTRAK

Pemerintah Jepang bersama Pemerintah Indonesia telah menandatangani perjanjian pinjaman Sektor Program Loan (SPL) INP 23 untuk Sektor Permukiman (Human Settlement) melalui Japan Bank for International Cooperation (JBIC) yang ditujukan untuk mengatasi krisis ekonomi dan dampaknya yang melanda Indonesia sejak pertengahan 1997.

Penelitian ini melaksanakan evaluasi terhadap manfaat kegiatan pembangunan Permukiman yang telah dilaksanakan sehingga diketahui seberapa besar kontribusi manfaat dari program Sektor Permukiman yang dilaksanakan melalui SPL INP-23, baik terhadap masyarakat penerima, instansi terkait yang mengelola proyek, serta pemerintah daerah setempat yang melaksanakan dan mengawasi perkembangan proyek.

Survei dilaksanakan dengan menggunakan pendekatan Wilayah, Ex Post Facto, dan Kelembagaan. Pemilihan Kota dan Kabupaten sampel merupakan hasil seleksi berdasarkan tiga (3) hal yaitu kelengkapan program, jumlah dana dan jumlah paket. Berikutnya, hasil penyusunan peringkat tersebut dipilih berdasarkan (1) ranking tertinggi, tengah dan terendah, (2) persebaran berdasarkan pembagian tiga wilayah Indonesia, yaitu Barat, Tengah, dan Timur, serta (3) mengecualikan daerah konflik. Hasil penelitian menunjukkan bahwa secara umum pembangunan dan hasil pembangunan Permukiman cukup bermanfaat bagi pemerintah maupun masyarakat. Antara lain lingkungan permukiman lebih tertata, lingkungan permukiman lebih sehat, peningkatan sarana dan prasarana, dan peningkatan mobilitas masyarakat. Manfaat khusus menunjukkan adanya pengaruh terhadap perubahan dalam pelayanan, penggunaan layanan dan dampaknya. Pembangunan Air Bersih memberikan tingkat pelayanan (L) memuaskan, tingkat penggunaan (U) berkisar pada tingkat berguna dan sangat berguna, dan memberi dampak yang bermanfaat. Pembangunan Drainase memberikan tingkat layanan (L) sangat memuaskan, tingkat penggunaan (U) berkisar antara tingkat berguna dan sangat berguna, dan memberi dampak yang bermanfaat. Untuk Pembangunan Prasarana dan Sarana Dasar

permukiman (IS & HAI) memberikan tingkat layanan (L) sangat memuaskan, tingkat penggunaan (U) berkisar dari berguna ke sangat berguna, dan memberi dampak (B) bermanfaat.

Kata kunci : Permukiman, Lingkungan Permukiman, Benefit Evaluation, dan Loan.

INTRODUCTION

The Government of Japan and Government of Indonesia (GOI) have mutually agreed upon the provision of a Sector Program Loan (SPL) INP-23 for Human Settlement Development in Indonesia, through Japan Bank for International Cooperation (JBIC), effective on 24 December 1998, to support Indonesia socio-economic rescue programs due to economy crisis since mid of 1997.

The main aims of SPL JBIC INP-23 is to help the GOI to achieve quick and tangible result in employment generation, food security and arbitrating the balance of payment, hence generate vulnerable economic condition rendered by economic crisis, through eight development sectors, 43 programs and thousands of activities throughout Indonesia.

Human Settlements had obtained fund from SPL JBIC (OECF) INP-23 with amount of Rp. 785,459,521,014. Numbers of activity packages were 7,026, incarnated into 6,870 of contracted packages that were spread throughout Indonesia for Water Supply Developments, Drainage

Developments, and Infrastructure Support & Housing Ares Infrastructure Improvement (IS & HAI) Developments.

Water supply development is improving infrastructure condition of broken pipes and pumps or network service development according to the target of local water supply provision (Suselo, H. 1987). The drainage developments, beside on preventing of rainwater, gave impact on well-operation domestic waste water run-off because the drainage is well operated as designed (Marsden, D. and Moser, C. 1990). The infrastructures provision will improve level of community health condition, especially for the endemic disease caused by bad environmental health condition. For example, endemic disease usually spread out in dense are, which does not have sufficient basic infrastructures to prevent the disease. Outputs of IS/HAI developments, such as drainage, public bath and toilet facilities, and solid waste management has given contribution in efforts to prevent endemic diseases in community by reducing inundated area, domestic waste water disposal, and garbage collection in certain area (Ife, J.W. 1995).

GOI obliged to secure the implementation of loan for Human Settlements Developments. Considering this matter, this research had to conduct benefit evaluation for Human Settlements Development to understand the benefit contribution activities towards beneficiaries, related institutions, and local government. The result of evaluation would be a Benefit Evaluation for Human Settlements Development funded by SPL INP-23.

METHOD

This research was conducted which used some approaches.

Regional Approach. Considering the activities funded by SPL Human Settlements were spread in kecamatan and desa, a lower administrative region than kabupaten/kota, therefore not all those kecamatan/ desa can be selected as samples, and not all SPL Human Settlements developments in one village can be taken as samples.

Ex Post Facto Approach. This approach was used after the activities of SPL Human Settlements was completed through assumption that the benchmark information was not available, therefore baseline data are required to justify the Benefit Evaluation analysis result.

Institutional Approach. This approach was conducted to understand the benefit aspect and impact of

developments towards beneficiaries, and to assess the overall implementation process, from planning, preparation, physical implementation, operational and maintenance. This activity was conducted through indepth interview.

Human Settlements Developments located in 229 kabupaten/kota in 29 provinces. The survey of this research covered 20 provinces and 46 kabupaten/kota scattered throughout Indonesia. The total fund for physical works at those 46 kabupaten/kota was Rp. 228,930,916,954, consisted of 2,159 of contract packages.

Selection of kota and kabupaten as sample was based on three aspects, which are: numbers of program (completeness), amount of fund, and numbers of packages. Afterwards, ranking result was based on (1) highest, medium and lowest rank, (2) dissemination based on three regions, Western, Central, and East, and (3) exception towards conflict areas; and then, the sample of kabupaten/kota was selected.

From 46 kabupaten/kota selected in Human Settlements Sector, numbers of physical development are 27 kabupaten/kota for Water Supply program, consisted of 25 for PDAM (local water company) and 2 for non-PDAM; Drainage was in 31 kabupaten/kota; and IS & HAI (Infrastructure Support to rural growth center &

Housing Area Infrastructure Improvement) developments were in 46 kabupaten/kota.

Description of survey of PBE SPL JBIC INP 23, Human Settlements as follows.

Based on coverage sampling taken as mentioned in the table above, it was expected that survey result is enough to represent overall activities of Human Settlements Development.

RESULTS

a. General

Generally, activities and outputs of Human Settlements Development are useful for local Government and community as describe below:

1. Well-organized living environment, such as the improvement of neighborhood road, footpath, drainage channel/ditch, and other various type of infrastructures.
2. Healthier environment that increase community health condition, such as housing improvement, garbage cart

procurement, garbage can, temporary waste disposal, public bath and toilet facilities, septic tank, etc.

3. Business infrastructure and facility improvement, such as market kiosks improvement and construction, fish auction yard, ports, and fisherman boat post.
4. The increasing of community mobility and the improvement of smoothness of materials distribution by neighborhood road and access road construction, etc.

From questionnaire survey of Human Settlements Sector to community, result obtained as follows:

1. Respondents stated that water supply developments has improved the distributed water quality. The statement was 66,59% of incoming responds.
2. Regarding to water supply continuity improvement, 66,05% respondent said "yes".
3. Respondents see the improvement of water supply continuity and quality as support the community

Table 1. Survey Sampling

	Total SPL INP-23	Surveyed	Percentage
Provinces	29	20	68.96
Kabupaten/Kota	229	46	20.08
Contract Amount (Milion Rp)	784,263.5	228,930.9	29.19
Number of Packages	6,870	2,159	31.43

- needs of water supply (59.86%) and even over supplied (18.50%).
4. After the development, 50.06% of respondent stated that time to collect the water has decreased. It means there was improvement in community accessibility to get water. It affects the community health improvement, felt by 62% respondents.
 5. 83% respondents see that the water tariff is affordable.
 6. From drainage program, answers showed that 80 % respondent said that ditches built by SPL JBIC INP 23 HS have well-function.
 7. Regarding to the service delivery, 78 % respondent said it was good.
 8. From IS&HAI program, 71 % respondent gave answer that infrastructures and facilities have well-function.

9. By the development provision, 68% respondents stated that infrastructures and facilities service has fulfilled their needs.

b. Benefit Assessment

According to the objectives/ criteria determined by Ministry of Kimpraswil (Previously Public Works); several kind of works can be measured its level of service by assuming as ideal as possible, this was density 75 persons/ ha. The calculation are as follows:

For the other like water processing installation, the available data was only unit numbers data, no data of capacity debit (l/second.) Therefore, it was not possible to calculate its level of service. Also fro reservoir, intake, PLN, etc.

Tabel 5.2 Level of Service

No	Type of Work	Service Target	SPL Output	Leven of Service (persons)
1	Household connection	1 unit for 5 persons	23.484 unit	117.420
2	Public Hydrant	1 unit for 100 persons	714 unit	71.400
3	Drainage channel	300 m for 75 persons	479 km	119.750
4	Neighborhood Road	50 m for 75 persons	1629 km	2.443.500
5	Foot path	150 m for 75 persons	655 km	1.310.000
6	Aspalt Road	50 m for 75 persons	137,2 km	205.800
7	Public bath and toilet facility	1 unit for 375 persons	729 unit	273.375
8	Temporary solid waste disposal	1 unit for 7500 persons	317 unit	2.377.500
9	Garbage cart	1 unit for 550 persons	472 unit	259.600

Answers from respondents collected then processed to get evaluation result for special benefit of SPL INP 23 for Human Settlements. The special benefit is benefit assessment that use the sectoral approach by justifying outputs and seeing its influences in level of service, usage of service, and benefit. The processing conducted to know the type of improvement, which consists of three (3) aspects, which are: level of service (L), usage of service level (U), and benefit (B) from the Human Settlements development. The results are as follows:

The conclusion of L, U and B classification for the three programs are as follows:

Water Supply Developments

Result of benefit evaluation shows that the water supplies developments mostly gave level of service (L) at satisfactory level 73.08 %. Usage of service level (U) around at useful (42.31 %) and very useful (50 %). Meanwhile level of impact (B) at beneficial (73.08 %).

It is shown that financing the water supply developments gave double benefit, which is important to community. It is related with the reality on the filed, shown by respondents answer, which stated that water supply developments gave double benefit to family health, social life, and local economic value condition that show by tax object selling value (NJOP).

Level of service was influenced by the outputs that succeed on improving water potency such as quality improvement, water continuity, and water availability. Water quality can be tasted by its smell and color.

Abovementioned condition showed that water supply developments tangible benefit to the service improvement of water availability, which needed by the community. The works of water supply covered several items, which guarantee the improvement of clean water availability also the sustainability of water supply provision for the community.

Table 2. average value of L, U and B

Program	L	U	B
Water Supply	27.9%	56.8%	28.3%
Drainage	61.4%	61.3%	21.8%
IS & HAI	73%	78.7%	40.6%

Actually the works of water supply developments not only cover network improvement but also give the benefit to the sustainability of water provision. It is related to the type of works that handled within location such as new distribution network addition, which gave differences in water supply and service network or just improvement.

Drainage Developments

Result of benefit evaluation shows that the Level of service (L) of drainage developments is very satisfactory (81.11 %). For level of usage (U) around at useful (27.78 %) and very useful (61.11 %), meanwhile the classification of assessment appeared as impact (B) was beneficial (55.56 %).

It shows that financing on drainage developments gave double benefit, which is important for community. It could be seen on the field, the baseline data shows that number of villages inundated is decrease that before the SPL developments. For example, number of village inundated at Kota Medan decrease 75% than previously.

Because of the decreasing of inundation, community has another direct benefit from drainage developments, which was the improvement on environment hygiene/health. Community has a better and proper life.

The decreasing of inundation gave impact on free inundation /flood land, which can be used for public economic activities. Besides that, it will improve the existing business development.

Even though, there were some cases, which the drainage developments gave unsatisfactory benefit. Mostly it caused by improper community behavior around the drainage network, such as threw away the garbage into drainage channel/ditch so that he channel/ditch was clogged up and dirty. In dry season, the garbage and wastewater make the air stinky. The inundation on drainage becomes a media of mosquitoes breeding and diseases organism. In wet season, the rainwater over flows and makes inundation that disturbed the community activities.

Result of the survey on drainage developments location shows that responds of community was very enthusiastic to drainage improvement in their neighborhood because the service of previous drainage could not prevent the overflow. Without reducing the meaning of benefit felt from the drainage developments SPL INP 23, actual reality shows that the volume of water increasing faster than drainage networks construction. It affects the benefit assessment in the L, U, and B aspects some kabupatens has negative value.

Temporary flooding/ inundation because of rain is spreading out all over Indonesia. The increasing flood area was caused by people's behavior that did not follow the spatial planning and environmental preservation policy. For example: the open space policy is not applied in balanced. No any open space exists made the rainfalls go directly to impermeable and following as run off going to the lowness area and there was flooding its.

The scale of SPL INP-23 activities for Human Settlements Development, particularly drainage developments were not being able to solve the problems in several areas. Therefore, negative value of L, U, and B of drainage developments should be considered as a phenomenon of many factors that directly influence the achievement of good drainage management. As a result, at present required huge scale of developments and spontaneous (together and directly) on constructing drainage network to stabilize and reduce flooding area.

The answers collected from respondent for benefit and lose out caused developments were processed to obtain result benefit-cost ratio. For 17 kab/kota, known that developments of drainage program give communities benefit up to 1.5 times more than lose out (cost) where caused by development. From this, we get conclusion, cumu-

latively, drainage program had give real benefit to communities at developments boundaries.

IS & HAII Developments

Level of service (L) of IS & HAII developments were very satisfactory (81.08 %), meanwhile level of usage of service (U) around at useful (35 %) and very useful (83.78 %). In benefic assesment appeared as impact (B) has beneficial level (72.97 %).

The classification shows that development of local infrastructures by Human Settlements Sector through IS/ HAII developments gave tangible impact and benefit. Well-function of development outputs have added the level of service in infrastructure provision. This gave opportunity to local community to have proper housing and activity. For dense population in urban area, the outputs have improved the family and environment health that become part of spatial planning, which gave secure health and activities.

The digestion diseases is one of the impacts of inadequate or infrastructures settlement or was not available. Inundation and wastewater disposal are becoming media for organism that may cause digestion diseases in settlement areas, particularly in urban area where energy cycle become narrower. Also because of the land usage by community, which based on the interest to get house

or economic oriented so that neglecting community health aspect.

Outputs also conducted in rural area and as an effort to accelerate the development of growth centers. Built road were succeeded to improve regional accessibility to enlarge opportunities for a better local economic growth. As the information from respondents that the construction of access road make neighborhood become crowded, easiness of incoming of raw materials, and creating new economic activities. The beneficiaries of road development funded by SPL INP-23 also felt that the land/house value was increased.

Beside that, the local way of life was hoped could change to the healthiest one so that endemic and digestion diseases incidents in rural area can be prevented. Even there was a respondent who see the public bath and toilet development from the infrastructure settlements development could motivate the users to create clean environment and improve individual/family health condition. The solid waste/garbage development supports the creation of wastewater management and gives improvement to the environment.

The impact of drainage construction from IS/HAII development gave good benefit, which caused by drainage developments and programs. Therefore, the social and public

facilities development gave opportunities to community to play their social roles.

Therefore, outputs from IS/HAII developments have given important benefit to the healthy environment improvement and also accelerate economic growth in rural growth centers.

The answer collected from respondent for benefit and lose out caused development was processed to obtain result benefit-cost ratio. For 40 kab/kota, known that developments of IS HAII program give communities benefit up to 1.6 times more than lose out (cost) where caused by development. From this, we get conclusion, cumulatively, drainage program had give real benefit to communities at developments boundaries.

c. Related to the Goals

Below generally desribed conclusion of in-depth interview results:

- The increasing of job opportunities
In *Planning Phase*, the increasing of job opportunities was predicted enough absorbing in certain man power, such as consultants. Meanwhile, at *Implementation Phase*, the increasing of job opportunities was bigger and wide circles
- Food Security
Although, in food security field Human Settlements developments did not give undirect benefit, developments support to.

- Local Economy Stimulation
Human Settlements Sector results gave adequate stimulation to local economy. For example, the improvement of kiosk could increase number of merchants/sellers.

Recommendation

Low budget for development general cost or development administration that needed for supervision was taken from APBD. That was an obstacles where development location is very far from the office/development management homebase, so quite under-standable the offices/development staff did not know exactly development location and current situation of the development. In general, suggestion from the key informan in this case are increasing of BU/AP and it will be better if scheduled from JBIC fund too.

Other related suggestion:

- To involve management institution/organization (PDAM, agencies/dinas) in the planning process and implementation.
- Schedule of finishing DED should be enough in order to make development implementation schedule was not taken.
- Need to be planned a bigger water supply capacity by considering the availability of raw water resources, which it is very difficult to get/integrated raw water planning.

- Development socialization to the community is a good deed and need to be continued. Also for KSO pattern as well.
- Technical guidance of development implementation should be delivered earlier.
- Development implementation mechanism should be simplified, so that not necessarily back and forth to the center.
- Development should be directed to the more urgent priority.
- Consultant appointed should be professional, which means have background study and experience related to the development.
- Program planning still from the community but technical planning still require planning consultant.
- In the implementation still require supervision consultant, monitoring and associates/contractors.

Nevertheless, principle objectives of this development is **giving protection to the vulnerable community that suffered from economy crisis** which expected at that time was pretty much according to the target.

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company) or Desa (village) for Water Supply program, Dinas Cipta Karya / Dinas Kimtawil / Dinas Kimbang / Dinas Kimpraskot / Dinas Kebersihan (hygienic) / Dinas Pekerjaan Umum

(public works) / Dinas Tata Kota (city planning), Dinas Pasar (market) / UPTD Pasar / Pengelola Pasar, and community or local community organization.

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Figure 1. Value of L, U, and B of Water Supply Development in Human Settlements

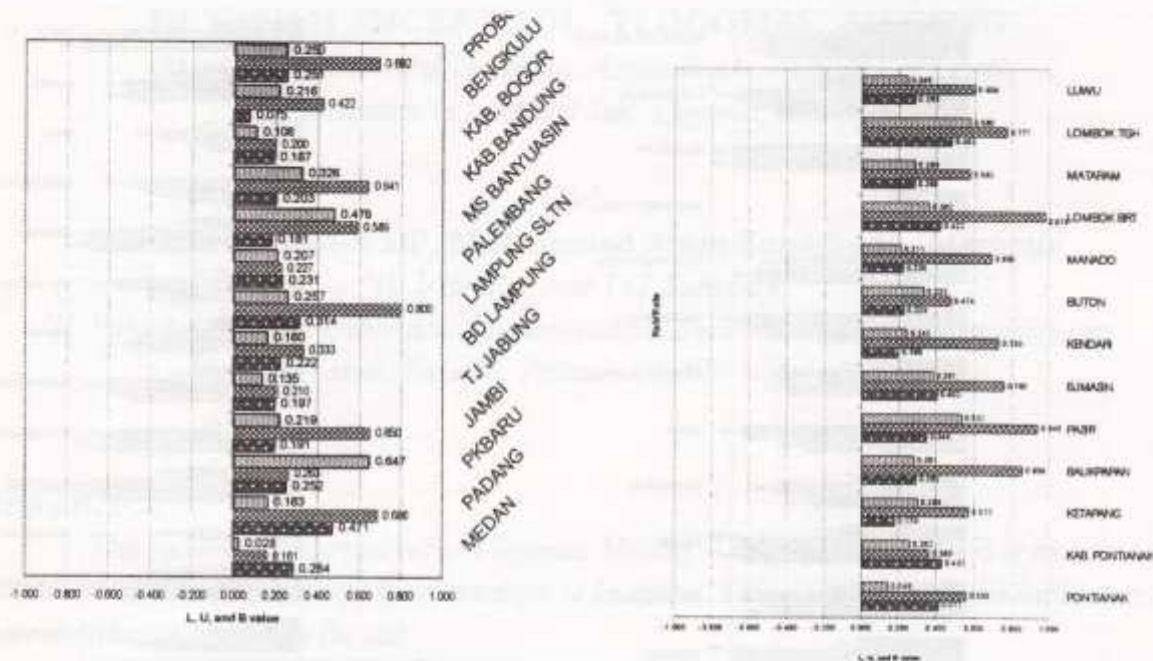


Figure 2. Value of L, U, and B of Drainage Developments in Human Settlements

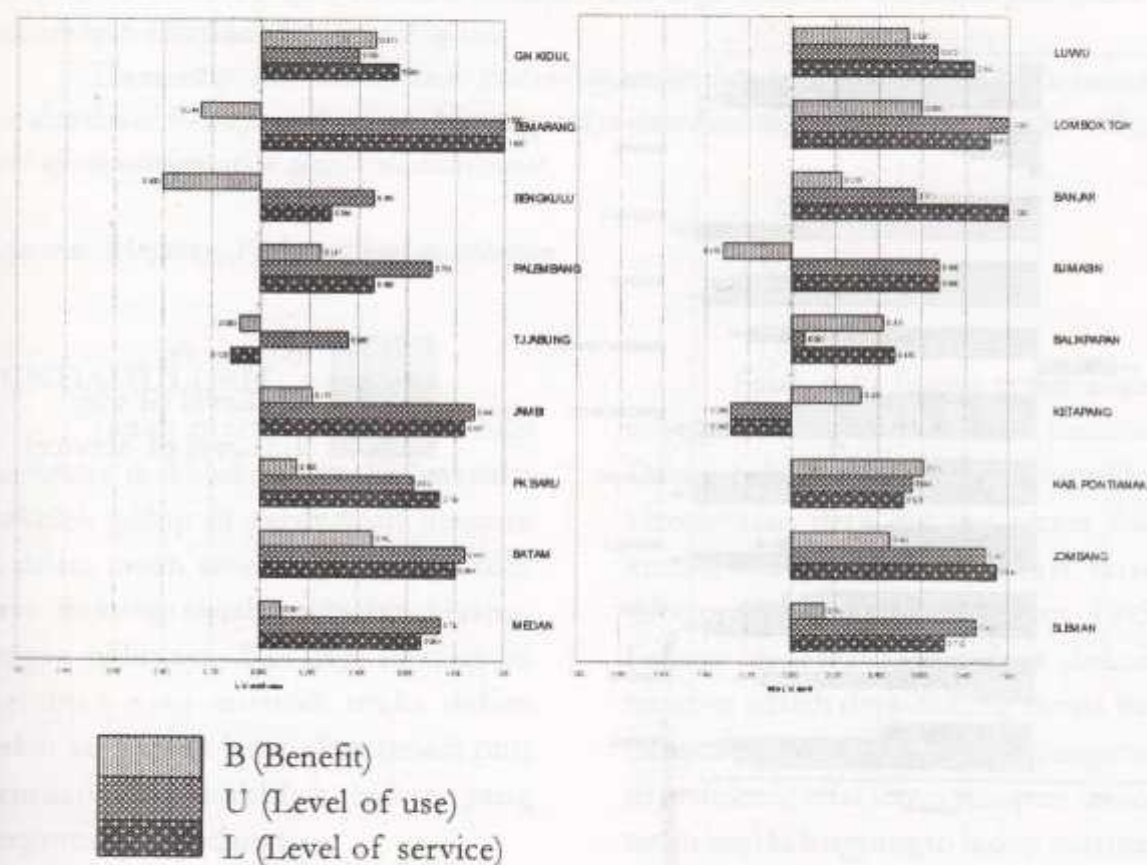


Figure 3 Value of L, U, and B of IS/HAII Developments in Human Settlement

