

Environmental and Social Considerations in Detailed Planning Survey (Technical Cooperation for Development Planning)

I Outline of the Project

1. Full title of the Project

Project of study for formulation of national development program of bas-fonds in Burkina Faso

2. Type of the study

Master Plan

3. Agency or institution responsible for the implementation of the project

Ministry of Agriculture and Hydraulic Layouts (MAAH)

4. Expected Goals which will be attained after the Project Completion are as follows:

4-1 Long-term goal

Agricultural productivity is improved through the development of bas-fonds in line with the national development program.

4-2 short-term goal

The national development program of bas-fonds targeting the year 2030 is adopted as a strategic operational program of MAAH.

5. Output

The national development program of bas-fonds targeting the year 2030 is formulated.

6. Activities

6-1 Formulation of GIS database for national bas-fonds development

- Analysis of bas-fonds potential area using available satellite image
- Collection and validation of existing inventory data which includes land cover, topography, soil, road, market, environment, socio-economy, census, etc.
- Formulating of GIS database of national bas-fonds sites which includes potential areas as well as developed areas
- Setting the selection criteria for identification of prioritized development site
- Compiling technical manual for utilization of GIS database
- Conducting training(s) for capacity development of MAAH and other concerned personnel on the utilization of the technical manual

6-2 Compilation of recommended methods of water use in bas-fonds for dry seasons

- Collecting information on existing developed sites of water use in bas-fonds for dry seasons and select target sites for field surveys
- Conducting field surveys at the selected sites (utmost 10 sites) to collect information, such as site conditions, crop type, production amount, farming area in dry seasons, specification of the water source facilities.
- Proposing appropriate technologies for water harvesting in bas-fonds for dry seasons from the field survey results and other development cases in other countries, if possible.
- Compiling recommended water use methods in bas-fonds for dry seasons as a report and share it with concerned stakeholders.

6-3 Compilation of good practice of development of bas-fonds

- Collection and analysis of available guidelines and manuals for development of bas-fonds
- Collection of information through field survey and monitoring in developed site and discussion with stakeholders such as Government of Burkina Faso personnel, donors and farmers
- Summarization of the good/bad practice for development of bas-fonds in various site conditions
- Compiling good/bad practice report of recommended bas-fond development type under specific site conditions
- Proposing of trial method(s) on improvement of contour bund

6-4 Compilation of good practice of farming in bas-fonds

- Collection and analysis of available guidelines and manuals for farming in bas-fonds
- Discussion with field extension officers and farmers on farming activities in bas-fonds
- Compiling good practice report of farming and recommended farming pattern in bas-fonds

6-5 Formulation of the national development program of bas-fonds targeting the year 2030

- Setting the goal for the year 2030 based on the activities from 6-1 to 6-4
- Establishment of the strategies to achieve the goal

- Formulating of the national development program of bas-fonds
- Conduct Strategic Environmental Assessment (SEA)
- Conduct validation workshop of the national development program of bas-fonds
- Conduct pilot field survey(s) required to be implemented prior to the implementation of development works in some prioritized development site of bas-fonds

6-6 Environmental and Social Considerations

- Strategic environmental assessment of alternative development scenarios

II Environmental and social considerations system

1. Environmental and social considerations system

1.1 Laws related to environmental and social considerations

The table below shows few laws/decrees relating to this project and the environmental and social considerations in Burkina Faso.

Table 1: Laws and Decrees relating to the environmental and social considerations in Burkina Faso

Title of the Laws and Decrees
Law No.034-2012/AN of the 2 nd of July 2012 on Agrarian and Land Reform
Law No.006-2013/AN Environmental laws of Burkina Faso
Decree No.2015-1187 conditions and procedures for implementation and validation of “EES” (Strategic Environmental Assessment), “EIES” (Environmental and Social Impact Assessment) and “NIES” (Initial Environmental and Social Evaluation)
Decree No.2015-1205 / PRES-PRANS / PM/MERH / MEF / MARHASA / MS/MRA/MICA/MME/MIDT/MATD of October 28, 2015 laying down wastewater discharge standards in sewers.
GENERAL GUIDE OF IMPACT SURVEYS AND NOTICES ON THE ENVIRONMENT

1.2 Other laws relating to the natural resources

The table below shows few laws/decrees relating to this project and the natural resources in Burkina Faso.

Table 2 Laws relating to the natural resources in Burkina Faso

Title of the laws
Law No.006-2013 / AN relating to the Forestry Code in Burkina Faso
Law No. 2001-002 relating to the Water Code

Law No. 014/96 / ADP of 23 May 1996 on Agrarian and Land Reform in Burkina Faso
Law No. 034-2012/AN relating to the Agrarian and Land Reform in Burkina Faso
NATIONAL POLICY ON THE WETLANDS OF BURKINA FASO
NATIONAL ACTION PLAN FOR SUSTAINABLE MANAGEMENT OF THE WETLANDS OF BURKINA FASO

2. Responsible organization for environmental and social considerations

The department responsible for environmental impact assessment in Burkina Faso is BUNEE (Bureau National des Evaluations Environnementales: National Environmental Assessment Bureau) of the Ministry of the Environment. The organization of BUNEE is described in Figure 6-2-1. BUNEE is composed of 3 departments employing 50 staffs.

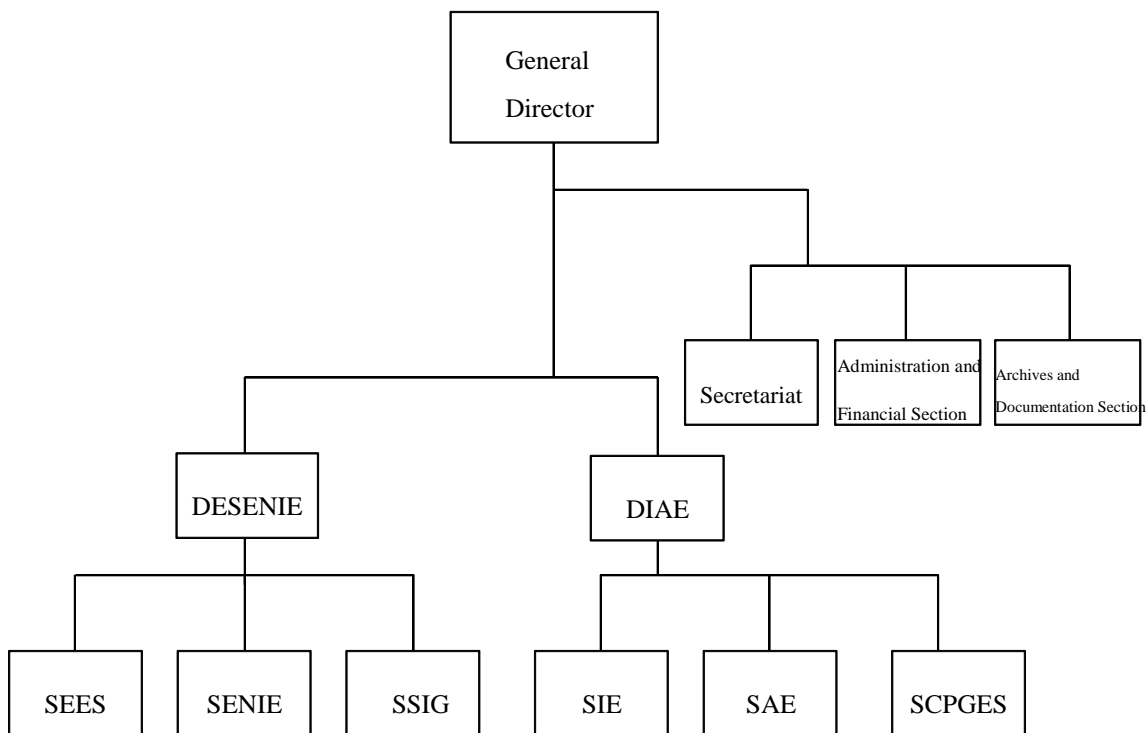


Figure 1 BUNEE Organization

BUNEE undertook office work such as inspection of SEA, ESIA, and IESE, authorization, registration and holding of public hearings, and inspection of 80 reports in 2014.

2.1 DESENIE (Direction des Evaluations Environnementales Stratégiques, des Études et Notices d’impacts sur l’Environnement : English, Department of Strategic

Environmental Assessments, Environmental Impacts Assessment and Initial Environmental Evaluation)

DESENIE is mainly responsible for analysis of environmental impact assessment, implementations of public consultations and technical committees on environmental assessment. The table below shows 3 sections of DESENIE.

Sections	Role
Le Service des Evaluations Environnementales Stratégiques (SEES) : The Strategic Environmental Assessments Section	<ul style="list-style-type: none"> ➤ Inspection of TOR of strategic environmental assessments studies ➤ Report on analysis of strategic environmental assessments studies ➤ Field trip protocol preparation ➤ Document preparation for technical committee on environmental assessment
Le Service des Etudes et Notices d'Impact sur l'Environnement (SENIE) Environment Impact Assessment and Initial Environmental Evaluation Section	<ul style="list-style-type: none"> ➤ Inspection of TOR of environmental impact assessment studies and initial environmental evaluations ➤ Report on analysis of environmental impact assessments studies and initial environmental evaluations ➤ Document preparation for technical committee on environmental assessment ➤ Record of Public opinion study on environmental impact assessment studies
Le Service Système d'information Géographique(SSIG) GIS Section	<ul style="list-style-type: none"> ➤ Support of reference materials collection relating to environment ➤ Materials preparation relating to mapping information by BUNEE

2.2 DIAE (Direction des Inspections et des Audits Environnementaux : Department responsible for public hearings)

DIAE is mainly responsible for reports inspection of public hearings and monitoring status of implementation of environmental management plan. The table below shows 3 sections of DIAE.

Section	Role
Service des Inspections Environnementales(SIE) : Environmental Inspection Section	<ul style="list-style-type: none"> ➤ Command and management of plan of environmental inspection
Service des Audits Environnementaux (SAE) : Environmental Audit Section	<ul style="list-style-type: none"> ➤ Inspection of TOR of environmental audit ➤ Report inspection of environmental inspection
Service Suivi des Cadres et Plans de Gestion Environnementale et Sociale (SCPGES) :	<ul style="list-style-type: none"> ➤ Investigation of implementation status of environmental monitoring plan

3. Environmental impact assessment procedures

3.1 SEA procedures

We confirmed through hearing from the person in charge that SEA procedures are the same as procedures (2) shown below in the law of environmental impact assessment process. Moreover, the investigation, necessary procedure, and obtaining approval can be entrusted to a hired consultant.

BUNEE does not prepare the list of consultants but can introduce personal/company consultants with whom they work in the past.

3.2 **ESIA** and **IESE** procedures

Moreover, Figure 6-2-2 below shows the flow of the implementation of the investigations and the inspections according to the environmental guidelines in case the pilot project to be implemented is subjected to an ESIA or IESE.

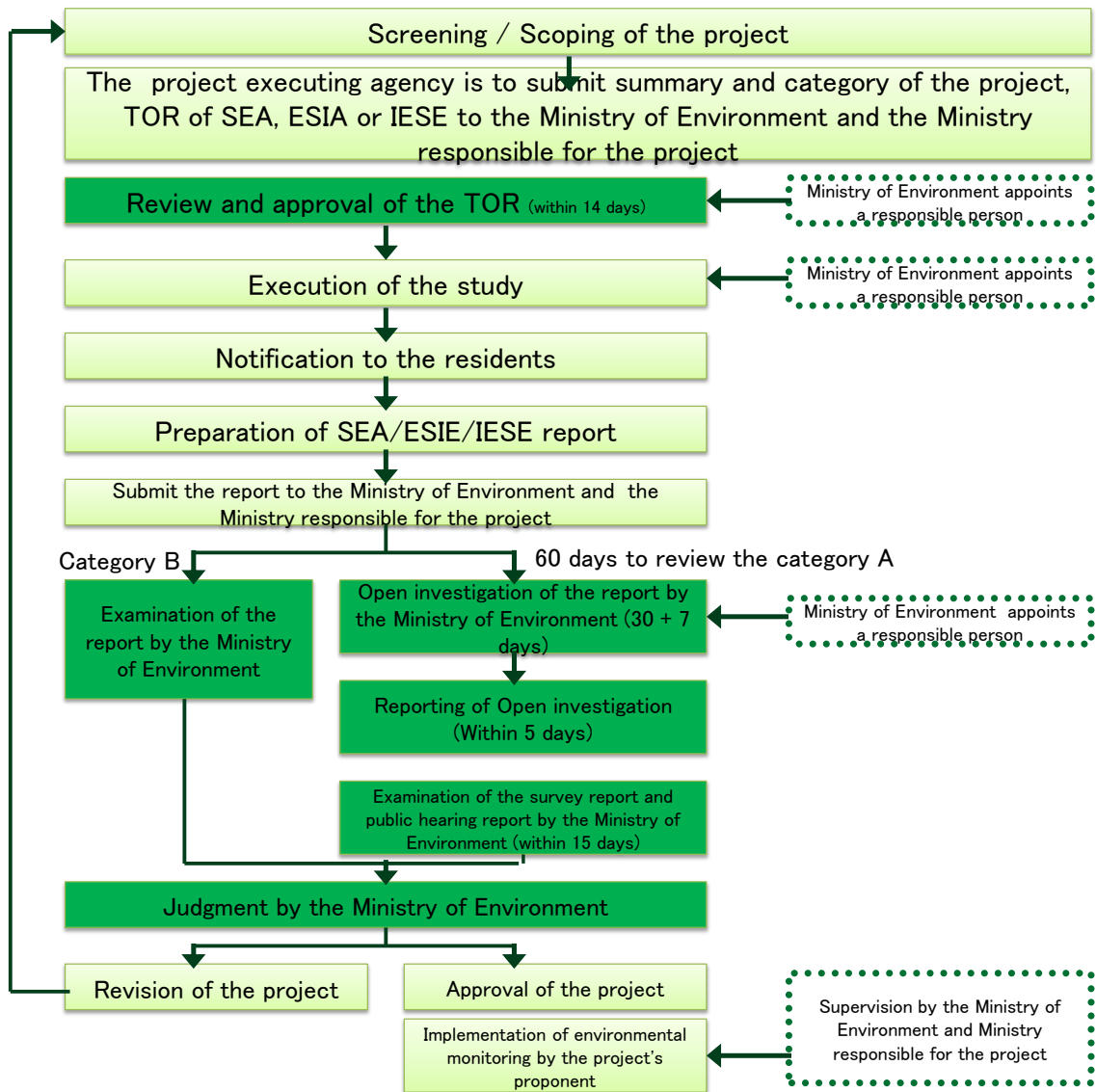


Figure 6-2-2: Flow of investigations and inspections in an environmental impact assessment¹

The pilot project expected in this project is assumed to be of ‘Category B’ based on the guidelines of environmental impact assessment in Burkina Faso as a large maintenance area or a large-scale structure maintenance construction is not involved. As a ‘Category B’ project, the pilot project will be inspected in accordance with IESE procedures.

4. Investigation and analysis of environmental and social considerations

¹ Sources : The Construction Project of the National School of Kaya Primary Teachers in Burkina Faso and the guideline of environmental impact assessment study of Burkina Faso

4.1 Environmental category

In accordance with the “JICA Guidelines for environmental and social considerations” formulated in 2010, a ‘Category B’ is defined as: “Proposed projects are classified as Category B if their potential adverse impacts on the environment and society are less adverse than those of Category A projects. Generally, they are site-specific; few if any are irreversible; and in most cases, normal mitigation measures can be designed more readily.” Moreover, in accordance with the “Illustrative List of Sensitive Sectors, Characteristics, and Areas” shown in Appendix 3 of the JICA Guidelines for environmental and social considerations, “Agriculture involving large-scale land clearing or irrigation” is mentioned; therefore this project should be classified into “Category B” but not into “Category A” as Lowland (Bas-Fonds) development by small-scale irrigation project is expected in the scheduled Master Plan.

4.2 Strategic environmental assessment

In accordance with JICA Guidelines for environmental and social considerations, the strategic environmental assessment is defined as “an assessment that is implemented at the policy, planning, and program levels, but not at project-level EIA. A Master Plan requires the undertaking of a strategic environmental assessment according to the “Measures for environmental and social considerations”, which must be implemented from an early stage to a monitoring stage.” This principle is deemed to be very important in this guideline.

The following shows concrete work items of strategic environment assessment.

- When detailed plan preparatory studies are conducted, an expert(s) on environmental and social considerations to conduct field surveys for Category A and B projects is dispatched.
- On the basis of collected information and consultations after the aforementioned review stage, projects are categorized through second screening.
- Operational scoping according to categorization is conducted and drafts of TOR for environmental and social considerations studies are prepared. Environmental and social considerations are consulted with project proponents and mutual undertakings, partnership, and coordination are concluded.
- Drafts of agreement documents are prepared after consultation with project proponents etc. about the organizational structure of environmental and social considerations. After obtaining basic agreements with host countries to incorporate the results of environmental and social considerations studies into the decision-making process of projects, agreement documents that include draft TOR

for projects are concluded.

4.3 Preliminary scoping

In this detailed planning survey, we carried out a preliminary scoping at the planning point (including performance of small-scale pilot project in Lowland (Bas-Fonds) development) on the basis of the contents of the supposed master plan survey. The results are shown in Table 6-2-2.

Table 6-2-2 Draft Scoping

Category	Evaluation item	Evaluation		The reason of evaluation	
		Before/Under construction	Operation		
counter measures for pollution	1	Air Pollution	B-	D	Under construction : The exhaust gas by the vehicles and dust will increase. Operation : The effect on atmosphere from dust is hardly expected.
	2	Water Pollution	D	C	Under construction : The effect on water from construction is hardly expected. Operation : : The effect is unclear at this time.
	3	Wastes	D	D	Under construction : The occurrence of wastes that effect surrounding environment is not expected. Operation : Not expected.
	4	Soil Contamination	B-	C	Under construction : There is a possibility of water pollution by oil from vehicles. Operation : There is a possibility of pollution by wrongly using chemical fertilizer and pesticide.
	5	Noise and Vibration	B-	D	Under construction : Noises by contractual vehicles are expected. Operation : Noise and vibration are not expected through the use of provided facility.
	6	Land Subsidence	D	D	Work that causes land subsidence is not expected.
	7	Offensive Odor	D	D	Work that causes stenches is not expected.
	8	Bottom Sediment	D	D	Work that effects bottom sediment is not expected.
Natural environment	9	Protection Area	C	B±	Under construction : Project site has not been identified at this time. The effect is unclear at this time. Operation : In case that the target area and surroundings have national reserves, there are possibilities of expanding the active range through the Operation of the lowland. On the other hand, We will survey the negative effect from now.

Category	Evaluation item	Evaluation		The reason of evaluation
		Before/Under construction	Operation	
	10 Ecosystem	B-	B±	Under construction: The large scale construction that affects ecosystem is not expected. Operation: At this time the effect is unclear, Aquatic plants and birds will receive benefits and will expand their growth area. On the other hand, the negative effect is surveyed hereafter.
	11 hydrometeor	D	D	Under construction: Work that causes the change of hydrometeor is not expected. Operation: The effect is not expected at this time.
	12 Topography/Geology	D	D	Since there is no plan of large scale cutting and filling site, the effect on topography and geology is not expected
Social environment	13 Land Acquisition • Resettlement	D	D	Before/Under construction: The effect is not expected at this time. Operation: The resettlement by land use with the lowland development area is not expected.
	14 Poverty group	B+	B+	Before/Under construction: Since the construction work by the community participation is carried out, a job creation is expected. Operation: It is expected to improve agricultural productivity and increase farmer's income by providing irrigation facilities.
	15 Minority race • indigenous people	C	C	Before/Under construction: The effect is unclear at this time. Operation: The effect is unclear at this time.
	16 Regional economy about employment and means of livelihood and so on	B+	B+	Before/Under construction: Since the construction work by the community participation is carried out, job creations are expected. Operation: It is expected that agricultural productivity is improved and income of farmers will increase because of the lowland development.
	17 Use of land/use of local resources	D	B+	Before/Under construction: Since the construction work by the community participation is carried out, and the construction will be carried out in the dry season when land is not used, the negative effect is not expected. Operation: The project promotes

Category	Evaluation item	Evaluation		The reason of evaluation
		Before/Under construction	Operation	
				surrounding agricultural developments, and the application of land and local resources is expected.
	18 Water use	D	B+	Before/Under construction : The work that affects water use is not expected. Operation: Constructed facilities contribute to effective water use.
	19 Existing social infrastructure and social services	B-	D	Before/Under construction : Increasing increment of traffic is expected. Operation: Not expected.
	20 Social capital and the constitution of society such as decision-making body on the area	B+	B+	Before/Under construction : Social capital and the constitution of society are strengthened by trainings related with the creation of the lowland development group. Operation: Burkina Faso government agencies (State and county government agencies) and lowland user groups' strengthen the capacity of water management through the lowland development.
	21 Misdistribution of benefit and equity	B-	B-	Before/Under construction : It is necessary to exchange a memorandum, because conflicts on land rights use will occur. Operation: There is a possibility of conflicts of interest due to the fact that benefit in the maintenance area will be unevenly distributed
	22 Local Conflict of Interest			
	23 Cultural Heritage	C	D	Before/Under construction : In case that there is a sanctuary in any of the target areas, it is necessary for the development plan to avoid it.
	24 Landscape	B-	D	Before/Under construction : The effect on landscape by land change and trees cutting will occur. Operation: The project provides small scale irrigation facilities, so the effect on landscape is not expected.
	25 Gender	C	C	No particular negative impact of this project on gender is expected. However we will carry out interviews to the implementing agency at the time of field survey and will evaluate the effect.
	26 Children's Right	C	C	No particular negative impact of the project on children's rights is expected. However we will carry out interviews to the implementing agency at the time of

Category	Evaluation item	Evaluation		The reason of evaluation
		Before/Under construction	Operation	
				field survey and will evaluate the effect.
	27 Hazards(Risk) Infectious diseases such as HIV/AIDS,	C-	D	Under construction : A large scale construction is not expected, but there is the possibility of the spread of infectious diseases with the influx of construction workers. Operation: Not expected.
	28 Working Conditions, Occupation Safety	C	D	Under construction : There is a need for the consideration of the working environment for workers (including resident volunteers) in construction. Operation: There is no plan that assumes negative effects for farmers at the time of Operation.
Others	29 Accident	B-	D	Under construction : There is a need for consideration of accidents in construction. Operation: Not expected.
	30 Impact of cross-border and , climate change	D	B+	Under construction : There are no effects for resident volunteers. Operation: Effective use of the water resource (precipitation) is expected.

A+/-: Significant positive or negative impact is expected.

B+/-: Some positive or negative impact is expected.

C+/-: The degree of positive and negative impact is unclear. (Additional survey is needed and the effect will be clear depending on the progress of the survey.)

D: Impact is not expected.

4.4 Mitigation measures

1) Screening that uses result of the preliminary scoping

The following items where negative impacts are expected through the preliminary scoping conducted in this Detailed Plan Preparatory Study are explained.

- Pollution control

There is a possibility of air pollution mainly from the construction vehicles. Moreover, there is a possibility of pollution for water, soil, the lowland through the wrongful use of chemical fertilizer and pesticide.

- Natural environment

It is necessary to confirm whether the project area will affect national parks, protected forests, or protected areas etc. at the full-scale survey stage as the latter is not fully specified at the present stage.

Social environment

- Before construction and after construction

Investigations and considerations toward vulnerable social groups, such as indigenous and ethnic people, cultural heritage including customary sanctuaries, gender, children's rights, infectious diseases, and working conditions, are expected if necessary. Moreover, the outbreak of conflicts between people concerned by the maintenance project and land use after it is expected.

- Under construction

Increase of soil contamination, noise and vibration, and traffic mainly by construction vehicles are expected. When trees are present in the maintenance area, the impact on landscape by trees cutting is expected.

2) Mitigation measures

The table below shows the mitigation measures based on the above result of scoping.

No.	Item	Mitigation measures
2	Water Pollution	To determine monitoring items during Operation and conduct monitoring following the monitoring items.
4	Soil Contamination	To determine monitoring items under construction and conduct monitoring such as to confirm related compliance
5	Noise and Vibration	To determine monitoring items under construction and conduct monitoring such as to confirm related compliance
9	Protection Area	To survey whether the project area is included in designated area such as national area or protected forest etc. before construction. We will confirm what kinds of development will be limited in protected area.
15	Vulnerable social groups, such as indigenous and ethnic people	Social survey etc. is conducted before construction, understanding residential area and habit etc., and measures will be included in the project plan if necessary. We will conduct monitoring after the Operation to confirm whether the contents of the plan are carried out.
19	Public infrastructures and services	Traffic rules are observed during construction, and necessary safety precaution is taken. We will take measures such as to notify the construction period etc. to residents of the maintenance area of the project and to those in surrounding villages
21	Misdistribution of benefit and equity	Memorandums are exchanged between people concerned prior to the beginning of the project and conflict of interest from the project implementation is avoided through the mitigation of the problem between land users concerned
22	Local Conflict of Interest	
23	Cultural Heritage	To specify the culturally protected area for villages targeted by the survey before construction and to

		exclude the area from the target districts.
24	Landscape	Cutting trees in the maintenance area is minimized, specifying with the officials of the Ministry of Environment which trees can be cut following the survey relating to environmental impact prior to project start.
25	Gender	To conduct hearing survey that targets related people during a field survey and to carry out necessary measures if an effect is expected.
26	Children's Right	
27	Hazards(Risk) Infectious diseases such as HIV/AIDS,	Awareness-raising activities targeting workers are conducted prior to construction start.
28	Working Conditions, Occupation Safety	Monitoring items are determined under construction and monitoring is conducted to see whether working conditions, including not only labor but volunteering residents, follow compliance.