

**STAKEHOLDER CONSULTATION REPORT
SURINAME SUSTAINABLE AGRICULTURAL
PRODUCTIVITY PROGRAM
(SU-L1052)**

**Inter-American Development Bank and Suriname Ministry of
Agriculture, Animal Husbandry and Fisheries**

April 17, 2018

Table of Contents

1.0	INTRODUCTION.....	1
1.1	Background	1
1.2	Identification of Stakeholders.....	1
1.3	Socio-Cultural Characteristics of the Nickerie District.....	2
2.0	STAKEHOLDER CONSULTATION EVENT.....	2
2.3	Description of the Consultation Event.....	3
2.4	Questions and Comments Raised by Participants	4
3.0	CONCLUSIONS.....	9

Table 1. Summary of Key Comments, Responses, and Next Steps Related to Program Design/Execution 4

Table 2. Comments/Questions Related to the ESA 7

ANNEX A. INVITATION TO STAKEHOLDER EVENT

ANNEX B. ATTENDANCE LIST

ANNEX C. MEETING MINUTES

ANNEX D. PHOTOGRAPHS OF THE EVENT

1.0 INTRODUCTION

1.1 Background

The Inter-American Development Bank (Bank) and the Suriname Ministry of Agriculture, Animal Husbandry and Fisheries (LVV) are preparing the Sustainable Agricultural Productivity Program, which is designed to increase agricultural productivity in Suriname through investments in: infrastructure and management of irrigation and drainage (I&D) systems; the transfer of these system's operation and maintenance (O&M) responsibilities to farmers organized in water boards; and to improve information-based policy-making by increasing the amount and quality of agricultural information on a national level.

The Program will be executed by the LVV, in collaboration with the Ministry of Public Works (OW) and the Overliggend Waterschap MCP (Overlying Water Board of the Multi-Purpose Corantijn Project – OWMCP), which is supported by the Ministry of Regional Development (RO). The drainage and irrigation aspects of the Program are focused on the Nickerie District, the country's primary rice-producing district located in western Suriname.

An environmental and social assessment (ESA) was carried out to evaluate potential impacts from the Program and to identify mitigation measures to reduce or eliminate impacts, where necessary.

The Bank's Project team has been working closely over several years with the newly created (although not yet functioning) water boards in Nickerie that have been proposed for receiving rehabilitation from the Project. The water boards are made up of the rice farmers who will be direct beneficiaries of the Project. The team, through the irrigation and drainage consultant, helped water boards develop and cost out their rehabilitation plans and also discussed other aspects of the Program.

Because the Program was classified as Category B, and there were expected social impacts related to the water board members taking on future operation and maintenance of their polders, as well as potential environmental impacts, additional stakeholder consultation was warranted. A stakeholder consultation plan was developed and presented in the draft ESA. The plan included:

- identifying potential stakeholders and other interested parties;
- making the draft ESA and a summary translated into Dutch available to stakeholders in Nickerie, as well as to interested parties at a national and international level to obtain public comments; and
- holding a stakeholder consultation event.

1.2 Identification of Stakeholders

A preliminary identification of stakeholders was developed for the draft ESA and then refined by input from LVV and OWMCP.

The final list of stakeholders was:

- Water Board members
- Individual farmers not necessarily in water boards who use irrigation and drainage services (ex. cattle and bananas)

- Associations of Rice farmers
- Cattle cooperative
- Horticultural cooperative,
- Women's groups that deal with small horticultural producers
- Nickerie District Commissioner's Office, (Ministry of Regional Development –RO)
- ADRON (despite the fact that ADRON was listed as a stakeholder in the draft ESA, they were apparently not invited to the event).

1.3 Socio-Cultural Characteristics of the Nickerie District

The great majority of rice farmers in Nickerie are of Hindustani origin, the descendants of indentured servants brought from British India to work on the agricultural plantations after slavery was abolished. Rice farming was originally a family activity involving manual labor, where all members of the family worked in the fields. Mechanization replaced the manual operations in the 1950s and meant that mostly the men of the families worked on and managed their polders, leaving women the responsibility of taking care of the home and raising children in this traditionally patriarchal culture. Because rice production, at least in recent years, has not provided sufficient income for small and medium producers, many have second jobs and some women have started working outside the home, as well as growing fruits and vegetables to sell in the Nickerie market.

There is at least one cooperative of small fruit and vegetable farmers consisting of 150 families with about 3000 square meters of land each. These families are mostly of non-Hindustani origin and include descendants of Indonesian ("Javanese") indentured servants, as well as mixed races.

The different cultures do not tend to mix and tend to keep their traditional languages, religions and cultural practices. The official language of Suriname is Dutch, which is taught in schools. Many people also speak "Sranan" (a creole dialect) as well as their "native" languages. Census data from 2012 indicate that in the Nickerie District, there were nearly 41,000 Hindustani compared to 11,750 Javanese. The population of people of Chinese origin was only around 560 and of creole and Marron¹ and mixed races was a little over 5,000.

The most recent agricultural census of 2008 showed that among the 1365 farmers, 714 had only completed primary school, followed by 40 that had completed junior secondary school and 58 that completed full secondary school. Obviously this information is very dated and may no longer be accurate. However, based on this information, it was decided that it was important to have some information about the Program written in Dutch and to have Dutch translation available at the stakeholder consultation event.

2.0 STAKEHOLDER CONSULTATION EVENT

2.1 Objectives

The objectives of the consultation were to:

¹ Also called Maroons, Marron is the spelling used in Suriname.

- present the objectives and range of proposed Project activities to the stakeholders;
- explain the Bank's environmental and social assessment and consultation requirements;
- present the results of the socio-environmental assessment, including the expected social and environmental impacts and the positive economic impacts;
- present the accompanying Environmental and Social Management Plan (ESMP); and
- provide an opportunity for meeting participants to ask questions, provide input, and comment on the proposed Project activities, the impacts, and the ESMP.

2.2 Planning for the Stakeholder Consultation Event

The event was planned by Sandra Whiting, the Bank's Social and Environmental Consultant who prepared the ESA, in coordination with Mr. van der Kooye, in charge of irrigation and drainage for LVV in Nickerie and Mr. Lila, Director of OWMCP.

The city of Nieuw Nickerie was deemed to be the appropriate location because it is the town closest to and surrounded by the polders, and most farmers live in the polders or in Nieuw Nickerie. The offices of OWMCP were chosen for the event, because it is a location familiar to all farmers (there have been frequent meetings and training events held there), and because OWMCP has a meeting space with sufficient space and audio-visual equipment to hold such meetings.

Stakeholders were contacted by telephone and by written invitation prepared by LVV and provided in Annex A. Recipients of the invitations were those stakeholders listed in the above section. In addition, the press was invited. In addition reminder emails were sent by out and telephone calls made by LVV to invited participants a day or two before the event.

Prior to the stakeholder event, a summary of the ESA report was translated into Dutch and posted on the LVV Facebook page on March 30, 2018.

2.3 Description of the Consultation Event

The consultation event took place on April 5, from 9 to 11:30 am. Attendees signed in as they arrived and provided information on affiliation gender and age. A total of 39 people attended (not including the three meeting facilitators), of whom 12 were women. Five different Water Boards were represented (not including those attendees that are part of LVV or OW, some of whom are also Water Board members). A list of attendees and their affiliations is provided in Annex B.

The ESA Summary in Dutch was not available in Nickerie in sufficient time to email it to meeting invitees, due to holidays over the Easter weekend. Therefore, a hard copy was printed out and distributed to each attendee at the beginning of the meeting.

The meeting was opened by Mr. van der Kooye of LVV, who welcomed participants and explained how the meeting would be structured. The event began with a presentation in English by Sandra Whiting using PowerPoint. The outline view of the presentation is provided in the meeting notes in Annex C.

Participants were asked if they wanted to have translation during the presentation. The general agreement was that most of the attendees could understand English sufficiently but would ask

questions in Dutch if they didn't understand something and that Mr. van der Kooye would provide translation.

The presentation included:

- explanation of the purpose and objectives of the consultation;
- description of the possible range of investments of the Program;
- explanation of the Bank's requirements for socio environmental assessment and consultation
- description of the key environmental and social impacts of the proposed Program;
- summary of the environmental and social management plan;
- and a discussion of next steps for the Program, including the opportunity for stakeholders to provide input, not only during the event, but afterwards, both prior to Program approval and during execution.

The link to the full ESA on the Bank's website was provided, and participants were encouraged to review a hard copy of the full ESA to be placed in the OWMCP library.

2.4 Questions and Comments Raised by Participants

After the presentation, the meeting was opened for questions and comments and people were called on one at a time by Mr. van der Kooye. Participants had many questions and comments, including women participants representing the NGO that works with small horticultural farmers (primarily women), and there was ample participation. The session went on a half-hour longer than scheduled because of the participation.

A detailed list of questions, comments and responses is provided in Annex D. A summary of the key comments and responses related to the design and implementation of the Program is provided in Table 1. Table 2 presents comments related to impacts identified in the ESA/ESMP. A list of requests for inclusion of additional infrastructure projects is provided below, as well. Most of the responses were provided by Sandra Whiting with clarifications and some responses from Mr. van der Kooye, and Mr. Lila, depending on the topic. Most questions and comments were made in Dutch and translated into English by Mr. van der Kooye to then be answered in English, but with additional clarification in Dutch, as necessary.

Table 1. Summary of Key Comments, Responses, and Next Steps Related to Program Design/Execution

Comment or Question	Response	Pending Issues
1. Lack of enforcement or control of actions of farmers who take actions of their own within the irrigation and drainage system without regard to other users	The long term goal of the project is to have an integrated, comprehensive water management system where all farmers are incorporated and water is managed according to a water calendar.	Add to ESMP that capacity building includes ways for OWMCP/LVV/OW to manage all water/drainage users so that the system is comprehensive and fair.

<p>2. Comments/questions related to capacity building for water boards such as:</p> <ul style="list-style-type: none"> - should be ongoing for a while and include an annual get together to share experiences and ideas - how to ensure that water boards actually function instead of doing nothing.- . 	<p>Good suggestion. Will be included in ESMP and passed on to Bank/LVV team</p>	<p>Include in ESMP, include in TORs for consultant(s) who will do capacity building</p>
<p>3. Comments related to annual water board payments for O&M:</p> <ul style="list-style-type: none"> - When would farmers have to start paying? 	<p>Payments would not start at the beginning of project but after rehabilitation was complete. Even then the Bank is considering helping farmers with the first year's payment and perhaps future years for a period of time.</p>	<p>Incorporate IDB's decisions about annual fees and subsidies into ESMP & Operating Manual</p>
<ul style="list-style-type: none"> - If farmers pay annual fee will they be guaranteed water by gravity flow? 	<p>Annual fee is for operation and maintenance of water board polders, not a payment for water. Project will finance repairs and maintenance of main irrigation and drainage system that will contribute to more reliable water supply and drainage</p>	<p>None</p>
<ul style="list-style-type: none"> - Do farmers have to repay rehabilitation and/or the loan? 	<p>Farmers are not required to repay the costs of rehabilitation and the loan will be repaid by the Government of Suriname</p>	<p>None</p>
<ul style="list-style-type: none"> - Are the water board annual payments and rehabilitation for all farmers or just rice farmers? 	<p>All farmers that are farming in the water boards, whether rice or other agricultural activity. And all farmers on left bank will benefit from the main system infrastructure improvements</p>	<p>Ensure that non-rice farmers are encouraged to participate in water board decision-making through Institutional Strengthening part of Project</p>
<p>4. A few comments received about flooding and if project includes financing for fixing this problem?</p>	<p>Some projects have been identified to address the flooding problems, like installing the Maratakka spillway and others. No final decisions have been made yet</p>	<p>Incorporate final list of projects into ESA and add any additional requirements for socio-environmental analysis to ESMP</p>

	on what infrastructure projects will be financed for the main system.	
<p>5. Questions and comments about the contracting process and timing of construction:</p> <ul style="list-style-type: none"> - Contractors will need to coordinate with farmers on timing of infrastructure projects to avoid disrupting the production cycle and damaging crops. - How will the Bank ensure that contractors are qualified?² 	<p>Very good point. This will be included in the ESMP with a requirement that it be part of the contract requirements</p> <p>The Bank has criteria for this and will require minimum qualifications for contractors through the bidding process so that contractor selection is transparent.</p>	<p>Incorporate into ESMP and into contract documents</p> <p>None</p>
<p>6. Women horticultural farmers currently don't receive all the irrigation water needed during dry seasons. How will the project improve this situation?</p>	<p>The possible impact of the Project on small horticultural farmers was identified in the ESA, as we know that water needs of fruits and vegetables are not the same as for rice. The ESMP states that these farmers' needs must be considered in developing the future water calendar and stakeholder involvement and gender action plans will be developed to ensure that their participation in water board decisions is promoted.</p>	<p>Emphasize in ESMP and include the Gender Analysis being undertaken, as well as the stakeholder involvement plan</p>
<p>7. Several speakers expressed concern about pesticide use, illegal imports, management and environmental contamination from that and discharges from rice and banana fields into canals later used by other farmers, as well as direct run-off into Nickerie River.</p>	<p>Although this Project is not designed to help farmers better manage pesticides, because it is possible that pesticide use could increase due to the Project, a pesticide study is proposed as a mitigation measure. The study will help to identify what pesticides are being applied, how often, what</p>	<p>Add some soil sampling in horticultural areas to the TORs for Pesticide Study.</p>

² Contractor competence has been perceived as a problem and has been raised before by water board members in the past related to water board rehabilitation carried out with LVV funds.

	<p>volumes and whether there is environmental contamination present as a result (especially in the sediments). This will provide a baseline for future decision-making. LVV has other initiatives to help with pesticide management, including a planned IPM project for rice farmers.</p>	
--	--	--

Table 2. Comments/Questions Related to the ESA

Comment or Question	Response	Pending Issues
1. The ESA summary is written from the point of view of farmers and not the environment when talking about potential impacts. What about ecological impacts?	It is correct that the summary has the point of view of farmers. There is much more analysis in the full ESA report of the ecosystem and the possible impacts to hydrology with Project implementation. We don't anticipate serious impacts, unless certain projects are financed such as the Maratakka spillway.	An ecological assessment of the Nanni Swamp system will be carried out to establish a baseline of current data and help inform infrastructure selection and design to ensure positive benefits are achieved and adverse impacts to the ecosystem avoided. The results of the assessment will be shared with stakeholders during the implementation of the Stakeholder Engagement and Communications Plan.
2. What is the estimate of water lost due to non-functioning infrastructure and how will the project will improve that?	We don't know, as it hasn't been estimated and there is not necessarily good data available. It has been recommended that the Project finance installation of a permanent water level monitoring system in the canals, rivers and Nanni Swamp in order to obtain current information.	Carry out Hydro-Bid Project and fund permanent monitoring system, including sufficient stations in various parts of Nanni Swamp to allow for collection of adequate hydrological data on the swamp's varied zones.

There were several requests for financing additional infrastructure projects in this Project as listed below. In all cases the reply was that they were not now included in the list of possible projects, but that the requests for funding would be passed along to the LVV/Bank's team for consideration.

- Include the Stondasi dam project to solve all problems (proposed dam on the upper Nickerie River included in EC Master Plan of 2009).
- Dredge the Wageningen canal and install a new sluice.
- Repair the embankments at the Arawara on the upper Nickerie River.
- Include a project for re-use of drainage water for irrigation, once treated.

Upon closing the question and answer period, the key comments and responses were summarized by Sandra Whiting and the next steps mentioned again. It was pointed out that stakeholders could continue to provide comments throughout the Program preparation. Comments and questions should be directed to Mr. van der Kooye, who will, in turn relay them to the Bank. In addition, participants were reminded that there will be ongoing opportunity to comment, ask questions, and lodge complaints during Program execution, as there will be a stakeholder involvement and gender action plan to be developed for the implementation phase.

The meeting attendees were reminded about how and where to review the full ESA report via the Bank's website and a hard copy to be made available in the OWMCP library in Nickerie.

3.0 GENDER AND SMALL FARMER ISSUES

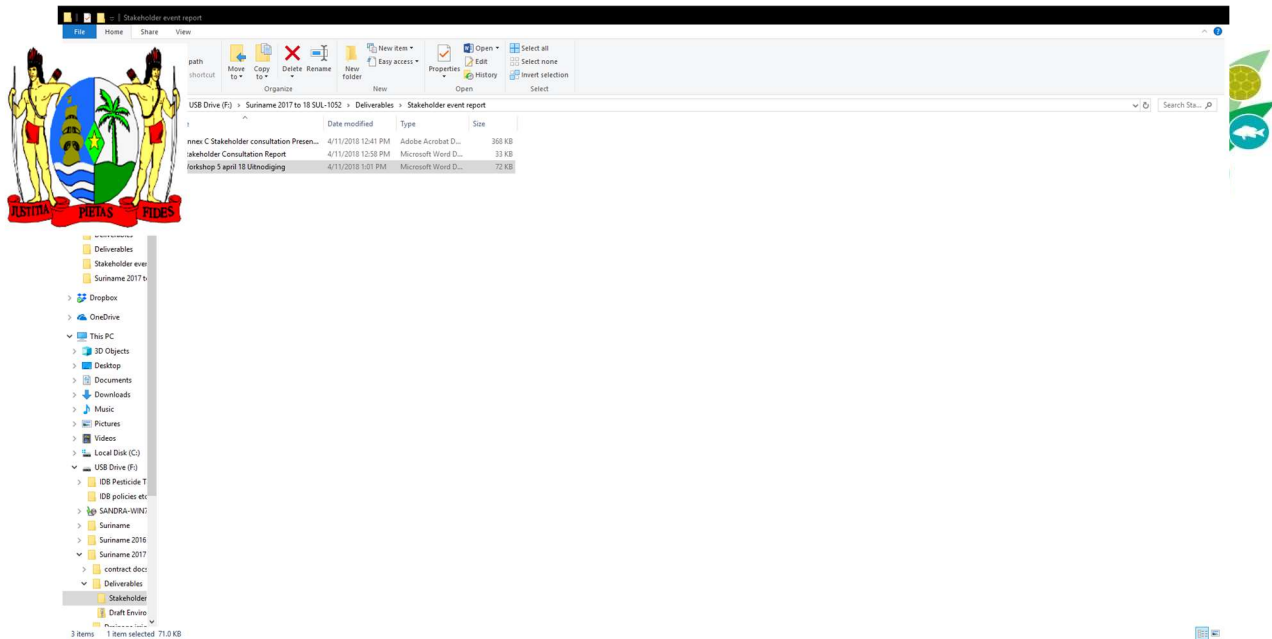
There were 12 women in attendance, mostly representing Moederhart, an NGO that works with poor women fruit and vegetable farmers and staff from the District Commissioner's office. No women attended from the Water Boards. The concerns of Moederhart related to the insufficient amount of water provided to these farmers, whose needs are distinct from those of the rice farmers, during the dry seasons and the issue of how the Project would address this in the future to ensure that there would be sufficient water supply to these farmers.

The day prior to the consultation, Sandra Whiting met with a local horticultural cooperative – Kooperatie Groente Verbouwers Van Pettenpolder (KGVP), made up of 150 families, who requested inclusion in the Project to assist with forming their own water board or receiving some financial assistance for rehabilitation of a main drainage canal that is the responsibility of LVV to maintain (but hasn't been maintained and is causing flooding of crops) or assistance with improving irrigation supply. They were well represented at the stakeholder event and raised the question of a water board for the Waterloo polder of which they are a part. This information was passed along to the LVV/Bank team for consideration.

4.0 CONCLUSIONS

While the stakeholder event was well attended and there was considerable participation by most attendees, unfortunately the Water Boards were not well represented at the meeting. Only five Water Boards were represented, although twelve were reportedly invited. However, the Water Boards have been involved in the Project development for several years, working with the Bank's irrigation and drainage consultants. Nonetheless, their lack of attendance at the stakeholder event underscores the importance for ongoing stakeholder involvement in the Project as it is finalized and as it is executed to ensure that the farmer's voices are heard and their concerns taken into account.

ANNEX A. INVITATION TO STAKEHOLDER EVENT



Ministerie van Landbouw, Veeteelt en Visserij

Hendrikstraat 136-Nieuw Nickerie – Suriname

Telefoon 231496 – Fax (597) 231160 – Email: lvvregiowest@hotmail.com

Nw.Nickerie, 28 maart 2018.

Aan:

Aantal personen.....

Ons ref. no. : /

Onderwerp : Uitnodiging

De Regering van Suriname heeft bij de Inter-American Development Bank (IDB) een lening aangevraagd, voor het verbeteren van de waterhuishouding in het district Nickerie.

In dit project zullen verbeteringen/veranderingen worden aangebracht aan infrastructurele werken in de waterhuishouding in het district, alsook het ondersteunen van de waterschappen.

Een van de vereisten voor de uitvoering van dit project is, dat een milieu en sociaal studie worden gedaan, om na te gaan wat de gevolgen (negatief en positief) zullen zijn tijdens en na de uitvoering van de activiteiten van het project.

In dit verband wordt U uitgenodigd, voor het bijwonen van een workshop:

Stakeholder Consultation

(LVV/IDB Sustainable Agricultural Productivity Program)

Datum : Donderdag 5 april 2018

Plaats : OWMCP. Soekramsinghstraat 26. Nw Nickerie

Tijd : 09:00 uur

Op deze dag zal mevrouw Sandra Whiting, Milieu Specialist, een presentatie houden, waarna er gelegenheid zal zijn voor vragen stellen en discussies.

Uw aanwezigheid wordt zeer op prijs gesteld

Met de vriendelijke groeten,

,

De wnd. coördinator Regio-West,

Guido van der Kooye MSc.

List of participants

1. Surinaamse Padie Boeren Associatie. SPBA
2. Vereniging van Padie Producenten. VVP
3. Waterschappen (12)
4. LVV
5. RO
6. OW
7. OWMCP
8. Cooperatie KGVP
9. Stichting Sari (vrouwen organisatie)
10. Cooperatie van Vissers
11. Cooperatie van Veehouders
12. FAI (Banana company)

ANNEX B. ATTENDANCE LIST³

Topic: LVV/IDB Sustainable Agricultural Productivity Program Stakeholder Consultation

Date: Thursday, April 5, 2018

Time: 09.00 o'clock

Place: Soekramsinghstraat 26, Nieuw Nickerie (OWMCP building, conference room)

Attendees:	Nankoe Ch. (R.O.)	Ministry of Public Works
	Dalloesingh A. (R.O)	Ministry of Public Works
	Somowidjojo M. (R.O. / CWS)	Ministry of Public Works
	Veira M. (R.O)	Ministry of Public Works
	Bipat M. (Stg. Moederhart)	"Motherheart", NGO that works with women horticulturalists
	Lalay R. (Stg. Moederhart)	"
	Kasi S. (Stg. Moederhart)	"
	Remington R. (K.G.V.P)	Horticultural Cooperative
	Beckles B.G. (K.G.V.P.)	Horticultural Cooperative
	Perk F. (R.O.)	Ministry of Public Works
	Rampadarath B. (V.P.P)	Vereniging Padie Producente
	Diran Y. (F.A.I. NV)	Federatie van Agrarische Industrie (banana grower)
	Wongsodrono H. (F.A.I. NV)	"
	Gerard J. (R.O.)	Ministry of Public Works
	Ramadhin R. (Waterschap)	Longmay/Paradise Water Board
	Nanda L. (LVV)	Ministry of Agriculture
	Dinai B. (Stg. Moederhart)	Motherheart
	Sodikromo A. (LVV)	Ministry of Agriculture
	Van der Kooye G. (LVV / CWN)	Ministry of Agriculture
	Nibar D. (Waterschap)	Europolder Zuid Water Board
	Jiawan- Bishesar V.	OWMCP – dir.secr.)
	Small O.	OWMCP
	Bishesar R.	OWMCP
	Ramesar S.	OWMCP
	Jaglal I. (Waterschap)	Van DrimmelpolderWater Board

³ Note that many representatives of the government are also part-time rice farmers

Khedoe N. (K.G.V.P)	Horticultural Cooperative
Kromodikoro U. (LVV)	Ministry of Agriculture
Lieveld A. (Media SBS)	Media
Jawalapersad H.	Water Platform, Nickerie
Jawalapersad I.	student
Oemraw H. (SPBA)	Suriname Paddie Association
Bansie (VPP)	Association of Paddie Producers (Vereniging Padie Producenten).
Lila A.	OWMCP
Surjbalisingh O. (Waterschap)	Van Drimmelpolder Water Board
Kasanwirjo T. (Waterschap/VPP)	Clarapolder Water Board
Dwarka Ch. (Waterschap)	Corantijnpolder Water Board
Triloki S. (Ministerie van OW T & C)	Ministry of Public Works
Radjie P. (Waterschap)	Clarapolder Water Board
Bhaggoe J. (LVV/Stg. Moederhart)	Ministry of Agriculture and Motherheart
Vriesde J. (Media Rasonic TV)	Media
Bierdja S. (Media SBS TV)	Media

ANNEX C. MEETING MINUTES

Announcements:

- The presentation will be done by Mrs. Sandra Whiting, Environmental Specialist.
- The presentation will be done in English by Mrs. Whiting
- For uncertainties during the presentation, anyone can raise their hand and ask for clarification.
- The questions can be asked after the presentation, it can be done in English and Dutch, with the help of Mr. Van der Kooye.
- The presentation is about the project which will be presented to the IDB about the possible social and environment impacts of the rehabilitation of the irrigation and drainage system
- The project is to rehabilitate some of the infrastructure of the water boards in Nickerie and of the main canals.
- The Bank's team is meeting next week to analyze the proposed investments and make some decisions about what will be financed. The project will be approved this year and hopefully will start in 2019, but sometimes it takes longer.

Agenda Points (PowerPoint presentation, outline view):

1. Goals:

- Increase productivity - investments in irrigation & drainage infrastructure
- Transfer ongoing polder operation & maintenance to water boards
- Increase amount and quality of agricultural information on national level

2. Possible Project Actions:

- Rehabilitate polders of some water boards
- Capacity building & support for water boards
- Water Controller
- Support for long term water resource management – LVV, Public Works & OWMCP
- Cost-sharing incentives for farmers – field leveling, crop diversity
- Rehabilitate main irrigation and drainage infrastructure

3. IDB Socio-Environmental Requirements

- Evaluate potential socio-environmental impacts
- Prepare draft & final Environmental and Social Analysis (ESA) report
- Prepare Environmental & Social Management Plan (ESMP)
- Carry out consultation with affected parties

4. Environmental Impacts

- Improved water management & reduction of wasted water
- No adverse impacts to Nanni Swamp hydrology or ecology
- Temporary construction impacts – wastes, erosion, water quality

- Probable increase in overall pesticide use due to expansion of irrigated areas
- Possible decrease in herbicide use for control of red rice due to reliable irrigation water
- Possible decrease in insecticide/fungicide use due to better water management, healthier plants

5. Social Impacts

- Improved farmer incomes due to increased rice production
- Long term sustainability
- Possible hardship to small farmers due to requirement to pay annual water board tax
- Health and safety risks – construction
- Ongoing health risks from use of pesticides

6. Environmental and Social Management Plan

- Purpose: establish principles & procedures to mitigate impacts or reduce risks and improve socio-environmental sustainability
- Content: mitigation measures, execution plan & responsibilities, budget, monitoring and reporting requirements
- Becomes part of Project Operating Manual

7. Environmental and Social Management Plan- Key Features

- Supervision of environmental and safety practices during construction
- Pesticide study to establish baseline data
- Stakeholder Involvement and Gender Action Plan
- Measures to ensure adequate irrigation for fruit and vegetable growers
- Measures to help vulnerable farmers to pay annual fee (in-kind labour, other assistance)

8. ESMP Responsibilities

- LVV will hire consultants to work in Project Executing Unit (PEU)
- LVV will monitor compliance & report to IDB

9. ESMP Budget – 5 Year Period

- Health & Safety Construction Supervisor \$40.000
- Pesticide Study

International consultant	\$90.000
Local teams & sampling equipment	\$50.000
Laboratory Analyses	\$60.000
- **Total expenditures for ESMP implementation \$240.000**

Questions and Responses:⁴

Question: No one asks permission to drain or to push water out of the irrigation canal or make other changes, who will be in charge of this or control it?

Reply: The long term goal of the project is to have an integrated system of water management that will apply to all farmers who use irrigation and drainage services so that it is fair and transparent.

Question: What about the impacts of pesticides used by other farmers that contaminate other's fields. Will the project control that?

Reply: The project will not directly control pesticide management but will carry out a study to establish a baseline of data – what farmers are using, how often, why and how they make decisions on what pesticide to apply; as well as an environmental sampling program to determine if water, soils and sediments are contaminated and present a risk to Nickerie farmers and other residents. This information will be made public once the study is concluded. LVV is working on improving pesticide regulations and enforcement for the whole country as well as regulating pesticide distributors and training farmers on how to use personal protective equipment when applying pesticides. There is more work to be done and it will take time.

Question: The environmental impacts are mostly aimed at the farmer's point of view and not the environment and the ecosystem. What about impacts to the environment other than the construction phase? There should be more study on this aspect.

Reply: You are correct that the ESA summary does not focus very much on the Nickerie drainage basin ecology and possible impacts. There is more information on the species of concern and ecosystem issues in the full version of the ESA. The full ESA can be found on the IDB website and a hard copy will be available in the OWMCP library., It should be noted that the information on ecosystem functions and flora and fauna is very old, some of it from the mid-70s. No current information on the ecology of Nanni Swamp appears to be available, so there is a lot of uncertainty. We think that the project will not adversely affect the hydrology of the swamp, except for maybe the Maratakka spillway or any other projects that might be added later. Both the ESA and the drainage and irrigation consultant have recommended installing a permanent water level monitoring system in the canals, swamp and tributaries so that there will be more information for evaluating impacts and making decisions. The ESA has also recommended conducting an ecosystem study to better understand the importance of the swamp for environmental services.

⁴ Note: replies are generally by Sandra Whiting unless otherwise noted. Many of the questions and replies were translated from Dutch.

Question: What can be done about the Kwie Kwie⁵ that are being eaten by piranhas coming in through the Wakay pump?

Reply: The project will not deal with that problem.

Question: Is the IDB willing to accept this project, given that there are three ministries involved and the management could be very confusing or not coordinated?

Reply: This project will be the responsibility of LVV, but the other 2 ministries will be involved some aspects of project execution and will be beneficiaries of infrastructure repairs and capacity building. However, LVV will be in charge through a Project Executing Unit to be created.

Question: If the Stondansi project were done then all the irrigation problems would be solved. The estimated cost for the dam construction is 2 million SRD. Please ask the Bank to consider funding it. (Note: the Stondansi project is a dam on the upper reaches of the Nickerie River identified under the EC master plan)

Reply: The Stondansi project is not one of the infrastructure projects being considered under this financing at this time.

Question: Is there room in this project for the expansion of existing access to water supply and drainage, because in the past the farmers had some troubles with flooding from the Nanni swamp.

Reply: (Mr. van der Kooye) Yes. In the rainy season when the Nanni swamp is full of water drainage is done through the South drain canal, Nannie creek and P and E canals. Repair of the south drain is one of the proposed infrastructure projects. Also there are several other proposals for improving drainage: including the Nanni spillway, and possibly the Maratakka spillway.

The dam of the Lekbeteugelingsdam has been accumulated and based on this it is considered to solve the Maratakka-overlaat problem later because of the financial lack, that's why if the Nanni swamp problem is solved first, then the South Drain is enough to take out all the excess water.

Question: People are already planting crops on the dams and using pesticides. When the dam and canal improvements are made, won't this make the situation worse? Who gives permission to plant on the dams?

Reply: (Mr. van der Kooye): On some dams you can plant because they won't cause any trouble but we have to look into this matter to stop people from planting on the dams. If we want to take a loan from the IDB, we need to put a stop on giving permission to plant on the dams.

⁵ An important fish popular with fishermen and consumed by local residents.

Question: if the water board farmer has to pay a fee for using their land, is this per season or per year? What if in one season the farmers don't use that amount of water because it is the rainy season. If you think about it then the farmer has to pay for only one season?

Reply: The fee to be paid by each farmer is for a year of operation and maintenance of each water board, according to the plan developed for each water board and based on how many hectares the farmer operates. The canals and dikes need to be maintained year round

Question: The loan that will be taken from the bank, who will repay this, the farmers?

Reply: The loan is to the government, and will be repaid by the government. The way it works is that the government will receive more resources through taxes and other means due to the expected increase in yields and the higher domestic product. It is this way that the government will be able to repay the loan.

Question: Is this project only for Nickerie?

Reply: Yes, the irrigation and drainage component of the project is for the Nickerie District only. However, there is another component related to improving the agricultural census and the availability of agricultural statistics that will benefit the whole country.

Question: Is this project going to benefit just the left bank?

Reply: Yes, that is what is currently proposed.

Question: Sometimes the small fruit and vegetable farmers don't get enough water for their crops. Will they be accommodated with water in the drought season?

Reply: The ESA identified that as a concern. The overall goal of the project is to achieve a water distribution system that will make sure that everyone will be provided with water when it is needed.

Question: We are worried that some small horticultural plots are contaminated from the very toxic pesticides that were used in the past. What can be done to find out and to get rid of it?

Reply: The project will include a pesticide sampling and analysis program and we could consider including some samples be collected and analyzed from some horticultural plots as part of the sampling program. There are some ways to remove toxic pesticides but a lot depends on what pesticides were used. There are technologies available like plants taking up the pesticides and bacteria that break them down, but these are not part of this project.

Question: Is dredging the Wageningen canal and installing a new sluice also mentioned in the project?

Reply: No, Wageningen is not included in the project at this time but the Bank's team could be asked if it could be considered. Is there a cost estimate for the work? Reply: No, there has never been a study to estimate costs.

Question: The water boards have been just sitting still for a long time but we keep having elections for new officers who never do anything. Will this change?

Reply: (Mr. van der Kooye). Water boards need to take this matter into their own hands and take the initiative about how and which proposals they have for the rehabilitation and maintenance of their polders. (Ms. Whiting): the goal of the project is to help water boards become functional by first rehabilitating the polders and then providing capacity building so that water boards can take over management of their own internal infrastructure

Question: Arawana sluice is not mentioned in this project and it is a very important matter. The embankment is leaking water into the Coppename River. Estimated cost is \$(US)300,000.

Reply: This information will be passed on to the Bank's team.

Question: If this project goes further, what are the conditions of the shareholders and the IDB regarding the quality of the companies to be hired to do the work. How can it be assured that the contractor are qualified?

Reply: The Bank has a strict process for hiring contractors and requires that contractors have the necessary qualifications to do the work. The bidding and contracting process is designed to be transparent and fair, as well as to ensure that contractors meet the qualifications.

Question: Who will ensure that contractors don't disrupt production during the infrastructure work. They should be required to coordinate with farmers regarding timing of the work, so that crops are not damaged or production interfered with.

Reply: That is a very good point and we can make that a requirement of the Environmental and Social Management Plan as well as a contract requirement.

Question: Waterloo is never mentioned in this project, who manages the Waterloo irrigation and drainage infrastructure?⁶

Reply: (Mr. van der Kooye): Those places not situated in one of the currently identified Water boards are managed by LVV or RO.

Question: Is this project just for rice farmers or for all farmers? Will the project bring change to the whole sector?

Reply: The project will benefit all users of irrigation and drainage services on the left bank through the improvements to the main infrastructure. It will also benefit the members of the water boards participating in the project, whether they grow rice or practice other kinds of

⁶ Note: Waterloo is a former abandoned plantation where there is currently a horticulture cooperative (legally) operating, as well as a large rice farmer and fallow land that receives some irrigation and drainage services but with a backlog of maintenance particularly of the drainage canal.

agriculture. Eventually the long term goal is for all water and drainage users to form part of one consolidated system.

Question: Does the fee to be paid by each water board apply to any one using water in that water board?

Reply: Yes, according to the law, each farmer that is in the water board must pay an annual operation and maintenance fee, according to the number of hectares farmed.

Question: If I pay my annual \$SRD 100, will I be guaranteed irrigation water by gravity flow?

Reply: The fee does not pay for water or guarantee water supply. The fee is intended to be used by and for each water board for the maintenance and operation of its own infrastructure within its polders. It is hoped that the infrastructure investments not only for the water boards but also in the main system will improve water availability and drainage for all farmers (at least on the left bank).

(Mr. van der Kooye): The \$SRD100 per ha. is only an estimate for planning purposes. It was calculated by Mr. Smith, the irrigation and drainage consultant. More detail will follow.

Question: When will this project start?

Reply: (Mr. van der Kooye): It is estimated to start in 2019 with the approval somewhere at the end of 2018.

Question: When will farmers have to start paying the annual fee?

Reply: (Mr. van der Kooye): Probably not the first year after rehabilitation of the water board. There may be some additional subsidies from the Bank for the first year and maybe longer. These decisions are going to be discussed by the Bank's team next week.

Question: Who is responsible for making all the farmers aware of pesticide management and problems and how will this be done?

Reply: LVV is responsible for pesticide management in Suriname and is working on improving legislation and enforcement. There is only one person in charge of this at LVV, so it will take time to improve the situation. She has already started giving workshops and information to farmers on how to use personal protection during pesticide application and how to store pesticides. She is also working on training inspectors to enforce pesticide storage laws at pesticide distributors and to require licenses for storing and distributing pesticides. The project we're talking about today will only provide funding for a pesticide study, so that at least there can be valid information about actual pesticide use in Nickerie and whether or not there is environmental contamination from it. However, through a separate LVV/IDB project related to animal and plant health and food safety, there are some resources to help with pesticide management. That project is just starting.

Question: More pesticide control is needed. Who will stop the import of banned pesticides and ensure that pesticides are effective?

Reply: The government, through a separate LVV/IDB project is working on improving the process of importing pesticides, inspecting shipped pesticides at the borders and rehabilitating and equipping a pesticide laboratory at LVV. This laboratory, situated in Paramaribo at the LVV headquarters will not only test crops to be exported for pesticide residues, it will also have capacity for testing the content of imported pesticides to make sure that the contents match the label and contain the ingredients stated.

Question: What is the percent of water loss before and after the project?

Reply: We don't have those numbers currently. There is a recommendation for installing permanent water-level monitoring equipment in the canals, rivers and Nanni Swamp so that this kind of information can be determined in the future.

Question: As part of capacity building for the water boards, I recommend that there be an annual event that gets all the water boards together so that they can share experiences.

Reply: That is an excellent recommendation. It will be included in the Environmental and Social Management Plan.

(Mr. van der Kooye): Mr. Smith mentioned something like this in relation to the Water Platform project.

Question: Is the project considering any water re-use?

Reply: Not as far as I know, but it is an interesting idea. We will pass this idea along to the Bank's team to see if a pilot project could be considered. (Note that the horticultural cooperative expressed interest in being part of such a pilot project if it could be funded).

ANNEX D. PHOTOGRAPHS OF THE EVENT





Mr. Van der Kooye responding to a question



Mr. Lila responding to a question