Support to the Improvement of the Upland Rice Cultivation in Suriname

GOVERNMENT OF THE REPUBLIC OF SURINAME

TRILATERAL TECHNICAL COOPERATION PROJECT
BRAZIL – NEW ZEALAND – SURINAME

Support to the Improvement of Upland Rice Cultivation in Suriname

PROJECT DOCUMENT

JULY 2015

Legal Basis:


# INDEX

<table>
<thead>
<tr>
<th>1 – INSTITUTIONAL DESCRIPTION AND SIGNATURE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1. Information on the Executing Surinamese Institution</td>
<td>3</td>
</tr>
<tr>
<td>1.2. Information on the Co-Executing Brazilian Institution</td>
<td>3</td>
</tr>
<tr>
<td>1.3. Information on the Co-Executing New Zealand Institution</td>
<td>3</td>
</tr>
<tr>
<td>1.4. Information on the Brazilian Coordinating Institution</td>
<td>3</td>
</tr>
<tr>
<td>1.5. Information on the New Zealand Coordinating Institution</td>
<td>3</td>
</tr>
<tr>
<td>1.6. Information on the Surinamese Coordinating Institution</td>
<td>4</td>
</tr>
<tr>
<td>1.7. Signatures</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2 – BRIEF DESCRIPTION OF THE PROJECT</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1. Project Title</td>
<td>5</td>
</tr>
<tr>
<td>2.2. Duration</td>
<td>5</td>
</tr>
<tr>
<td>2.3. Estimated Cost (US$)</td>
<td>5</td>
</tr>
<tr>
<td>2.4. Financing Governments</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3 – NATIONAL CONTEXT AND PROJECT PURPOSE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1. National Context</td>
<td>5</td>
</tr>
<tr>
<td>3.2. Project Purpose</td>
<td>6</td>
</tr>
<tr>
<td>3.2.1. Diagnosis of the Situation</td>
<td>6</td>
</tr>
<tr>
<td>3.2.2. Expected Situation by the end of the Project</td>
<td>7</td>
</tr>
<tr>
<td>3.2.3. Project Description</td>
<td>7</td>
</tr>
<tr>
<td>3.2.4. Suriname Institutional Framework</td>
<td>8</td>
</tr>
<tr>
<td>3.2.5. Strategy of Sustainability</td>
<td>9</td>
</tr>
<tr>
<td>3.2.6. Direct and Indirect Beneficiary</td>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4 – FINANCIAL ARRANGEMENT</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1. Contribution of the Government of Brazil</td>
<td>10</td>
</tr>
<tr>
<td>4.2. Contribution of the Government of New Zealand</td>
<td>11</td>
</tr>
<tr>
<td>4.3. Contribution of the Government of Suriname</td>
<td>11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5 – INSTITUTIONAL ARRANGEMENT</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1. Project Management Structure</td>
<td>11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6 – PROJECT STRUCTURE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1. Overall Objective</td>
<td>13</td>
</tr>
<tr>
<td>6.2. Specific Objective</td>
<td>13</td>
</tr>
<tr>
<td>6.3. Expected Results/Outcomes</td>
<td>13</td>
</tr>
<tr>
<td>6.4. Activities</td>
<td>14</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7 – WORKPLAN</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1. Logical Framework Indicators, Means of Verification and Important Assumptions</td>
<td>19</td>
</tr>
<tr>
<td>7.2. Implementation Schedule</td>
<td>21</td>
</tr>
<tr>
<td>7.3. Financial Framework w/ detailed costs</td>
<td>22</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8 – TECHNICAL MISSIONS</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Technical Missions</td>
<td>24</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9 – MONITORING AND EVALUATION</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.1. Monitoring</td>
<td>24</td>
</tr>
<tr>
<td>9.2. Evaluation</td>
<td>24</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10 – RESPONSIBILITIES OF THE GOVERNMENTS</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Responsibilities of the Governments</td>
<td>25</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>11 – CONCLUSIONS</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Conclusions</td>
<td>26</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12 – GENERAL OBSERVATIONS</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.1. Intellectual Property</td>
<td>28</td>
</tr>
<tr>
<td>12.2. Copyrights</td>
<td>28</td>
</tr>
<tr>
<td>12.3. Use of Names, Logos or Trademarks</td>
<td>29</td>
</tr>
<tr>
<td>12.4. Transfer of Genetic Material</td>
<td>29</td>
</tr>
</tbody>
</table>
Support to the Improvement of the Upland Rice Cultivation in Suriname

1. INSTITUTIONAL DESCRIPTION AND SIGNATURE

1.1. Information on the Executing Surinamese Institution
Name of the Institution: Ministry of Agriculture, Animal Husbandry and Fisheries
Address: Letitia Vriesdelaan 1-8
Country and City: Suriname, Paramaribo
Phone: (597) 479-112
Facsimile: (597) 470301
Name of the Head of the Institution: H.E. Suresh Algoe, Minister
Name and position of the responsible for execution: Mr. Iwan Raghoe - Head of the Department for the interior (hinterlands)
E-mail of the responsible for execution: iraghoe@hotmail.com / sipaliwini597@gmail.com

1.2. Information on the Co-Executing Brazilian Institution
Name of the Institution: EMBRAPA Arroz e Feijão
Address: Rodovia GO-462, km 12 Zona Rural C.P. 179
Country and City: Brazil, Santo Antônio de Goiás
Phone: +5562 3533-2110/2103
Facsimile: +5562 3533-2100
Name of the Head of the Institution: Maurício Antônio Lopes
Name and position of the responsible for execution:
Administrative Coordinator: Mário Alves Seixas, Head, Coordination of Technical Cooperation – Secretariat for International Affairs – Embrapa e-mail: chefia.sri@embrapa.br
Technical Coordinator: Dr. Adriano Stephan Nascente (researcher) Embrapa Arroz e Feijão
E-mail of the responsible for execution: adriano.nascente@embrapa.br

1.3. Information on the Co-Executing New Zealand Institution
Name of the Institution: Landcare Research New Zealand Limited
Address: PO Box 69040
Country and City: Lincoln, New Zealand
Phone: +64 3321 9848
Facsimile: +64 3321 9997
Name of the Head of the Institution: Chief Executive, Richard Gordon
Name and position of the responsible for execution: Jane Lattimore (International Manager) and Dr David Whitehead (researcher)
E-mail of the responsible for execution: lattimorej@landcareresearch.co.nz and whiteheadD@landcareresearch.co.nz

1.4. Information on the Brazilian Coordinating Institution
Name of the Institution: Brazilian Cooperation Agency – Ministry of External Relations
Address: Setor de Administração Federal Sul, Quadra 02 Lote 02 Bl. B – Ed. Via Office
Country and City: 70070-600 – Brasília DF, Brazil
Phone: +55 61 2030-9342
Facsimile: +55 61 2030-6584
Name of the Head of the Institution: Ambassador Fernando Abreu – ABC Director
Name and position of the responsible for execution: André Galvão – Project Officer/Analyst
E-mail of the responsible for execution: andre.galvao@abc.gov.br

1.5. Information on the New Zealand Coordinating Institution
Name of the Institution: New Zealand Embassy in Brasilia
Address: SHIS QI 09 Conjunto 16 Casa 01
Country and City: Brasília, DF, Brazil.
Phone: +55 61 3248-9903
Support to the Improvement of the Upland Rice Cultivation in Suriname

Facsimile: +55 61 3248-9917
Name of the Head of the Institution: Caroline Bilkey, Ambassador
Name and position of the responsible for execution: Tane Waetford, Deputy Head of Mission
E-mail of the responsible for execution: tane.waetford@mfat.govt.nz; Jaqueline.gil@mfat.govt.nz

1.6. Information on the Surinamese Coordinating Institution
Name of the Institution: Ministry of Foreign Affairs
Address: Henck Arronstraat 8
Country and City: Suriname, Paramaribo
Phone: (597) 472117
Facsimile: (597) 410851
Name of the Head of the Institution: H.E. Winston G. Lackin
Name and position of the responsible for execution: Juanita Lont, Foreign Affairs Official, Division of Frontier and Adjacent Countries
E-mail of the responsible for execution: grens.buurlanden@gmail.com

1.7. Signatures
Signed in Paramaribo, on 2015, in 06 (six) original versions, being 2 (two) in Portuguese, 02 (two) in English and 02 (two) in Dutch, all texts being equally authentic. In case of divergence of interpretation, the English version shall prevail.

____________________________________________________________
GOVERNMENT OF THE FEDERATIVE REPUBLIC OF BRAZIL

____________________________________________________________
NEW ZEALAND EMBASSY IN BRAZIL

___________________________________________________________
GOVERNMENT OF THE REPUBLIC OF SURINAME

Executing Institutions:

_________________________________
EMBRAPA Arroz e Feijão of Brazil

_________________________________
LandCare Research New Zealand Limited

_________________________________
Ministry of Agriculture, Animal Husbandry and Fisheries of Suriname
2. BRIEF DESCRIPTION OF THE PROJECT

2.1. Project Title: Support to the Improvement of the Upland Rice Cultivation in Suriname

2.2. Duration: 12 months (twelve months), as from the last signature’s date.

2.3. Estimated Cost in US$: 302,294 (Three hundred and two thousand two hundred ninety four dollars)

2.4. Financing Governments:

<table>
<thead>
<tr>
<th>Country</th>
<th>Institution</th>
<th>Partial Budget (in US$)</th>
<th>Composed Budget (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>Brazilian Cooperation Agency</td>
<td>44,164</td>
<td>92,164</td>
</tr>
<tr>
<td></td>
<td>Embrapa Arroz e Feijão</td>
<td>48,000</td>
<td></td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Government</td>
<td>45,480</td>
<td>77,480</td>
</tr>
<tr>
<td></td>
<td>LandCare Research</td>
<td>32,000</td>
<td></td>
</tr>
<tr>
<td>Suriname</td>
<td>Ministry of Agriculture, Animal Husbandry and Fisheries</td>
<td>132,650</td>
<td>132,650</td>
</tr>
<tr>
<td><strong>TOTAL GENERAL</strong></td>
<td></td>
<td></td>
<td><strong>302,294</strong></td>
</tr>
</tbody>
</table>

3. NATIONAL CONTEXT AND PROJECT PURPOSE

3.1. National Context

The government of the Republic of Suriname, especially the Cabinet of the President, has given its unrestricted support to develop innovative practices for intensified cultivation and production of Upland Rice in relation with the rural development of the Maroon Culture of the Inner land (countryside).

The traditional economy of the Maroon Culture is in a transition phase and will be no longer the same in the future. Through a development policy of economic activities the government is creating possibilities in which the Maroon Culture can develop a dignified social security.

A part of the economy of the Maroon Culture is the cultivation of Upland Rice crop for the consumption on a daily basis. Food security has a crucial role in this. The production of food in the Inner land will have the possibilities to make use of new developments of technology.

Farmers, especially women (gender), will be involved in partnership with researchers and the extension service of the Ministry of Agriculture. Some of these groups have already been identified as part of existing upland rice activities and will be trained by the extension service to start their own innovative practices. The technicians from the Ministry of Agriculture will be trained by researchers from Brazil.

This means there will be a focus on the quality improvement in areas with the common 'shifting cultivation' of Upland Rice as the main food.

For a sustainable realization of the above mentioned, critical gaps have to be bridged with:

- Creation of a national upland rice program;
- the supply of excellent seed;
- technical cultivation expertise and practical guidance;
Support to the Improvement of the Upland Rice Cultivation in Suriname

- the processing; and
- financial and social management.

All this with the focus to improve the production capacity for the inner land.
To bridge the critical gaps, the current existence of knowledge and experience of the Surinamese expertise of rice production will be used by developed and implemented methods and techniques.

Victoria area will be used to perform the trials, participatory experiments will be carry out to develop site-specific recommendations for Upland Rice production and to evaluate different practices for intensive rice production including representatives of farmers, researchers, extension organizations and the private sector.

In collaboration with the present modernity and innovation within the Upland Rice cultivation, the Surinamese expertise will set up counterparts with expertise from the region to ensure transfer exercises of vital practical and theoretical knowledge of Upland Rice cultivation management, methods and techniques.

3.2. Project Purpose

3.2.1. Diagnosis of the Situation

In Suriname there are several Upland Rice varieties which are cultivated in the inner land by the Maroon Culture. These varieties have their origins from Africa, when the slaves were brought to Suriname, 150 years ago. The Upland Rice varieties from Suriname have probably its origins in the wild varieties of the *Oryza Glaberrima*.

At this moment, 14 local Upland Rice varieties have been identified in Suriname. These varieties are cultivated by a traditional method by the Maroon Culture with a yield less then or around 1.000 kg/hectare.

The arable land for traditional cultivation of the Upland Rice varies from 1 to 10 m² (square meters) and is not homogeneity, because also other crops are cultivated together.

To bring the quality improvement in cultivation and production capacity of Upland Rice, the focus is set on homogenous cultivation of local varieties on the arable land by up scaling the area by using mechanization and new techniques. Therefore a pilot project was set up.

A pilot was established to promote research and development activities for intensive and innovative Upland Rice production, this included evaluation of the performance of different Upland Rice varieties and planting methods, weed control, water and soil conservation.

The pilot project was started in 2013 on a plot in Victoria, a former palm oil plantation, in the district of Brokopondo. The main focus of this project was to measure and observe the performance of the different traditional rice varieties and methods of planting, weed control and soil and water conservation.

The best practices, identified by farmers, are combined to develop a best option for intensified Upland Rice production. All done by experimental and scientific basis according to the experimental technical principles.

The experiment was implemented with the 14 local Upland Rice varieties. The experiment followed:

- Sowing technique;
Support to the Improvement of the Upland Rice Cultivation in Suriname

- Integrated Crop Management (Fertilizing and Pest included);
- External influences for example: weather (drought-stress) and blasts from the surroundings.

The 14 local Upland Rice varieties had been laid out in blocks of 3*3 m² with an average growing period of 4 months.

As a result of this experiment 3 of the local Upland Rice varieties have shown good potential in their vegetative and generative phases and resulted in promising yield results.

These 3 below mentioned varieties will be characterized in plant height, life cycle, number of leaves, type of grain, reaction to disease, in technical reports, called by their local names, are:

- Topi-Topi (red and white);
- Watra Lantie;
- Koelie Alesi (red and white).

### 3.2.2. Expected Situation by the end of the Project

With the results of the pilot project as an experiment, the purpose is to compare the local Suriname Upland Rice varieties with cultivated Upland Rice varieties from the geographical region, such as Brazil.

This will give the Surinamese rice expertise to experience the learning curve in the vital practical and theoretical knowledge with the present modernity and innovative cultivation techniques of Upland Rice.

The Surinamese Rice expertise is looking and willing to set up collaborated counterparts from abroad to optimize their learning curve on the experimental and scientific principles by an interchange of their knowledge of their local Upland Rice varieties and vice versa.

In this case the Surinamese rice expertise will guide and analyses the possibilities of the Brazilian Upland Rice varieties.

The project will have the following milestones:

- gendered participatory;
- rice and input markets access;
- best production practices;
- rice production options scaled out in communities neighboring the pilot intervention villages;
- to improve land productivity and smallholders incomes;
- partnership with national and international research and extension organizations by bringing together many actors involved in the Upland Rice chain to identify constraints and jointly develop solutions;
- bringing together national research institution, extension organization, international research and development organizations, rural extension workers, farmers groups, private seed and fertilizer companies, to participate in a continuous and interactive manner.

### 3.2.3. Project Description

To compare the local Suriname Upland Rice varieties with cultivate Upland Rice varieties from the geographical region, a training and research framework will be set up in a trilateral technical cooperation between Brazil – New Zealand – Suriname.

Within this framework Upland Rice experts will interchange their knowledge and experience to make the cultivation of Upland Rice in Suriname more sustainable with the experimental and scientific principles.
Support to the Improvement of the Upland Rice Cultivation in Suriname

This framework is based on an arable land of 5 ha on which 3 best local varieties will be compared with 4 varieties from Brazil.

In terms of costs and budget, this is based on the preparation for this project and the set-up for the cultivation (technical and integrated crop management) of Upland Rice on the 5 ha.

The land to be used for the trials is part of the old shut-down government-owned oil palm estate Victoria (1800 ha) in the district Brokopondo, where the government will start a private–public-participation agriculture project.

In the surroundings/environment of the proposed project area are different villages of the inlands of which members already have participated in the 5 ha observing trial project, meanwhile a great number of villages and inlands were consulted in the development of the project, also ministry of agriculture, also the private-public-participation, also the IDCS, also the government, also suppliers of equipment and machines. Land use risks will not exist for the reasons above.

Local stakeholders are and will be further involved in the development of the project especially enlarged after the elaboration of the exploratory first joint-mission.

3.2.4. Suriname Institutional Framework

The Ministry of Foreign Affairs of Suriname will be the coordinating institution for the political relations with Brazil and New Zealand. The Ministry will also be involved in working out financial strategies to make sure the funding for this project will be ensured from the side of Suriname.

The Ministry of Foreign Affairs will also facilitate the legal and administrative protocols to ensure legal aspects for the project signature by the Surinamese Government.

For this project implementation the Ministry of Agriculture will be the executing institution. This project will be part of a National Upland Rice Program which is yet to be designed and work out.

For this Program, a national coordinator will be appointed with a properly mandate and will be responsible for its execution and for all upcoming projects in its scope.

Different Departments and/or Institutions of the Ministry of Agriculture will participate under Ministry’s supervision and will also be considered and involved as important stakeholders.

SNRI/ADRON is the Rice Research Institute of the Ministry of Agriculture responsible for low land rice research and development in Suriname at national level.

The Seed Committee is the board responsible for monitoring the legislation of the Seed Law within the Government of Suriname.

Other Departments of the Ministry of Agriculture such as the Department of Soil Analysis, Department of the Innerland Development will also be involved in this project.

The extension service of the Ministry of Agriculture will have an active role within this project because their technicians will be trained for the cultivation of Upland Rice in Suriname, so the knowledge and experience gained can be transferred to the local farmers.
3.2.5. Strategy of Sustainability

The strategy of sustainability is based on the production of food in the inner land which will have the possibilities to make use of new developments of technology and innovative mechanization.

This means there will be a focus on the quality improvement in areas with the common 'shifting cultivation' of Upland Rice as main food.

For a sustainable realization of the above mentioned, critical gaps have to be bridged with:

- supply of excellent sowing-seed;
- supply of environmental friendly fertilizers, herbicides, insecticides and fungicides;
- technical cultivation expertise and practical guidance;
- processing;
- financial and social management.

All this focused to improve the production capacity for the Inner land.

Victoria area will be used to make the trials, in this area participatory experiments will be carry out to develop site-specific recommendations for Upland Rice production and to evaluate different practices for intensive rice production including representatives of farmers, researchers, extension organizations and the private sector.

The sustainability will be assured as follow: the set-up of the private-public-participation of upland rice plant will supply good qualified seeds and buy their harvest in a win-win model.

3.2.6. Direct and Indirect Beneficiaries

Direct beneficiary of this project will be farmers of the Maroon Culture. With an optimized cultivation of Upland Rice with good varieties, the consumption on a daily basis can be guaranteed in food security, which is crucial in this.

Farmers, especially women (gender) are and will be selected by organization of the project in cooperation with the extension service of the ministry of agriculture, of which some are already identified; they will not be nominated by local groups; they will be trained directly to start their own innovative planting.

In the surroundings/environment of the proposed project area are different villages of the inlands of which members already have participated in the 5 ha observing trial project, meanwhile a great number of villages and inlands were consulted in the development of the project, also ministry of agriculture.

Indirect the production of food in the Inner land will have the possibilities to make use of new developments of technology and innovative mechanization. This means there will be a focus on the quality improvement in areas with the common 'shifting cultivation' of Upland Rice as main food.

4. FINANCIAL ARRANGEMENT

With the purpose of accelerating the development of Project activities and promoting adequate use of resources as established in the procedures of participating institutions, the management and financial execution will be carried out according to the legislation applicable to each Project component in force in Brazil, in New Zealand and in Suriname.
4.1. Contribution of the Government of Brazil

The Government of Brazil will provide the Project with financial resources in the total amount of USD 89,624 (eight nine thousand six hundred twenty-four US dollars). Such sum comprises the funding and the direct execution under the responsibility of the Brazilian Cooperation Agency (ABC/MRE), as well as the indirect execution carried out by the Brazilian Agriculture Research Corporation (Embrapa), described as follows:

4.1.1. Contribution of the Brazilian Cooperation Agency (ABC/MRE)

Due to the Brazilian Government’s experience in implementing technical training and capacity building activities, ABC will directly and discretionarily execute the budget related to activities, in the total amount of USD 44,164 (fourty four thousand one hundred sixty-four US dollars), within the Annual Work Plans previously approved by the Steering Committee, and it will receive technical support by Embrapa. The resources will be directly used by ABC in conformity with the rules and regulations governing the technical cooperation provided by the Brazilian Government. In this sense, the National Program Coordination, supported by ABC, shall carry out the necessary administrative proceedings related to hiring consultants, procuring goods and services, requesting airline tickets and daily allowances, and submitting invoices.

Expenditures to be incurred by the Government of Brazil shall be requested by the National Coordinator and approved by ABC, upon appraisal of the representative assigned by the Government of New Zealand.

4.1.2. Contribution of Embrapa

Embrapa’s contribution will be provided by donation of four upland rice cultivars: BRS Esmeralda, BRSMG Curinga, BRS Pepita and BRS Sertaneja (10 kilos of each cultivar) and assigning experts to participate in the project, who will directly carry out activities with the project beneficiaries and who will join the Technical Committee and technical missions, as well as attend the Steering Committee meeting upon prior invitation.

The in-kind support provided by Embrapa amounts to USD 48,000 (forty eight thousand US dollars) and relates to the participation hours of 2 experts in the project, either in an episodic or continuous way, during a total period of about 12 months.

4.2. Contribution of the Government of New Zealand

As contribution, the Government of New Zealand will assist with a total sum equivalent to USD 45,480 (forty five thousand four hundred eighty US dollars), which will be jointly managed in strict coordination with ABC by means of an financial agreement with the United Nations Development Program (UNDP). For approval purposes, the funding will be registered in US dollars, according to the currency exchange rate on the date such resources are formally transferred to ABC. The funding will be provided as follows:

- This total sum will be transferred in a single installment to ABC, aiming at the implementation of the Annual Operating Plan according to budget contribution modalities agreed on. The partners agree on applying to the overall budget execution the same rules that govern the technical cooperation provided by the Brazilian Government through UNDP.
The in-kind support provided by LandCare Research amounts to **USD 32,000 (thirty two thousand US dollars)** and relates to the participation hours of 1 expert in the project, either in an episodic or continuous way, during a total period of about 12 months.

### 4.3. Contribution of the Government of Suriname

The contribution of the Ministry of Agriculture, Animal Husbandry and Fisheries will sum **USD 132,650 (one hundred thirty two thousand six hundred and fifty US dollars)**.

This contribution will be mainly in-kind, provided by means of assigning a technical staff for the Project and providing the necessary facilities for the activities of the National Program Coordination and its Project Management Unit, in the city of Paramaribo, which includes basic utilities, such as Internet service, electric energy, water supply, telephone line, car with driver, as well as the payment for the services of technical professionals from government institutions, and others. Furthermore, the National Coordinator is expected to be preferably a public servant assigned by the Ministry of Agriculture, Animal Husbandry and Fisheries.

The in-kind support provided by the Ministry of Agriculture, Animal Husbandry and Fisheries will be related to technical assistance delivered by experts in charge of carrying out the Project.

### 5. INSTITUTIONAL ARRANGEMENT

The proposal of institutional arrangement for the Project is based on the attempt to effectively implement trilateral cooperation so as to promote mutual assistance, exchange of experiences and combination of different competencies and synergies with the purpose of achieving a common objective. The trilateral arrangement represents a new cooperation experience that arises from the desire to value and share with the Government of Suriname the Brazilian and New Zealander cooperation experiences, in order to add to and complement the experiences of the three countries.

This initiative will serve as basis and starting point for jointly designing a locally-adapted methodology, which will result from effective cooperation among the parties and the interaction with the community. The partners will capitalize on the experiences acquired, which will thus become important contributions for the development and improvement of a unique methodology that may be adapted to other places in Suriname and in the Region.

#### 5.1 Project Management Structure (Directorate)

The institutional arrangement for the Project management encompasses two bodies, one at the strategic level (Steering Committee) and another at the operational level (Project Management Unit), whose members and responsibilities are listed as follows:

- **Trilateral Steering Committee**

  It will be formed by a representative and/or deputy representative from the Governments of Brazil, of New Zealand, and of Suriname. The Committee will act at the strategic level and its main role will be to follow up on, to monitor and to evaluate the Project, as well as carry out all its activities in a strategic way.

  The Committee will promote effective cooperation among the partners, which is the purpose of the trilateral cooperation, in addition to providing the means for efficient and effective Project management, as well as permanent exchange of experiences between the executing Surinamese institution and the international partner institutions. Its members will meet twice during the 12-
Support to the Improvement of the Upland Rice Cultivation in Suriname

months period in the city of Paramaribo, aiming at to evaluate "in site" strategy implementation; the first time will be dedicated to evaluating the progress implementation of the Annual Operating Plan, whereas the second one will be focused on Project final evaluation and completion. Moreover, there may be ad hoc meetings, including via videoconference.

During the meetings, the Committee will analyze progress reports, the annual schedule encompassed by the Annual Operating Plan, documents previously submitted for the appraisal of the Committee members, who shall approve progress reports (both on technical and financial matters) and the Operating Plan. If deemed necessary, ad hoc meetings may be held with the purpose of addressing critical issues related to project implementation.

- Project Management Unit – PMU (Technical group)

For the implementation of activities and decisions from the Trilateral Steering Committee, a Project Management Unit will be formed, comprised of a locally assigned and multidisciplinary team of experts.

During the Project validity, the PMU will be comprised of a local permanent staff under the guidance of the National Coordinator, who may preferably be a public servant assigned by the Government of Suriname and who will count on the support from technical advisors assigned by the Government of Brazil and Landcare Research of New Zealand to ensure the transfer of the knowledge and experience acquired by these countries.

Besides its own experience as mentioned before, the PMU shall also reference the Project methodology on those experiences acquired by Brazilian and New Zealand institutions dedicated to agricultural development, namely EMBRAPA Arroz e Feijão, in Brazil, and LandCare Research, in New Zealand.

Furthermore, the PMU will be responsible for implementing local activities as planned and preparing the technical and financial reports related to resources made available by the partners.

The PMU, with support from the National Coordinator, shall submit biannual progress reports to the Steering Committee, encompassing the monitoring and progress of activities described in the Annual Operating Plan previously approved by such Committee. On behalf of the PMU, the National Coordinator shall also inform the Steering Committee about possible delays, conflicts and difficulties related to project implementation.

6. PROJECT STRUCTURE

The proposal for the trilateral cooperation is meant to effectively build capacities related to mutual assistance, exchange of experiences and combination of different competencies and synergies with the purpose of achieving a common objective. So as to accomplish such purpose, the action rationale is described as follows:

6.1. Background

The request for preparing the project was submitted during the first semester of 2014, at preliminary negotiations and previous consultations aimed at assigning a team to be responsible for its coordination and implementation. Afterwards, there was the setting of the governance structure for the cooperation activities yet to be programmed. At last, the Parties involved in the initiative planned a fact-finding mission, carried out from May, 26th to 30th, 2014, in Surinam, with the purpose of gathering details about the request at the site, and also collecting the necessary information about the upland rice cultivation practices used in the region the future project would target. Such mission was funded with resources.
Support to the Improvement of the Upland Rice Cultivation in Suriname

from ABC and from the New Zealander counterpart, and had as product a preparation and implementation plan, concretized in this project. This activity implied direct costs to ABC in the amount of USD 12,224 (twelve thousand two hundred twenty-two US dollars), which will be deducted from the total amount assigned to the initiative.

6.2. Overall Objective

Strengthening the upland rice cultivation techniques in order to improve the production and productivity of the upland rice in local communities of Suriname.

6.3. Specific Objective

1) Evaluate and characterize upland rice cultivars (4 from Brazil and 3 from Suriname), under favourable conditions of Suriname (plant types; lengths; growing periods; grain quality; resistant of diseases and pests; tolerance of drought and unfavorable soil types and high yield potential).

2) Evaluate the effects of rates of N, P and K sowing fertilization on the upland rice grain yield;

3) Supporting the practical guidance for upland rice cultivation and training for technicians to have the knowledge to implement innovative techniques.

6.4. Expected Results/Outcomes

Outcome 1
Upland rice cultivation has been strengthened and varieties have been selected to provide the most improved, developed and suitable upland rice production under favorable conditions for Suriname.

Outcome 2
Rates of N, P and K sowing fertilization of upland rice have been evaluated and the proper rate of each nutrient to promote the highest upland rice grain yield has been identified.

Outcome 3
Upland rice cultivation techniques have been demonstrated and strengthened at local and/or national levels in order to train technicians in best practice technical cultivation techniques, knowledge and practical guidance.

Outcome 4
A communication strategy has been developed to promote knowledge exchange to technicians on best practices and overcome main challenges for improving the production and productivity of upland rice production.

Outcome 5
Monitoring, evaluation and technical missions have been carried out to evaluate the project implementation goals.

6.5. Activities

Outcome 1
Upland rice cultivation has been strengthened and varieties have been selected to provide the most improved, developed and suitable upland rice production under favorable conditions for Suriname.

Activity 1.1 – Shipping of upland rice cultivars to Suriname.
Support to the Improvement of the Upland Rice Cultivation in Suriname

**Description of activity:** availability and shipping of four varieties of upland rice; provision of information about Surinamese phytosanitary requirements; issuance of phytosanitary export certificates and other procedures deemed necessary for the shipping of material to Suriname.

**Location:** Brazil

**Duration:** related to analysis required in the Import Permit and the issuance of export certificates.

**Funding Institution:** New Zealand

**Month Scheduled:** month 3 – however, it depends on Import Permit requirements as determined by the Government of Suriname.

**Responsible Institution:** Government of Suriname (providing information about phytosanitary requirements); Embrapa (selecting and providing cultivars); certified laboratories (issuing phytosanitary certificates); ABC (providing logistics support for the shipping of seeds and procuring laboratory services as required).

**Note:** As this activity directly relies on access to information about phytosanitary requirements of the Government of Suriname on the import of seeds, related costs are based on an estimate, which may vary according to the aforementioned requirements.

In addition, the time necessary for the shipping of seeds to Suriname directly depends on the length of laboratory analysis as required in the Import Permit of the Government of Suriname. Finally, it is important to mention that procedures related to the provision of seeds will only be started after the Project document is signed.

**Cost detail – Activity 1.1**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Cost Details</th>
<th>Sub-total US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selection and disponibilization of cultivars. Issuing by Lab authorities, the required certification according to phytosanitary requirements. Shipping seeds.</td>
<td>Logistics shipping and tests payment</td>
<td>6,000</td>
</tr>
</tbody>
</table>

**SUB-TOTAL MONETARY (NEW ZEALAND)**

US$ 6,000

**Activity 1.2** – Technical Brazilian missions to Suriname to (i) set out and plant the trials with improved upland rice varieties and different levels of fertilizer applications and (ii) evaluate the rice harvest (Month 5, 2015 linked to Activity 2.1).

**Location:** Suriname

**Duration:** 3-4 months (2 visits x 2 researchers - one week 1st mission and 10 days 2nd mission linked to Activity 2.1)

**Funding Institution:** New Zealand, Suriname

**Month scheduled:** Months 1 and 5

**Cost detail – Activity 1.2**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Cost Details</th>
<th>Sub-total US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travelling</td>
<td>2 experts per 4 air tickets x 1,000</td>
<td>4,000</td>
</tr>
</tbody>
</table>
Support to the Improvement of the Upland Rice Cultivation in Suriname

**Technical hours of Embrapa (4 technicians)**
4 technicians x 8 hours x U$$100 x 5 days x 20% (mission preparing)

**Per diem (meals and accommodation)**
4 participants x 5 days x 196/day

**Fertilizers, herbicides, insecticides, fungicides, seeds supplies etc.**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Cost Details</th>
<th>Sub-total US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land preparation 5 ha</td>
<td>5 ha x U$$540/ha</td>
<td>2,700</td>
</tr>
<tr>
<td>Sowing-seed</td>
<td>5 ha x 80kg/ha x U$$4,50/kg</td>
<td>1,800</td>
</tr>
<tr>
<td>Sowing</td>
<td>5 ha x 5day x 5 workers/day x US$$37,50/day</td>
<td>4,687.50</td>
</tr>
<tr>
<td>Crop management:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Fertilizing Labour</td>
<td>5 ha x U$$495/ha</td>
<td>2,475</td>
</tr>
<tr>
<td></td>
<td>5 ha x 4 frequency x US$$1150/day</td>
<td>3,000</td>
</tr>
<tr>
<td></td>
<td>5 ha x U$$150/ha</td>
<td>750</td>
</tr>
<tr>
<td>• Weed/Pests Labour</td>
<td>5 ha x 6 frequency x US$$75/day</td>
<td>2,250</td>
</tr>
<tr>
<td>Harvest</td>
<td>5 ha x U$$217,50/ha</td>
<td>1,087.50</td>
</tr>
<tr>
<td>Storage &amp; Processing</td>
<td>5 ha x U$$1,470/ha</td>
<td>7,350</td>
</tr>
<tr>
<td>Labour</td>
<td>120 days x U$$225/day</td>
<td>27,000</td>
</tr>
<tr>
<td>Project management</td>
<td>120 days x U$$450/day</td>
<td>54,000</td>
</tr>
</tbody>
</table>

**SUBTOTAL MONETARY (NEW ZEALAND)**
US$ 21,920

**SUBTOTAL IN-KIND (Embrapa)**
US$ 19,200
Outcome 2
Rates of N, P and K sowing fertilization of upland rice have been evaluated and the proper rate of each nutrient to promote the highest upland rice grain yield has been identified.

Activity 2.1 – Technical Brazilian mission to Suriname to evaluate rates of N, P and K sowing fertilization of upland rice and identify the proper rate of each nutrient to promote the highest upland rice grain yield (Month 5, 2015 linked and budgeted to Activity 1.2).

Location: Suriname
Duration: 5 days (Activity linked to Activity 1.2)
Funding Institution: ABC, Suriname
Month scheduled: Month 5

Cost detail 2.1 linked to Activity 1.2 – No costs related

Outcome 3
Upland rice cultivation techniques have been demonstrated and strengthened at local and/or national levels in order to train technicians in best practice technical cultivation techniques, knowledge and practical guidance.

Activity 3.1 – Training technicians in crop management (including extension technicians)
Location: Suriname
Duration: 10 days, 1 week each mission, 1st mission linked to Activity 1.2 being 10 days
Funding Institution: ABC, Suriname
Month scheduled: Month 5, 2015 (possible mission linked to Activity 1.2 – 10 days)

Cost detail – Activity 3.1

<table>
<thead>
<tr>
<th>Activity</th>
<th>Cost Details</th>
<th>Sub-total US$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Travelling 2 experts (October 2015)</strong></td>
<td>2 air tickets x 1,000</td>
<td>2,000</td>
</tr>
<tr>
<td><strong>Per diem for the 1st mission linked to Activity 1.2 - March 2015 (meals and accommodation)</strong></td>
<td>2 participants x 4 days x 196/day</td>
<td>1,598</td>
</tr>
<tr>
<td><strong>Per diem for the 2nd mission October 2015 (meals and accommodation)</strong></td>
<td>2 participants x 7 days x 196/day</td>
<td>2,744</td>
</tr>
<tr>
<td><strong>Technical hours of Embrapa (4 technicians)</strong></td>
<td>4 technicians x 8 hours x US$100 x 5 days x 20% (mission preparing)</td>
<td>19,200</td>
</tr>
</tbody>
</table>

**SUBTOTAL MONETARY (NEW ZEALAND)** | **US$ 6,342** |
Support to the Improvement of the Upland Rice Cultivation in Suriname

<table>
<thead>
<tr>
<th>Activity</th>
<th>Cost Details</th>
<th>Sub-total US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documentation Flow-Charts</td>
<td>5 days x US$ 300/day</td>
<td>1,500</td>
</tr>
<tr>
<td>Practical training at least 20 technicians</td>
<td>40 days x US$ 300/day</td>
<td>12,000</td>
</tr>
<tr>
<td>Guiding technicians on-site</td>
<td>40 days x US$ 300/day</td>
<td>12,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUB-TOTAL IN-KIND (Embrapa)</th>
<th>US$ 19,200</th>
</tr>
</thead>
</table>

Activity 3.2 – Implementation of the best results of the activity 1.2 in big plots (observation unit) to show to the technicians

Location: Suriname
Duration: 1 to 7 months
Funding Institution: ABC, Suriname (no costs)
Month scheduled: Month 5 to 12 (linked to Activity 2.1 – 10 days)

Cost detail 3.2 linked to Activity 2.1 – No costs related

Outcome 4

A communication strategy has been developed to promote knowledge exchange to technicians on best practices and overcome main challenges for improving the production and productivity of upland rice production.

Activity 4.1 – A final seminar to demonstrate best practices and lessons learnt from the challenges of the collaboration and presentation of a final report and conclusions.

Location: Suriname
Duration: 1 ½ day (linked to 2nd mission of the Activity 3.1)
Funding Institution: New Zealand
Month scheduled: Month 12
Cost detail – Activity 4.1

<table>
<thead>
<tr>
<th>Activity</th>
<th>Cost Details</th>
<th>Sub-total US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Seminar to evaluate the project activities and conclusions</td>
<td>Costs on materials, reports, printing, coffee break, meals etc.</td>
<td>4,258</td>
</tr>
<tr>
<td>Technical hours Land Care</td>
<td>(1 technician)</td>
<td>10,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUB-TOTAL MONETARY (NEW ZEALAND)</th>
<th>US$4,258</th>
</tr>
</thead>
</table>

17
Activity 4.2 – Upland rice material and reports produced and translated.

| Location: | Suriname |
| Duration: | 120 days |
| Funding Institution: | ABC |
| Month scheduled: | Month 2 and 12 |

Cost detail – Activity 4.2

<table>
<thead>
<tr>
<th>Activity</th>
<th>Cost Details</th>
<th>Sub-total US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upland rice material and reports produced and translated</td>
<td>Costs on the production and translation of upland rice material</td>
<td>26,000</td>
</tr>
</tbody>
</table>

Output 5

Monitoring and evaluation missions have been carried out.

Activity 5.1 – To carry out two monitoring and evaluation missions.

| Location: | Suriname |
| Duration: | 5 days (each mission – to coincide with technical missions) |
| Funding Institution: | ABC, New Zealand |
| Month scheduled: | Months 5 and 12 |

Cost detail – Activity 5.1

<table>
<thead>
<tr>
<th>Activity</th>
<th>Costs Details</th>
<th>Subtotal US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Brazilian monitoring and evaluation missions (Brazil)</td>
<td>3 air tickets x US$ 1,000</td>
<td>3,000</td>
</tr>
</tbody>
</table>

Technical hours of Embrapa (1 technician) | 8 hours x US$100 x 5 days x 20% (mission preparing) | 4,800 |

Per diem (accommodation and meals) | 5 days x 196 x 3 | 2,940 |

SUBTOTAL MONETARY (ABC) US$5,940

SUBTOTAL IN-KIND (Embrapa) US$4,800

<table>
<thead>
<tr>
<th>Activity</th>
<th>Costs Details</th>
<th>Subtotal US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 monitoring and evaluation mission (New Zealand)</td>
<td>1 air ticket x US$ 4,000</td>
<td>4,000</td>
</tr>
</tbody>
</table>

Per diem (accommodation and meals) | 5 days x 196 | 980 |
<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity/Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 monitoring and evaluation mission</td>
<td>1 air ticket x US$ 1,000</td>
<td>1,000</td>
</tr>
<tr>
<td>(New Zealand Brazil)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per diem (accommodation and meals)</td>
<td>5 days x 196</td>
<td>980</td>
</tr>
<tr>
<td>Technical hours of Land Care of Representative from de NZ Embassy</td>
<td>1 technician from Land Care or NZ Embassy Brasilia</td>
<td>7,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SUBTOTAL MONETARY (NEW ZEALAND)</strong></td>
<td></td>
<td><strong>US$6,960</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SUBTOTAL IN-KIND (NEW ZEALAND)</strong></td>
<td></td>
<td><strong>US$ 7,000</strong></td>
</tr>
</tbody>
</table>
### Support to the Improvement of the Upland Rice Cultivation in Suriname

#### 7. WORKPLAN (REVIEW)

#### 7. 1. Logical Framework Indicators, Means of Verification and Important Assumptions

**MATRIX FRAMEWORK**

<table>
<thead>
<tr>
<th>Project Structure</th>
<th>Objectively Verifiable Indicators</th>
<th>Means of Verification</th>
<th>Important Assumptions/Risks</th>
</tr>
</thead>
</table>
| Overall Objective | Strengthening the upland rice cultivation techniques in order to improve the production and productivity of the upland rice in local communities of Suriname. | • Selection of Upland Rice variety(ies)  
• Training extension technicians on Integrated Crop-management  
• Upland rice materials produced | • 4 x intervention visits  
• 4 x Level of Joint Execution Reports | Seeds imports from Brazil |
| Specific Objectives | 1) Selection of upland rice varieties, the most improved, developed and suitable under favorable conditions for Suriname (plant types; lengths; growing periods; grain quality; resistant of diseases and pests; tolerance of drought and unfavorable soil types and high yield potential).  
2) Rates of N, P and K sowing fertilization of upland rice have been evaluated and the proper rate of each nutrient to promote the highest upland rice grain yield has been identified.  
3) Supporting the practical guidance for upland rice cultivation and training for technicians to have the knowledge to implement | • Cultivation of 7 varieties of Upland Rice:  
• 3 Local varieties;  
• 4 Brazilian varieties;  
• Evaluation of N, P and K rates at the sowing fertilization  
• Trainings on Integrated Crop Management | • Yield at least 2 ton/ha per variety  
• Certification  
• Practical guidance material produced  
• Plant types;  
• lengths;  
• growing periods;  
• grain quality;  
• resistant of diseases and pests;  
• tolerance of drought and unfavorable soil types;  
• high yield potential. | |
| Results/Outcomes | Outcome 1 - Upland rice cultivation has been strengthened and varieties have been selected to provide the most improved, developed and suitable upland rice production under favorable conditions for Suriname. | • Variety(ies) selected  
• Fertilization rates defined  
• Planting and harvesting reports  
• Pre-Project Proposal Agreed  
• Formation Steering and technical Committees and PIU | • Signing October 2014  
• Funds November 2014  
• Formation 2015 | |
| | Outcome 2 - Rates of N, P and K sowing fertilization of upland rice have been evaluated and the proper rate of each nutrient to promote the highest upland rice grain yield has been identified. | • Evaluation of N, P and K rates at the sowing fertilization | • Travel reports on missions | 
## Support to the Improvement of the Upland Rice Cultivation in Suriname

<table>
<thead>
<tr>
<th>Project Structure</th>
<th>Objectively Verifiable Indicators</th>
<th>Means of Verification</th>
<th>Important Assumptions/Risks</th>
</tr>
</thead>
</table>
| Outcome 3 - Upland rice cultivation techniques have been demonstrated and strengthened at local and/or national levels in order to train technicians in best practice technical cultivation techniques, knowledge and practical guidance. | - At least 2 training courses  
- At least 20 technicians  
- Observation unit implemented  
- Upland rice materials produced and translated | - Travel reports on missions | -  |
| Outcome 4 - A communication strategy has been developed to promote knowledge exchange to technicians on best practices and overcome main challenges for improving the production and productivity of upland rice production. | - Seminar on best practices carried out  
- Upland rice material produced | - Technical reports  
- Final report produced  
- Practical guidance elaborated/translated | -  |
| Outcome 5 - Monitoring, evaluation and technical missions have been carried out to evaluate the project implementation goals. | - At least 4 technical mission carried out;  
- M&E missions carried out;  
- Participation in the Final Seminar. | - Technical reports elaborated  
- Final report produced | -  |
### Support to the Improvement of the Upland Rice Cultivation in Suriname

#### 7.2.- Implementation Schedule

<table>
<thead>
<tr>
<th>Activities</th>
<th>Schedule (months)</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Activity 1.1</strong> Shipping of upland rice cultivars to Suriname.</td>
<td></td>
<td>• Cultivars shipped.</td>
</tr>
</tbody>
</table>
| **Activity 1.2** – Technical Brazilian missions to Suriname to (i) set out and plant the trials with improved upland rice varieties and different levels of fertilizer applications, (November 2014) and (ii) evaluate the rice harvest (linked to Activity 2.1). | **Schedule** 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 | • Trials implemented  
  • Techniques on Upland Rice Cultivation acquired and strengthened;  
  • Evaluation of N, P and K rates at the sowing fertilization implemented |
| **Activity 2.1** – Technical Brazilian mission to Suriname to evaluate rates of N, P and K sowing fertilization of upland rice and identify the proper rate of each nutrient to promote the highest upland rice grain yield (linked and budgeted to Activity 1.3). |                   | • Extension technicians trained and certified;  
  • Practical guidance elaborated; and  
  • Final variety report elaborated. |
| **Activity 3.1** – Training technicians in crop management (including extension technicians) |                   | • Units of observation implanted |
| **Activity 3.2** – Implementation of the best results of the Activity 1.2 in big plots (observation unit) to show to the technicians |                   | • Evaluation Seminars carried out;  
  • Communication strategy planned and implemented; and  
  • Final report elaborated. |
| **Activity 4.1** – A final seminar to demonstrate best practices and lessons learnt from the challenges of the collaboration and presentation of a final report and conclusions. |                   | • Monitoring and evaluation missions carried out;  
  • Technical missions carried out;  
  • Upland Rice cultivation strengthened |
| **Activity 4.2** – Upland rice material and reports produced and translated. |                   | • Monitoring and evaluation missions carried out;  
  • Technical missions carried out;  
  • Upland Rice cultivation strengthened |
| **Activity 5.1** – To carry out two monitoring and evaluation missions.     |                   | • Monitoring and evaluation missions carried out;  
  • Technical missions carried out;  
  • Upland Rice cultivation strengthened |
Support to the Improvement of the Upland Rice Cultivation in Suriname

### 7.3 – Financial Framework w/ Detailed Costs

<table>
<thead>
<tr>
<th>OUTCOMES / ACTIVITIES</th>
<th>TOTAL ABC</th>
<th>TOTAL NEW ZEALAND</th>
<th>TOTAL SURINAME</th>
<th>SUB-TOTAL PROJECT</th>
<th>TOTAL SURINAME</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Monetary Costs</td>
<td>In-Kind Costs</td>
<td>Monetary Costs</td>
<td>In-Kind Costs</td>
<td>Monetary Costs</td>
</tr>
<tr>
<td>Outcome 1</td>
<td>12.224</td>
<td>24.000</td>
<td>27.920</td>
<td>15.000</td>
<td>107.150</td>
</tr>
<tr>
<td>Activity 1.1</td>
<td>-</td>
<td>-</td>
<td>6.000</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Outcome 2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Activity 2.1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Outcome 3</td>
<td>-</td>
<td>19.200</td>
<td>6.342</td>
<td>-</td>
<td>25.500</td>
</tr>
<tr>
<td>Activity 3.2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Outcome 1**: Upland rice cultivation has been strengthened and varieties have been selected to provide the most improved, developed and suitable upland rice production under favorable conditions for Suriname.

**Fact-Finding Mission**: Technical mission to Suriname in order to have comprehensive information on local upland rice cultivation data.

**Activity 1.1**: Shipping of upland rice cultivars to Suriname.

**Activity 1.2**: Technical Brazilian missions to Suriname to (i) set out and plant the trials with improved upland rice varieties at different levels of fertilizer applications, using good quality seed (November 2014) and (ii) evaluate the rice harvest (linked to Activity 2.1).

**Outcome 2**: Rates of N, P and K sowing fertilization of upland rice have been evaluated and the proper rate of each nutrient to promote the highest upland rice grain yield has been identified.

**Activity 2.1**: Technical Brazilian mission to Suriname to evaluate rates of N, P and K sowing fertilization of upland rice and identify the proper rate of each nutrient to promote the highest upland rice grain yield (linked and budgeted to Activity 2.1).

**Outcome 3**: Upland rice cultivation techniques acquired and strengthened by local and/or national levels in order to train farmers in technical cultivation (integrated crop-management) knowledge and practical guidance.

**Activity 3.1**: Training technicians in crop management (including extension technicians)

**Activity 3.2**: Implementation of the best results of the activity 1.2 in big plots (observation unit) to show to the technicians.
Support to the Improvement of the Upland Rice Cultivation in Suriname

<table>
<thead>
<tr>
<th>OUTCOMES / ACTIVITIES</th>
<th>TOTAL ABC</th>
<th>TOTAL NEW ZEALAND</th>
<th>TOTAL SURINAME</th>
<th>SUB-TOTAL PROJECT</th>
<th>TOTAL PROJECT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Monetary Costs</td>
<td>In-Kind Costs</td>
<td>Monetary Costs</td>
<td>In-Kind Costs</td>
<td>Monetary Costs</td>
</tr>
<tr>
<td>Outcome 4</td>
<td>26,000</td>
<td>-</td>
<td>4,258</td>
<td>10,000</td>
<td>-</td>
</tr>
<tr>
<td>Activity 4.1</td>
<td>-</td>
<td>-</td>
<td>4,258</td>
<td>10,000</td>
<td>-</td>
</tr>
<tr>
<td>Activity 4.2</td>
<td>26,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Outcome 5</td>
<td>5,940</td>
<td>4,800</td>
<td>6,960</td>
<td>7,000</td>
<td>-</td>
</tr>
<tr>
<td>Activity 5.1</td>
<td>5,940</td>
<td>4,800</td>
<td>6,960</td>
<td>7,000</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL</td>
<td>44,164</td>
<td>48,000</td>
<td>45,480</td>
<td>32,000</td>
<td>132,650</td>
</tr>
</tbody>
</table>
8. TECHNICAL MISSIONS

With the purpose of supervising the onsite implementation of the Program, checking the development of planned actions and ensuring permanent exchange of experiences with the PMU and other local stakeholders, the Governments of Brazil and/or New Zealand will send technical missions on an annual basis. Such missions are expected to last three days and will be carried out according to the implementation schedule. The schedule must be agreed on with the PMU so as to harmonize it with the work schedule and the dates the Steering Committee will hold meetings.

The missions may be comprise of representatives from the Governments of Brazil and of New Zealand, coordinated by ABC and a representative from the Government of New Zealand, and having as focal points EMBRAPA and LandCare Research. Such missions are also intended to provide technical assistance to support the Steering Committee and the PMU with regard to technical issues that may arise during supervision works. Whenever deemed necessary, there may be ad hoc meetings via videoconference.

9. MONITORING AND EVALUATION

9.1. Monitoring

Monitoring will be aimed at ensuring a sound development to the Project, good information flow, Project implementation and its verification with the beneficiaries. The supervision will also provide means for redefining the Project strategy if necessary. When the Project is started, the following activities must be carried out:

a. Checking indicators that are most suitable for socioeconomic analysis, considering their use as tools to design the Project strategy.

b. Supporting the updating of a baseline, that is, the gathering of relevant socioeconomic and production data about the territory, which will be the starting point for the Project. After its completion, such information will be contrasted with the impact indicators.

c. Designing an internal control system, fed with data collected by national experts.

Monitoring results will be used for preparing the semester reports and will serve as starting points for Project evaluation activities.

The PMU will prepare an initial Annual Operating Plan to implement the first phases. Afterward, a progress report and a complete Annual Operating Plan shall be prepared one month before the Steering Committee meeting.

The monitoring and evaluation missions will be carried out by ABC and representative(s) from the Governments of New Zealand and of Suriname, as of the Steering Committee meetings. External consultants may also be hired with the purpose of addressing specific issues that may arise during the Project implementation.

9.2. Evaluation

So as to address specific issues that may arise during the Project implementation, there will be two evaluations, a mid-term one and another at Project completion. The evaluation missions will coincide with the monitoring missions.
Support to the Improvement of the Upland Rice Cultivation in Suriname

10. RESPONSIBILITIES OF THE GOVERNMENTS

The Brazilian Government, through the Brazilian Cooperation Agency (ABC), under the Ministry of External Relations, will be responsible for:

a. Supporting the preparation, negotiation and approval or proposals for the Project Document, as well as monitoring, following up on and evaluating activities as set in the Project implementation schedule;
b. Assisting the implementation of technical activities, by assigning experts to perform them as agreed on;
c. Supporting the implementation of activities by providing financial contributions as defined in the work plan and under the direct management of ABC, in accordance with the respective budget execution schedule;
d. Defining, jointly with other implementing institutions, the terms of reference and the technical specifications of goods and services to be procured so as to provide means for the implementation of activities;
e. Holding monitoring and evaluation meetings by means of the Steering Committee;
f. Coordinating with the parties involved in the Project implementation, whenever changes and adjustments are deemed necessary and indispensable for a sound development of activities;
g. Receiving and evaluating progress reports submitted by the partner implementing institution, in which the latter describes the performance of its duties, informing and detailing the progress of ongoing activities; in addition to the submission of the Annual Operating Plan for the following years to be approved by the Governments;
h. Carrying out technical missions with the purpose of onsite monitoring of activities as planned in the Project, as well as to ensure permanent exchange of experiences with the Project Management Unit and other local stakeholders;
i. Assisting the national authorities in the settlement of disputes related to this initiative, and also related to its participation in decision-making meetings.

The Government of New Zealand, through the New Zealand Embassy in Brazil, and Landcare Research, will be responsible for:

a. Supporting the preparation, negotiation and approval or proposals for the Project Document, as well as monitoring, following up on and evaluating activities as set in the Project implementation schedule;
b. Assisting the implementation of technical activities, by assigning experts to perform them as agreed on;
c. Supporting the implementation of activities by providing financial contributions as defined in the work plan and under the direct management of DGSC, in accordance with the respective budget execution schedule.
d. Defining, jointly with other implementing institutions, the terms of reference and the technical specifications of goods and services to be procured so as to provide means for the implementation of activities, when applicable;
e. Holding monitoring and evaluation meetings by means of the Steering Committee;
f. Coordinating with the parties involved in the Project implementation, whenever changes and adjustments are deemed necessary and indispensable for a sound development of activities;
g. Receiving and evaluating progress reports submitted by the partner implementing institution, in which the latter describes the performance of its duties, informing and detailing the progress of ongoing activities; in addition to the submission of the Annual Operating Plan for the following years to be approved by the Governments;
h. Carrying out technical missions with the purpose of onsite monitoring of activities as planned in the Project, as well as to ensure permanent exchange of experiences with the Project Management Unit and other local stakeholders, when applicable;
Support to the Improvement of the Upland Rice Cultivation in Suriname

i. Assisting the national authorities in the settlement of disputes related to this initiative, and also related to its participation in decision-making meetings.

The Government of Suriname, through the **Ministry of Agriculture, Animal Husbandry and Fisheries**, will be responsible for:

a. Carrying out activities as informed in the Work Plan of this Project, in accordance with the implementation schedule agreed on;
b. Promoting adequate technical development of the Project, also by assigning experts to perform the activities agreed on;
c. Keeping close relations with the Brazilian Cooperation Agency (ABC) and (New Zealand representative) throughout the activities, also by submitting technical reports;
d. Coordinating with the parties involved in the Project implementation, whenever changes and adjustments are deemed necessary and indispensable for a sound development of activities;
e. Preparing the Annual Operating Plans, reports on the activities (both on technical and financial matters), reports on achieved results and impacts, and the final project report;
f. Holding the Steering Committee meetings, at least, once a year, as informed in this Project Document, for monitoring and evaluation purposes, as well as for carrying out technical meetings and onsite supervision of activities jointly with the Governments involved in the Project;
g. Coordinating with the other institutions involved in the Project implementation, aiming at ensuring a sound development and completion to planned activities;
h. Widely disseminating the methodologies and tools developed within the scope of the Project.

The Government of Brazil, through **Embrapa**, will be responsible for:

a. Supporting the preparation, negotiation and approval or proposals for the Project Document, as well as monitoring, following up on and evaluating activities as set in the Project implementation schedule;
b. Assigning experts to provide technical assistance to the Project development, in accordance with requests from ABC for their participation in the activities agreed on;
c. Assisting the preparation of terms of reference and technical specifications of goods and services to be procured for the Project;
d. Coordinating with its counterpart in the Steering Committee as for Project implementation, whenever changes and adjustments are deemed necessary and indispensable for a sound development of activities;
e. Assisting the evaluation of progress reports and the Annual Operating Plan;
f. Carrying out technical missions with the purpose of onsite monitoring of activities as planned in the Project, as well as to ensure permanent exchange of experiences with the Project Management Unit and other local stakeholders;
g. Keeping close relations with the Brazilian Cooperation Agency (ABC) throughout the activities.

11. CONCLUSION

The Project will be carried out with the purpose of improve the upland rice cultivation in Suriname by means of implementing practices related to best practices acquired in Brazil and New Zealand, so as to contribute to improve the living and food conditions of local communities.

The Project will have national coverage and will be comprised of monthly implementation phases. The first activities will take place in a priority region as defined by the Government of Suriname.

This document also covers the following specific objectives:
Support to the Improvement of the Upland Rice Cultivation in Surinam

- Promoting the exchange management experiences, as well as mechanisms and tools to improve practices related to improve the upland rice cultivation;
- Promoting technical visits;
- Exchange and disseminate technical, scientific and methodological knowledge on upland rice techniques;
- Support to build capacity of community leaders, maroon people, communities of peasants, technical staff from public institutions and institutions involved in response and support in the field of agriculture (upland rice cultivation);
- Promoting and sharing strategies of upland rice cultivation;
- Promoting processes aiming at jointly design public policies that allow the improvement of upland rice cultivation in areas where the intervention took place.

Costs for this Project are based on real and similar services provided in the country. Both countries will be responsible for contributions aimed at covering (monetary and in-kind) costs, in the total amount of USD 302,294 (Three hundred and two thousand two hundred ninety four dollars).

Both monetary and in-kind commitments will be shared as follows: USD 92,164 (ninety two thousand one hundred sixty four dollars) provided by the Brazilian Government; USD 77,480 (seventy seven thousand four hundred eighty dollars) provided by the New Zealand Government through UNDP - ABC; and USD 132,650 (one hundred thirty two thousand six hundred and fifty dollars) provided by the Surinamese Government.

The Project coordination and implementation, based on its management and responsibility for its execution, will be assigned to (Surinamese Institution), represented by the local National Coordinator to be designated by the Surinamese Government. Moreover, the National Coordinator will be in charge of ensuring basic conditions for project development and success, which also includes logistics support, and monitoring and evaluation activities approved by the Steering Committee, in addition to project promotion, by acknowledging and giving visibility to the participation of Brazil and New Zealand in conferences, meetings, events in general, printed materials, virtual media, and any other communication strategy implemented by the Surinamese party. Furthermore, as part of the national policy of Suriname, sustainability and institutionalization strategies for the Project activities must be identified.

12. GENERAL OBSERVATIONS

12.1. - INTELLECTUAL PROPERTY

Any activity whose product is capable of obtaining Intellectual Property (IP) that is designed, discovered, developed or put into practice in the execution of this project shall be reported in writing to the Embrapa within the agreed deadlines. This action includes, but not limited to, manuscripts, computer programs, inventions, developments, discoveries, concepts, trademarks, logos, and similar confidential information, whether patentable or subject to copyright or not.

The intellectual property rights of products designed, developed or discovered by the parties resulting from implementation of the Project will be jointly owned by Embrapa. The parties agree to respect the intellectual property rights of third parties for materials and other goods.

12.2. - COPYRIGHT

Without prejudice to item on Intellectual Property, shall be permitted free use of teaching materials and other publications developed under this project, provided that the parties undertake to provide for the celebration of their Terms of Assignment of Copyright or Equity Terms of Recognition Copyright Sheets,
as each case before the authors of the Works. These Terms shall be signed by each executing agency and co-executor with their employees who are authors of the Works.

12.3. - USE OF NAMES, LOGOS OR TRADEMARKS

For use by co-executing agencies of names, trademarks and logos of Embrapa, in any press release or publicity, prior written approval is required from Embrapa.

12.4. - TRANSFER OF GENETIC MATERIAL

In the case of specimens of species listed in Annex I of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), sending should be formalized with the prior conclusion of the Standard Material Transfer Agreement (SMTA), approved by the signatory countries that Treaty. In addition, all transfer of genetic material will be formalized with strict observance of national legislation and will be formalized by the prior signing of the Transfer of Material.