“Guyana is a nature-rich country, with more than 85% forest cover, an abundance of freshwater resources, high mineral reserves and rich biological diversity. These resources continue to be fundamental to Guyana’s, and Guyanese well-being, livelihood and development. The majority of our communities’ livelihood activities are intertwined with these resources, and so also are most of the economic sectors of the country. We all are aware that Guyana aims to advance a low-carbon economy by 2030 and with commitments to progress towards the Sustainable Development Goals (SDGs), Convention on Biological Diversity and Post 2020 Biodiversity Framework.”

Aiesha Williams - Country Manager (Guyana), WWF Guianas

Prepared by:
Ashanta Osborne
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Section 1: Overview of Voluntary Commitments Launch

1.1 Introduction

Ecosystems and the services they provide are fundamental for all life on earth and critical for human existence. Healthy ecosystems ensure quality life – providing clean air, freshwater, and soils for our inherent survival. Biodiversity is fundamental for all ecosystem functions, goods and services and plays a critical role in the maintenance of natural systems. Globally, the trend towards fewer species, less abundant populations and degraded ecosystems has not slowed since 2010 putting approximately 1 million animal and plant species under threat. The health of ecosystems is deteriorating rapidly, eroding livelihoods, food security, health, and quality of life worldwide. Mitigating these impacts while still ensuring human needs are met requires a shift in production and consumption of materials and products. One way of doing this is by understanding the “footprint” of production and consumption – that is accounting for all aspects of pressure on the natural systems and addressing these impacts, bringing them within safe boundaries by 2030.

The Global Biodiversity Outlook (GBO) 5 further highlights biodiversity decline at an unprecedented rate, and the pressures driving this decline are intensifying. It noted that none of the Aichi Biodiversity Targets will be fully met, threatening the achievement of the Sustainable Development Goals (SDG) as a result. The global crisis in 2020 brought to the fore a greater connection between ecosystem degradation, biodiversity loss/decline and climate change – essentially the planets’ health and human health and well-being. The Living Planet Report (LPR) highlights that 60% of emerging infectious diseases such as Covid-19, originated from animals and more than half of these are from wild animals due to increased interactions or encroachment in wildlife habitats. As a result, scientists are of the view that zoonotic diseases will increase, unless stronger actions are taken to address, reverse the loss of biodiversity and maintain ecosystems in healthy state. The GBO further highlights that despite the failure to meet the goals of the Strategic Plan for Biodiversity 2011-2020, it is not too late to slow, halt and eventually reverse current trends in the decline of biodiversity, especially at the country level.

The preparatory process towards a robust post 2020 Global Biodiversity Framework, agreed by Member States of the UN CBD in 2018, encourages participation of all stakeholders – government, civil society, academia, private sector - to ensure acceptance, especially for implementation. The process underscores thorough knowledge generated from scientific research and relevant data systems, inclusive of natural, social sciences – local, traditional, and indigenous knowledge and good practices/lessons from the implementation of the convention.

In this context, the French Development Agency (AFD) launched the **BIODEV2030** initiative – an approach piloted across 16 counties with varying socioeconomic, environmental, and geographical background. Guyana is one (1) of the pilot countries, with implementation through WWF Guianas. The Project: **Biodev2030 Mainstreaming Biodiversity across Economic Sectors (BIODEV2030)**, is financially supported by the French Development Agency (AFD), is coordinated by Expertise France, and through WWF France aims to contribute to the post 2020 global biodiversity agenda process. Its main objective is to mainstream biodiversity across strategic economic sectors in Guyana to reduce pressures/threats on the environment. Specific objectives of the Biodev2030 Mainstreaming Biodiversity Project are to:

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1. IUCN Red List of threatened species global assessment.
2. Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
Determine the scientific basis of voluntary multi-actor commitments for biodiversity at national level;
Support the country to formalize voluntary national commitments on mainstreaming biodiversity into key economic sectors; and
Contribute to the international discussions through the dissemination of results. It is also expected to contribute to wider national initiatives to transition sectors towards a low carbon, nature positive future.

1.1.1 Project Outcomes
The process employed in the project allowed for all stakeholders to participate in discussions on biodiversity. It helped to increase awareness, especially among private sector actors and for this group of stakeholders to influence/shape the commitments and outcomes by incorporating biodiversity in strategic economic sectors to reduce pressures on ecosystems by 2030.

Three studies were conducted, namely:
(i) National Context Analysis
(ii) National Synthesis Assessment
(iii) In-depth Analysis of Agriculture and Mining Sectors

Voluntary commitments arising from the consultations under the project are as follows:

**Agriculture**
- ✔ Reduction of the use of agrochemicals
- ✔ Use of bio-pesticides and bio-fertilizers

**Mining**
- ✔ Reduce mercury and cyanide pollution

1.2 Objectives of Voluntary Commitments Launch
The purpose of the Voluntary Commitments Launch was to share the outcomes and results of the *Biodev2030 Mainstreaming Biodiversity across Economic Sectors (BIODEV2030) Project* with key stakeholders. The objectives were to:
1. Inform participants of the select voluntary commitments arising from the project.
2. Provide information on what stakeholders can do to realize these commitments.
3. Launch publications of the final reports of the three studies undertaken in the project.
4. Give stakeholders an opportunity to inform the public about actions they have been doing, are doing and plan to do in relation the commitments.

1.3 Launch Agenda
*Image 1: The workshop agenda was developed and disseminated by WWF-Guianas, and may be referenced in Appendix A.*
1.4 Methodology of Launch

The Voluntary Commitments Launch event was executed through a mixed methodology, designed to both share information, and foster participation and engagement.

The programme featured a presentation, which outlined the results of the BIODEV2030 Project and included a Question and Answer session.

The agenda also included a group work session which involved a highly participatory and engaging approach. This session entailed break-out groups where participants were given specific guidance for exploring three key questions as follows:

1. What is one concrete stumbling block (challenge) to multistakeholder coordination around a particular issue within the sector in which you operate?
2. What is one possible concrete solution for addressing that stumbling block (challenge)?
3. Share one example of multistakeholder coordination that went well, which we can learn from?

The session integrated the use of technology in its implementation by using Miro as the platform for participants to submit their response to the questions. One member of the group was asked to upload group responses to platform, which was then compiled virtually and then integrated into the next session. Outputs of the group work discussions may be references in Appendix B via the link provided.

The final segment of the programme entailed a panel discussion, which centered around what each entity has been doing and/or plans to do to contribute to the reduction in the use of mercury in gold mining, or the reduction in the use of chemical fertilizers and pesticides. The panel of speakers included Heads of Agencies/Institutions from: Agriculture Research Center, Guysuco; Guyana Rice Development Board; Pesticides and Toxic Chemicals Board; Head of the Environmental Unit, Guyana Geology and Mines Commission; and Guyana Gold and Diamond Miners Association.

1.5 Workshop Participants

The workshop was attended by a broad array of stakeholders from across sectors including ministries, governmental agencies/regulatory bodies, academia, donor partners, development organizations, private sector, conservation partners, among others. One presenter was also able to access the event virtually. Appendix C provides a list of Stakeholders.
Section 2. Voluntary Commitments Launch-Guianas Context

2.1 Remarks- International Context (BIODEV project in General)- Expertise France- Quintin Dupetit Global Coordinator BIODEV2030 (Virtual presentation)

Mr. Dupetit began his remarks by stating that it is very important that all the countries, all the private sector voluntary commitments that are being taken during the project would be integrated into the end result and would be presented at COP15. He shared that Expertise France will be present at COP15 to present the BIODEV2030 project and that all of the participating countries managed to foster private sector voluntary commitments and also to highlight the link between what the countries have been doing and the Global Biodiversity framework.

He shared Guyana was selected along with 13 other African countries, and the fact that Guyana, Vietnam and Fiji was a part of the project was very important. He further shared that the methodology of the project has been tested all over the world, with countries that have different political landscapes, different challenges to biodiversity within different sectors, but Guyana’s perspective was important to aid in compiling the results for the project.

Mr. Dupetit highlighted that although the project started during the second wave in 2021, Guyana has reached quality results, with dialogue and the validation of two sectoral voluntary commitments and the fact that Guyana’s approach is not only centered on the two sectors that were selected but on global stakeholder involvement with fishermen, journalists etc. is very important. Guyana did select Agriculture and Mining which are the sectors that most of the countries participating in the project selected.

He informed the audience BIODEV is an ending project, that comes to an end by the end of 2022 and stated that COP15 is the end point. He shared that the issue in the countries that were being supported over the life of the project, was ensuring the multi-stakeholder dialogue platforms were sustained so as to ensure that voluntary commitments made could be kept and eventually integrated into policies.

Finally, Mr. Dupetit opined that Guyana has the capacity to achieve voluntary commitments. Stating that this is evident in the fact that Guyana has already linked the BIODEV2030 project with other ongoing projects by other agencies to sustain the initiative.

2.2 Opening Remarks - WWF Guianas, Country Manager - Guyana: Ms. Aiesha Williams

In her opening remarks, Ms. Williams began by stating “Guyana is a nature-rich country, with more than 85% forest cover, an abundance of freshwater resources, high mineral reserves and rich biological diversity. These resources continue to be fundamental to Guyana’s, and Guyanese wellbeing, livelihood and development. The majority of our communities’ livelihood activities are intertwined with these resources, and so also are most of the economic sectors of the country. We all are aware that Guyana aims to advance a low-carbon economy by 2030 and with commitments to progress towards the Sustainable Development Goals (SDGs), Convention on Biological
She shared that WWF Guianas believe that Biodiversity conservation is an important prerequisite to achieving low carbon and sustainable development, and as such it is vital for this to be integrated into all aspects of development and economic sectors. It is with this strong dependence and connection to nature and biodiversity for Guyana, that WWF Guianas took up the task of participating in this global project and coordinating the pilot in Guyana.

Ms. Williams further remarked that mainstreaming biodiversity is generally understood as ensuring that biodiversity, and the services it provides, are appropriately and adequately factored into policies and practices that rely on, and have an impact on it. This requires efforts and enhanced collaboration from all parts of the society. Towards this end, the BIODEV2030 project intends to seek voluntary commitments through a number of analyses, and primarily through multi-stakeholder engagements across key economic sectors. In this regard, the Country Manager commended many of the attendees of the Launch for their participation and contributions in a series of sector-specific focus groups discussions, bilateral interviews and meetings, and multi-stakeholder working sessions, which brought together representatives from civil society, government, and private sectors.

It was noted that in Guyana, through these processes, two sectors - Mining and Agriculture - were selected based on their impact on biodiversity and importance to Guyana’s development sector. Two sectors that are major contributors to Guyana’s economy and the livelihoods of many inland and coastal communities.

Ms. Williams ended her remarks by stating that while WWF Guianas does have a track record of focusing on the gold mining sector, the organization is particularly happy to engage and better understand the Agriculture sector, and hopes to foster stronger cooperation to preserve a more harmonious relation with biodiversity while achieving food security. Also, that the organization was enthused to be able to convene various stakeholders over the past 18 months, as it believes that it is with dialogue, understanding and action that the biodiversity and natural resources of Guyana can be preserved.

2.3 Presentation of Results of the BIODEV2030 Project- Dr. Devon Dublin- WWF Guianas & Mr. Seon Hamer- University of Guyana

In a joint presentation, Dr. Dublin and Mr. Hamer spoke about the process and results of the BIODEV2030 Project.

Dr. Dublin discussed the 3Ds framework approach taken in the project, which were Diagnoses, Dialogue, and Dissemination, and stated that the overarching goal was to identify the main threats to biodiversity and collectively identify ways of addressing those threats. He further emphasized that the main idea was that threats to biodiversity can be reduced within the sectors of mining and agriculture; reiterating that the work does not aim to get rid of the economic sectors, but to rather reduce the threats and make them much more harmonious with biodiversity.
To this end, the project convened and engaged a working group, which met in a total of six (6) meetings via zoom meetings due to COVID19 and a series of email meetings. The group provided oversight and after review approved final outputs of the project; this included reviewing reports and other documents and providing feedback.

[Image 4: Dr. Devon Dublin- WWF Guianas and Mr. Seon Hamer- University of Guyana]

Mr. Hamer, spoke to the process of conducting the project and outlined the different phases. Specifically: **Phase 1 included a Bibliographical Review and Analysis** of documents that were already published, which were integrated into the project. **Phase 2 included a process of Consultations** with stakeholders from a wide array of sectors in Guyana, such as the; Mining Sector, Tourism Sector, Forestry Sector, and Agricultural Sector. **Phase 3 entailed an exercise of Prioritization**, where during the consultation phase, a prioritization process was conducted based on three criteria; Willingness to engage in the process, the impact of the sector on various ecosystems found across the country, and the reversibility of the impacts done to those ecosystems.

Dr. Dublin wrapped up the presentation by discussing the status of the project, stating that for there to be a commitment there needs to be objectives, benchmarks, and a plan. And that for this to be successful there would need to be legal, legislative, political, financial framework in place.

Details of the presentation may be referenced in Annex D.

**2.4 Q&A on Presentation - Results of the BIODEV2030 Project**

Following the presentation on the Results of the BIODEV2030 Project, attendees were engaged in a session of Q&A. Notes on the plenary discussions that followed the presentation are presented below verbatim to capture the full essence of the depth and substance of the exchange. There was a high level of interest from all workshop participants, which lead to a fruitful exchange with the presenter.

<table>
<thead>
<tr>
<th>Questions/Comments</th>
<th>Responses</th>
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<tbody>
<tr>
<td><strong>Annette Arjoon</strong></td>
<td><strong>Devon Dublin</strong></td>
</tr>
<tr>
<td>What is this project going to do differently to ensure that there is a different outcome, hopefully a positive one, especially with regards to mining?</td>
<td>Initially there was no intention to study mining. There were 8 sectors that were looked at in the study, and through the prioritization process mining was one of the sectors selected.</td>
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<tr>
<td>There have been a number of projects over the decades that aspired to reduce the use of mercury etc. that have not achieved that.</td>
<td>The process has highlighted that there is a deficit in baseline data. There were extensive demographic revisions on what pertained to Guyana but a lot of data was difficult to find.</td>
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<td>*</td>
<td>There is also the reality that there are agencies who have</td>
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3 Notes taken by Malisa Peters (Rapporteur)
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<tr>
<th>Questions/Comments</th>
<th>Responses</th>
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</table>
| **Annette Arjoon**  
*Within the dialogues had, was there any focus on Agriculture outside of the regions that are usually included in the conversation; regions 4, 5 and 6? For example; non-traditional Agricultural regions like Region 1, which is an organic region in Guyana and there is a lot of interesting Agricultural development taking place there. It has the country's largest in tack mangrove ecosystem; namely the Barima-Mora Passage.* | **Devon Dublin**  
*Unfortunately no and this is highlighted in the research that was conducted. The dialogues were focused on mainly rice and sugar and where those industries are located; regions 3, 4, 5 and 6.*  
*The lessons however, can be scaled up or applied horizontally and perhaps the prioritization process can also be applied.*  

**Chris Bissessar**  
*How receptive were these sectors to the mitigation methods that were proposed; particularly the Agriculture sector?*  
*The cost for bio-fertilizer etc. may be expensive and the proposals might not have been received well.* | **Devon Dublin**  
*This is related to the enabling framework once again, for example; if Bio-fertilizer or pesticides are more expensive than the toxic ones, they are allowed to be imported tax free this may help.*  
*This is done in other areas and once the argument is made and there is scientific evidence it should be done.*  
*In the case of mining; the alternative machinery might be more expensive, but if they are imported free of tax people might be inclined to use them more. There needs to be more support.*  

**Khemraj Persaud** | **Devon Dublin** |
It was mentioned in the presentation that not a lot is being done in the Agriculture sector with regards to the environment; how does the study bridge this gap?

The study conducted shows that this is an area that we need to focus on.

Guyana was originally developed as an outgrowth of the UK and Holland for Agricultural purposes. Thus, continuing to do agriculture was not an issue, we have been planting the same spaces for hundreds of years and this is possibly why much emphasis has not been placed on agriculture from the environmental perspective. As long as people were not cutting down trees and encroaching on new spaces there was no threat.

There is also no baseline, there are many farmers who are not aware of how many species of insects etc. are found in their rice field they do not know. This type of study has not been done and there are places, for example: Japan, where a farmer can identify what species are in his farm.

These kinds of studies are lacking in Guyana and because it has not been done the importance of these existing farms for biodiversity does not come to the fore.

If the material location is to be looked at in some cases, for example; in the Interior, there are farmers in Indigenous villages who may know and can say what species in their farm. However, villages on the coast land are never invested in this information and this would be a cultural shift.

Ms. Sharifah Razack

I am not sure how many studies have been done in relation to agriculture and its impacts on the environment to aid in getting commitment.

Guyana is at a different stage of its development from where it started, and for us to influence policy studies should be done. We should know how fertilizers are impacting our aquatic eco-systems; fishes, the nitrogen content in rivers, etc. Also, look at ways of using the optimal amount of fertilizers, this can be a phased approach to moving towards organic

In the rest of South America people are more advanced in relation to fertilizer usage based on research that they have done.

We are at a place where studies have to be done that will influence policy makers.

William Woolford

Comment.
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<tr>
<th>Questions/Comments</th>
<th>Responses</th>
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<tr>
<td>Policies are generally related to the government and they would indeed need the scholarly reports etc. to influence them.</td>
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<tr>
<td>The challenge however, has always been, ‘how do you get both sides to walk the same road on policy?’ If the government changes, they are not always willing to adopt what the previous government had implemented.</td>
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<tr>
<td>There should be some effort to sensitize everyone how important the issue is.</td>
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<tr>
<td><strong>Badrie Persaud</strong></td>
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<tr>
<td>It was mentioned in the presentation that the project is at the point of soliciting commitment from stakeholders but this is a process that would take place gradually. Because, for example; what happened in Sri Lanka just earlier this year: The entire economy collapsed and what fast tracked this was that the government of the day decided that agriculture in the country would be 100% organic and they banned the importation of fertilizers and agro-chemicals</td>
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<td>This is a great initiative but it has to take place gradually, because if it happens with too much enthusiasm it can have negative side effects.’</td>
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<td><strong>Devon Dublin</strong></td>
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<td>There are examples that Guyana can follow and there are certainly examples that we can use as what not to do.</td>
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<tr>
<td>FAO did a report stating that if we all go organic we would not be able to survive. It seems that going organic is only for those who can afford it.</td>
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3. Multistakeholder Coordination in Guyana

3.1 Outputs from Group-work Session

Attendees of the Voluntary Commitments Launch were asked to - in groups - discuss three (3) guiding questions and provide consolidated feedback. The main objective of the session was to focus on identifying concrete ways of overcoming stumbling blocks as it relates to multi-stakeholder coordination in Guyana, and to examine cases where it has worked with positive impacts. The information presented below represents the consolidated responses from each of the groups.

3.1.1 List one stumbling block to multistakeholder coordination around issues of common concern in Guyana

- Getting time within everyone's schedule to work on coordination issues in addition to their regular work load
- Stakeholder decision makers do not attend meetings and since bottom-up communication tends to be ineffective - progress in coordination is slow or even absent.
- Syncing priorities is difficult.
- Dissemination of information from the centralized bodies is not effective Anonymous
- Conflicting Priorities
- Lack of Data Sharing
- Convening of spaces for multi stakeholder coordinating, including financing and facilitation.
- Silo syndrome where institutional knowledge and experience is limited to one or a few persons. Not necessarily intentional, e.g. absence of a succession plan, repository of information.
- Availability of personnel within the Agencies are over subscribed
- Having an overarching coordination or mechanism that truly facilities multi-stakeholder engagement. Coordination is often times more ad-hoc among few stakeholders rather than whole.
- Maintaining continuous stakeholder engagement and momentum
- Lack of synergy.

3.1.2 Provide one possible concrete solution for that stumbling block

- Multi stakeholders Forums with key decision makers;
- Legislation and Develop a National Repository
- Respective agencies or groups should appoint a specific competent point person to work together with a steering committee or with other sector agencies or groups
Establish a coordinating entity to set up the multi-stakeholder platform for relevant stakeholders to meet and engage around common issues/agenda setting, reporting, development of knowledge products.

Maintain the relationships with persons representing agencies, follow up, have continuous group dialogue.

Central hub to access data and information.

Continuous engagement through forums that can facilitate the movement of information across agencies.

To have a specialized unit to coordinate multi-sectoral engagements within each agency on cross-cutting matters.

Ensure that the messaging is tailored to the particular stakeholder group.

Data repository (availability and access) so the information/data/experiences remain within the institution and not necessarily with one or a few persons.

Better communication and more engagement with the Tourism stakeholders.

Coordinating and finding a common motive to work towards and doing so in a timely manner.

Relevance unclear to stakeholder evidenced by disinterest.

3.1.3 Give one example of some type of multistakeholder coordination that went well which we can learn from

Minamata Working Group, which allowed for a multi-stakeholder group chaired by MNR so there was government buy-in, which resulted in the national action plan and national implementation plan, there are also various projects testing Mercury free alternatives like GGDMA, CI, WWF, GWMO, GGMC etc.

The Society of Petroleum and Engineering (SPE) organized a capacity building session for geology, geography, environmental science and petroleum students amongst different oil and gas companies in Guyana. The focused on members of different academic backgrounds, experiences, ages and nationalities. They (SPE) offers networking, job opportunities and scholarships. It was successful as it was an open discussion among board members and attendees that was met with a significant amount of feedback.

Targeted invitees, communication that speaks to why the invitees are there and the relevance of the subject matter to the invitees. Interest equals engagement. It must answer the ‘What's in it for me’ question. Example "Consultation on Unpaid Care Work" Invitees were women and social benefit experts, Ministry of Finance and NIS Persons

Building expo initiative combining the various industries related to housing development. Builders, constructors, suppliers, investors est. I believe this was successful because all parties involved had a similar interest and the initiative benefited the stakeholders. If there is a multi-stakeholder project and not all
parties see the value and reason for participation, there will be a lack of engagement.

- Forestry EPA - GFC. Coordination in terms of authorization of community forestry operators for environmental permits - EU project was a catalyst. Minamata Convention national working - led by a strong coordinator.

- Covid 19 Task-force

- Pink Mealy Bug Eradication Program (1998/9)

- EITI

- Conservation International Multistakeholder working group for REDD+ Project.

- Energy Implementation Working Group
Section 4. Panel Discussion

4.1 Record of Panel Discussion

The final session of the Voluntary Commitments Launch was a moderated panel discussion among four (4) key stakeholder entities leading the sectors of agriculture and mining.

Panelists shared what their various agencies and/or institutions were currently doing; and discussed what additional actions they are planning to undertake going forward, within their respective organizations and as representatives of their specific field.

The transcript below presents a record of the discussion that occurred.

<table>
<thead>
<tr>
<th>Discussion with Guyana Sugar Corporation</th>
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<tbody>
<tr>
<td><strong>Question--Ashanta Osborne</strong></td>
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<tr>
<td>- ‘Can you say what your organization has been doing and what are your plans going forward for mainstreaming Biodiversity in the sector?’</td>
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<tr>
<td><strong>Response- Gavin Ramnarain (Guysuco)</strong></td>
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<tr>
<td>- ‘Guysuco realized in the 1950’s that there was a lot of insect infestation and this was post World War II and there were a lot of insecticides being imported to the country. To control insects everywhere there the blank spray method was used.</td>
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<tr>
<td>- Later on it was thought that the quantity of insecticide being used needed to be increased because it seemed not to be working. However, this was the insects building resistance.</td>
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4 Transcript prepared by Malisa Peters
In the late 1990’s Guysuco banned the use of insecticides completely and moved towards a bio-control program by studying what was in the environment. It is a very delicate thing: to balance the environment and agriculture but the environment is taken care of.

What Guysuco does is breed a wasp at all of the estates and locations, it is then released into the environment and this takes care of the stem borers. This has been extremely successful and the population has increased ever so often. The use of insecticides in this regard has not been used in almost 35 years.

In the case of other pest control the fields are flooded for 48 hours and this works perfectly fine and it does not damage any crops.

Guysuco has now moved on to look at bio-pesticides and bio-fertilizers and one of the areas that is being examined is fungi; Bolivian and eutherian to control the pest population.

Recently, buffer zones are left next to dams and there is nothing done in these areas. It has been observed that owls would come and stake out for the night and help to reduce the rat population and by extinction cost. There are also little birds that would come and take care of the pest population as well. It is an extremely diverse space.

There has been an experiment by putting owl houses at some of the estates. The challenge has been convincing other farmers because they are of the opinion that they are not doing anything. However, one of the key things in pest management is knowing when not to do anything.

Guysuco is dedicated to not using pesticides and reducing the use of fertilizers.’

**Question- Ashanta Osborne**

- ‘What are some of the lessons, practices, technologies etc. that can perhaps be translated into small scale farming use?’

**Response- Gavin Ramnarain (Guysuco)**

- ‘One of the advantages of being a large scale farmer is that you can pass an instruction and 50,000 hectares do the same thing.
- There are a lot of lessons for small scale farmers and they are always encouraged to reduce their insecticides because this affects us as well.
- There is a lot of research that needs to be shared; Guysuco has done a lot of research on what species are in the cane fields and how they being present can be beneficial. Every 5 years, every field and all pests are studied; the bad guys but we have not yet comprehensively studied the good guys and this is something that needs to be done.’

**Discussion with Guyana Rice Development Board**

**Question- Ashanta Osborne**

- ‘Can you say what is being done in the rice sector in relation to mainstreaming Biodiversity?’

**Response- Badrie Persaud (GRDB)**

- ‘We cultivate about 92 hectares of rice in Guyana, that is about 230,000 acres. There are about 6000 farmers involved in rice. Unlike sugar, rice is owned privately by people and the government has no involvement. The GRDB acts as regulator, facilitator in the industry.
- Rice is grown in regions 2, 3, 4, 5 and 6.
- GRDB is not as advanced as Guysuco in the area of bio control. However, GRDB does have a Rice Research Station, at Burma Mahaicony and it is headed by Dr. Mahindra. He heads the Pest Breeding Department. There is also a Plant Breeding Department,'
Entomology Department, Soil Weed Science Department, and a Pathology Department.
- All of the major rice varieties, nearly 90% of all of the paddy grown in Guyana was developed by the Rice Research Station, headed by Dr. Mahindra.
- There are two varieties that have proven to be good in weed control; the GRDB 14 and to a lesser extent the GRDB 16. The GRDB 14 has a lot of foliage in the growth period; it is able to cover the ground and minimize the growth of weeds. A study has been done to quantify the denicate of this in region 3; where the GRDB 14 was grown in comparison to a standard variety and it has shown that in the field where the GRDB 14 was grown there was less weed growth and other benefits.
- This is an area that the Plant Breeding Department has been focused on; having varieties that can grow at a much more rapid rate than weeds and develop more foliage than the weeds do.
- There is the major pest that is faced in this industry, which is the rice and the paddy bug. It is controlled 100% presently by chemical means. We are in the process of developing a Bio- Control Lab that is scheduled to be completed shortly, this is to facilitate the study of the Paddy Bug scientifically. Perhaps this can be a partnership between GRDB and Guyuco.
- Recently, the Entomology and Pathology Department, headed by Dr. Rajendra, has developed a partnership with USDA. USDA also has an issue with the paddy bug being a major pest to their rice. There is uncertainty as to if it is the same species, but USDA has formulated a pheromone; a pheromone lures and traps the bug and it does not have the negative effect as chemical control would have.
- GRDB has recently received a package of this pheromone and will shortly be conducting trials to assess if the pheromones that are effective against USDA’s paddy bug will also be effective against the paddy bug species in Guyana. The mechanism is yet to be worked out but this is the first step that GRDB is taking towards controlling a rice pest by non-chemical means.
- The GRDB has over time partnered with many international agencies; Dr. Mahindra has a long standing relation with the Latin American Fund for Irrigated Rice (LAFIR) and GRDB usually receives geno-types from LAFIR and they are processed. This has been extremely successful.
- One of the other things GRDB is focusing on is climate resilient varieties, in China there are varieties that are doing very well in saline conditions. Guyana is vulnerable to salt water incursion; there are over 12,000 hectares that are vulnerable to salt water incursion. GRDB has recently initiated discussion with Chain on developing a partnership that helps with the implementation of this initiative in Guyana.
- Another area being focused on is flood varieties, because we are having more rain in recent times and we need to be prepared. GRDB 14th variety has proven to be doing well in flood conditions. So we can say that we do have a locally developed variety that does well in not so severe flood conditions.’

Discussion with Registrar, Pesticides and Toxic Chemicals Board

Question- Ashanta Osbourne
- ‘What are some of the priorities in terms of facilitating an environment that not only regulates pesticides, but also considers issues of access?’

Response- Trecia David- Garnath (PTCCB)
- ‘One of the things we have done over the years as a regulatory body is to facilitate as much as possible addressing the use of these chemicals and the issues arising from their use.
- One of the issues discussed was: how do we address the dependency on the use of these
chemical pesticides and move to bio-pesticides or more organic products.
- For the past 10 years, one of the things the board has been doing is reducing the importation of toxic chemicals. About 75% of those chemicals that were on the market prior to this 10 years span were more in the class ones and twos of toxicity to both the human health and the environment. What has been done through the registration process and working significantly with stakeholders; importers and manufacturers to have the products on the market be in the class threes and fours of toxicity levels. There is about 1% of the chemicals on the market now that is in the class ones and just about 3% that is in the class threes.
- Also, the board has been looking at those chemicals that can be categorized as highly hazardous as outlined in the International Chemical Convention, to which Guyana is a party too. The board is identifying these chemicals and looking for alternatives for these products. We are also working with Guysuco and GRDB to have these alternatives be field tested.
- It is known that farmers are difficult to convince, however, if they are able to see a product work they are more likely to make a change. Thus, there is a phase out plan for these products.
- Additionally, one of the key indicators that we have been managing over the past few years is facilitating the registration of bio-pesticides in Guyana. We have had support from IICA about four years ago, to draft what the requirements would be for these products since their new. This was then adopted into the board’s policies to facilitate the registration, so that there can be more products available on the market that are organic in nature.
- There was also the process of stakeholder engagement and we have had good buy-in from a number of importers, so much so that we now have more bio-pesticide and biofertilizer on the market.
- Further, we have encouraged importers to do, which 99% of them have done is have an Agronomist on staff that can work with farmers in the field.
- Cost factor is also extremely important for farmers, as they need to understand the feasibility before making the change. This process is ongoing and the board is continuously monitoring it.
- Training is also done with farmers country wide, through Guysuco, GRDB and also cash crop farmers. This was started in 2008 and it is the board’s largest expenditure annually.
- We’ve recognized that these chemicals are poisonous, not only to the environment but also to human health, and this was initially why training was first done. To ensure that farmers were knowledgeable about these products; how to use them, their application techniques are not causing impacts to themselves or the environment.
- Five years ago, we moved away from framers based training to community based training. Because one of the lessons learnt is that women (wives) and children are involved in farming.
- Recently, a survey was done, looking at human health based on the impacts of pesticides on farmers. The board is more concerned now, with research and understanding the impacts that chemicals are having, thus there will be a new research arm added to the board in the new year.
- While it is the board’s task to regulate, our mandate is ever growing and we continue to go a step further in acting as more than just a regulating body.’

Question- Ashanta Osborne
- ‘From the board’s perspective, is Guyana ahead, rather than behind in terms of reducing the use of chemicals in the Agriculture Sector?’

Response- Trecia David-Granath (PTCCB)
- ‘The FAO report for 2015 states that Guyana is leading the region in chemical’s management in general. Currently we are chairing the regional body for chemical’s management as well.
- We do take the Life Cycle approach, and this is international chemical’s management at its best.
- In terms of the agro-pesticides that are used in the industry, this is one of the areas that is extensively managed.
- Since 2008 when policy was implemented the board has been focused on pesticides and toxic pesticide did come into play recently in 2012. Now that there is oil and gas there are many more lessons to learn. In terms of where we are with pesticides, the life cycles thus far have been addressed extensively.
- In terms of what next; there are always new and emerging issues to address. Regionally, there are many countries that are still grappling with the basic issues and they are not able to address the new and emerging ones.
- What we try to do however; is to address emerging issues. This is because we recognize that these may be relevant to us and they may be urgent and if we can put the resources that are needed into it we do it. For example; Highly Hazardous Pesticides (HHPs), many of the countries in our region have not yet identified all the HHPSs that exist within their countries. But Guyana has already worked with an international company that has helped us to identify HHPS and also at the board’s level we have already decided which ones we would want to phase out. We have also already started the ground work with various agriculture agencies.’

Discussion with Guyana Geology and Mines Commission

Question- Ashanta Osbourne
- ‘What is being done from GGMC’s perspective to mainstream Biodiversity in the Mining Sector?’

Response- Darcy Waldron (GGMC, Environmental Unit)
- ‘The Mining sector is a bit more diverse than Agriculture, in that everyone looks to GGMC as a regulatory body, and it is overlooked that we do a number of research, a lot of collaborative efforts to ensure that we meet the mandates of policies for the country; the LCDS 2023 and ensuring that Guyana meets its international obligations on conventions that we have signed to; the Minamata Convention.
- GGMC is guided by our Acts, Regulations and Codes of Practices, and we work tirelessly to ensure that Miners operate within those parameters, as operating within these parameters would help to limit the impacts of mining that can contribute to biodiversity loss.
- We do look at whole Life Mining: from exploration to closure (recommendation)
- The Commission is now trying to do a comprehensive exploration exercise, to understand what minerals we have and where they are located, to have a plan so as to limit the impacts of mining; knowing where to mine and how to go about it.
- Recommendations are being mainstreamed significantly within the past few years, so that areas can be restored to a point where natural vegetation can grow or to a point where it can be used for alternative purposes; Agriculture, Commercial uses etc.
- Within the Environmental Division a lot of work is done in relation to mercury mitigation; being a part of the National Working Group for Mercury within Guyana. We have also done extensive research as it relates to air quality management in relation to mercury; working along with the Bureau of Standards to set standards for emissions and releases. We have also worked on technologies, the Commission has done demonstration sits for
mercury free technologies within various mining districts so as to show that there are alternatives and as a way to train. A number of training is also done through the mining school, through partnerships with various organizations; Government, NGOs etc. We partner with all these organizations to help reduce the impacts of mining in general.’

**Question- Ashanta Osborne**
- ‘What do you consider to be your key role in the transition from the use of mercury, particularly in relation to small and medium scale miners?’

**Response- Darcy Waldron (GGMC, Environmental Unit)**
- ‘The key aspect is the sharing of information; letting people know that there are alternatives, to demonstrate efficiencies and how they can be beneficial; as in if we improve on our recovery rates there is more value to obtain. This is also why we are keen on research, it is to show miners from an evidence based perspective what is affecting ao as to bring behavioral change.
- It is known in the Mining sector that mercury is the easiest thing to use; it does not require technical skills, it is cheap to get and it is readily available.
- GGMC has worked with RPTCB to develop and MOU has been developed as it relates to the importation of mercury. There are now restrictions on the amount of mercury that can be imported into the country and the importers also have a cap in place as it relates to the amount they can import a certain amount within a certain period.
- Our role as the Commission is to bridge the gap and ensure that we improve and limit the impacts of transition from mercury.’

**Question- Ashanta Osborne**
- ‘What is the conversation around the cost of transitioning?’

**Response- Darcy Waldron (GGMC, Environmental Unit)**
- ‘Through the Mineral Processing Unit of GGMC, they have actually brought about cheaper alternatives and this is where we have the demonstration sites to demonstrate that there are alternatives, that are relatively cheap, that can bring about higher efficiencies in recovery rates.’

**Discussion with Guyana Gold and Diamond Miners Association**

**Question- Ashanta Osborne**
- What is GGDM doing to mainstream Biodiversity?

**Response- Avalon Jagnandan (GGDMA)**
- ‘GGMA is partnering with Conservation International Guyana and the Global Environmental Facility (GEF) on the Responsible Mining Project. This is a six months project and its objective is to assess ways in which we can reduce the use of mercury while increasing efficiency in the mining sector. The goal is to establish, promote and operate demonstration sites and these will target small and medium scale miners. We are using Mobile Mineral Processing plants (RG30) and this is happening in Kaburi. At the end of this project we will continue our partnership with CI Guyana and host a Responsible Mining Conference.
- GGMA also has a partnership with the Ministry of Natural Resources and GGMC and we are focusing on the Rivering Mineral Recovery System. This is a new technology that is geared towards increasing recovery, boosting productivity and reducing the use of mercury. Some of the benefits of this equipment are; no use of chemicals; no mercury, no cyanide, no floatation reagents, maximum recovery of fine and flat gold; which existing small and medium scale miners face, more profitability for the miners and minimum
environmental impact.

Question posed to Mr. William Woolford- Ashanta Osborne
- ‘Do you have anything to add?’

Response- William Woolford (GGDMA)
- ‘Mercury has been used in Mining in Guyana since the 1880’s and at that time gold mining was very significant; retrieving over 100,000 ounces of gold annually. One of the things that we realized in the industry as well, is that mercury is naturally occurring and there might be areas in Guyana where mercury is naturally occurring. This is important because if a miner excavates an area and encounters mercury, they are contributing to mercury in a way that is not sustainable.
- Miners usually use mercury at the end stage and they generally use it very carefully because mercury is an operating cost. Thus, if they can recover all of the mercury used, their intent is to do that.
- The miners look to GGMC as a collaborating partner to help find solutions, therefore it would be fair to say that miners would prefer to see the GGMC offerers coming with technical assistance, to improve recovery rate, to improve exploration etc. rather than their regulatory cap.
- This collaborative effort has been in place since the 1880’s. There have been a number of initiatives that the GGMC and GGMA have collaborated on.
- We have not yet been able to announce as an industry that there is a particular technology that is both technically and economically feasible that can replace mercury. There has been efforts and there will continue to be efforts made to achieve this.
- Goal mining is a business and the intent is to make profit and therefore, if a substitute for mercury is going to be proposed, then it has to be, as the Minamata Convention rightfully stated, a technically and economically feasible solution.’

Cross-panel Discussions

Comment- Darcy Waldron (GGMC, Environmental Unit)
- ‘As Mr. Woolford did mention, in relation to it being more appreciated by miners if GGMC would not approach them with their regulatory caps; we do a lot of education and awareness. Continuous training is done to ensure that we limit the impacts and this is something significant to understand, that we are doing everything we can to limit the impacts of mercury.
- He was also correct in saying that miners mostly use mercury in the final stages and only in enclosed spaces. This is why education and awareness is important and it is ongoing.
- We do use the “big stick method” only when miners disregard this and we need to take a more stringent approach.’

Comment- William Woolford (GGDMA)
- ‘GGMC and GGMA, over the years, have been looking at the effects of mercury on fish life and there are studies that show that fish do get contaminated with mercury. We have not found, and the miners of sort of celebrated this, that there is a crisis. However, we still want to reduce the use of mercury and where feasible eliminate it.’

Comment/ Question- Ashanta Osborne
- ‘The Women Miners Association is a group within this sector that has certainly organized themselves over the last decade to be a significant force and they are an important stakeholder; especially in relation to the socio economic aspects of regulating mercury
with the sector.
- Question- What, in relation to women miners, is being done to assist this group by more organized spaces in the sector; particularly with most women not having access to finances or collateral?’

Response- Darcy Waldron (GGMC, Environmental Unit)
- ‘This group has been a part of the national working group in helping to develop a national action plan for mercury. So the process does have an element of gender diversity and equality and this is also captured within the NAPS.
- This is something that is mandated by the Minamata Convention and the group is also a part of other conventions that we have signed on to.
- The Women Miners also have an active member on the GGMC board to represent their interests.’

Comment- William Woolford (GGDMA)
- ‘Over the years, women have been actively involved in mining in the leadership role. The Miners Association for several years, had at least one woman as an executive member in the management of the association.
- While we have had women work in the industry, we have had women who are business women who have been able to sit in leadership positions and compete with the men.’

Comment- Avalon Jagnandan (GGDMA)
- ‘Yes, women are becoming more and more involved in mining. We recently held our annual general meeting and we were pleasantly surprised by the number of women that turned out.
- Currently, we have a woman who serves on our board. GGMA has been in existence for 36 years and we represent all miners and whatever benefits the organization can receive from, Government for example; this goes back to all miners.’

Discussions with Plenary

Question- (Chris Bissessar)
- ‘Are there any other training or outreaches done for small scale farmers to communicate proper farming practices?’

Response- Gavin Ramnarain (Guysuco)
- ‘There is training done with small scale farmers; every month there is a National Cane Framing Committee. There are sub-committees that deal with farmers.’

Response- Badrie Persaud (GRDB)
- ‘GRDB has training ongoing continuously for small scale farmers. There are two arms; Research and Extension Service, there is the Farmer’s Field School that sits within the latter arm.
- Recently, there was an outreach done in region 2, to address the questions of farmers in relation to low yield in region 2 compared to other regions.
- GRDB over the years has been focusing, and will continue to do so more vigorously, on integrated pest control management. We have recognized that farmers who use the ITM practices, use less fertilizer, less agro- chemicals and achieve the same yield or in some cases higher yield.
- There is a farmer in Black-Bush Polar who does well with incorporating the ITM practices, so much so that he can use ¼ bag of Urea per acer; instead of 1 bag per acer
and get a better yield than the neighboring farmers who use 1 bag of urea per acre. There are farmers who are willing to integrate best practices, and we have been taking them from one region where they are doing well, for example; Cane Grove or Black Busl Polar and have them do an exchange of best practices in regions where the yields are lower. This is because a farmer will listen to his fellow farmer and the transfer of best practices would be more effective.’

Comment- Shalisa Shaw
- ‘Financing was mentioned at some point in the discussion, and I have been in banking for over 38 years. The financial institutions require proper collateral.
- Most miners have mining equipment that can be taken as collateral via bills of sale, but what banks find to be risky is the ability to monitor this type of collateral, as opposed to a house for example. Thus, bankers have always been shy of lending to the mining sector, because most mining is done in rituals where the banks do not have physical presence. But this is not to say that financing is not available.
- The Georgetown Chamber of Commerce’s membership has been lobbying for access to finances and this outside of miners. We have been trying to get bankers to receive assignment of receivables or invoice factoring.
- Recently, a business development forum was held and access to finances was one of the main topics being discussed. One of the things discussed was looking at regulatory changes to the financial institute’s act, to allow for receivable and invoice factoring to be considered.
- We recognized that there is a large percentage of persons in mining, and outside of mining want access to finance but do not have the tangible collateral to offer.
- How then can we in the banking sector modify our systems to accommodate them?’

Response- Badrie Persaud (GRDB)
- ‘Demerara Bank a few months ago, launched a program targeting rice farmers; that small scale rice farmers can access non collateral small loans up to 1.5 million dollars.
- The bank recently declared that they made 2.5 billion dollars after taxes without a bad debt last year. The banking sector is surely moving along.’

Question- (Edon Daniels)
- ‘The discussion is about mining and agriculture and mainstreaming biodiversity, but by default I do get the sense that we are speaking of gold mining only; do we venture into other aspects of mining and the mining of other minerals?’

Response- Darcy Waldron (GGMC, Environmental Unit)
- ‘This can be tied back into the acts, regulations and codes of practices; these help to limit the impacts of mining and mining here, is not limited to gold, diamond etc.
- Mercury and cyanide were highlighted because this is the focus of the event today.’

Response- Ashanta Osborne
- ‘Dr. Dublin did mention in his presentation that one of the sectors looked at was logging, but because of the prioritization process that was implemented, gold mining and agriculture; rice and sugar; were the sectors that were selected.
- The sectors that were not included in this study are being addressed in other spaces.’

Comment- Darcy Waldron (GGMC, Environmental Unit)
- ‘Precisely, for example in quarrying, you would need an environmental management plan and permit and GGMC works closely with EPA to make this process effective.’
Comment- William Woolford (GGDMA)
- ‘In relation the issue on financing; over the years efforts were made to provide financing to miners. There was a development bank that did have a window for lending to miners and there was also an act; financial assistance for the mining sector. There is experience in lending to miners, but somewhere along the line the commercial banks morphed into a different framework.
- On the matter of other minerals; even though it is important to recognize that the primary mineral is gold; in mining gold they have come across other minerals as well that can become co-products of the gold mining industry.’

Question- (Khemraj Persaud)
- ‘With reference to alternative technologies that demonstrate efficiencies in mining, can an example of this be provided?’

Response- Darcy Waldron (GGMC, Environmental Unit)
- “…the mineral processing unit continues to offer technical assistance to miners through demonstrations, using the gold catcher and the gold cube concentrators. Through collaboration efforts between Conservation International, Guyana Mineral Processing Unit and GGMC we have been able to set up two mineral recovery pilot sites at Puruni - Mazaruni Mining Districts; where they use the trammel, crushers, two gold catchers, shaking table and one triple flex sluice box.”

Comment/ Question- Aiesha Williams
- ‘In relation to the question on why the focus on gold mining; there were initially 8 sectors that were highlighted during the process of analysis and engagement with various stakeholders. This then led to the focus on gold mining and agriculture; rice and sugar, with a focus on the use of chemicals and pesticides.
- Question- When the agriculture aspect of the discussion was taking place, this sounded similar to discussions on gold mining, miners ect; can there be any lessons learned across sectors?’

Response- Gavin Ramnarain (Guysuco)
- ‘We live on this land and farmers have been planting rice and cane for 200-300 years and the land is still producing for us. And as farmers, we are invested in the land, we do not want to damage it because it is the way we will secure our future income.
- Farmers realize the importance of biodiversity and we exist in a web; connected to everything else around us and when you pressure one aspect it pushes back. If you eliminate a pest, the insect that was not a pest becomes a pest, it is only through carefully studying and education we learn to fit in this web. We can get what we want but we must do it in a sustainable way, we have certainly learnt our lesson as a planet; that if we keep talking, there will be push back.
- If it is possible to grow cane in the same spaces for the next 500 years, this of course is what is desirable. This must be done using as little fertilizer as possible, in an environmentally friendly way this would be better for the environment. Sugar cane is also a green crop, it observes a lot of carbon dioxide and broilers are used to process the cane, thus our contribution to greenhouse gasses is negative.
- Farmers do not want to use all of these chemicals, but it is our life. This is why the organization is working with the board to educate people as best we can.’

Comment- Trecia David- Granath (RPTCB)
- ‘Training and awareness is important and has to be continuous. Some may question why training continues in one community; this is because most farmers have been using
pesticides for a long time and the impacts that we may tell them is taking place, because they have not seen it for themselves they may not understand.
- Added to this, when you share the impacts with farmers, the ask; is that data from Guyana? This is why more emphasis is being placed on research. If they can see the impacts or it's closer to home they will understand.'

Comment- Darcy Waldron (GGMC, Environmental Unit)
- 'This is relevant to the mining sector as well and one of the lessons learnt; as was mentioned by our colleagues from GGMA is that you can use the farmers to educate each other. Because, GGMC is still seen as a regulatory body and learning may be more effective if miners were to learn from the experiences of their fellow miners.'

Comment- William Woolford (GGDMA)
- 'The mining industry has learnt from the agriculture sector, because agriculture has the Guyana School of Agriculture and they have extension programs.
- In recent times, the mining commission has introduced a strong technical assistance program and to a smaller extent an extension program. The Mining School, to a lesser extent mimics the Guyana School of Agriculture.'

Comment- Ashanta Osborne
- 'Someone did mention the behavioral change element of this, and that is one of the things that most training programs are taking on-board in a more meaningful way. Where they address, not only the barriers to learning, but the barriers to changing as well.'

Comment- William Woolford (GGDMA)
- 'GGMA is the only agency that has a technical assistance group. This group provides technical assistance to those who need it.'

Comment- Badrie Persaud (GRDB)
- 'There is something called Minimum Residual Level (MRL) of pesticides in products in Europe. This outlines the minimum level of pesticides in products that can be imported into or exported out of Europe.
- There is one pesticide that is used in Guyana; trade name pronto that Europe has closed in on. If this pesticide exceeds the level that has been set on it in the paddy being exported from Guyana it will not be accepted into the market. The major exporter of rice in Guyana has caught wind of this and they are raising awareness among local farmers.'

Comment- (Suresh Amichand)
- 'The most dangerous threat to biodiversity comes from the use of insecticides and this is used by farmers who plant other crops. There is an information gap because there is usually no focus on farmers who plant other kinds of crops.'

Response- Devon Dublin
- 'The lessons learnt and what we generate within this dispensation would then be translated into best practices for other places.
- When we look at Guysuco and GRDB; they can be looked at as the big brothers of the industry and if they can be the trend setters, this would be helpful. This is one of the differences with the mining sector, you are always here; what about the big guys? Well, here we have Guysuco and GRDB, who are the big guys, who are setting the example. This can be an area that mining can learn from.
- NARI is doing a lot for small farmers as well, it would add value if the work being done by Guysuco and GRDB can feed into the work being done by NARI.'
Comment- Ashanta Osborne
- ‘We do have the opportunity here, to study and learn from the lessons of these stakeholders; that is not to say that all lessons are transferable because they are nuanced experiences.’

Question- (Amrita Churaman)
- ‘As it relates to biodiversity with respect to the rice and sugar industry, is there a comprehensive report on the biodiversity of the soil?  
- The soil’s microbial community is important and there is a lot of research emerging that shows that the microbial community can help with the reduction of the use of pesticides and fertilizers.  
- There is research that shows that a certain type of bacteria are plant growth promoters, because they help with the secretion of nutrients, making it available for the plants. Also, they are able to confer resistance through their actions against other microbes.  
- It is important to know what microbes exist so as to help them with respect to the soil.’

Response- Gavin Ramnarain (Guysuco)
- ‘There is an issue with lack of resources; a few years ago we did have a micro- biologist on staff but it is very difficult to find a micro- biologist.  
- A few years ago a study was done; a survey of all of our soils was done, covering about 50,000 hectares of land. We did find out that there are certain areas that have good bacteria and there are areas that have bad bacteria.  
- I do agree with you but it comes back to capacity, we do not have sufficient experts here and the few that we have are already stretched thin.’

Comment- Ashanta Osborne
- ‘It is certainly good to note this, as an area for capacity development and for the purpose of informing people in the room who have the authority to make decisions that will impact these gaps.’

4.2 Responses from Panelists to Group Work Conclusions

Question- Ashanta Osborne
- ‘What can we do to ensure that the decision makers are present in the spaces that they need to be in order to have the information they need first hand to make the decisions that are impacting?’

Response- Trecia David-Granath (PTCB)
- ‘It is difficult to find the time, and it is difficult to be present at all the different engagements that require your attention. It is factual that there may be occasions that you as the decision maker need to be present in the room, because if you were to send a representative from your organization and have the report to you after, sometime there is a dilution of the communication and therefore no actions are taken.  
- How to solve this however, is difficult to say.’

Response- Avalon Jagnandan (GGDMA)
- ‘Most times agencies are indeed stretched thin and the best way to probably solve this is
to designate persons within the agency to various areas that they would best serve.’

Response- Badrie Persaud (GRDB)
- ‘This has to do with the appeal of the event also. Does it appeal to the mind’s of the decision makers to be a part of the event.’

Question- Ashanta Osborne
- ‘Are you saying that there may be the opportunity to engage decision makers before coming to larger groups; so that the decision makers know of the projects and are familiar with the organizations funding or executing them etc.? ’

Response- Badrie Persaud (GRDB)
- ‘Yes.’

Response- Darcy Waldron (GGMC, Environmental Unit)
- ‘This can also be reliant on the policy of the agency as well. If the agency’s policy lines up with the project goal and they can help move the inactive forward then that agency can be engaged.’

Response- Badrie Persaud (GRDB)
- ‘You can also look at what other successful organizations do; like the Private Sector Commission. They have a membership, so perhaps this can be applied.’

Response- Avalon Jagnandan (GGDMA)
- ‘WWF is doing a fairly good job, they have been in continuous contact with GGMA. I do not usually attend events like this but I make a special effort because of the relationship that WWF has built with us.’

Comment- Ashanta Osborne
- ‘This is certainly one of the key things that will be central to this process, in terms of building momentum for these and over time various methods would have to be implemented when it comes to stakeholder engagements.

Thank you; to the panel of speakers, this conversation has been instructive in helping us all understand what is already being done and where we go next. The audience has also been very instrumental in helping to pull out ways in which cross sector learning can take place and even within sectors there are a lot of opportunities to collaborate.

Image 7: Participants proving feedback to Panelists.
Section 5. Conclusion

5.1 Summary and Conclusion - Ms. Sabina Khan, WWF Guianas

Ms. Khan opened her closing remarks by stating that a ridiculous amount of studies in the fields of sustainability science, ecological economics and so forth have validated that nature underpins all economic activity, contributing, what we call, natural capital. She further emphasized that some conservative estimates of the value of global natural capital is in the range of trillions of US dollars, annually. For example: work of the Intergovernmental Panel on Biodiversity and Ecosystem Services has estimated that $577 billion US dollars in annual global crop output is at risk from the loss of our pollinators. The World Economic Forum’s 2022 Global Risks Report has indicated that environmental risks biodiversity loss, climate change and extreme weather – are now considered the most damaging to society over the next 10-years, and moreover, they aggravate all other risks stemming from other sectors.

Continuing her remarks, Ms. Khan reiterated that biodiversity is cross-cutting across every aspect of our social, economic and cultural systems. And it is because of this underpinning and interdependency, we necessarily need a systematic approach to biodiversity governance. Stating that there is a role and responsibility for every stakeholder in safeguarding biodiversity as a foundation for sustainable development.

The Biodev2030 project is contributing to important ongoing efforts by all of our colleagues in this room in strengthening the science-policy-practice interface -- to improve the consideration of the value of biodiversity and ecosystem services within policies, plans and practices in all economic sectors.

Recalling the discussions of the day, Ms. Khan reflected on the mainstreaming initiatives of colleagues in agriculture and mining, and stated that the attendees of the Voluntary Commitments Launch heard about how the pesticide board is working to phase out the importation of certain extremely toxic chemicals. Simultaneously, Guyuco and GRDB are investing in research and development to ramp up the phase-in of innovative approaches in Integrated Pest Management. GGMC is working on implementing a national action plan on artisanal and small-scale gold mining and restricting importation of mercury, thus upholding Guyana’s commitment under the Minamata Convention. And GGDMA is supporting collaboration between two unlikely bedfellows – the mining sector and the environmental conservation sector -- in testing new methods in mining which have reduced ecological impacts. Each stakeholder here has taken a firm grip on their sphere of influence to steer systems towards sustainability.

Ms. Khan wrapped up her remarks by thanking project partners, specifically, the French Development Agency (AFD), Expertise France, the International Union for the Conservation of Nature and Biotope Siège Social for supporting Guyana in implementing this initiative. In remarks at the conclusion of the days programme, Expertise France- Quintin Dupetit Global Coordinator BIODEV2030 in his virtual presentation commended Guyana for reaching quality results even after joining the project during the second wave in 2021, and noted that the country has the capacity to achieve voluntary commitments. Stating that this is evident in the fact that Guyana has already linked the BIODEV2030 project with other ongoing projects by other agencies to sustain the initiative. Ms. Khan thanked the project working group for lending their superb expertise in the process, noting that already, the results of the project will be fed into national reports for the Convention on Biological Diversity through the EPA.

In closing, Ms. Khan shared that WWF Guianas looks forward to maintaining the momentum that was built with all partners that played a role in the process, to take the outputs to the next logical
and necessary step – of securing and supporting the implementation of voluntary commitments for biodiversity mainstreaming across all economic sectors in Guyana, and also throughout the Guianas as a region.

*Image 8: Group Photo of Event Participants.*
Appendices

Appendix A: Agenda

Biodiversity Engagement Facilitation (BIODEV2030)
Consolidation Event
Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30 – 09:00</td>
<td>Registration</td>
<td>Chairperson - Ms. Ashanta Osborne</td>
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<tr>
<td>09:00 – 09:02</td>
<td>Opening</td>
<td>Mr. Kemptorne Daley</td>
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<tr>
<td>09:02 – 09:05</td>
<td>BIODEV Video –</td>
<td>Expertise France – Quintin Dupetit – Global Coordinator BIODEV2030</td>
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<tr>
<td>09:05 – 09:12</td>
<td>Remarks- International Context</td>
<td>Guianas Context – Ms. Aiesha Williams</td>
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<tr>
<td>09:20 – 10:10</td>
<td>Presentation of Results of the</td>
<td>WWF Guianas – Dr. Devon Dublin and Mr. Kemptorne Daley; University of Guyana - Mr. Seon Hamer</td>
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<td></td>
<td>BIODEV2030 Project and Q&amp;A session</td>
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<tr>
<td>10:10 - 10:30</td>
<td>Coffee Break (20mins)</td>
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<tr>
<td>10:30-11:00</td>
<td>Group-work</td>
<td>All participants</td>
</tr>
<tr>
<td>11:00 – 12:15</td>
<td>Panel Discussion and Round-table Discussion</td>
<td>Mr. Gavin Ramnarain, Head of Agriculture Research Center, Guyusco; Mr. Badrie Persaud, General Manager, GRDB; Ms. Trecia David-Garnath, Registrar, Pesticides and Toxic Chemicals Board; Mr. Darcy Waldron, Head of the Environmental Unit, GGMGC; Mr. Avalon Jagnandand and Mr. William Woolford, General Manager, GGDMA</td>
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<tr>
<td>12:15 – 12:25</td>
<td>Closing remarks</td>
<td>WWF Guianas – Ms. Sabina Khan (Confirmed)</td>
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The Following appendices may be found at the Drop-box link provided: https://www.dropbox.com/scl/fo/1g8mjtrw16et7ki1d4n4n/h?dl=0&rlkey=8w7qzto2c99k341kaiv9y0m5

**Appendix B**: Outputs of Group Work Session

**Appendix C**: Participants List

**Appendix D**: BIODEV2030_Project Consolidation Event Presentation - Final