TALANOA SESSION REPORT

Wednesday August 22 2018
Fiji Commerce & Employers Federation Boardroom,
42 Gorrie Street, Suva
ACKNOWLEDGEMENTS
We offer our sincere thanks to all our Members and Partners who have worked with us on our journey to support an enabling environment for Green-Blue Pacific economies, and affect transformative change for sustainable and inclusive development in the Pacific.

DESIGN
The Talanoa Series Report was designed in house by the PIDF Strategic Communications Unit. Photographs are acknowledged to PIDF Programme and Strategic Communications Units.

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<td>BARC</td>
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<td>COP23</td>
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INTRODUCTION AND BACKGROUND

For Fiji and the Pacific, the versatility of Bamboo could offer an important source of rural employment and income for local communities, and contribute to a green transformation in support of climate resilience and the implementation of the SDGs.

Bamboo is a native species across the Pacific, and some species have also been introduced – all have found traditional uses but efforts in developing a small cottage industry, through workshops and trainings have not been followed and scaled up. Innovations and applied research in bamboo products and potential for sustainable development are increasing in many countries like China, Indonesia, Thailand and Malaysia among others. In this context, renewed interest in Bamboo, as a fast growing natural resource-tool for community development by producing innovative products and services, is growing from the private sector, Government Ministries and local communities.

In terms of outcomes, this Talanoa:

- Set the scene of bamboo development in Fiji and the Pacific Islands;
- Highlighted the outcomes of the Global Bamboo and Rattan Congress 2018;
- Gave an outlook on bamboo development on the global stage including innovations, products and services for community development and resilience;
- Presented and discussed a concept for the establishment of a Bamboo Development Centre in Fiji;
- Fostered interactive discussions and proposed next steps for bamboo development in Fiji and the Pacific Islands.

The Concept Note, Agenda, Flyer and Participants’ List for this Talanoa are provided as Annex 1, 2, 3 and 4 respectively to this Report.
SUMMARY OF PRESENTATION AND DISCUSSIONS

Welcome Address - Mr. François Martel, Secretary General PIDF

Following a brief introductory video from BARC, the Secretary General of the PIDF, Mr. François Martel, highlighted why Bamboo is important for green growth in the Pacific Islands.

Mr. Martel’s speech is provided as Annex 5 to this Report and the introductory video is available for viewing at https://www.youtube.com/watch?v=gRbXQKhvPoU&feature=youtu.be

Opening Address – Ms. Sanjana Lal, Conservator of Forests, Fiji

Ms. Sanjana Lal touched on the history of bamboo in Fiji. She mentioned that one of the initial projects on bamboo development in the late 1970s lost momentum because of a lack of interest in the area, exacerbating the already lack of technology and expertise that was available at that time. Despite that setback, a slow-but-steady affinity grew for this product and in 1998 a Bamboo Association was established. All this while, however, Fiji had fallen behind the already developing worldwide global bamboo industry.

Nevertheless, the not-so-distant past has given life to this industry even further. Most recently, Fiji’s COP23 Presidency herald in discussions around the various uses of bamboos putting up a strong case for the need for greater utilization of bamboos and to address pressing challenges including climate change mitigation and adaptation and supporting livelihoods.

Owing to this, Bamboo has in recent times been referred to as the “New Green Gold” of Fiji, and perhaps even the Pacific.

A copy Ms. Lal’s Opening Address is attached as Annex 6 to this Report.

Video Introduction – Mr. Hans Friederich, Director General, INBAR

The PIDF attended a first ever Global Bamboo and Rattan Congress (BARC2018) held in Beijing, China. Knowledge and networks from this conference, together with a developing relationship between the PIDF and INBAR provides possibly the foundation on which to build genuine partnerships and drive transformative change towards green growth and increased resilience. This video presentation covered the efforts of INBAR to promoting Bamboo in the Pacific.

This video is available for viewing at https://www.youtube.com/watch?v=h-TFhqKWJxM&feature=youtu.be
Background of Bamboo in Fiji - Ms. Salaseini Bureni, Ministry of Forests, Fiji

Ms. Salaseini Bureni explained how research and development of Bamboo in Fiji has hit a snag because of a lack of proper inventory of the stocks and species in the country and a lack of expertise in this area – amongst other reasons. Challenges encountered were also part of her presentation.

A copy of her presentation is provided as Annex 7 to this Report.

Bamboo Technology and Products used in the Islands – Mr. Sukulu Soko, Sunnyville Bamboo Development

Renowned bamboo enthusiast and entrepreneur Mr. Sukulu Soko delivered a heart-felt presentation that introduced the audience to the various species of bamboo that are in Fiji, bamboo product development, weaknesses, barriers and possible next steps forward from here.

A copy of his presentation is provided as Annex 8 to this Report.

Mr. Soko has, over the years, been able to document the different types of bamboo in Fiji, together with different brochures, pictures and uses of bamboo i.e. for construction, consumption etc; and other first-hand information. Please get in touch with him directly for these.

Brief from BARC/INBAR Conference – Mr. François Martel, Secretary General PIDF

As mentioned earlier, the PIDF attended a first ever Global Bamboo and Rattan Congress held in Beijing, China. In this session, Mr. Martel provided the audience a snapshot of the plenary sessions and side events that PIDF attended.

A copy of his presentation is provided as Annex 9 to this Report, and for comprehensive information on BARC2018, please http://www.barc2018.org/en/index.html

Bamboo to Save the World – Mr. Pablo van der Lugt

In this session, the participants were presented with Mr. Pablo Van der Lugt’s Bamboo to Save the World video on YouTube. Mr. Lugt was simply astounding, and we highly recommend it be viewed at https://www.youtube.com/watch?v=wI_fdwCU_oc not only as a reference to this Talanoa, but to also truly appreciate the seemingly endless uses of Bamboo.

Mr. van der Lugt is the Head of Sustainability at MOSO International (https://www.moso.eu/en/home) & Accsys Technologies (https://www.accsysplc.com/).
Bamboo in Construction – Mr. Masi Latianara, Director Habitat for Humanity Fiji

Mr. Latianara took to the stage to show participants the work they have done towards promoting and advocating sustainable low-cost housing in Fiji. The presentation also made suggestions on how Bamboo could fit into the overall picture in terms of climate change mitigation and adaption. Discussed also were Building Codes, and how these could help give rise to bamboo structures in Fiji.

Mr. Latianara’s presentation is provided as Annex 10 to this Report.

Proposed Fiji Bamboo Centre – Mr. Mark Borg, Team Leader Programme Management, PIDF

The PIDF is proposing that a Fiji Bamboo Centre bring all the moving parts in the bamboo conversation together. Essentially, the Centre will serve as a focal point for bamboo-related activities and revive the bamboo industry in the Pacific. To explain this further, Mr. Borg presented the Concept of the Fiji Bamboo Centre.

A copy of his presentation and full concept paper is provided as Annex 11 and 12 respectively.

INTERACTIVE DISCUSSIONS AND PROPOSED NEXT STEPS FOR BAMBOO DEVELOPMENT IN FIJI AND THE PACIFIC ISLANDS

Discussions during this interactive session are noted below:

1. Bamboo Center
   - In regards to the Bamboo Center, it is to be initially established in Fiji then taken regionally. The Fiji Center can be used as a stepping stone for the rest of the Pacific, especially in those countries where Bamboo is naturally abundant.

2. Some challenges in realizing Bamboo’s true potentials are:
   - Fiji Building Code does not certify structures built from Bamboo.
   - Engineers in Fiji are not acquainted with bamboo and its potential and thus have a somewhat negative response to building practices using bamboo.
   - Social mindset – there is an inferiority complex towards traditional building material. People are more accepting of housing structures made from cement, profiled timber and steel because bamboo is “poor man’s timber”.
   - Bamboo has moisture in it thus it tends to rot and is highly susceptible to insects. However, there are documented methods by which bamboo can have its moisture reduced to a minimum and be made stronger than steel.

3. In terms of solutions to challenges:
   - Raise the profile of bamboo and encourage all involved to consider new developments in bamboo related technologies.
   - Request the Chinese and Indonesian Governments, and other national and international entities, to provide capacity building to engineers in the Pacific on bamboo related building technologies.
   - Re-establish the currently stagnant Bamboo Association. PIDF will support this, but we all must strategically plan the areas of bamboo development to collectively focus
   - Lobby for Government to create an inclusive Working Group that will guide bamboo development in collaboration with private sector entities and civil society groups.
• Expand stakeholder consultations and encourage involvement of women and women groups. For instance, an NGO called FieldReady has the mandate to stop supply chain issues in the Pacific region by manufacturing humanitarian aid items locally. Vatuvara Foundation is a conservation foundation focusing on addressing land degradation.

• Begin discussions and work towards consultations for the inclusion of bamboo structures in the Building Code for Fiji. One of our arguments is possibly through science and calculations, and the Entec Materials Testing Laboratory in Walu Bay can be a starting place. Labs here can test bamboo products versus steel and prove that a composite of bamboo creates zero emission compared to steel.

4. In terms of potential partners and donor funding agencies:

• The Ministry of Forest, Fiji, can provide research expertise in terms of most suitable species, work towards ratifying the 2030 UN Declaration on Forestry.

• The Ministry of Women – can coordinate engagement of women groups. Bamboo can be utilized by women to make handicraft, fishing poles, garden fences or as a water pipe. Some of those very simple solutions can be put to use in rural areas to sustain livelihoods.

• Technical expertise and funding can be sought from the Chinese Government, through PIDF’s Bamboo Centre Concept.

• Technical & Capacity Building can be sought from the Indonesian Government.

• Engagement from the Private Sector in terms of pilot project sites, solutions for low cost and eco-friendly housing alternatives and building materials and testing of bamboo products. However, in the private sector nothing happens unless a sale occurs and that is really the beginning of the process. Everything is a response to demand rather than the ability to produce something. For example: Mr. Arnie Duckworth of Pacific Harbour Planters is currently in Thailand. He is planning to move to Fiji his plant and equipment that can produce stronger, lighter, stiffer and more affordable building panels from bamboo. Mr. Duckworth is a material scientist with a life time passion of building materials for the boating industry and the housing industry.

5. It’s imperative that a three-to-five year plan is made to support how our work progresses to the next level because sitting in the same room some years later talking about the same issues is not an option. Incidentally, the people who can chart a path forward are in this meeting.

6. Apart from identifying bamboo species that are good for structural purposes there is a need to consider what land all this bamboo can be planted on, and the invasiveness of bamboo species which may not be available locally but needs to be brought in. In this regard, meetings have already taken place with Biosecurity Authority of Fiji’s CEO.

7. Currently, the Ministry of Forests works on Bamboo but discussions are still in progress as to which Ministry – either Forests or Agriculture – are custodians of Bamboo. This stems from the fact that Bamboo is considered a grass, and thus, is more in Agriculture than it is Forests.

8. Professor Lex Thomson and his PARDI2 Team are planning to build a compendium of information pertinent to Bamboo. PIDF is discussing this with them and will share draft documents one ready and approved for circulation.
PROPOSED NEXT STEPS

- PIDF to use the Pacific Green Business Portal to publish web-pages on bamboo development.

- The participants agreed there was a need to establish a Fiji Bamboo Association that brings together the different private stakeholders involved in bamboo development in Fiji. PIDF offered to act as Secretariat of the Association if it is needed. It was proposed that the Association will develop a constitution and a Strategic Plan.

- PIDF to pursue funding for the establishment of the Bamboo Centre in accordance with the shared concept paper.

- The Ministry of Forests to confirm who in government will be primarily responsible for bamboo development in Fiji.

- PIDF to continue consultations with stakeholders to determine priorities in the development of the bamboo industry and build a partnership network on the subject.

- PIDF and PARDI2 to jointly produce a compendium on bamboo for the Pacific region.

- Another Talanoa to be organised once funding for the Bamboo Centre is confirmed.
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ANNEX 1 Bamboo Talanoa Concept Note

THEME: The Potential of Bamboo for Green Transformation in Fiji and the Pacific Islands

DATE: 22nd August 2018, 8:30am to 1:30pm

VENUE: Fiji Commerce and Employers Federation Board Room, 42 Gorrie Street, Suva

RATIONALE AND BACKGROUND:

For Fiji and the Pacific, the versatility of Bamboo could offer an important source of rural employment and income for local communities, and contribute to a green transformation in support of climate resilience and the implementation of the Sustainable Development Goals. Bamboo is a native species across the Pacific, and some species have also been introduced—all have found traditional uses but efforts in developing a small cottage industry, through workshops and trainings have not been followed and scaled up. Innovations and applied research in bamboo products and potential for sustainable development are increasing in many countries like China, Indonesia, Thailand and Malaysia among others. In this context, renewed interest in Bamboo, as a fast growing natural resource-tool for community development by producing innovative products and services, is growing from the private sector, Government Ministries and local communities.

The Global South has tremendous expertise, best practices and high level of research and innovation in replacement of construction material, timber, steel and plastics, among others that have created an industry worth USD$60 billion globally. Bamboo can be a low- or even negative-carbon alternative to a number of traditional materials and can help communities adapt to life under a changing climate. Countries across the world are also using bamboo to restore severely degraded lands and prevent deforestation.

The recent Global Bamboo and Rattan Congress (BARC2018) held in Beijing, China, which was attended by the PIDF, expounded on how bamboo can contribute to South-South Cooperation and the Sustainable Development Goals. Knowledge and networks from this conference, together with a developing relationship between the PIDF and INBAR—the International Network for Bamboo and Rattan, provides the foundation on which to build genuine partnerships and drive transformative change towards green growth and increased resilience. This Talanoa aims in part at sharing with key stakeholders in Fiji the information collated through our participation in many of the sessions, panels and displays related to Bamboo development with potential application in the Pacific context.

With its partners, PIDF has initiated discussion on the establishment of a Bamboo Development Centre in Fiji, with the concept being possibly extended in other PIDF member countries with bamboo potential. It is essential to establish a support system to provide those trained with assistance when they are faced with problems in their endeavours. The establishment of national Bamboo Development Centres in those Pacific island countries where bamboo production and utilisation offers promising prospects, proposes to do just that.

OUTCOMES:

This Talanoa will seek to:

- Set the scene of bamboo development in Fiji and the Pacific Islands;
- Highlight the outcomes of the Global Bamboo and Rattan Congress 2018;
- Give an outlook on bamboo development on the global stage including innovations, products and services for community development and resilience;
- Present and discuss a concept for the establishment of a Bamboo Development Centre in Fiji;
- Foster interactive discussions and proposed next steps for bamboo development in Fiji and the Pacific Islands.
ANNEX 1 (cont’d)

PARTNERS:
1. The Ministry of Forests, Government of Fiji;
2. The Ministry of Women, Children and Poverty Alleviation; Government of Fiji;
3. International Network for Bamboo and Rattan (INBAR);
4. Pacific Agribusiness Research in Development Initiative.

POTENTIAL PARTNERS:
1. Fiji Bamboo Association;
2. Fiji National University (FNU); 3. Other interested parties.

PARTICIPANTS:
Representatives from Government Ministries, regional and international organisations, Pacific Islands’ missions, private sector entities and CSOs will be invited to attend and participate.

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ANNEX 2 Bamboo Talanoa Agenda

Agenda - Talanoa on Potential of Bamboo for a Green Transformation
Wednesday August 22nd, 2018
FCEF Boardroom, 42 Gorrie Street, Suva.

<table>
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<tr>
<th>TIME</th>
<th>SESSION</th>
<th>SESSION LEAD</th>
<th>PURPOSE</th>
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<tbody>
<tr>
<td>8:30am - 9:00am</td>
<td>Registrations</td>
<td></td>
<td>Record participants’ name and contact details</td>
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<tr>
<td>9:00am - 9:05am</td>
<td>Bamboo Video and Welcome Address</td>
<td>Mr. François Martel, Secretary General, PIDF</td>
<td>Introduce participants to the Talanoa and highlight why this is important for green growth in the Pacific Islands</td>
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<tr>
<td>9:05am - 9:15am</td>
<td>Opening Address</td>
<td>Ms. Sonjana Lal, Conservator of Forest, Fiji</td>
<td>Highlight Fiji’s vision for APOLU sector and the role Bamboo plays in it</td>
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<tr>
<td>9:15am - 9:20am</td>
<td>Bamboo for Sustainable Development</td>
<td>Video Introduction from INBAR Director General Mr. Hans Friedrich</td>
<td>Video presentation covering efforts of INBAR to promote Bamboo</td>
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<tr>
<td>9:20am - 9:30am</td>
<td>Background of Bamboo in Fiji</td>
<td>Mr. Jale Tauraga, Principal Silviculture Research and Development Officer, Ministry of Forests, Fiji</td>
<td>Where is the Bamboo Industry in Fiji?</td>
</tr>
<tr>
<td>9:30am - 9:40am</td>
<td>Bamboo Technology and Products Used in the Islands</td>
<td>Fiji National University Mr. Sufula Soko,</td>
<td>Pique the participants interest in scope for Bamboo products</td>
</tr>
<tr>
<td>9:40am - 9:50am</td>
<td>Brief from BARC/INBAR Conference</td>
<td>Mr. François Martel, Secretary General, PIDF</td>
<td>Update from BARC/INBAR Conferences</td>
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<td>9:50am - 10:05am</td>
<td>Bamboo to Save the World</td>
<td>Video from Pablo van der Lught, Head of Sustainability - MOSO International &amp; Access Technologies</td>
<td>SHG impact and potential of Bamboo</td>
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<tr>
<td>10:05am - 10:30am</td>
<td>Morning Tea</td>
<td>Mr. Arof Robik, Director, IndoBamboo</td>
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<tr>
<td>10:30am - 10:40am</td>
<td>Bamboo Experiences in Indonesia</td>
<td>Mr. Arof Robik, Director, IndoBamboo</td>
<td>Bamboo experiences relevant to the Pacific Islands from Indonesia</td>
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<td>10:40am - 10:50am</td>
<td>Bamboo in Construction</td>
<td>Mr. Masimake Lepeta, Habitat Humanity Fiji</td>
<td>Pique the participants interest in scope for Bamboo products</td>
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<td>10:50am - 11:00am</td>
<td>Proposed Fiji Bamboo Centre</td>
<td>Mr. Mark Bay, Team Leader Programme Management, PIDF</td>
<td>Brief participants on PIDF’s proposed Bamboo Centre</td>
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<tr>
<td>11:00am - 12:30pm</td>
<td>Interactive discussions and proposed next steps for bamboo development in Fiji and the Pacific Islands</td>
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<tr>
<td>12:30pm - 12:35pm</td>
<td>Vote of Thanks</td>
<td>Ms. Puna Ravanala, Bamboo Entrepreneur Fiji</td>
<td>Lunch</td>
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<td>12:35pm - 1:30pm</td>
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The Pacific Islands Development Forum (PIDF) considers Bamboo as an incredible resource in the Green Economy and potentially an important component of the Green transformation sought in the Pacific. The versatility of Bamboo could offer an important source of rural employment and income for local communities, and contribute to a green transformation in support of climate resilience and the implementation of the Sustainable Development Goals.

The PIDF recently attended the Global Bamboo and Rattan Congress (BARC2018) held in Beijing, China, and the knowledge and networks from this conference, together with a developing relationship between the PIDF and INBAR – the International Network for Bamboo and Rattan, provides the foundation on which to build genuine partnerships and drive transformative change towards green growth and increased resilience.

Bamboo is a native species across the Pacific, and some species have also been introduced – all have found traditional uses but efforts in developing a small cottage industry, through workshops and trainings have not been followed and scaled up. In this regard, PIDF has initiated discussions on the establishment of a Bamboo Centre in Fiji.

Hosted by the Fiji’s Ministry of Forests, Ministry of Women, Children and Poverty and Poverty Alleviation and the PIDF, this Talanoa will seek to:

- Set the scene of bamboo development in Fiji and the Pacific Islands;
- Highlight the outcomes of the Global Bamboo and Rattan Congress 2018;
- Give an outlook on bamboo development on the global stage including innovations, products and services for community development and resilience;
- Present and discuss a concept for the establishment of a Bamboo Development Centre in Fiji;
- Foster interactive discussions and proposed next steps for bamboo development in Fiji and the Pacific Islands.

For further information please contact:

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## ANNEX 4 Attendance Register

<table>
<thead>
<tr>
<th>NAME</th>
<th>ORGANIZATION &amp; TITLE</th>
<th>CONTACT DETAILS</th>
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<tbody>
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ANNEX 5  Welcome Address – Mr. François Martel, Secretary General, PIDF

Your Excellency, Ambassador of the People’s Republic of China, HE Qien Bo and members of the Diplomatic Corp,

Fiji Conservator of Forests,

Bamboo enthusiasts,

Ladies and Gentlemen,

Welcome to this Talanoa on Bamboo development for a Green Transformation.

I don’t know if you have noticed on this short clip – the same video that introduced the Global Congress - but although we have seen people from across continents – none were from the Pacific Islands, despite the fact that bamboo is growing naturally on most of our islands and have traditional usage in most of our communities.

Last year, I had the opportunity to attend the 1st Belt and Road Forum for International Cooperation held in Beijing – there, I was introduced to INBAR – the International Bamboo and Rattan network – a full-fledged inter-governmental organization with more than 40 countries and their bamboo and rattan initiative for sustainable development.

This has led to where we are today with this Talanoa.

When I first came to Fiji as a young forestry researcher, the country was moving at pace in what was coined at the time the “green gold” – Caribbean Pine plantations across the dry talasiga – from a few plots, it turned into 100,000 ha of plantations, providing business opportunities for rural communities, reduced pressure on logging of the indigenous forest and turn into what is today a multi-million dollar timber export industry of what is known worldwide as Fiji Pine.

I have spent 35 years working as a forester and conservationist in the Pacific and although bamboo is an indigenous and introduced resource in most Pacific Islands, and traditional usage is well known – only feeble efforts have been made in its promotion as a sustainable landscape resource and promoted as a key resource for green growth. In Asia, it has become a USD$60 billion industry employing nearly 8 million people from mainly rural communities.

Imagine Fiji Pine growing ten time faster and being part of 10,000 different products – bamboo has the potential to be this century “green gold”.

Today, we have gathered a group of key stakeholders in the bamboo trade in Fiji to:

• Set the scene of bamboo development in Fiji and the Pacific Islands;
• Highlight the outcomes of the Global Bamboo and Rattan Congress 2018;
• Give an outlook on bamboo development on the global stage including innovations, products and services for community development and resilience;
• Present and discuss a concept for the establishment of a Bamboo Development Centre in Fiji;
• Foster interactive discussions and proposed next steps for bamboo development in Fiji and the Pacific Islands.

We are supported here in our dialogue and discussion by local bamboo specialists and our colleagues at INBAR, by World Bamboo Ambassadors in the Netherlands and an Indonesian organization, Indo-Bamboo, promoting bamboo for community development and resilience (but I have just been told the latter may not be able to present due to technical difficulties).

I wish you all an informative and fruitful Talanoa on Bamboo development in Fiji and the Pacific.
The Secretary General, Pacific Islands Development Forum  
Team Leader and staff of the PIDF Bamboo Programme  
Representatives of the Government Ministries and Non Government Organizations  
Partner Agencies  
Ladies and Gentlemen

It is indeed an honour to deliver an opening address on this much awaited commodity for which many of us have been hopeful to see prosper. And I am hopeful that after today’s Talanoa session, we will be seeing a platform from where we will see bamboo being given the recognition it truly deserves, and an understanding and awareness of its potential and how we can together, commit to developing this special resource.

Bamboo development in the Fiji Forest sector started with a project in Vunidawa, Naitasiri in the late 70s with funding from the People’s Republic of China, to explore the utilization of the local bamboo species. The project however was not successful due to lack of appropriate technology, interest and financial support. In spite of this the Bamboo Association was formed in 1998 to revive the bamboo industry and to encourage the use of bamboo in Fiji.

Apart from the Bamboo association, there were also two local small scale developers of Bamboo that have showed interest and ventured into bamboo manufacturing and furniture making.

The Ministry of Forests in 2000 brought twelve different bamboo cultivars from Australia for research experimental plantings and for product development research but again, interest dwindled over the years and did not attain what was anticipated. Even with numerous training locally and in China, the use of bamboo as alternative materials for building and handicrafts is quite low and insignificant. We hope that with the recent signing of an MoU between the Ministry and State Forestry Administration of the People’s Republic of China, we will revive bamboo projects and this time around, have the success we have hoped for.

The development of a Bamboo industry and the establishment of a Bamboo Centre in Fiji are in line with the mission of the Ministry of Forests and Fiji’s Development Plan. The Government of Fiji had already identified this plant’s potential to alleviate poverty in Fiji. At a side event during COP 23 in Bonn last November, Government representatives and members from international organisations including Fiji, shared the various uses of bamboos putting up a strong case for the imperative need for greater utilisation of bamboos and innovation to address some pressing challenges including climate change action and livelihoods support. The event highlighted the role of bamboo for climate change action and value chain creation though collaboration and innovation.

The PIDF Secretary General, Francois Martel, as a panellist to this side event championed the need for more island states in the Pacific to join INBAR and benefit from bamboo, emphasising it as an incredible resource in the Green Economy and how its versatility could offer Pacific people sustainable solutions to their needs.

Other participants at this side event discussed the use of bamboo for typhoon proof construction, soil/water conservation and coastal protection, small and medium enterprise (SME) development, bioenergy, and carbon sequestration.

They noted the important role bamboo can play in addressing many of the most serious challenges faced by SIDS, while, also supporting their Nationally Determined Contributions (NDCs) and realising their sustainable green development goals.

We probably did more with bamboo in the past than we are doing currently and this at a time when the technologies have advanced dramatically and when almost every country of the tropics has realised the incredible potential of this giant grass. Unfortunately the Pacific is still lagging behind and we now need to play catch up.... And we need to catch up fast.

We agree that if we had a centre in Fiji, things would have progressed better in this sector. We thus have supported the establishment of this centre.

Of course we are very limited in terms of naturally occurring bamboo species in Fiji, we only have one indigenous species – Schizostachyum glaucifolium, and another which is introduced, well established and naturalised – Bambusa vulgaris. Both have their uses but we know we are not maximising the potential of this already existing resource. With the introduction of other species, depending what uses of Bamboo we want to focus on, we can add a lot of value to this resource.
We know bamboo grows extremely well in Fiji. We have an abundance of water most of the time in the year and we have enough land to create vast forests of bamboo. We need to take advantage of the fact that this plant is also ideal for land restoration projects and has been used in other countries to even restore lands that have been degraded by mining activities.

The PIDF Secretary General called this plant the new Green Gold. Considering the potential – currently the value of trade in bamboo is estimated at 60 Billion US dollars annually – and its versatility, I have to agree. This green gold has been staring us in the face for too long now and it’s time to harness it.

We need to take the issue of bamboo propagation and utilisation seriously. We cannot continue implementing ad hoc activities or some time-bound projects that come to an end after a few years and everything folds up with it. If we are truly serious about this ... and we should be as there are many opportunities in this area .... we need to look at a long term engagement in this area, and one way of doing so is to establish this proposed centre that would support these efforts and the efforts of individuals and those in the private sector who want to take this work seriously.

We need an approach that is inclusive of a number of factors including advocacy work, botanical and agricultural research, research in innovative applications, mapping of bamboo habitats around the Pacific, training in propagation and also in the skills required in its many applications, and establishing policy that is conducive for the growth of the industry.

This Talanoa session is an opportunity to set the scene for bamboo development in Fiji and the Pacific Islands, including innovations, products and services for community development and resilience. With the presentations and discussions on the concept of a Bamboo Development Centre in Fiji, we hope that through this session we will be able to foster interactive discussions and proposed next steps for bamboo development in Fiji and the Pacific Islands.

We are therefore grateful for this talanoa, for the number of partners engaged in this effort and the obvious high interest in the sector reflected by the level of participation in today’s talanoa. I look forward to some interesting presentations and a lively discussion and I hope that in the future we look back at this moment as the turning point of the bamboo industry in Fiji.

This is not something new to us. We have tried to develop this resource but not rigorously pursued it. We have had some trainings and capacity building in the propagation and utilization of bamboo but we need to seriously implement programmes in the various sectors and take ownership towards completion.

We need a Centre and some investments to maintain and develop bamboo as an industry in Fiji and we need an inclusive approach. The opportunity is now there and we are grateful for PIDF to be providing us this opportunity to use today’s Talanoa session as a turning point for bamboo, it’s revival and revitalization.

Thank you.
ANNEX 7 Background of Bamboo in Fiji - Ms. Salaseini Bureni, Ministry of Forests, Fiji

**Background of Bamboo in Fiji**
- There are three types of bamboo in the world. In Fiji, we have only 1 variety, Symposial variety (clumping).
- Bamboos are mostly used for building huts, walls, and floor coverings.
- Also used for weaving, traditional games, cooking, and fencing, pales, traditional farming, protecting the village from intruders during traditional war, rafts, handles for fishing spears, crafts, etc.
- Bamboo leaves are traditionally used for healing burns; and a Totem tree.

**Bamboo Propagation – Tropical Clumping Species**
- Division
- Seed
- Culm cutting
- Branch cutting
- Marcotting
- Micro propagation
- Trench layering

**Presentation Outline**
- Overview
- Background
- Research and Development of Bamboo in Fiji
- Bamboo Propagation
- Challenges with the Processing of Bamboo Products

**Research & Development of Bamboo in Fiji**
- In August 2000, a bamboo trial plot was established in Colo-i-Suva for research purposes where the branch cuttings were imported from Australia.
- Species included: *Bambusa oldhami*, *Bambusa vulgaris* cv *Vittata*, *Bambusa vulgaris* cv *Wamin*, *Bambusa meilingensis*, *Bambusa ventricosa*, *Dendrocalamus latiflorus*, and *Dendrocalamus asper*. The species had no labels.
- The purpose of this trial plot was to determine the best planting space and growth dynamics, shoot production and a demonstration stand to provide background information on desirable bamboo species for plantation establishment.
- The branch cuttings were raised in the SRD nursery and planted out in the field when they had reached a meter in height; and
- A total of 22 bamboo species were used for planting in this trial plot.

**Challenges with the Processing of Bamboo Products**
- Durability of bamboo – Fiji lacks the proper facilities and technologies for treating bamboo wood as it is susceptible to pest and disease.
- Lack of proper knowledge and technologies for processing bamboo products.
- Chemicals used for treating bamboo wood is costly.
- Identifying markets – local and international.
- Viable bamboo industry is questionable.

**THANK YOU**
ANNEX 8 Bamboo Technology and Products used in the Islands – Mr. Sukulu Soko, Sunnyville Bamboo

Way out

Internal

1. Include Bio into existing programs - cocktail things - awareness
2. Include NGO in potential offices - break it into parts
3. Association's official working group - ways to change awareness, training pair
4. Partnership

External networks to increase opportunity

- NGOs
- Community
- Government
- Private sector
- Regional

Directions for Development

- Village based entity contribution
- Result

External Landscape

- Market competition
- Aggressive/pro-active lobby group
- "Poor man’s timber" mentality
- Create adequate awareness/training

BNF Framework

- Assessor
- Support
- Certification
ANNEX 9  Brief from BARC – Mr. François Martel, Secretary General, PIDF

Participation of PIDF in BARC 2018

- Secretary General François Martel and Team Leader Programme Management Mark Borg.
- Supported by the kind assistance of the Embassy of the People’s Republic of China.

At BARC 2018, PIDF

i) Participated in high-level and panel discussions.
ii) Promoted the Fiji Bamboo Centre concept.
iii) Provided a Pacific perspective on sustainable bamboo developments.
iv) Networked extensively.
v) Learned from initiatives from around the world.

Themes of Plenary Sessions

- Ministerial Session: Agenda 2030 and Bamboo and Rattan
- Session 1: South-south Cooperation and the Belt and Road Initiative
- Session 2: Bamboo and Rattan for Climate change and green growth
- Session 3: Technological Innovation and Industrial Development

The Potential of Bamboo as Part of Green Transformation TALANOA SESSION REPORT

Bamboo development for SDGs

- Sustainable Bamboo: Driving Materials Innovation & 3rd International Conference on Modern Bamboo Structures
- The role of bamboo in aromatic essences and social housing

- Protecting the cultural heritage
- Ethnobiology and bamboo craftsmanship in North Africa
- Bamboo for water management and on-farm rehabilitation
- International markets for bamboo commodities
- Promote indigenous bamboo for sustainable development (1)

- Bambusa tulda, a sustainable species
- Bamboo-based tourism
- Ecological benefits and ecosystem services
- Economic and social benefits

- Sustainable bamboo also in meet them (1)
- Sustainable bamboo also in meet them (2)
ANNEX 9 (cont’d)

Bamboo for Climate mitigation

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<th>CO2 emissions (kg)</th>
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<td>Aluminum</td>
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Capacity-building for Bamboo

CONCEPT NOTE
To establish a training centre in Fiji to help training local entrepreneurs in bamboo propagation and applications.

Pacific Islands Development Forum

Construction in cane form

Transport - Bicycles

Civil engineering

Display & Furniture

Sustainable alternatives

Vinaka vakalevu – Thank You
ANEX 10 Bamboo in Construction - Mr. Masi Latianara, Director Habitat for Humanity, Fiji

Living with Bamboo
Bamboo in Construction

Possibilities

Housing

Construction Components
ANNEX 10 (cont’d)

Codes & Standards
- 2013 International Building Code (IBC)
- 2012 International Residential Code (IRC)
- Hapal Code (Hong Kong)
- Rodale
- Habitat and Bamboo

257,000
(31%) Living in poverty
57,119
Homes threatened by disasters

4000
Bamboo homes a year

Vinaka
ANNEX 11 Bamboo Centre – Mr. Mark Borg, Team Leader Programme Management, PIDF

The Potential of Bamboo as Part of Green Transformation TALANOA SESSION REPORT

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**Why a Bamboo Centre?**
- Bamboo is tied to Pacific traditions
- Bamboo is the future of the Green Economy
- Past bamboo activities have not been comprehensive - need to go beyond ad hoc activities or time-bound projects.
- A support system for bamboo entrepreneurs is needed.

**The Bamboo Centre & SDGs**
The Bamboo Centre will contribute to the following SDGs:

1. Poverty Alleviation
2. Economic growth
3. Climate change adaptation capacity
4. Peace and justice
5. Partnerships

---

**The Bamboo Centre & Fiji’s Development Plan**
The Bamboo Centre can help achieve:
- Accessible and adequate housing for all
- Green Growth
- Food and Nutrition Security
- Women in Development
- Rural Economy Expansion
- Sustainable development of forestry resources
- Enhanced technical and vocational skills

---

**Bamboo in the Green Economy**
- PIDF’s mission is to promote Green and Blue Economy to ensure development and economic growth protects the environment.
- Bamboo qualities are ideal for Green Growth –
  - Fast growing
  - Effectively combat erosion
  - Keeps water in and oxygenates water
  - Inhibits water pollution due to high nitrogen consumption
  - Protects surrounding land, species, communities
  - Supplies oxygen up to 12.6m of CO2 from the air per hectare
  - Generates up to 25% more oxygen than equivalent stand of trees
  - Versatile in its use

---

**Bamboo Centre Activities**
The three main activities proposed are:
- Establishment of training facility
- Capacity Building and Demonstrations
- Project management

---

**Outcomes**
- Establishment of facilities for regional bamboo capacity
- Enhanced bamboo product development and utilization capacity
- Enhanced capacity for producing sustainable and affordable bamboo materials for local use and export

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**Project personnel**
- Establishment Stage
  - Project Manager
  - Project Administrator
  - International/InAR Bamboo Advisor
  - PID and MIF staff offer support.
- Beyond Establishment Stage
  - Bamboo Centre Administrator
  - Trainees/Consultants (as required)

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**Research & Training**
- Proposed partnership with University of Indonesia
- Proposed research areas:
  - Bamboo site mapping
  - Development and dissemination of propagation and cultivation techniques
  - Increased understanding of native species
  - Adaptation to local cultures and community needs

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**Partnerships**
- Fiji Government – e.g. Min. of Forestry/Min. of Women, etc.
- Foreign Missions – e.g. China and Indonesia
- Academic research – e.g. PARDI2, University of Indonesia
- We continue building partnerships around various areas – e.g. Fiji National University, Pacific Community, GGGI, IFCN, etc.
- We encourage additional partners – national, regional and international
- Most important private sector

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**Research & Training**
- Proposed partnership with PARDI2 (Pacific Agribusiness Research for Development Initiative Phase 2)
- Preparation of a Pacific Bamboo compendium that will explore the status of bamboo propagation, application and industry development in the Pacific.

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**Bamboo Centre**
- Goal: To establish a Bamboo Centre in Fiji to serve as a focal point for bamboo-related activities and revive the bamboo industry in the Pacific.

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**Bamboo in the Green Economy**
- The bamboo centre would facilitate research to understand how to make better and new products from bamboo, help train bamboo producers in these uses, and help develop markets for these products.

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**Bamboo for coastal erosion control**
Arranging bamboo poles in rows helps to reduce the height and strength of waves, facilitate the accumulation of sediment and re-establish mangrove forests for more resilience coastal defenses.