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INTERGOVERNMENTAL GROUP ON HARD FIBRES AND INTERGOVERNMENTAL GROUP ON JUTE, KENAF AND ALLIED FIBRES

Intersessional Meeting

22 September 2021

DRIFT ACTION PLAN

Executive Summary

The economic context under which jute, abaca, coir, kenaf, sisal and allied fibres (JACKS +) sectors operate has become very challenging and competitive, and urgent action is required to ensure the sectors' long-term economic sustainability. At the same time, the global transition towards a bio-based economy provides many new market opportunities.

As requested by the Joint Meeting (JM) of the Intergovernmental Group (IGG) on Hard Fibres and the IGG on Jute, Kenaf and Allied Fibres held in Beijing, China, in October 2019, the Secretariat commissioned the development of an action plan to strengthen and streamline the efforts of the group in promoting and modernizing the JACKS+ sectors.

The action plan builds on the priority areas and working groups of the IGG and covers three main themes: (1) Research and Development; (2) Sustainable Management Systems and Life-Cycle Assessment; and (3) Foresight and Business Intelligence & Transition Management.

The action plan foresees the foundation of a 'Knowledge and Capacity Centre' by JACKS+ fibre producing countries as a practical approach to support the IGG in addressing the persistent challenges of the JACKS+ sectors that prevent them from becoming competitive on a global scale and engage in emerging global sustainability transitions. A concrete action plan for the first 36 months (three years) is proposed as a pilot period to build the Knowledge and Capacity Centre with the aim to develop it into a centre to support the JACKS+ sectors.

Suggested action by the Joint Meeting

Considering the multiple challenges faced by the JACKS+ sectors and new market opportunities that are opening up, the JM is invited to:

1. Adopt the report "Proposal for an IGG Work Plan";
2. Express its views on the modalities of implementation of the Action Plan.

Queries on the substantive content of the document may be addressed to:

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drift for transition

Draft Proposal for an IGG Work plan

JACKS+ Knowledge and Capacity Centre

IGG Workplan

Date

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1. Introduction

This Action Plan is a result of a decision made by the members of the Intergovernmental Group on Hard Fibers (Abaca, Coir and Sisal fiber) and the Intergovernmental Group on Jute and Allied Fibers of the Food and Agriculture Organization of the United Nations at its joint Session held in Beijing, China, in October 2019.

It comes as a response to two trends that need the joined attention of all JACKS+ producing countries. First, the economic context under which JACKS+ sector operate has become very challenging and competitive. The sector needs to change to ensure its long-term sustainability. Second, the global transition towards a biobased economy is at the same time providing many market opportunities that can be exploited.

This Action Plan builds on the priority areas of work that were already decided on by the group at previous sessions. As a result, this Action Plan is developed around three main themes: 1) Life-Cycle Analysis and Sustainable Management; (2) Foresight and Capacity Development; and (3) Research and Development. Each of these main themes are managed and coordinated by a Working Group, consisting of IGG members. In addition, it provides an estimate of the funding requirements and arrangements for capacity building and knowledge sharing across all three working groups and a budget for a small operational team for a pilot period of 36 months.

The Action Plan of the IGG is also very timely. In November 2019 the UN General Assembly at its meeting passed resolution A/C.2/74/L.2/Rev.1 calling all UN member states to support plant fibers in general and JACKS+ (Jute, Abaca, Coir, Coir, Kenaf and Sisal and allied fibers) specifically. The resolution was initiated by the Govt. of Bangladesh, who is the largest exporter of Jute fiber in the world. The resolution acknowledges the enormous potential plant fibre production can have to ecological, social and economic sustainable development goals. It calls upon countries and stakeholders to scale up efforts to support sustainable production to the benefit of local communities and global sustainability. To do so it asks for developing plans and partnerships that support sharing of (indigenous and scientific) knowledge and competences and mainstreaming of sustainable production. In appendix 1 the key article of the UN GA resolution is provided.

The structure of this document is as follows. In section 2, the scene is set by providing a brief system analysis, positioning the JACKS+ sector in the broader transition to a nature positive economy, based on concepts such as circular, regenerative and biobased. In section 3, building on the experience and insights from the IGG working groups, the main strategic challenges of the JACKS+ sector are presented. Section 4 presents a proposal how the IGG can tackle these challenges through the support of a collaborative 'Knowledge & Capacity Centre' for the global JACKS+ fiber producing countries (KCC- JACKS). Finally, section five discusses the role the IGG can take in this and what is needed for the next steps in terms of capacity and funding.

2. The position of JACKS+ fibres and the transition to a nature-positive economy

Setting the scene – a system analysis

2.1 JACKS+: Natural hard fibers with a shared history of challenges and development.

JACKS+ is the collective name of Jute, Abaca, Coir, Kenaf and Sisal and allied fibers. These renewable natural fibers crops have been used for centuries. The development of these sectors, the natural fiber production and its uses share a history of technical, social and market related challenges. By tradition these natural fiber crops have been cultivated in their natural environment and mostly in small holdings in rural settings. They provide an income and employment, but not necessarily have profited from modernization, globalization or innovation as have other markets and material sectors.

Millions of people around the world earn a living in the JACKS+ fibers' sector, predominantly in emerging economies and developing countries such as Bangladesh, Brazil, China, India, Malaysia, Philippines, Sri Lanka, Tanzania and Kenya. The production and international trade of most of the natural fibers has a long history spanning several decades if not centuries. However, since the second World War most of the JACKS+ fiber sectors have faced severe competition and even decline. This has been caused to a large extent by the rapid developments and market penetration of manmade synthetic materials such as polymers, including plastics. But additional factors have played a role in the decline in area of plantation as well as fiber production besides the competition with the polymer industries. In policy and strategy discussions within the sector many factors are mentioned. Most notably, little innovation, limited knowledge of the impact of global developments and weak and fragmented public policies and private sector strategies and governance structures.

2.2 The current state of the global JACKS+ sector from a transition perspective

The future of the JACKS+ sector is a pressing matter, because of its ecological and economic potential as well as the possible further decline. Will the marginalization of the market for JACKS increase or are alternative scenarios possible? Will JACKS be able to capitalize on its potential for regional economic growth, social development and positive environmental and ecological impact? These questions can be answered by looking at the international JACKS+ sectors from foresight approach and a transition perspective. This includes describing how the sector is currently organized, how relevant macro-trends influence the development of the sector and what incremental and transformative innovations can guide the sector to make a transition towards contributing to human well-being.

Current state of the Jacks+ sectors

The JACKS+ fibers are mainly produced by micro, small and medium sized family owned businesses in developing countries and emerging economies but the supply/value chains are not global value chains as generally understood in globalization literature. Although the labor intensity of production and fiber extraction is high, the degree of mechanization and automation

is relatively low. People often work under challenging conditions, mostly in rural areas, are cashflow driven and work under small financial margins. The semi-finished and finished product manufacturers in the supply chains operate in highly competitive environments. This leaves little room for investments in technology and innovation, which is enhanced because of their limited of knowledge of international markets or global development.

Apart from a major part of Jute and Kenaf fiber products manufacturers in India (the larger part of these fibers is used for national consumption), most fiber product manufacturers are focused on international export. This relates to the colonial history of supply chains being dominated by European trading houses that after the world wars discouraged local innovation, controlled market access and mostly promoted buying in bulk. This impacted the modernization of production methods, product and business development. All JACKS+ fiber producers could benefit from long term planning due to the dependency on the climate and the nature of agricultural cycles. (e.g. Sisal plants need to mature a few years before being harvested), For Jute, production yields tend to differ yearly, due to competition with food crops as rice and cassava, depending on price levels for each crop.¹

Traditionally, JACKS+ fibers are used in a wide range of applications. To mention just a few, this includes ropes, yarns, sacks, brushes, carpets, doormats etc.) to more detailed, fine products (cigarette filters, teabags, coffee filters, banknotes. In certain advanced applications the biodegradability of JACKS+ fibers have proven to be beneficial.

Most of the JACKS Fibers are facing a declining or stabilizing demand, which is partly due to the fierce competition with plastic alternatives, that are initially lower in price. But also by the lack of timely product and market development based on innovation and modernization. Hopes are this decline will stop due to new emerging markets and market protection policies. (e.g. In India, Agricultural products mostly sacked in non-plastic packaging).

Relevant macrotrends

Several macrotrends are relevant for future developments of the JACKS+ sector. This works both positive as negatively: some macrotrends offer promising opportunities to JACKS+ sectors, while others are putting pressure on the sectors to make a change. Typical examples are:

Climate change: Changing weather conditions will impact production of JACKS+ in several ways, which will impact the stability and scale of production. **Growing concerns about biodiversity and climate** contribute to the pressure on fossil fuels, and fossil based markets. This might lead to a growing demand **for renewable, biobased alternatives.**

Additionally, **technological innovations are marginalizing fossil based sectors** by offering attractive, renewable and biobased alternatives. These innovations can both be competing with JACKS+ products, as offer new markets to JACKS+ fibers.

¹ <http://www.fao.org/3/y5143e/y5143e1q.htm#TopOfPage>

In many Western countries, a large-scale **movement towards biobased and circular alternatives** is emerging. This results in more consumer awareness, changing consumption patterns, and a growing demand for transparent and sustainable supply chains.

Digitization ensures rapid knowledge exchange. The COVID19- pandemic speeds up this development even more by stimulating online communication and collaboration. This may contribute to international collaboration.

An emerging **translocal economy with more decentralization in combination with globalization.** This might impact the current market dynamic in most JACKS+ sectors, to focus less on “western markets”, and instead organizing a promising regional and local demand.

Emerging alternatives

Within the JACK+ sector we see several innovations emerging, that offer an alternative for the traditional applications.

- JACKS+ fibers are being used for new applications. Examples are sustainable building materials, (panels and insulation materials), Natural Fiber Composites (e.g. in automotive parts, furniture and other product categories), advanced civil engineering applications as Geotextiles.
- Some producers are experimenting with closed loop, zero waste production systems, by using 100% of the plant (e.g. for cattle feed, biogas, pharmaceuticals), and producing in consortium with other crops to improve soil quality; while inter-cropping could improve land use and offer economic benefits.
- The introduction of the sustainable Development Goals provides an incentive for JACKS+ producers to not only align with these goals but also acknowledge the value of their contribution to individual goals better. green and biobased economic development based of People, Planet and Prosperity for all perspective.

2.3 JACKS+ in the transition to a nature positive, circular and biobased economy

The combination of challenges in the current way JACKS+ sectors are organized, relevant macro-trends and emerging alternatives provide the building blocks for a mobilizing narrative for the JACKS+ sector: the role of natural fibers in the transition back to a nature positive, circular and biobased economy. Globally economies are increasingly looking to move away from fossil and linear models. Supported by government, science and business different pathways are explored, expressed through concepts such as ‘circular’, ‘biobased’, ‘green’ or ‘social’ economy. Each of these concepts refer to the desire to find economic models that are good for planet and people. Major economies like the EU and China are now leading this push with the EU Green Deal and Chinas ecological civilization. These policies are supported by exponentially cheaper technologies, new business models and new approaches to measure and reward positive impacts through so-called capitals approaches.

These emerging sustainability transitions all help business break away from a locked-in, linear, extractive and fossil-fuel-based economy towards a future economy that creates value for

people. This model is referred to as a Nature Positive Economy: an economy that is regenerative, collaborative and where growth is only valued where it contributes to social progress and environmental protection. Importantly, it is not dependent on fossil fuels for energy, on extracting and wasting resources or on exploiting people and communities to create value. A healthy environment offers the best guarantee for human health and a high quality of life, so a nature positive economy must also be a human-centered economy focused on well-being.

This inspiring idea of generating positive impact for nature and people can be the starting point for any business to start exploring its own role, position and contribution. This journey starts with business models that generate positive impacts relevant to their context, considering their employees, communities and the natural environment within which they operate. In energy, food, mobility and resource use there are already technologies, business models and markets emerging that operate this way, and offers high perspectives for JACKS+ sector:

- As a potential supplier of biobased materials for a circular economy that also supports local economies and can potentially help regenerate ecosystems. The biobased and circular economy requires to partially substitute many common raw materials that are currently largely produced from fossil (petrochemical) or mineral resources, with products produced from renewable (plant and animal based) resources
- JACKS+ Fibers have the potential to become a favorable substitute to synthetics that, in some cases, use unsustainable inputs, while at the same time encouraging the growth of sustainable agriculture, fostering economic development and strengthening the participation of smallholders in the value chain.
- Last but not least JACKS+ fibers provide a promising pathway towards sustainable development in regions that most need. They have the combined benefits of Fibers, Food, Feed and Fuel. Hence business models can be **regenerative**, seeking to contribute to creating positive impact for nature and people and help address persistent ecological and social challenges. They can be **collaborative**, based in cooperation with diverse groups of stakeholders to create social and ecological value, and often support shared value creation, such as community or public goods and services. They can be **transformative**, helping to shift context (policy); inspire new products, models and practices (business); improve awareness, understanding and impact (research); and change demand and preferences (consumers).

Approach – how to get there?

But to get that point won't be easy – and it will take a long time: the JACKS+ sectors will have to go through transitions themselves, to be able to become part of the global push away from fossil, towards a more biobased, nature positive economy. To achieve this requires coordinated activities on many levels such as:

- Deepening knowledge (analysis, data, expertise, shared history, learning and monitoring).
- Exploring futures (envisioning, strategy building, nature positive futures)

- Developing strategy (scenarios, backcasting, strategy and coalition building)
- Facilitating transformative innovation (experimentation, business models, funding).

Above all, it demands a perspective that builds on and strengthens knowledge and capacities on the ground while at the same time catalyzing broader engagement and coordination to strengthen and support institutions, networks and actors on a global scale.

Over the last years, the IGG has done some formidable work in setting out the strategic challenges of the JACKS+ sector in more detail and provided the preliminary work to create the support structures needed to make this transition happen. In the remainder of this document, we will build on this work and summarize the main strategic challenges in reaching this goal (chapter 3), propose how the IGG can provide a structure to address these challenges and support the global JACKS+ sector in this transition process (chapter 4) and make a rough indication of the required resources needed (chapter 5).

3. Strategic challenges and way forward for JACKS+sectors

[problem analysis]

The JACKS+ sectors must capitalize on its potential to contribute to a nature positive economy locally and globally by further strengthening both proven and promising practices and internationalizing its reach. Over the last couple of years, the three working groups of the IGG have made substantial progress in identifying where the most pressing challenges are, identifying, the main areas for strategic action. A more in-depth analyses of the challenges can be found in the appendix of this document, but the main points are presented below, in no particular order:

3.1 Operationalizing foresight, business intelligence and transition management.

Improving the position and strength of the international JACKS+ sector demands developing a more integral approach based on foresight methodologies, thereby strengthening the capabilities for collective tactical and strategic action of the IGG. These function and capabilities building have proven to be essential for strategy development and evidence-based policy actions. Through statistical data collection from the member states the FAO IGG secretariat produced medium term outlook for the JACKS+ fiber. The objective is also to combine the foresight approach with the quantitative modeling forming the basis of the medium-term projections.

At the same time, it is observed that national level policy making also needs data/information regarding the international developments that were shaping the JACKS+ sector. In order to determine the best course of collective actions by the JACKS+ fiber producers the International Natural Fiber Organization (INFO) initiated a series of workshops, during the period 2012-2017, in which the Foresight Approach took a central role. During the INFO workshops the participants were introduced to the foresight approach and its effectiveness of generating both processes (e.g. collective visioning, collaboration, trust etc.) and contents (e.g. assessment of mega trends, scenarios, roadmaps etc) related outcomes. However, due to budgetary constraints the activity could not establish continuity. Therefore, more orchestrated and dedicated activities are needed to further develop the information providing function of the IGG into a platform for foresight, business intelligence and transition management that fulfills the following needs:

- Lack of strategic insight in how global megatrends are shaping the JACKS+ sector.
- Lack of quantitative insights to support policy and strategy development.
- Lack of 'action Learning' to develop, maintain and institutionalize capabilities and capacities for foresight, business Intelligence and transition management.

3.2 Operationalizing science, technology and innovation

A lack of innovation has been signaled as a key weakness, especially innovation that contributes to wider sector transitions. Several producing countries initiate "incremental" projects. But collective efforts to address major challenges that are the concern of all JACKS+

fibers producers have been discussed intensively in the recent past but concrete actions are lagging. Themes that are selected as main focus areas are currently:

- Green Composites. JACKS+ fibers have many practical applications but diversification to higher value-added products has been lagging. It is anticipated that Green Composites as an application focused priority theme could function as a trigger for moving towards more value-added applications, such as automotive, aerospace, building construction, interior decoration and furniture, sport items etc.
- Bio-Refinery. The harvesting of fibers from JACKS+ crops leads to a secondary stream of materials amounting to sometimes 90% of the input material. To date the secondary material streams, with utility and commercial potential, have not been systematically assessed nor exploited. Bio-Refinery could provide opportunities for the JACKS+ crop producers to make productive use of these secondary streams.
- Climate change impact, mitigation and climate smart agriculture. Climate change will impact JACKS+ sectors, and there is currently a lack of R&D on selecting and breeding new varieties with strong resistance to stresses and disasters, develop (technical) measures or capacities for disaster prevention and mitigation, promoting sustainability based and ecological agriculture.

3.2 Operationalizing certification of the sustainability claims of JACKS+ sector in a convincing way.

Higher sustainability demands in the past decades have led to an explosion of schemes claiming to demonstrate the “greenness” of products. This has led to so called “Voluntary Certification Schemes”, which can be 3rd party verified or also self-reporting. It is very difficult for micro, small and medium sized businesses to deal with all these developments, which will impact the opportunities of these businesses to enter markets that demand such certification schemes. The “technicalities” of the schemes are already well established. What is needed now is the mobilization of the political will and commitment of key players (policy makers and the businesses) of the JACKS fiber producing countries to initiate activities in this area. There is a need to explore the feasibility of implementing a collectively developed and managed system (i.e. internationally harmonized) while suiting the national level supply side (production) conditions. However, there are still some barriers to overcome, most notably:

- Lack of awareness of the international discussions and the emerging requirements for conformity with Sustainability management Systems (SMS) and/or Life Cycle Assessment (LCA).
- Lack of understanding of and experience with the substance of SMS and LCA and its policy & business implications.
- Lack of reliable, accurate and relevant data sets and some methodological issues to initiate, develop and manage the data inventory in the various JACKS+ producing countries.
- The lack of understanding of the possible linkages of SMS and LCA to the very data intensive SDGs.

4. Proposal for a collaborative ‘Knowledge & Capacity Centre’ to ensure the continuity of the IGG work

[practical approach]

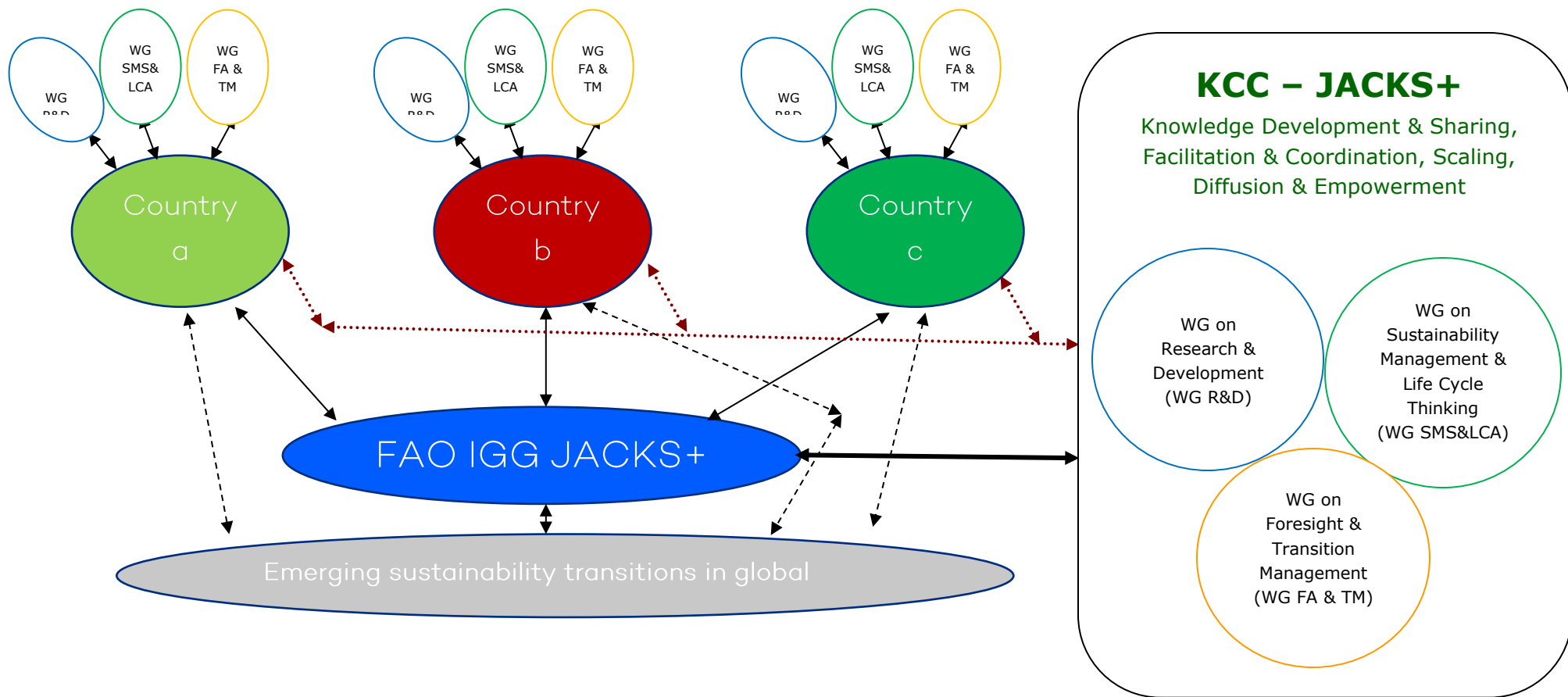
In this chapter we propose the foundation of a ‘knowledge & Capacity Centre’ for the global JACKS+ fiber producing countries (KCC- JACKS) as a practical approach to support the IGG in addressing the persistent challenges of the JACKS+ sector that prevent them from becoming competitive on a global scale and engage in emerging global sustainability transitions (as discussed in the previous chapter). The proposal focuses on co-creation and support for transformative change from within existing JACKS+ sectors, that will help build knowledge and capacities on the ground. Specific attention goes out to a platform for broader engagement and coordination to strengthen and support institutions and actors on a global scale.

The KCC is the operational entity that ensures continuity of the IGG work. The IGG will continue to be the place where policy discussions, agreements and implementation take place. Today, the IGG already presents a platform that can legitimize and empower these bottom-up strategic actions for transformative change, while at the same time providing a structure to support global learning, network building and advocacy. The challenge at hand is to successfully mobilize this platform to empower these transformative actions. For this end, the foresight approach will be complimented with the transition perspective and its associated approaches to learning, governance and research. It will draw from the global field of sustainability transitions research, that focuses on the patterns and dynamics of transformative change in sectors and regions and offers tools and strategies for governance. Specifically, the KCC will draw upon actionable knowledge that will aid countries and stakeholders in navigating their own transitions, support the diffusion of social learning and transformative innovation, and link in regional developments into global economic transitions.

The KCC will help to produce process related outcomes (e.g. collective visioning, collaboration, capacity-building, transition arenas, lobbying and networking etc.) and content related outcomes (e.g. basic research, papers, reports, data analysis, assessment of mega trends, roadmaps etc). Both types of output will be developed to support desired transformative changes, knowledge creation and diffusion and social learning. The starting point is to unlock academic and practice-inspired knowledge that is already there, for instance through co-creation, action research and literature reviews. In practice, this means the KCC will for example help share and diffuse methods to encourage reflection, exploration, analysis and synthesis, that could assist in informing policy makers and businesses in initiating collective and individual strategic actions.

The KCC builds on existing efforts of the three IGG working groups, thus building on years of experience from within the JACKS+ country representatives. Therefore, for each existing working group, a proposal for a variety of activities is proposed. The proposed structure of the KCC is presented in figure 1.

In the remainder of this chapter, for each working group broad activities are identified and translated into specific strategic actions for the near future (up to 36 months). Next to these working group activities, we also identify the need for some overarching activities focusing on knowledge and capacity development across all three working groups, and a small dedicated support staff to bring stability and continuity. Together, these activities provide a basic structure of what a KCC could do to support the IGG and the JACKS+ sector.



4.1 Research & Development

When funds are available, a core task of the KCC will be to contribute to common knowledge base by developing specific research as well as strengthening networks within the research community on relevant topics as identified by the R&D working group, namely climate change impact, green composites and biorefinery. Recognizing the resources limitations, for the initial round, from a long list of R&D themes these three areas have been selected by the WG. The remaining themes, as shown in the appendix, will be an on-going concern of the WG and the IGG.

For each of the three priority themes, several activities are identified, ranging from literature reviews to more hands-on work of assessing the current status of a particular technology or providing concrete recommendations about the possible roles of these technologies for JACKS+ sectors. One task will be to organize a high-level international R&D roundtable and workshop with up to 100 participants in 2021 to coordinate and prioritize short-term actions, which will focus on the three themes but may also address other themes from the long-list. A more detailed description of these proposed activities can be found in the proposed budget and appendix 2 of this document.

4.2 Sustainability management, lifecycle thinking and SDGs

The further promotion of Life Cycle Assessment (LCA) and Sustainability Management network and linkages to the SDGs will be a core task of the KCC. Efforts will focus on the initiation of the use of LCA and Sustainability Management network also assess the linkages with SDGs within the JACKS+ producer community so that these tools can be implemented for hotspot identification, industry upgrading and guide & inform policy development. The methods on how to design and collect data are already well established elsewhere but could be modified and used in the JACKS+ sector. However, the question is how to initiate, develop and manage the data inventory in the various JACKS+ producing countries.

Concrete activities for the coming 36 months will involve assessment of awareness at policy and business level; further developing this awareness where needed; and Laying the foundations for the use of LCA in the JACKS+ sector. *See appendix 3* for more details on the activities and budget allocated to sustainability management and lifecycle thinking

4.3 Foresight and transition management

The further promotion of foresight and transition management consists of three components: 1) developing a method to assess megatrends shaping JACKS+ industry structure; (2) Quantitative modelling of the JACKS+ sector; and (3) developing methods to apply foresight and transition management to national contexts. *See appendix 4* for more details on the activities and budget allocated to foresight and transition management, but *concrete activities for the coming 36 months* will involve:

- To review the quantitative models being used at FAO at present, assess the assumptions being made, verify the parameters being used for the medium-term projections and propose improvements. In addition, capacities and capabilities need to be developed at national level to strengthen the use of these models and also to “train experts” who could

satisfy the role of “assessors” and “commentators” of the modelling outcomes. To develop a standardized method to assess how global megatrends are shaping the JACKS+ sector, which can be used for recurring flagship publication (about the current state and future) of the JACKS+ sector every 2 to 3 years. Part of this standardize method is to explore how quantitative and qualitative knowledge can be combined in order to strengthen the joined understanding of the state of the JACKS+ sector.

- To assess the readiness of the JACKS+ fiber producing countries to use the currently available IGG/INFO foresight framework, to be supplement with the insights from Transition Management. This method can enable countries to get a better understanding of current dominant market dynamics within the specific JACKS sector, identifying dominant and relevant niche actors, and identifying potential transformative innovations.
- To develop continuous knowledge and capacity building for foresight and transition management through the development of a South-South-North community of practitioners. For this the working group will develop specific training modules to transfer lessons, support learning and capacity development. Think of masterclasses, train the trainers, and MOOCs in which local learnings are harvested and diffused.

4.4 Knowledge and capacity development – activities across all three working groups

In its basic shape, the proposed knowledge and capacity center is the sum of the combined activities of the three IGG working groups. However, to make the KCC a lasting success, there is the need for continued attention and effort in terms of both manpower and budget for knowledge and capacity building across all three working groups. Think of activities like communication and knowledge sharing, both internally and externally. For the next 36 months we foresee the following activities:

- Creating a website and forum for communication with the JACKS+ fiber network and interested parties. Including Development and use of JACKS+ Fibers Logo for promotional activities.
- Developing and maintaining overview of all global relevant databases, clearing houses and knowledge resources, including an online deposit for own IGG publications, to support global learning by bundling lessons, creating handbooks, exchanging standards, etc. Corporate communications including Monthly News-Brief. 3-5 pages + Quarterly Newsletter/Policy brief
- Facilitate and Support participation in at least 3 exhibitions
- International Conference with participation of all JACKS+ national teams + Researchers to exchange state-of-the-art and knowledge development.

4.5 Support staff for knowledge and capacity center.

To bring much needed stability and continuity to activities around knowledge and capacity building within and across all three working groups, we foresee the need for a small but dedicated support staff, consisting of both supporting essential sustaining processes (i.e. updating website and other essential administrative and communicative activities) and more strategic activities (strategic agenda development and coalition building).

5. Required resources

This final section discusses the role the IGG can take in this proposal and what is needed for the next steps in terms of capacity and funding. The proposal is to translate the identified strategic activities of the previous chapter and translate them into a concrete action plan for the next 36 months (three years). These 36 months can be seen as a pilot period to build the KCC with the aim to develop it into a permanent centre for the support of JACKS+.

The KCC itself could be collocated with the Dutch Research Institute For Transitions (DRIFT), Erasmus University Rotterdam to create synergies with the existing knowledge and networks on transition and sustainability, as well as to benefit from the available knowledge on business, economics and governance there. As an established transition research institute it can ensure direct access to state of the art knowledge but also offer an academic institutional environment including facilities for the proposed staff.

Below, an overview is given of the workload of the respective budget that is needed to successfully start the KCC. The ambition is to execute these activities within the pilot period (first 36 months) of the KCC. However, this is obviously dependent on the fact whether funds can be found. To estimate the budget, an average rate is taken (for Director/Senior and Junior researchers) of EUR 1,200,00 per day Ex. Taxes.

Action Plan and budget FAO IGG Jacks+		
Work Group 1		
Theme 1: Research & Development: climate change impact and climate smart agriculture		
Activity	days allocated	Budget
1. Conduct a literature review on Climate change issues related to JACKS+ fiber sector and identify R&D gaps that could lead to the development of an international programme	40	48000
2. Literature review on Carbon Trading and Policies: who is doing what and how developed are these systems? Initial assessment of relevance and applicability of Carbon Trading for JACKS+ fiber sector.	40	48000

3. An initial scoping to understand the role of SMART agriculture in the context of Climate Change in general and gather data on status of SMART Agri in JACKS+ producing countries	60	72000
Theme 2 of WG Research & Development: Green Composites		
4. Conduct a literature review on the state-of-the-art of NFC.	15	18.000
5. Assess the status and capabilities of the NFC sector in the JACKS+ fiber producing countries.	45	54.000
6. Assess (in an exploratory manner) the willingness of businesses to invest in this sector.	20	24.000
7. Provide recommendations for the JACKS+ fiber producing countries regarding the potential development of NFC sector as one of the diversification strategies.	20	24.000
Theme 3 of WG Research & Development: Bio-refinery		
8. Assess the current utilization of JACKS+ crops i.e. the conversion to fibers, feed, fuel and food. Taking into account the need to assess the two special topics of single use plastics and nano-technology and enzymes pathways (also for retting) with regards to JACKS+ crops	40	48.000
9. Determine the status of biorefinery in the JACKS+ producing countries	20	24.000
10. Report and provide initial recommendations on the possible role of Biorefinery in the JACKS+ producing countries.	20	24.000
Theme 4 of WG Research & Development: High-level round-table and workshop		

<p>11. The highest level management team members of R&D institution from the JACKS+ fiber producing countries and a selected number of other institutions with targeted specialties/expertise will also be invited to participate in this event. The objective is also to explore the possibilities of a selected number of institutions function as the national level focal point for the specific R&D theme.</p>	<p>n/a</p>	<p>130.000</p>
<p>Work Group 2 Sustainability Management and Life Cycle Assessment (LCA) including Sustainable Development Goals</p>		
<p>12. Assessment of awareness at policy and business level of SMS-LCA-SDGs.</p>	<p>40</p>	<p>48.000</p>
<p>13. Developing an of awareness building programme at policy and business level of SMS-LCA-SDGs</p>	<p>15</p>	<p>18.000</p>
<p>14. Laying the foundations for the use of LCA in the JACKS+ sector.</p>	<p>25</p>	<p>30.000</p>
<p>Work Group 3 Foresight and transition management</p>		
<p>15. To review and plan for the improvement of the quantitative models being used at FAO at present</p>	<p>40</p>	<p>48.000</p>
<p>16. Develop a standardized method to assess how global megatrends are shaping the global JACKS+ sector, which can be used for recurring flagship publications.</p>	<p>40</p>	<p>48.000</p>
<p>17. Developing a plan for an Action Learning Platform - Developing, maintain and institutionalizing the foresight, business Intelligence and Transition Management knowledge and capacities of the JACKS+ sector at national level. Continued attention for knowledge and capacity building for foresight and transition management through developing plans for the master-classes, train the trainers programmes, MOOCs, etc.</p>	<p>80</p>	<p>96.000</p>

Operationalization of Collective Action Knowledge and capacity development – activities across all three working groups (initial pilot period of 36 months)		
18. Creating a website and forum for communication with the JACKS+ fiber network and interested parties. Including Development and use of JACKS+ Fibers Logo for promotional activities .	n/a	20.000,-
19. Developing (40 days) and maintaining (70 days) overview of all global relevant databases, clearing houses and knowledge resources, including an online deposit for own IGG publications, to support global learning for example by bundling lessons, hand-books, exchanging standards, etc. This overview should become part of the website. Exact budget for specific activities to be determined on a case-by-case basis.	110	132.000
20. Corporate communications including Monthly News-Brief. 3-5 pages + Quarterly News-Letter/Policy	60	72.000
21. Facilitate and Support participation in at least 3 exhibitions - Only for organization and travel of organisers etc. Participants meet own costs. Final budget case-by-case basis for selected exhibitions.	20	30.000
22. International Conference with participation of all JACKS+ national teams + Researchers to exchange state-of-the-art and knowledge development.	N/a	130.000
Support & operationalization team (small core team for pilot period of 36 months)		
23. Essential core support team/staff for sustaining and coordinating daily processes for the period of 36 months Strategic support staff for activities such as advocacy, strategic agenda development and coalition building	312	374.000
TOTAL		1.560.000

Appendix 1: UN resolution

United Nations

A/C.2/74/L.2/Rev.1



General Assembly

Distr.: Limited
14 November 2019

Original: English

Seventy-fourth session

Second Committee

Agenda item 24

Agriculture development, food security and nutrition

Bangladesh, Bhutan, Eritrea, Haiti, India, Lesotho, Malawi, Mauritius, Nepal, Papua New Guinea, Philippines, Sri Lanka, Suriname, Thailand, Timor-Leste and United Republic of Tanzania: revised draft resolution

Natural plant fibres and sustainable development

The General Assembly,

Recalling the 2030 Agenda for Sustainable Development,¹ the Addis Ababa Action Agenda of the Third International Conference on Financing for Development,² the Paris Agreement,³ the Sendai Framework for Disaster Risk Reduction 2015–2030⁴ and the New Urban Agenda adopted in Quito by the United Nations Conference on Housing and Sustainable Urban Development (Habitat III),⁵

Recalling also its resolution 61/189 of 20 December 2006 on the International Year of Natural Fibres, 2009,

Recalling further resolution 3/2005 of the Conference of the Food and Agriculture Organization of the United Nations, adopted on 25 November 2005,

Noting the definition of natural fibres, as developed by the Food and Agriculture Organization of the United Nations during the International Year of Natural Fibres in 2009, and the scope of the present resolution, which focuses on the lesser known natural plant fibres, such as jute, abaca, coir, kenaf, sisal, hemp and ramie,

Noting also that the diverse range of natural plant fibres produced in many countries provides an important source of income for farmers, and thus can play an important role in contributing to food security and in eradicating poverty and hence in contributing to the achievement of the Sustainable Development Goals,

¹ Resolution 70/1.

² Resolution 69/313, annex.

³ Adopted under the UNFCCC in FCCC/CP/2015/10/Add.1, decision 1/CP.21.

⁴ Resolution 69/283, annex II.

⁵ Resolution 71/256, annex.

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Appendix 2: Input Working Group Research and Development

Lead party:
Institute of Bast Fiber Crops – Chinese Academy of Agriculture Sciences

27 November 2020
Version 1.1

Working Group (1) of Research & Development Of FAO HF/JU

1 Background

Research and Development driven innovation is a key route to strengthen, modernize and position the hard fibers (Abaca, Coir and Sisal) and Jute, Kenaf and Allied Fibers such as Ramie fiber (collectively to be called JACKS+ fibers) in the present context of Green and Bio-Based Sustainable development. In several discussions, within the Inter-Governmental Group on Hard fibers and the Inter-Governmental Group on Jute, Kenaf and Allied fibers, spanning decades the lack of R&D based innovation has been signalled as a key weakness. Several producing countries initiate “incremental” projects aimed at the local situation. But collective efforts to address major challenges that are the concern of all JACKS+ fibers producers has been discussed intensively in the recent past but concrete actions are lagging. There are several issues in the JACKS+ fiber producing countries that need to be resolved and for this R&D is needed in certain key areas that have been identified by the IGG members in past meetings.

Given the wide scope of R&D and the limited availability of resources the 1st step was to draw up a list of topics relevant to JACKS fibers field in a long-term view of worldwide and then to select a short list of 3-5 themes for further development. The intention is to produce R&D research programme and project proposals and with the support of the FAO seek funding for implementation.

Based on discussions at the November 2019 IGG meeting held in Beijing, China and the latest work and situation, the following list of topics was proposed, however the theme is not limited to the topics mentioned below.

The objective here is to re-visit the themes/list presented in 2019 IGG document and make suggestions that could contribute towards the plans of the Working Group on Research and Development led by China.

- (1) Developing a roadmap for Bio-refinery for JACKS fibers
- (2) Impact of climate change on JACKS fibers
- (3) Developing a roadmap for Nano technology for JACKS fibers
- (4) Impact agricultural policies (Food, Fuel, Feed & Fibers)
- (5) Making natural fiber composite technology accessible to fiber producing countries
- (6) Creating science and technology networks, South-South-North networks

(7) JACKS fibers and the wellbeing of 9 billion people: S &T development.

(8) Retting systems of JACKS fibers

(9) Mechanization Issues of JACKS fibers

(10) Data mining

(11) Land rehabilitation

(12) Impact , opportunity, challenges (e.g. of “Restricting plastic order - January, 2020, China”), on JACKS+ fibers, and develop an action plan for Research and Development to develop coping strategies, including enhancing quality and supply reliability, as well as addressing market access and standardization issues.

2 Priority themes

Based on this initial list the following themes were identified for further development:

(1) Impact of climate change on JACKS+ fibers – Mitigation and adaption

Climate change and the global warming causing a significant threat to the human being has raised concern all over the world. Results of WMO indicated that the past 10 years have been the hottest in the world on record. According to data statistics of Global Atmosphere Watch(GAW), in 2020 global atmospheric CO₂ concentration hits a new record level in the last 3million year, causing extreme weather and climate events. Project Drawdown of US issued the report of “Drawdown Review 2020” showing the 6 sources including food accounting for 24% ,agriculture, land use, industry accounting for 21% are the main reason causing climate change. Climate change not only causes glaciers receding, sea level rising, ocean warming and acidification, but also has serious impacts on human health and food security. The world will more rely on green, low-carbon climate-friendly technologies than before.

(2) Green Composites

For several decades the more traditional products based on JACKS+ fibers and their related supply side industries have proven their business case in the national and international markets and provided income to millions of households in emerging and developing economies. However the call for diversification to higher value added product/marketing combinations has been lagging. The lack of innovation and limited investment in R&D capabilities of the JACKS+ fiber sector are often mentioned as possible cause. It is

anticipated that Green Composites as an application focused priority theme could function as a trigger for the vitally needed upgrading towards the value added supply chains and diversification.

The logic being that when there are market requirements for JACKS+ fibers in demanding (technical) applications then the need for partnerships becomes essential and supply/value chain management compelling. The outcome will be a win-win partnership across the supply/value chain and leading to sound business operations and national prosperity.

Natural Fiber Composites (NFC) is a strategic area that could drive the upgrading of the JACKS+ fiber sector and can contribute towards concepts such as Circular Economy, Green deals and BioBased economic development.

In order to avoid possible confusion, in this proposal, three categories of composite materials are of concern:

(i) Natural fiber Composites (NFC):

Mix of fossil fuel based polymers and JACKS+ natural fibers

(ii)Bio-Based Composites:

Mix of fossil fuel and/or renewable material based polymers and JACKS+ natural fibers

(iii) Green Composites:

Mix of renewable material based polymers and JACKS+ natural fibers

However for convenience sake the more generic abbreviation NFC will be used here. But all three categories are relevant.

The use of NFC in commercial applications is not new at all. In the past several decades the German automotive sector has been the key user of NFC. However the anticipated rate of growth of NFC has not materialized, as yet. With increasing interest biobased materials, green economic development and Circular Economy could form the basis for increased use of NFC in a wide range of industrial applications (automotive, aero-space, building construction, interior decoration and furniture, sport items etc.).

Considered from the supply side, the industrial level production volumes and well established supply chains of JACKS+ fibers produced in different countries could be a sound basis for industrial partners to consider the use of NFC in their products.

There are more than 10 different technologies that could be used to manufacture NFC products. The deployment of the type of technology would depend on the production volume, the shape and the size of the product to be manufactured. Each technology would need different level of investment and technical skills.

Since NFC has been used commercially over the past 40 years or more, particularly in Europe, several technical studies, including PhD level, have been conducted, many international conferences organized and plenty of technical articles and books have been published on the subject. It is safe to say that most of the science is already known and is ready to go. This means that the current project will concentrate on the “industrialization” potential of NFC in the JACKS+ fibers producing countries will be assessed.

(3) Bio-Refinery

Biorefining is understood to be the processing of biomass into a wide range of products for fibers, food, feed ingredients, biochemicals & materials and fuel. Biorefining is considered a part of bioeconomy and could play an important role in the mitigation of climate change. This is specifically related to use of biomass for fuel, which is increasingly being contested, as far as the deployment of wood is concerned.

JACKS+ fiber crops, which belong to ligocellulosic biomass, could be converted to fiber, feed, fuel and food. However at present the conversion processes of JACKS+ crops have been at a rudimentary level, focusing mainly on fibers.

For example, a crop such as sisal (*agave sisalana*) cultivated mainly for fiber, which is extracted from the leaves, produces a secondary stream of materials amounting to at least 90% (w/w) of the input material. Or jute sticks used as fuel. To date the secondary material streams, with utility and commercial potential, have not been systematically assessed nor exploited.

The increasing scientific insights into concepts such as biorefinery and circular economy could provide opportunities to the JACKS+ crop producing countries to organize the production in an integrated manner so that it could lead to zero waste and closed loop systems but also form the basis for new industrial clusters.

Biorefinery (BR) is often referred to in terms of “generations” (1st generation, 2nd generation etc.). Some of the key features describing BR are (a) platforms (b) products (c) dedicated feed stock and (d) processes. At this stage it is not the intention to describe in detail all the ins and outs of BR. The issue at hand is to explore and assess how BR as a concept could provide opportunities for the JACKS+ crop producers and improve their contribution towards sustainable biobased and circular economic development.

There are two specific, much debated and talked about topics that need to be addressed with regards to the potential for JACKS+ crops and BR.

These two topics are:

(i) single use plastics and the need to find alternative routes to achieve the required functionality with minimal environmental and ecological impact.

(ii) the deployment of “nano-technology” i.e. the deconstruction of JACKS+ crops in order to produce value added materials and products.

In most cases the focus is on cellulose (chemistry) i.e. how to access and produce materials based on cellulose i.e. nanocellulose. For this enzymes pathways are often suggested.

As far as natural fiber crop based nanotechnology is concerned it seems these developments are in the scholastics and laboratory stage. Therefore the question is about the viability and feasibility of using JACKS+ fiber crops in the above mentioned two areas. Taking into account the heavy (political) bias that may exist in the deployment of biomass to address the issues related to reduction in CO₂ emission. For example the focus on the concept of Biorefinery could be the use of biomass as fuel i.e. biofuels. Or countries in which forestry plays an important role in their national or local economy could frame “wood” as the most suitable biomass for the cellulose pathway or even wood as “biofuel” or packaging material.

3 Implementation actions

(1) Assessing the impact of global (and national) climate change and Coping Actions for a climate-smart JACKS+ crops sector

Conception: Climate-smart agriculture is an agricultural production and development model that can sustainably improve work efficiency, adaptability, reduce greenhouse gas emissions, and achieve higher goals for national food production and safety and meeting the material needs of societies . As the new field of global agricultural transformation and development, the comprehensive management of soil, water, input of resources and industrial value chain will improve the changes of current agricultural system to meet the demands of jointly solving the problems of food security, materials needs and climate change.

R&D actions: In terms of the restoration and protection of the environmental and the ecological systems and the transformation of agricultural production models, selecting and breeding new varieties with strong resistance of stresses and disasters and adaption to different ecological, climate types to adjust the planting system and structure;

Improving agrotechnical measures and capacity of disaster prevention and mitigation, promoting sustainability based and ecological agriculture to improve the agricultural climate and ecological environment, including water conservation measures adapting to local precipitation fluctuations as well as the trend of warming and drying, and improve the comprehensive utilization of residues to reduce the use of fertilizer and animal wastes.

From the aspects of improving materials, waste utilization, substitutes, focusing on the replacement of bioplastics and decorative materials, the use of waste substrates, the value-added utilization of waste materials to strengthen the research and development including the technique of environment-friendly natural fiber materials, substrate processing and utilization of fiber crop wastes and substitution technology of decoration materials.

In addition to the technical feasibility the financial viability is equally important to encourage Climate Smart Agriculture in the JACKS+ crop producing countries. From an economic

perspective the potential of Carbon Credit and Trading has not been addressed by the JACKS+ sector, as yet. It is proposed that an exploratory study be undertaken to assess the potential of Carbon Credit and Trade.

The workload and budget:

An expert team with understanding of JACKS+ crops business side and science & technology development should conduct a study and produce a report.

Component 1:

Conduct a literature review on Climate change issues related to JACKS+ fiber sector and identify R&D gaps that could lead to the development of an international programme.

Component 2:

Literature review o Carbon Trading and Policies: who is doing what and how developed are these systems? Initial assessment of relevance and applicability of Carbon Trading for JACKS+ fiber sector?

Component 3:

An initial scoping to understand the role of SMART agriculture in the context of Climate Change in general and gather data on status of SMART Agri in JACKS+ producing countries

Workload for component 1: 40 working days

Workload for component 2 : 40 working days

Workload for component : 60 working days

Total workload: 140 working days

An average rate (for Director/Senior and Junior researchers) of EUR 1.200,00 per day Ex Taxes taken to estimate the budget.

The budget need will be EUR 168.000,00 (for 140 days of work) Ex taxes.

(2) Green Composites

In order to assess the viability and feasibility encouraging or creating of NFC clusters in the JACKS+ fiber producing countries the following steps (as components) are proposed:

Component 1:

Conduct a literature review on the state-of-the-art of NFC.

Component 2:

Assess the status and capabilities of the NFC sector in the JACKS+ fiber producing countries.

Component 3:

Assess (in an exploratory manner) the willingness of businesses to invest in this sector.

Component 4:

Provide recommendations for the JACKS+ fiber producing countries regarding the potential development of NFC sector as one of the diversification strategies.

The workload and budget:

An expert team with understanding of JACKS+ crops, the business side and science & technology development should conduct a study and produce a report.

Workload for component 1: 15 working days

Workload for component 2: 45 working days

Workload for component 2: 20 working days

Workload for component 4: 20 working days

Total workload: 100 days

An average rate (for Director/Senior and Junior researchers) of EUR 1.200,00 per day Ex Taxes taken to estimate the budget.

The budget need will be EUR 120.000,00 (for 100 days of work) Ex taxes.

(3) Bio-Refinery

Since the concept of biorefinery has not been assessed (technically, socially, business wise and politically) by the JACKS+ group and as the group has given high priority to this theme the working group proposes the following components that could lead to developing a coordinated international R&D program for assessing the concept of biorefinery for the JACKS+ producing countries.

Component 1:

Assess the current utilization of JACKS+ crops i.e. the conversion to fibers, feed, fuel and food. Taking into account the need to assess the two special topics of single use plastics and nano-technology and enzymes pathways (also for retting) with regards to JACKS+ crops.

Component 2:

Determine the status of biorefinery in the JACKS+ producing countries

Component 3:

Report and provide initial recommendations on the possible role of Biorefinery in the JACKS+ producing countries.

The workload and budget:

An expert team with understanding of JACKS+ crops business side and science & technology development should conduct a study and produce a report.

Workload for component 1: 40 working days

Workload for component 1: 20 working days

Workload for component 1: 20 working days

Total workload: 80 days

An average rate (for Director/Senior and Junior researchers) of EUR 1.200,00 per day Ex Taxes taken to estimate the budget.

The budget need will be EUR 96.000,00 (for 80 days of work) Ex taxes.

4 High-level international R&D round-table and workshop

The R&D challenges of the JACKS+ fiber sector are many but for pragmatic reasons a limit number of themes have been selected for present action.

Even the 3 priority areas by themselves are subjects with a wide scope and complexity. The conference programme will address topics on the modalities for further action.

The highest level management team members of R&D institution from the JACKS+ fiber producing countries and a selected number of other institutions with targeted specialties/expertise will also be invited to participate in this event. The objective is also to explore the possibilities of a selected number of institutions function as the national level focal point for the specific R&D theme.

Event date

2021 (to be confirmed) - Duration 3 days

Address

Beijing, China (to be confirmed)

Participants: 75 international + 25 local

JACKS+ fiber producing countries

Food and Agriculture Organization of the United Nations (FAO)

Chinese Academy of Agricultural Sciences (CAAS)

Institute of Bast Fiber Crops of CAAS (IBFC)

3-4 international experts of specific themes

Program

Conference agenda (Remains to be updated)

Budget

Total budget EUR 130.000,00.

The event will host 75 international from JACKS+ producing countries including a selected number of international experts on very specific and relevant themes.

and national participants (25) and The budget includes economy class air tickets to China, 5 days hotel rooms and food & beverages during the 3 day session.

No fees or honorarium will be paid to participants.

A detail budget could be made available.



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Appendix 3: Input Working Group on Sustainable Management Systems and Life Cycle Assessment (including Sustainable Development Goals)

Activity working title:
**The Nexus of Sustainable Management Systems, Life Cycle Assessment
and UN Sustainable Development Goals for the Jute, Abaca, Coir, Kenaf,
Sisal and Allied Fiber producers in emerging and developing countries**

Lead party:
International Natural Fiber Organization

22 November 2020
Version 1.1

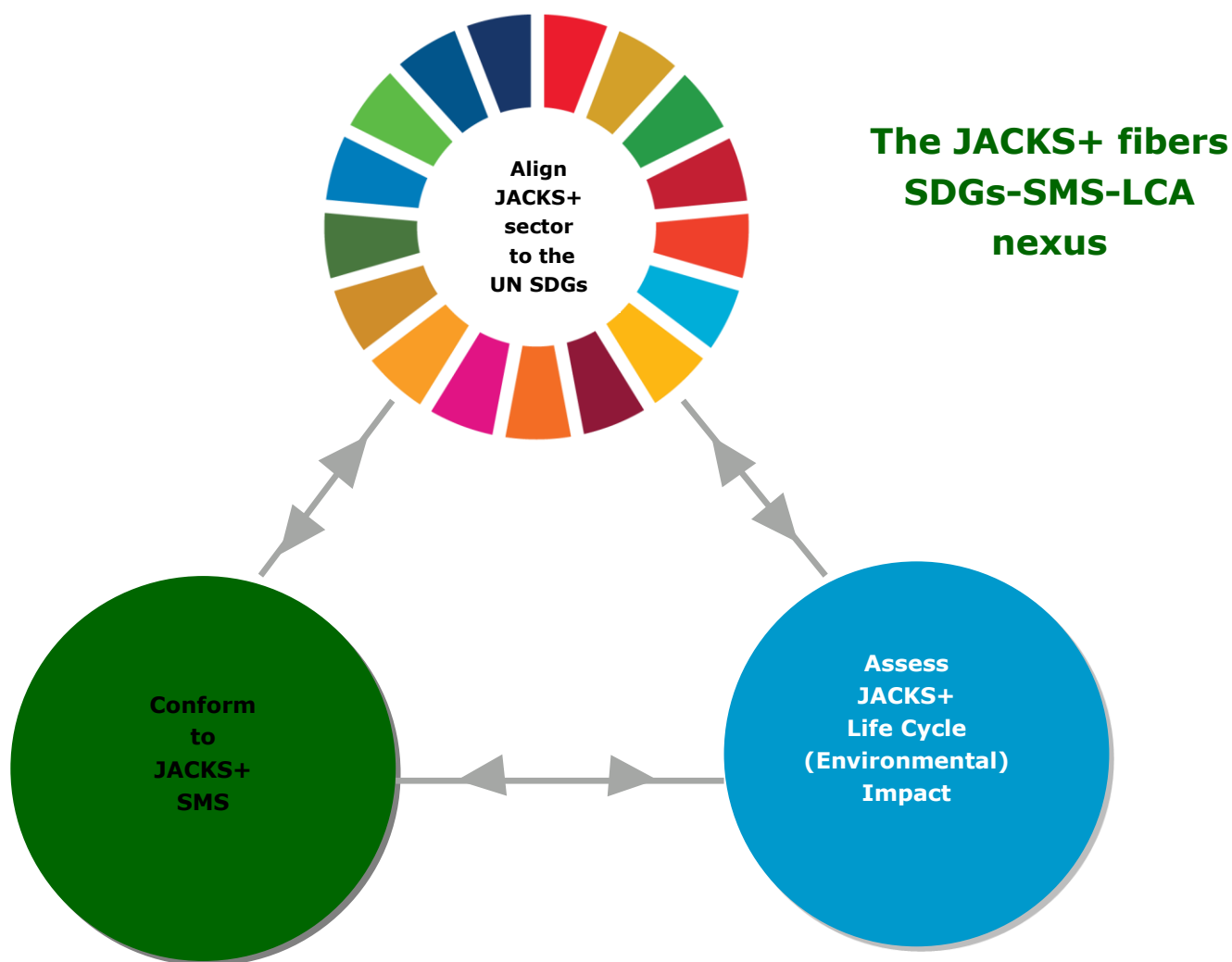
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WG 2 on Sustainable Management Systems and Life Cycle Assessment
including Sustainable Development Goals**

Activity working title:

**The Nexus of Sustainable Management Systems, Life Cycle Assessment
and UN Sustainable Development Goals for the Jute, Abaca, Coir, Kenaf,
Sisal and Allied Fiber producers in emerging and developing countries**

1. Introduction: Background

This is a unique international development programme of the Jute, Abaca, Coir, Kenaf, Sisal and Allied Fiber (JACKS+ fibers) producers in emerging and developing countries with the objective of triggering the long awaited industry upgrading effort and innovation of the sector by using the nexus of Sustainability management Systems (SMS), Life Cycle Assessment (LCA) and the UN Sustainable Development Goals (SDGs).



The systems could be beneficial to the rural micro businesses and farmers as well as the larger manufacturing companies in reflecting about their business practices, enables

them to identify hot-spots in operations and to contribute towards overall industry upgrading.

The ambition is to contribute towards achieving the UN SDGs and enabling a resilient JACKS+ sector based on the principles of People, Planet and Prosperity for all i.e. sustainability. This is a proactive initiative of the JACKS+ producers, who are mainly in developing and emerging economies.

(The key JACKS fiber producing countries are: Bangladesh, Brazil, China, India, Philippines, Sri Lanka and Tanzania. While countries such as Kenya, Mozambique, Haiti and Malaysia have been showing interest. Vietnam, Thailand, Mexico and Indonesia are potential candidates as well).

By developing, organizing and implementing the SMS and LCA, the group will demonstrate to the international customers that the JACKS+ Fiber producers are serious about Sustainability (People, Planet and Prosperity for all) and thereby increase the potential of the JACKS+ fibers to enter advanced applications that are emerging in the so called concepts such as Bio-based economies, Green economic development, Circular Economy etc. It will benefit the rurally based farmers and producers of JACKS+ crops and fibers, with the objective of improving their income and overall well-being.

It is now widely recognized that human behaviour is impacting all types of systems of our planet. Therefore increasingly businesses and organizations in the supply and value chains must justify their "green claims". In addition, international customers and consumers are concerned about the origin of and how the products they use or consume are made. This is driving the need for "assurances", which could be systems such as sustainability certification in general. Different scientific disciplines and so called "stakeholders" are dealing with this subject from different perspectives. This is resulting in an explosion of schemes. Which is not only expensive for the JACKS+ crop producers but also confusing. Not to forget the customers and end-consumers who are overwhelmed by the number of ECO-labels, Foot-Prints etc. and they may even generally not understand these schemes. Quick fixes like solutions from the suppliers could lead to reputation risks related to green-washing and are potentially damaging.

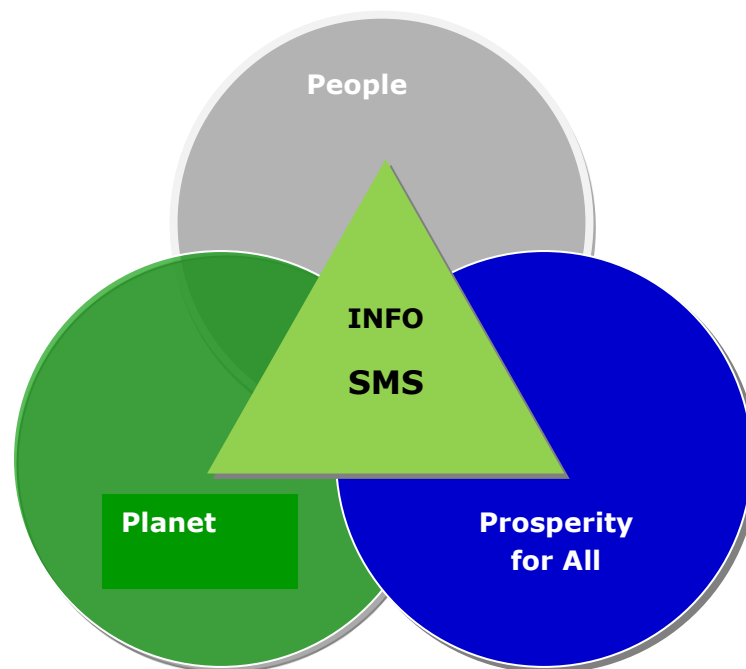
The pragmatic view of sustainable development, from a business perspective, will be an integral focus on the key areas of People, Planet and Prosperity for all.

This is basically the reconciliation of the social, ecological, environmental and economical dimensions of businesses. Very often JACKS fiber producers claim that they have "green products" and this should be one of the key reasons for the customers to choose these fibers. The JACKS fiber producers would often base their claims on aspects such as biodegradability, carbon sequestration and renewable material based on agriculture. Therefore it is assumed the products must be green. Many are then disappointed that the "demand side" or consumers don't share the same sentiment and enthusiasm. Even though systematic research is lacking it is safe to conclude that the buyers are not impressed with these "emotional claims" by JACKS fiber producers. They want tangible proof of the greenness of products.

It is anticipated that the demand for proof of greenness will continue and may even become legalized. Therefore in the past decades there has been an explosion of schemes claiming to demonstrate the "greenness" of products. This has led to so called "Voluntary Certification Schemes", which can be 3rd party verified or also self reporting. To the general public it is often not very clear who controls, promoting and are backing these schemes. Hence increasingly there is doubt amongst the general public about the logos of green claims. In addition to "greenness", increasingly consumers (both business and households) are wanting to know "fairness, integrity and origins" of the products they use or consume. This is the domain of Fair Trade Schemes. Businesses also wish to demonstrate their engagement with stakeholders and it is about Corporate Social Responsibility. It is virtually impossible for micro, small and medium sized businesses to deal with all these developments, which will impact the businesses in more than one way.

It is not the intention to discuss in (technical) detail the various schemes and their operational aspects and impact on businesses. The "technicalities" of the schemes are already well established. What is urgently needed now is the mobilization of the political will and commitment of the key players (policy makers and the businesses in supply chain of the industry) of the JACKS fiber producing countries to initiate activities in this area.

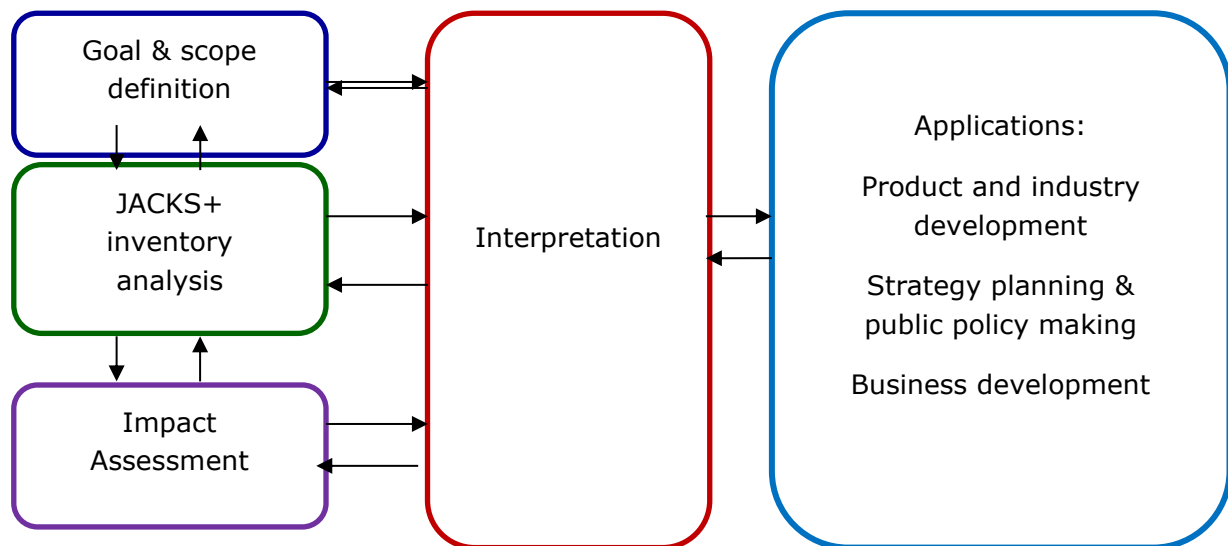
Therefore the JACKS+ sector plans to develop a cost effective and pragmatic Sustainability Management System based on People, Planet and Prosperity for all



The foundation of JACKS+ Sustainability Management

Unfortunately assuring the "sustainability" is necessary but not sufficient. Advanced methods such as Life Cycle Assessment, after several decades of incubation, seem to be gaining momentum in the "certification landscape". Increasingly Life Cycle Assessment (LCA) is forming the basis for

sustainability/Green claims and eco-label certification. Therefore the activities of the Working Group will contribute towards Life Cycle Thinking of the JACKS+ fiber sectors and prepare the sectors to satisfy the needs of the demand side and at the same time use LCA as a management tool to improve operations and reduce harmful impact. LCA is also mandatory under the ISO 14000 regime for certain types of Eco-labels.



Life cycle Assessment Framework
(Basis of ISO 14000)

The combination of voluntarily sustainability management along the dimension of People (social), Planet (Environment and Ecology) and Prosperity for All (Economic) and LCA will contribute towards the so called Circular Economy and better use of resources, eventually to closed loop systems and less harmful impact. From a commodity perspective it means the JACKS+ fiber sector could make a transition towards Sustainability based sector and substantiate the "green claims" of JACKS+ crops and fibers based products. In addition there are other related frameworks such as the Environmental Product Declaration, Product Environmental Footprint are also being promoted. It is not the intention to discuss all the "complications" of the Environmental Management Systems but suffice to say that these international developments would need to be tracked and assessed by the JACKS+ crop producers.

The Post 2015 of the United Nations General Assembly led to the adaptation of the 2030 Agenda on Sustainable Development, a new global and universal action plan for People, Planet, Prosperity, Peace and Partnerships, and at its core the 17 Sustainable Development Goals. The total of 169 targets to be achieved will be tracked by 232 indicators. (Taking note that there are 244 indicators in the SDG framework but 9 indicators appear under two or three different targets).



Even

though several

organizations claim to align to the SDGs it remains unclear how their actions quantitatively contribute towards the goals. It seems to be unclear as to how an individual sector could contribute towards SDGs.

It is also unclear if any of the JACKS+ sectors is claiming alignment to the SDGs.

2. The current status

It is envisaged that a Voluntary Sustainability Management System or scheme, will act as an accelerator of productivity improvements and a stimulus to the much needed upgrading of the global JACKS+ sectors. It could also pave the way for organizations in the JACKS+ fiber supply chain to get acquainted with the concept of sustainability Management and Life Cycle Assessment and in due course even consider participating, on a voluntary basis, in a scheme that could lead to certification. INFO and the IGG already have an active platform and capabilities to centrally develop, implement, manage and promote a collective system (harmonized across the JACKS+ fibers) that will be customized to local conditions.

The international developments of eco-labeling and certifications prompted INFO to initiate discussions regarding this important topic within the JACKS+ fiber producing countries. These countries are the active members of the UN FAO IGG on HF/JKA fibers. INFO organized a series of awareness building workshops during the period 2012-2015 for key policy makers from the JACKS+ fiber producing countries. In these workshops the foundation and the need of both Sustainability Management Systems and LCA were intensively debated and discussed. At that time the post 2015 agenda of SDGs was not on the radar.

One of the conclusions of these deliberations was that it is not a question of IF international customers would need proof of "sustainability or green claims" but WHEN such requirements would be needed. Therefore, it was decided that INFO should proceed with exploring the feasibility of implementing a collectively developed and managed system (i.e. internationally harmonized) and localization to suit the national level supply side (production) conditions.

Due to various organizational reasons roundtable discussions that were to be held in India, on how such a feasibility could be assessed and the funding needed for such an exercise could be mobilized, slowed down during the period 2017-2019.

It is anticipated that in the current planning cycle this important activity could resume. In the meantime the JACKS+ producing countries have ratified the UN SDGs and are/or have produced so called National Reports which were submitted to the UN. However the reports are at national/macro level. It is unclear how the various national sector policies could contribute towards the SDGs and how the linkage is determined or assessed. It seems none of the JACKS+ sector have specific policies that align to the SDGs.

The present proposal is aimed at building upon the initial work (SMS and LCA) that has already been conducted by INFO and endorsed by the UN FAO IGG on Hf/JKA and assess the feasibility of developing and implementing a Sustainability Management Scheme and rolling out Life Cycle Assessment in the JACK+ fibers producing countries. Since JACKS+ producing countries have committed to the UN SDGs it is only appropriate for the sector to reflect upon and assess the role of SDGs in its sector strategy/policies, practices and reporting.

3. Proposed activities of the Working Group

The objective of the working group is to consider as a nexus the three concepts i.e. SMS, LCA and SDGs. They are inter-connected and could mutually strengthen each concept i.e. could be cost effective and efficient when considered together. However the concepts themselves are technically complicated. Therefore the WGs will follow the following steps (called components) to initiate the much awaited activities at collective as well as national level. The proposed components are:

Component 1: Assessment of awareness at policy and business level of SMS-LCA-SDGs.

As mentioned earlier the SDGs and its reporting is an international requirement and a matter of national concern. However national economies consist of sectors and their actions may or may not contribute to the SDGs at national level.

Not all organizations in the supply chain of the JACKS+ sector may be fully aware of the international discussions and the emerging requirements for conformity, be it in terms of SMS, which could include the required foot prints and/or the role of LCA in international business.

The work of this component will be to first assess the readiness of the JACKS+ producing countries (governments/sector and businesses) with regards to SMS, LCA and SDGs and map the views of the stakeholders at national level.

It is anticipated and speculated that the awareness at the JACKS+ sector level in the producing countries will certainly need to be improved.

Component 2: Developing an Awareness building around SMS, LCA and SDGs.

Awareness building (not just having heard these terms but in really understanding the substance and policy & business implications) will be the 2nd component of the current activity of the WG.

Component 3: Laying the foundations for the use of LCA in the JACKS+ sector.

The use of LCA in the past decades has been slow mainly due to the availability of reliable, accurate and relevant data sets and some methodological issues.

The LCA relies on so called inventories (data that are specific to materials) and other national level data such as energy mixes etc. Without getting into too many technical details on this complicated subject, suffice to say that the starting point for JACKS+ sectors would be to create the relevant data inventory.

It should be noted that such an inventory could be used for other purposes for the benefit of all the stakeholder of the sector. For example it could form the basis for bench-marking that will assist policy makers and benefit businesses to assess their performance against sector bench-marks and the like.

The methods on how to design and collect data are already well established. However the question is how to initiate, develop and manage the data inventory in the various JACKS+ producing countries.

The workload and budget:

An expert team with understanding of JACKS+ crops business side and science & technology development should conduct a study and produce a report.

Workload for component 1: 40 working days

Workload for component 2: 15 working days

Workload for component 3: 25 working days

Total workload: 80 days

An average rate (for Director/ Senior and Junior researchers) of EUR 1.200,00 per day Ex Taxes taken to estimate the budget.

The budget need will be EUR 96.000,00 (80 days of work) Ex taxes



Input to DRIFT
For bankable document

**Appendix 4: Input Working Group (3)
Foresight and Business Intelligence
& Transition Management**

Lead party:
International Natural Fiber Organization

23 November 2020
Version 1.1

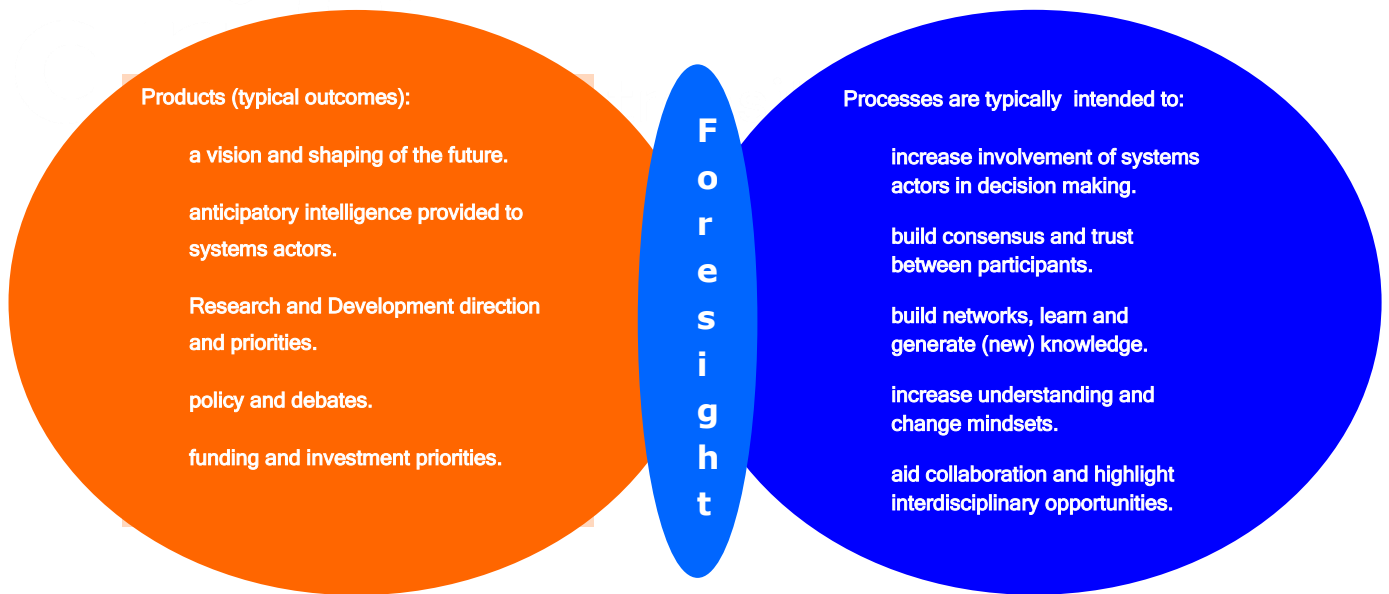
Introduction

For decades the FAO Inter-Governmental Group on Hard Fibers and the Inter-Governmental Group on Jute, Kenaf and Allied Fibers (jointly called IGG-JACKS+) have been responsible, with the active involvement and support of the FAO IGG secretariat, for providing a platform for dialogue, exchange of ideas and “keeping the members informed about the developments” that could or are shaping the JACKS+ fiber sector. The strength of the FAO approach was based on maintaining statistical data of JACKS+ fiber production and exports. Based on the data collected from the member states the FAO IGG secretariat produced medium term outlook for the JACKS+ fiber. For several years the members discussed the results of the outlook and urged the need to develop a more integral approach to the vital “information providing function”, which should also include analysis, of the IGG. This information was essential for strategy development and evidence based policy actions

This need for a more holistic approach was highlighted because the environment in which JACKS+ operates was and is changing, while at the same time becoming more complex due to the several inter-connected developments at national and global levels. At the same time national level policy making needed data/information regarding the international developments that were shaping the JACKS+ sector. Also taking note that the JACKS+ fibers were not benefiting from the international development and even losing market share in an era where sustainable and green economic development were increasingly becoming main stream.

In order to determine the best course of collective actions by the JACKS+ fiber producers the International Natural Fiber Organization (INFO) initiated a series of workshops, during the period 2012-2017, in which the Foresight Approach took a central role. Due to budgetary constraints the activity could not establish continuity. During the INFO workshops the participants were introduced to the foresight approach and its effectiveness of generating both processes (e.g. collective visioning, collaboration, trust etc.) and contents (e.g. assessment of mega trends, roadmaps etc) related outcomes. The more qualitative approach of Foresight was to be improved and complemented by the JACKS+ fiber quantitative modelling approach used by the FAO for medium term outlook. Taking all these aspects into consideration the IGG at its joint meeting of 2017 held in Tanga, Tanzania endorsed the foresight approach and business intelligence related activities and urged further actions. INFO was elected by the members to lead this activity and working group.

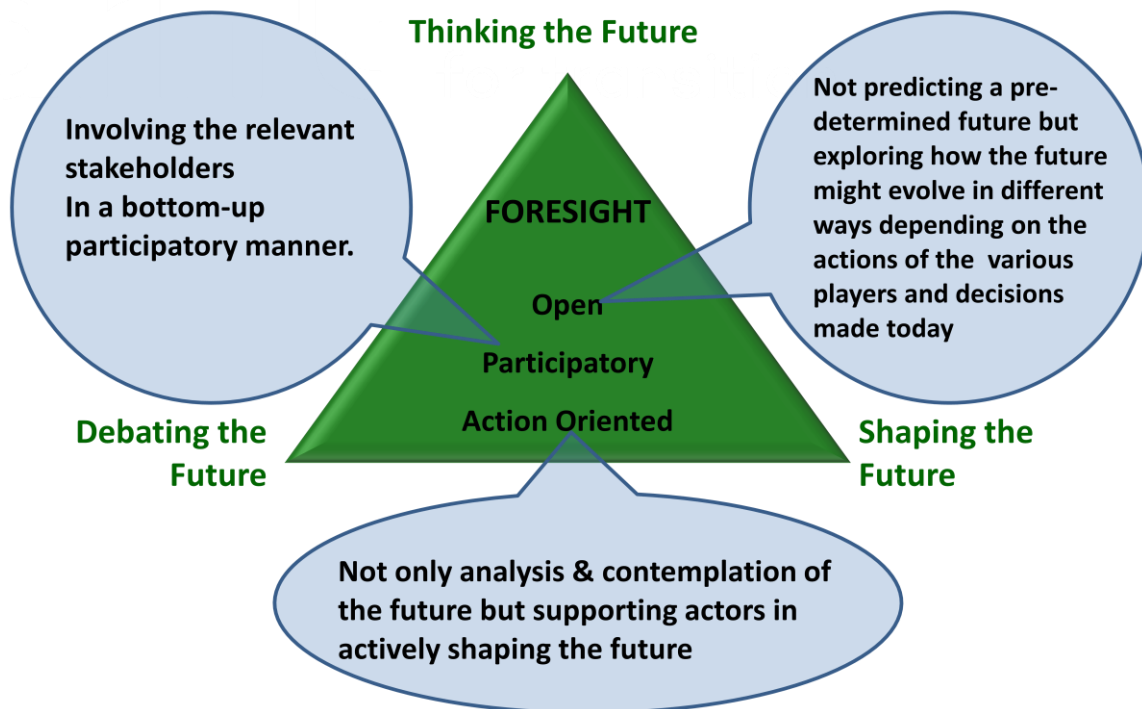
This proposal is an input for the bankable document (work-plan) of the 3 IGG working groups, including the WG on Foresight and BI. It is suggested that scope of the WG be widened to include Transition Management.



Foresight – Products & Processes (Typical only)

Some brief comments on the Foresight and Business Intelligence Approach

The key objective of this approach is to improve the processes of collective reasoning of the past, present and the future of JACKS+ crops and fiber sectors by the FAO Inter-Governmental Group on Hard Fibers and the Inter-Governmental Group on Jute, Kenaf and Allied Fibers (jointly called IGG-JACKS+). The foresight and business intelligence approach consisting of a tool box with a wide range of methods will be used to encourage reflection, exploration, analysis and synthesis of the wide range of topics of concerns to the JACKS+ and the results could assist in informing policy makers, businesses and other interested parties so that collective and individual strategic actions are initiated. It is about improving the capabilities to generate insights (sense-making) and preparedness of the group so that actionable strategies could be developed.



Foundations of the Foresight Approach

The use of the foresight approach for policy and strategy development is not new. It is a well proven method that serves several purposes. In recent history, Foresight has been used by several OECD and other countries for many decades (since 1950) to inform policy development. It has often been used in the Science, Technology and Innovation studies.

The interested reader could refer to a large body of theoretical literature and policy reports on the subject of Foresight Approach hence will not be repeated here.

Demarcation of the scope of activities of the Working Group

Generally speaking, from an economic perspective "market Intelligence and analysis" would consist of both the supply and demand side of JACKS+ sectors. However the very wide range of sectors of demand served by the JACKS+ fiber products is often underestimated. For example JACKS+ fiber products are supplied to the civil engineering sector (e.g. geotextiles), to the agricultural materials sector (e.g. ropes and twines), the packaging sector (e.g. jute bags and teabag paper), the building construction sector (e.g. in cladding), the interior architecture (carpets, mats and matting), home and garden (brushes, growing media) the automotive sector (composites) and the list could go on. Not to mention the new emerging demand. And all these demand are global as well. Therefore assessing and analysing the demand needs lots of resources in term of time, in terms of persons who are capable and knowledgeable about the JACKS+ sector, in terms of money and in terms of data and statistics. Therefore the IGG has been unable to generate any insights as to the demand side.

With regards to the supply side there are slightly better possibilities. Because there are several organizations and government agencies in the JACKS+ producing countries who

have insights into the supply side of the sectors. The data or insights might not be complete but there is sufficient data and expertise to undertake sensible analysis or at least to make a start.

Currently the quantitative medium term statistical projections by the IGG secretariat at the FAO are based on JACKS+ production and export data.

For practical reasons focus of supply side of JACKS+ sector

Given severe resources constraints, capacities and capabilities the initial focus of the working group will be on the supply side of JACKS+. This offers the potential to reflect and develop both adaptive strategies (for developments that are difficult to change but are impacting) and transformative strategies in order to explore and exploit emerging developments.

Collective sector level and not individual business/firm level

As far as demarcating of the scope of activities of the WG is concerned it is of utmost importance to keep in mind that the IGG and INFO function at a collective level. This means the focus will not be on any individual firm/business but the analysis and strategies will be at sector level only.

Collective JACKS+ sector level and not individual fibers

In order to maintain harmony and minimize "inter-fiber" conflicts and tensions the IGG and INFO do not have any preference or bias to any particular fiber within the JACKS+ family. All family members are treated equally and with respect. In the unlikely event of potential conflict the group will facilitate the resolving of issues amicably so that destructive outcomes individually and collectively are avoided. The mental alignment for collective action, i.e. recognizing that JACKS+ family members share a common destiny, will be an outcome of the foresight approach.

Cooperating to compete

The various governments of the JACKS+ producers could facilitate the overall development of the sector but in the end it is the firms and businesses that would need to compete in the international markets. Therefore the scope of the IGG and INFO foresight activities will be limited to pre-competitive domain and as far as practically possible foster a stance of collegiality amongst the JACKS+ producers and stakeholders. Reaching consensus is more about mutual adjustment and balance rather than homogenization.

The activities of the WG for the period 2021 to 2023

It is unrealistic to assume that all the issues and challenges of the JACKS+ producers could be addressed professionally and seriously. Therefore for the period 2021 to 2023 the WG proposes to focus on the following strategic areas and thereby (partially) fulfil its requirement of "keeping IGG members informed about the developments" that are shaping the JACKS+ sector.

Component 1: Mega Trends and shaping JACKS+ industry structure

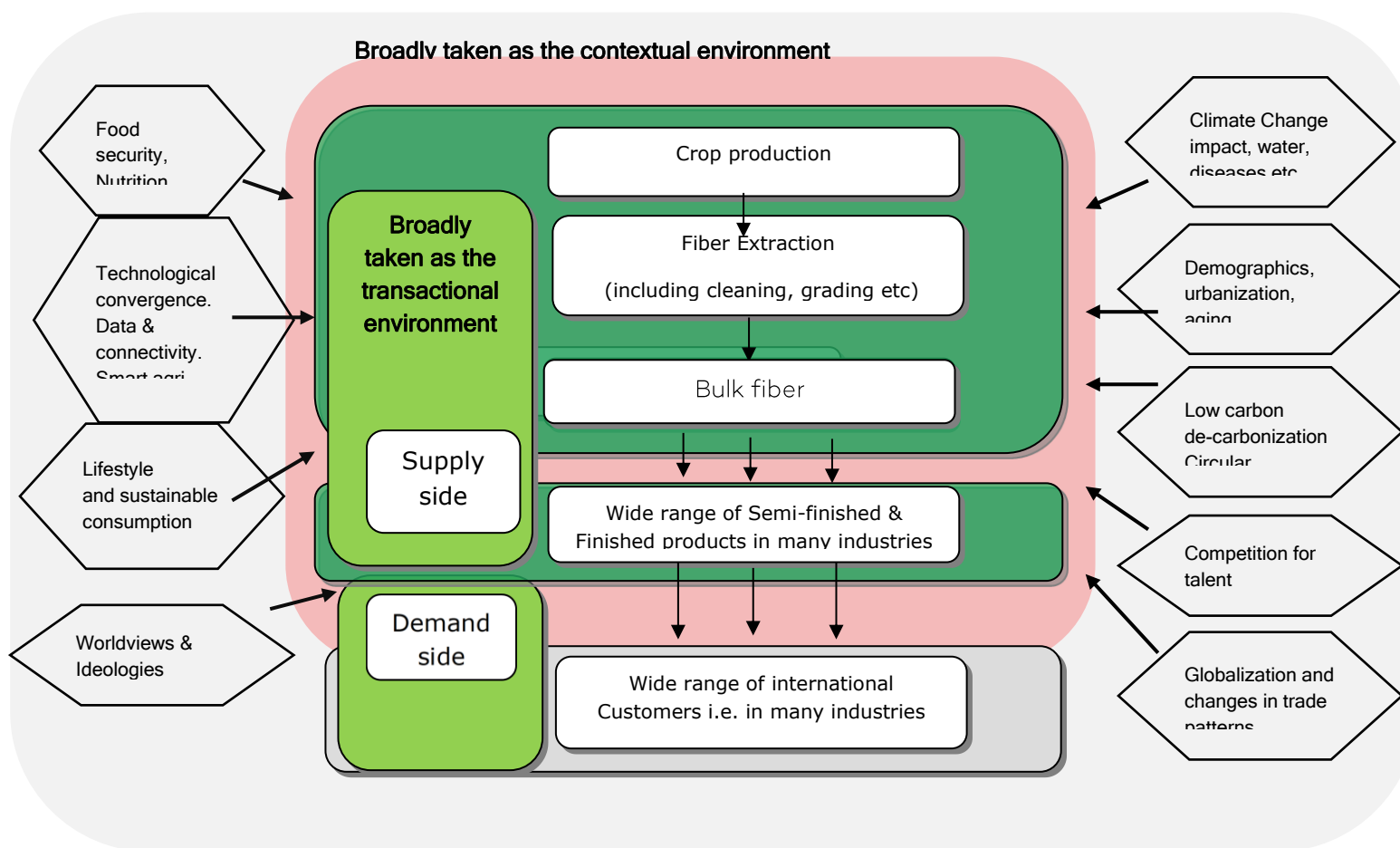
Developing a method to assess how the global mega trends are shaping the JACKS+ sector.

There are several mega trends that are shaping the world and also the JACKS+ sector. The task of the WG will be to design a robust method to assess the mega trends that are important and how they could shape the industry structures at national as well as

international level. The key problem is availability of literature on methods to analyse the impact of mega trends at a collective level of industry structure. In any case it is anticipated that scenario development and related tools could be a major method that could be used for this purpose.

The ambition is to produce a flagship publication (the state and future) of the JACKS+ sector every 2 to 3 years.

Figure: Typical & Highly simplified supply chain of JACKS+ fibers and a selection of Mega Trends shaping JACKS+ (illustrative only)



Component 2: Quantitative modelling of the JACKS+ sector

As mentioned earlier a key task of the FAO IGG is to collect statistics and model medium projections of the JACKS+ sector. However the IGG members at national level are unaware of these modelling methods and processes which could be used to support policy and strategy development. There seems to be a need to review the accuracy of the “economic parameters” used/needed for quantitative modelling. This means that there is a need to initiate work to review the models being used at FAO at present, assess the assumptions being made, verify the parameters being used for the medium term projections and propose improvements.

In addition capacities and capabilities need to be developed at national level to strengthen the use of these models and also to “train experts” who could satisfy the role of “assessors” and “commentators” of the modelling outcomes.

In this component an assessment will be made as to how the expertise and support for the JACKS+ producing countries could support and contribute towards this important activity of the IGG. Also keeping in mind that a possible outcome of the assessment is that the FAO IGG secretariat would have to continue the current centralized practice of modelling but initiating activities to improve the modelling data of JACKS+ and the processes involved. In short this is about reviewing and improving the global JACKS+ model for medium term projection and the modelling processes.

Component 3: Action Learning - Developing, maintaining and institutionalizing the foresight, business Intelligence generation and Transition Management capabilities and capacities of the international JACKS+ sector

It is often mentioned that the JACKS+ sectors are troubled by persistent and wicked problems. Dealing with these problems on an incidental and ad hoc basis is difficult if not possible. There is a need for an institutional memory about the JACKS+ sectors. This is only possible when there is an institutional embedding and permanent engagement by a group of trained experts familiar with JACKS+ sector development.

Learning by doing, or action learning, are effective methods to enable the shared understanding of “what is going on around us”. The mental alignment of participants of the JACKS+ sector, which is a very diverse group, is greatly improved when intensive face-to-face engagement is organized. Learning by doing is the process related aspect and the key reason for INFO to embark on the journey of introducing the foresight approach to the group. Since there is diversity of views, histories, national and business interests a process of mutual adjustment by dialogue and consensus forming is essential for enabling and mobilizing collective action. The challenges and complexities of issues to be dealt with by the JACKS+ are too many for any individual sector alone. It is about truly understanding and internalizing that in an increasingly globalized world with very strong (business) groups and “forces” the most viable way for the JACKS+ fiber to create and maintain a desirable market position is by cooperation and collective action.

Collective action learning and knowledge development in South-South-(North) knowledge networks need to be created, strengthened and maintained to ensure timely analysis that could be generated to inform policy and strategy development. Therefore in this component an assessment will be made as to how such a JACKS+ sector knowledge network could be established, specializing in foresight and business intelligence (and Transition Management). Also the option of being realistic and modest about the key task of the IGG to “keep members informed about the development shaping JACKS+ sector” will have to be a part of the assessment.

The workload and budget

An expert team with understanding of JACKS+ crops business side and science & technology development should conduct a study and produce a report.

1. Workload for component 1: Developing a framework - Mega Trends and the shaping JACKS+ industry structure(s)

Workload: 40 working days

2. Workload for component 2: Reviewing and planning for the improvement of the quantitative model and the modelling of the global JACKS+ sector

Workload: 40 working days

3. Workload for component 4: Developing a plan for an Action Learning Platform - Developing, maintain and institutionalizing the foresight, business Intelligence generation and Transition Management capabilities and capacities of the JACKS+ sector

Total workload: 40 days

Time horizon for reporting: 12 months in total

An average rate (for Director/Senior and Junior researchers) of EUR 1.200,00 per day
Ex taxes taken to estimate the budget.

The budget need will be EUR 144.000,00 (for total 120 days) Ex taxes