



Review of traditional knowledge within current Guyanese environment / development policies and strategies

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1.0 Introduction

Integrating traditional knowledge (TK) into policy and practice has a multitude of benefits. Firstly, it indicates respect towards the Indigenous and local communities that are willing to share their knowledge and that efforts/actions are being taken to protect this valuable knowledge and the human rights of indigenous people (IP). Showing respect and integrating indigenous people's knowledge and rights are in line with many countries commitments towards international treaties on human rights, the Convention for Biological diversity and the Sustainable Development Goals.

Second, incorporating TK recognises collective rights over natural resources and a willingness to share power and management over the important natural environment. This leads to benefits for the conservation of biodiversity and ecosystem services, as well as a more sustainable use of natural resources, which has the potential to lead to poverty alleviation and well-being improvements of indigenous communities, which are usually the poorest and most vulnerable inhabitants/citizens of countries.

This working paper will describe the policy review method that has been developed to assess the level of integration of both TK and IP rights in Guyana's policy and acts. By developing and applying this new method, a baseline of how well TK and IP rights are integrated is possible and is presented. This baseline will serve as a comparison for annual policy reviews over the next four years, and thus enable the project to measure if the level of TK and IP rights integration is improving.

The first part of the document briefly describes the goal of the policy review. The second part focuses on the methodology, and provides a step-by-step approach on how to undertake the policy assessment. The last part presents the result of the policy assessment and discusses key findings and next steps.

1.1 Goal of Guyana's Policy Review

The purpose of this document is twofold, the first is to describe the methodology that has been developed to allow for a policy review that produces an easily communicated level of integration of TK and IP rights. The second purpose is to demonstrate the result of applying this new method, and to show the current extent of TK and IP rights integration in Guyana. The level of integration for both TK and IP rights is important to establish as it allows a baseline to be recognized, which then future policy reviews can use to measure level of progress. Furthermore, the methodology's results can be used to guide what sectors are most suitable to focus efforts on to improve the level of integration. Thus, the method can support the user to identify the most suitable approach for a country to improve the level of integration of TK and IP rights.

2.0 Methodology of Policy Review

This evaluation of TK and IP rights integration in Guyana's policy landscape is based on a deductive qualitative content analysis of documents. Purposively-selected polices and sample of texts within these have been analysed using a matrix-analysis of pre-established categories to establish the level of TK and IP rights integration for each relevant sector¹.

In this section, a step-by-step procedure is used to describe the methodology developed and used for this evaluation.

2.1 Step 1: Identify and collate relevant policies and acts

This step starts with identifying possible relevant sectors that would be useful to include in the assessment. To aid this process a good understanding of a country's governance structure is useful. Therefore, a diagram was produced to identify the different types of ministries and their roles and responsibilities (Appendix 1). By using the governance structure and consulting with TK experts and in-country contacts, relevant sectors were identified.

After the sectors were established, a wide search of relevant ministry websites and a more general search using the Google search engine to locate specific policies were undertaken. However, this approach had limited success and further in-country consultation and contacts with relevant ministries (e.g. Ministry of Indigenous Peoples Affairs, Ministry of Natural Resources) and governmental agencies (e.g. Environmental Protection Agency, Protected Areas Commission) were needed to collate the majority of the policies and acts. Thus, for this step to be successful, it is invaluable to have and/or develop in-country contacts, in countries where many of the polices are not easily accessible on government websites.

Once the analysis began, a second stage of collecting polices was undertaken as further relevant polices were identified. Additionally, we consulted project partners and stakeholders once an initial list of polices were established and asked for further input, which resulted in additional polices added to the review.

2.2 Step 2: Understand assessment approach and criteria

To assess the integration level of TK and IP rights, a three level approach was developed (adapted from Kettunen 2014², 2017³). The first level of integration is classified as 'Conceptual', second level is 'Operational' and the third and last level of integration is termed 'Implementation'. These three levels are defined as follows:

1) Conceptual integration; where documents underpinning sectoral policies (e.g. strategies) explicitly or implicitly take TK/IP rights into account.

2) Operational integration; where specific measures or instruments are identified and committed to address TK/IP rights related objectives within policy sectors.

¹ Elo S. and Kyngäs H. (2008) The Qualitative Content Analysis Process. *Journal of Advanced Nursing* 62(1): 107–15.

² Kettunen M, ten Brink P, Underwood E, et al. (2014) Policy needs and opportunities for operationalising the concept of ecosystem services. Report for the EU FP7 OPERAs project, D4.1, Grant Agreement No 308393, May. Available at: <http://www.operas-project.eu/sites/default/files/resources/policy-needs-and-opportunities.pdf>

³ Kettunen, M., ten Brink, P., Mutafoğlu, K., Schweitzer, J.-P. and Pantzar, M. Claret, C. & Metzger, M. Pavlova, D. (2017). Making green economy happen: Integration of ecosystem and natural capital into sectoral policies. Guidance for policy and decision makers. Available at: <https://www.oppla.eu/product/18160>

3) Implementation integration; where concrete measures achieve integration on the ground in actual policy- and decision-making situations.

Table 1 provide examples of policy instruments that have been divided into three different types of instruments. The three types of policy instruments are: *information*, *decision support* and *implementation*. These three types of instruments can be linked to the three levels of integrations, with *information instruments* being examples of *conceptual integration*; *decision-support instruments* being examples of *operational integration*; and *implementation instruments* being examples of potential implementation integration. The examples of policy instruments in Table 1 can therefore be used to aid in the categorization (based on the traffic light evaluation system described below) of policies. However, in this version of the Working paper we were unable to include an analysis of the implementation level. This was because we lacked the appropriate documents at the time of the analysis. To assess the implementation level of a policy, further documents need to be identified and reviewed such as policy evaluations, annual reviews and other impact related documents. Thus, this document will be updated once relevant documents have been identified and /or becomes available.

Table 1: This table provides examples of existing key policy instruments that may be relevant to the integration of TK and IP rights. The instruments are categorized to three different types, which can loosely be linked to the three integration levels. For conceptual integration level to be achieved, instruments from the Information instrument types are often needed to be recognized and included. For operational integration level to be achieved, instruments from the Decision-support instrument types are needed to be recognized and included. For the Implementation integration level, some of the instruments from the Implementation instruments types need to be included.

Key existing policy instruments relevant for Traditional Knowledge Integration	
Instrument type	Instruments
Information instruments	Consultation process, participatory processes, indicators, mapping, monitoring (Indicators, monitoring, mapping, assessments)
Decision-support instruments	Impact assessments, risk assessments, supported by information support tools such as; indicators, mapping and monitoring
	Reporting (supported by indicators, monitoring and mapping)
	Planning and targeting
Implementation instruments	Dedicated legislative acts, regulations and standards recognising and respecting TK
	Community/Indigenous Protected areas
	Funding to allow for TK to be included
	Land tenure rights to ancestral lands
	Indicators targeted for indigenous people and women. Data collected separate for indigenous people

Traffic light evaluation system

The next part of the methodology is the use of a traffic light evaluation system (Table 2) to categorize each policy. Table 2, provides the criteria for each traffic light category. The highest level of integration is classed as ‘Green’, and the text in the table specifies that this means that the policy has to both explicitly and comprehensively recognized TK/IP rights. Whereas the ‘Yellow category’, the second highest integration level include some explicit integration but it is not comprehensive. The ‘Amber category’ of integration only mentions TK/IP rights implicitly or indirectly and it focuses generally on preventing negative impacts on TK/IP rights. The lowest ‘Red’ category of integration means that the policy document has no recognition, neither direct nor indirectly of TK/IP rights.

The methodology combined the three level approach to integration with the traffic light evaluation system to do a matrix analysis. This meant that for each policy/act that was reviewed they were evaluated and classified into one of the traffic light categories for both the conceptual and operational integration level. In addition, this was done for both TK and IP rights as in quite a few cases IP rights were further integrated than TK, and if the review had only focused on TK integration, an important omission and a wrongful picture might have been concluded.

Table 2: Traffic light evaluation system, providing the criteria for each traffic light category (green, yellow, amber and red).

Explicit and comprehensive recognition of Traditional Knowledge (TK)	Explicit and comprehensive recognition of the rights of indigenous people	Some explicit integration but not comprehensive (e.g. some mentioning of TK)	Some explicit integration (e.g. some mentioning of indigneous people's rights)	Implicit and indirect integration, generally focus on preventing negative impacts of a policy sector on TK	Implicit and indirect integration, generally focus on preventing negative impacts on the rights of indigenous people.	No recognition (direct / indirect) of TK	No recognition (direct / indirect) of the rights of indigenous people
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2.3 Step 3: Review Polices and Acts

Once the policies and acts were collated, and the matrix analysis had been understood and set up, the content analysis was undertaken. This meant that each policy/act was read through and text that were relevant to TK/IP rights were extracted and analysed. A traffic light category for each policy and for both the conceptual and operational level of integration were then assigned.

However, after a few policies, it became evident that the four traffic light categories did not result in as clear evaluation as hoped for. Thus, further nuances of integration level were developed by using an index approach of weighing, to allow for a more sensitive evaluation system. This meant that for each policy/act they were first categorised according to the traffic light system for each integration level (conceptual, operational). For the polices/acts that either were categorized belonging to the green category (Explicit and comprehensive recognition) or for the Red category (No recognition) the evaluation ended here because the criteria for both these categories are clear and definite.

However, for the policies/acts that were categorized belonging to either yellow (Some explicit integration) or amber (Implicit and indirect integration), a further assessment of the policy/act was done. This was done according to a fou- point score scale (Table 3). This further evaluation was based on a more in-depth content analysis that allowed for a more sensitive categorization along the four-point score scale of the polices/acts. For the sectors where several documents had been reviewed, the average score was calculated and used for categorizing the level of TK and IP rights integration for the sector.

By adding this further level of evaluation of the integration categories (yellow and amber), it allowed for a more in-depth integration analyses which helped to identify which sectors require the most

attention to improve TK/IP rights integration. It also permitted for a more detailed monitoring protocol to assess progress on the level of TK/IP rights integration.

Once all the policies/acts had been reviewed and evaluated in the matrix spreadsheet, the results were analysed according to the eleven sectors, and two new tables were produced (one for TK and the other for IP rights). In the tables, the colour category corresponding for level of integration was added for each sector and for both the conceptual and operational level. In addition, the index scores for the yellow and amber categories were also added for each sector and integration level.

Table 3: Four-point score scale used to assess more in-detail level of integration for the yellow and amber integration categories.

Colour categorizations	Weighting score
	<10
	< 7.5
	< 5
	<2.5
	<10
	<7.5
	<5
	<2.5

3.0 Findings so far

The first step of the assessment, identifying relevant sectors and policies, resulted in 25 policies, divided between seven sectors and eight sub-sectors (Table 4). The number of relevant policies per sector varies, depending on their focus on TK and IP rights to biodiversity conservation and poverty alleviation.

Table 4: The number of policies reviewed per policy sector and sub-sector.

Policy Sector	Sub-sector	No. policies reviewed
Agriculture		3
Climate Change		2
Conservation	Protected area	5
	Biodiversity	5
Development	Culture	1
	Land use	4
Extractive	Mining	1
	Petroleum	1
Forestry		1
Human Rights	Indigenous people	1
	Land tenure	1

The review of the 25 policies/acts shows a wide variety of results between sectors in terms of level of TK and IP rights integration (Table 5 and Table 6). Figure 1 shows that about 20 per cent of the policies/acts reviewed have been categorized as green (Excellent and comprehensive integration level) for both TK and IP rights. The sectors that have this good level of integration are protected areas (Conservation sector), culture (Development sector) and Indigenous people (Human rights sector) for both TK and IP rights. However, there are some differences between the conceptual and operational level, which are further discussed below.

The results also show that from the policies and acts which have been categorized with a fairly good level of integration, category 'Yellow' (some explicit integration but not comprehensive), TK integration is relatively low (18 per cent) whereas IP rights integration is better with 32 per cent. For TK, it is only the Biodiversity sub-sector (Conservation sector) that has been categorized as 'yellow' for both the conceptual and operational levels. However, for IP rights the following three sectors and sub-sectors are categorized as yellow at both the conceptual and operational level: Biodiversity (Conservation sector), land use (Development sector) and Forestry.

Considering the poorer categories of 'amber' (implicit and indirect integration) and 'red' (no integration), Figure 1 shows quite clearly that TK is prevalent (64 per cent of the sectors) for both the conceptual and operational levels. In other words, comparing the level of TK and IP rights integration, the results from the policy/act assessments show that the level of integration of IP rights is higher than the level of TK integration (Figure 1).

Lastly, the sectors that differ the most in integration level when comparing TK and IP rights are: agriculture, forestry, land use (Development sector) and Indigenous people (Human rights sector).

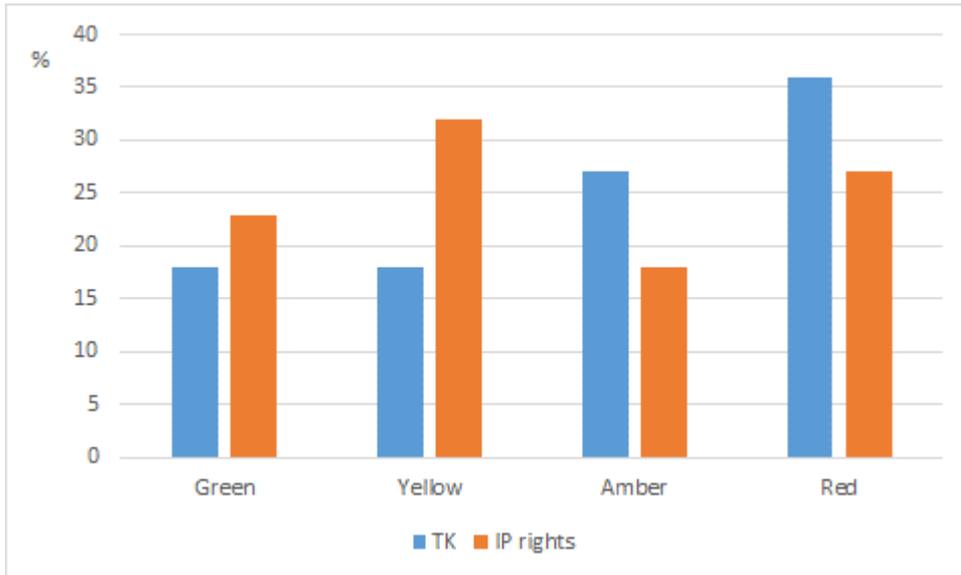


Figure 1: Result showing how the seven sectors (in both conceptual and operational level) been categorized in the different traffic light categories (green, yellow, amber and red) in percentages (see Table 2 for further details on criteria for the different categories).

3.1 Traditional knowledge integration results

The overall result of the review indicates that most sectors need to improve in their level of TK integration. Low or no integration of TK (categories Amber and Red) is found for 64 per cent of the sectors both on the conceptual and operational level. However, an encouraging result is found for TK integration in the conservation sectors, with the protected area sub-section classed as ‘Green’ (Explicit and comprehensive integration) on the conceptual level and classed as a strong ‘Yellow’ (8) on the operational level (Table 5). The Biodiversity sub-sector (e.g. National Biodiversity Strategy and Action Plan) also shows a relatively positive level of integration with a strong Yellow (8) on the conceptual integration level and a fairly strong ‘Yellow’ (7.5) on the operational integration level. Another sector that shows fairly good TK integration is the Development sector, where the Culture sub-section is classed to have both a good ‘Green’ level of conceptual and operational integration. However, the Development sub-section Land use only shows an average ‘Amber’ (5.4) rating for the conceptual level and even lower (3.8) for the operational level. Similarly, the Human rights sector shows very different results between the two sub-sectors; Indigenous people rights show a good ‘Green’ conceptual level of integration and fairly good ‘Yellow’ level of operational integration, while the land rights sub-sector shows very poor result of no indication of TK integration (red).

These results indicate that there is much room for improvement, even for the sectors that show a good level of integration, such as the protected areas and biodiversity sub-sectors. The integration level for both these two sub-sectors decreases from the conceptual to the operational integration level. Furthermore, this pattern can be seen throughout the review for numerous sectors for both TK (Table 5) and IP rights (Table 6). This result can to some degree be expected, as the level of integration needs to improve from conceptual to operational and the same from operational to implementation, thus making it easier for a sector to have a high conceptual level compared to operational and implementation levels. Unfortunately, as the implementation level was not possible to assess in this version of the document the further reduction in integration level cannot be shown in this review result. But the pattern does suggest that the level of implemented integration is even

lower than what these results show, which might indicate that much more progress is needed to integrate TK to a level that is actually realized and recognized on the ground and at a national level.

Table 5: Result of policy/acts review to establish traditional knowledge integration level for seven policy sectors in Guyana.

Level of Integration	Policy Sectors										
	Agriculture	Climate change	Conservation		Development		Extractive		Forestry	Human Rights	
			Protected area	Biodiversity	Culture	Land use	Mining	Petroleum		Indigenous people	Land rights
Conceptual		5		8		5.4			5		
Operational		3.8	8	7.5		3.8			2.5	7.5	
Implementation											

	Explicit & comprehensive recognition of traditional knowledge
	Some explicit integration but not comprehensive (e.g. some mentioning of traditional knowledge)
	Implicit & indirect integration, generally focus on preventing negative impacts of a policy sector on traditional knowledge
	No recognition (direct / indirect) of traditional knowledge of indigenous people
	Not yet assessed

3.2 Indigenous people rights integration result

The review shows that the integration level for IP rights are fairly good for about half of the sectors assessed, with 55 per cent of the sectors categorised as either green or yellow (Table 6). The sectors categorised as green are the same as TK: protected areas (Conservation sector), culture (Development sector) and Indigenous people (Human rights sector). Sub-sectors categorised as yellow; include Biodiversity, land use and forestry. These sectors are categorised as yellow for both conceptual and operational level. For both the Biodiversity and land use sub-sections, the score is fairly good (7.2-7.5), but for the forestry sector, the operational level is a low score (2.5) and average (5) for the conceptual level (Table 6). As the description of the different categories of integration explains, these sectors show some level of explicit integration but it is not comprehensive (Table 2), and thus would very much benefit from further work to improve the level of IP rights integration, particularly as some progress has already taken place.

Sectors categorized as amber, only showing implicit and indirect integration, are Agriculture and Climate change. Both these sectors activities and impacts could greatly affect IP and their way of life. Thus, improving the level of integration of IP rights are important in these sectors. Comparing the IP rights integration level with TK shows that for climate change the level is similar, but for the Agriculture sector it is even lower integration than for TK, thus providing an even stronger case to improve the integration of both TK and IP rights for these sectors.

Lastly, the sectors with no integration of IP rights are the two sub-sectors in the Extractive sector (mining and petroleum) and the land rights sub-section. It is disappointing that no integration about IP rights have taken place in these sectors. They all can have major impacts on IP, and the land rights sector is one of the most important sectors for IP equality and poverty alleviation. The result could thus be interpreted as, sectors categorized as red, are the most important sectors to focus on and improve the integration level. However, the result can also be interpreted that there is no progress to build on in these sectors and thus starting to focus action on integration at these sectors might not be the most efficient way of improving the integration level, as it might be too difficult. It is therefore more likely to improve the integration level of TK and IP rights more successfully by

starting to focus on sectors that have a fairly good level of integration and then once some work has progressed focus on sectors with lower integration level.

Table 6: Result of policy/acts review to establish indigenous people’s rights integration level for seven sectors in Guyana.

Level of Integration	Policy Sectors										
	Agriculture	Climate change	Conservation		Development		Extractive		Forestry	Human Rights	
			Protected area	Biodiversity	Culture	Land use	Mining	Petroleum		Indigenous people	Land rights
Conceptual	5	5		7.2		7.5			5		
Operational	4.2	3.8	8	7.2		7.5			2.5		
Implementation											

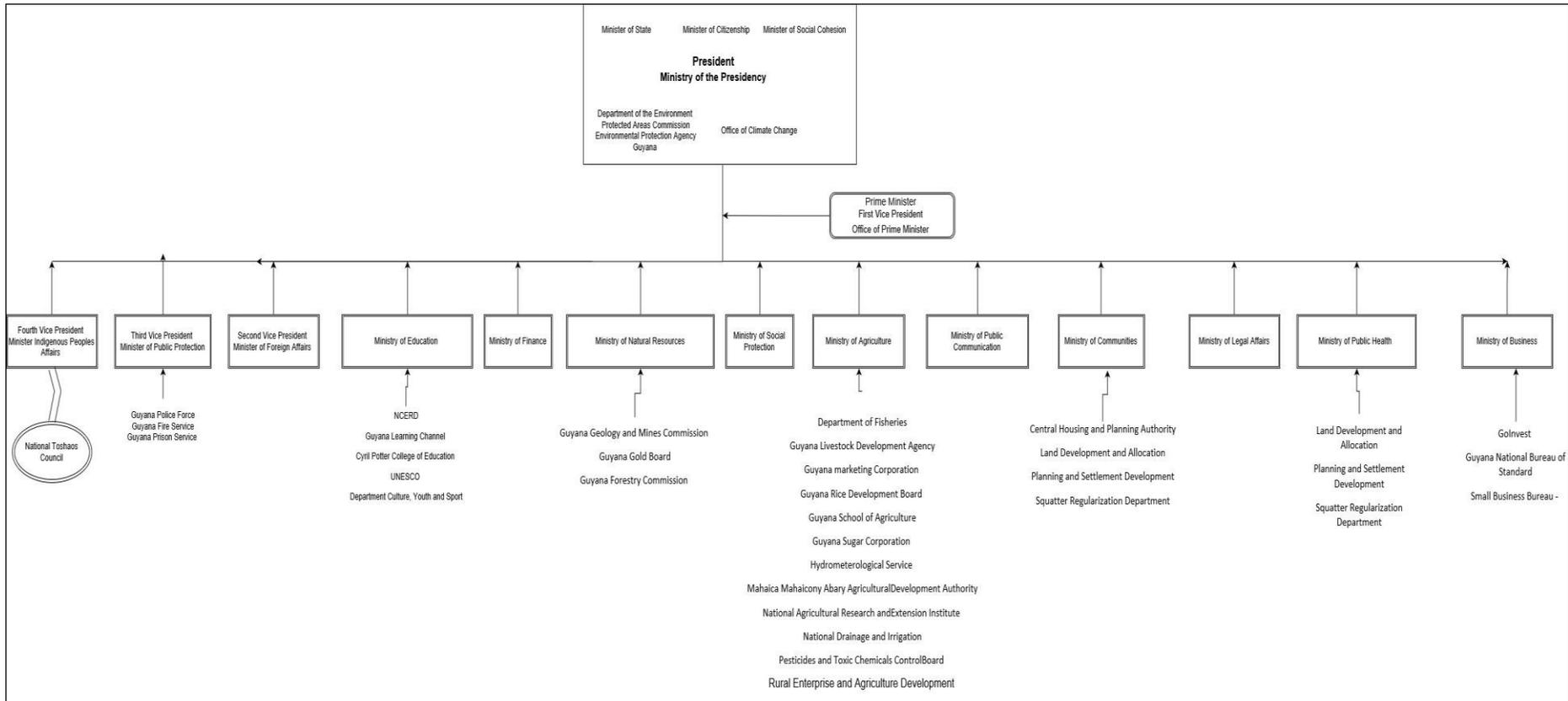
	Explicit & comprehensive recognition of indigenous people's (IP) rights
	Some explicit integration but not comprehensive (e.g. some mentioning of IP rights)
	Implicit and indirect integration, generally focus on preventing negative impacts of a policy sector on IP
	No recognition (direct / indirect) of IP rights
	Not yet assessed

4.0 Conclusion

This review has established the integration level of both TK and IP rights for the chosen seven sectors in Guyana. Only a few sectors show a good level of TK and IP rights integration. Most of these positive results indicates only a good level of TK integration at the conceptual level. The sub-sections that show the most promising results are the Protected area, the Culture and Indigenous rights sub-sectors. This is an encouraging result as these sectors are of major importance for this project, which focuses on supporting progress towards the Convention for Biological Diversity (particularly the Aichi Biodiversity Target 18) and the Sustainable Development Goals (SDGs). This result thus indicates that some progress has been made to integrate TK for biodiversity and poverty alleviation in Guyana, which also means that relevant international treaties have had some progress. Although, this has been hard to record and report nationally. Thus, the established baseline for TK integration will allow for monitoring and assessing progress in the next three years of the project,

The next step of the review is to assess documents relating to the implementation level so that a baseline can be established for this integration level too. After this, the method will be applied annually for the coming three years as a way to measure integration level progress.

Appendix 1: Guyana's Governance structure



Appendix 2: Policies and acts reviewed for integration evaluation.

Sector	Sub-Sector	Policy
Agriculture		National Strategy for Agriculture in Guyana 2013-2020
Agriculture	Disaster and risk management	Disaster Risk Management Plan for the Agriculture Sector 2013-2018
Agriculture	Food security	Food and Nutrition Security Strategy 2011
Climate change		Guyana Climate Change Plan
Climate change		Guyana's National Determined Contribution
Conservation	Protected area	Kanuku Mountains PA Management Plan
Conservation	Protected area	Shell beach PA Management Plan
Conservation	Protected area	Kaiter National Parc Act
Conservation	Protected area	PA Act 2011
Conservation	Biodiversity	Guyana NBSAP 2014
Conservation	Biodiversity	Guyana Biosafety Act
Conservation	Biodiversity	National Act on ABS 2007
Conservation	Biodiversity	National Policy on ABS 2007
Conservation	Protected area	Plan for Iwokrama Forest _2017
Conservation	Biodiversity	Wildlife conservation and management Bill
Culture		Guyana's Framework National Cultural Policy
Development	Land use	Guyana Land Degradation Plan 2006
Development	Land use	Sustainable Land Development and Management Project
Development	Land use	Guyana National Land Use Plan
Development	Land use	Low Carbon Development Strategy

Extractive	Mining	Guyana Geology and mines Commission Act
Extractive	Petroleum	Guyana Policy for the Petroleum Sector 2017
Forestry		Guyana National Forest Policy
Human rights	Indigenous people	Amerindian Act 2006
Land rights		Guyana Lands and Surveyd Commission Act 1999