

## **WORK IN PROGRESS FOR REVIEW ONLY**

### **GCF Indonesian Members' Database Analysis**

**Task 3 Report**

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#### **1. Introduction**

The purpose of this document is to report on the status of activities directed towards mitigation and adaptation to climate change, through projects trading in reduced carbon emissions from forests (REDD) in the Indonesian GCF member Provinces of Nanggroe Aceh Darussalam, West Kalimantan, East Kalimantan and Papua.

The information presented here was collected over a two week period from late August to early September 2010 from interviews in each Province structured according to a pro forma questionnaire developed by Task 3 members coordinated by Dr Luis Filho. The results of the interviews have been complemented by statistical data contained in a variety of sources particularly the annual provincial statistics compiled by the National Statistics Organisation in each Province, data from the Medium Term Strategic Plan (RPJMD) and the Province Spatial Plans (TRRW-P) where these have been fully or partially available. Because the Papua Governor and his Climate Change Team were overseas during the field work period the report for Papua is still only partially completed and has depended on other official publications. The data on the extent of forest cover in each Province and in each forest use category has been obtained from the national Forest Planning Division of the Ministry of Forestry (Dir-Jen Planologi) and complemented by data available in the provinces.

A challenge in compiling documents like this for Indonesia is not so much gaps in the data but the need to sort through and interpret the large volume of statistics. This can be quite time-consuming as it is frequently the case that data sets are not fully consistent and it becomes a question of judgement as to which data set to choose, mindful of the sensitivities of many of the parameters. This factor has been paramount in my mind and is the reason for the strong reliance on National Government forestry statistics.

Nevertheless, there will be gaps in what has been presented and probable errors in interpretation. It is important therefore that this document is read as a work-in-progress that will benefit from critical reading by colleagues from Indonesia in the member Provinces and also in the national government. The presentation here represents a first iteration of data collection. It is intended that further work will involve at least some time in Papua and it is hoped a second set of visits after the Santarum meeting.

Because Indonesia is so different from the United States, Brazil and Nigeria I have preceded the presentation of the pro forma data with an explanation of the constitutional context as it influences the opportunities member provinces can easily explore through GCF. I have also endeavoured to summarise my understanding of the relationships between the three tiers of government and the authorities which rest with the Ministers, Governors and Bupati's under regional autonomy (the situation for West and East Kalimantan) and Special Autonomy as it applies to Aceh and Papua. As far as I can determine this relationship continues to be quite fluid and the boundaries of responsibility surely need further testing. It is my view however, that this relationship will be critical to the short to medium term objectives of GCF and I am particularly anxious to get feedback from my colleagues in the Provinces in relationship to these issues.

The work to date has depended upon the assistance and cooperation at short notice of a number of people in the Provinces. I have provided a list of the people I had contact in each location and I would like to acknowledge their contribution to the work and apologise if I have misrepresented them in any way.

## **2. Indonesian Constitutional Context**

Indonesia is constituted as a *Unitary State* under the 1945 Constitution. The decision to form a country based upon a central unity involved an historical decision to reject a federal model whereby individual provinces retained autonomous identities. The unitary state was enforced by conflict in its beginnings and has been periodically reinforced throughout the nation's independent history. Regional autonomy remains a highly sensitive issue and its history is reflected in a continuing tension regarding the extent of regional authority between central, provincial and district governments.

Because of this history, the decision taken during the Habibie Presidency through the Law 22 of 1999, to decentralize power to the Districts (by-passing the Province Governors), was dramatic. It ushered in a period of extraordinary flexibility during which decisions taken by local leaders led to huge changes in the patterns and extent of resource use. One area in which the impact was felt most strongly was in the forest sector. Unregulated and illegal logging expanded dramatically and there was an increase in the rates of deforestation and forest degradation that have only been reduced since about 2005. This early phase of regional autonomy coincided with the 1998 Asian economic crisis and the subsequent major changes in the form of governance in Indonesia and the introduction of a real democracy. The period was also characterized by a poor level of professional know-how in the regional governments and an inability by central government to regulate the political and administrative changes occurring locally.

Nevertheless, by 2010, the face of Indonesia has changed forever. While performance and capacity remains patchy across the regional governments, the economic impact of the reallocation of national budget to local development is clear, with infrastructure and investments expanding and a complementary shift in demography as internal population changes have rearranged the structures of society. Rather than promoting divisions in the unitary state, the mix of economic transmigrants has actually acted to reinforce the integration of the country.

Despite this trend, there has been since beginning of regional autonomy a concern about the role of the provinces and the relationship that should exist between national, provincial and district leaders: the President, the Governors and the Bupatis. From the beginning regional autonomy led to much local legislation that was not consistent with national Laws, while at the same time Ministerial authorities were not explicitly devolved to either Governor or Bupati. An expression of this concern has been a political momentum to organize the authorities of the Bupatis under provincial Governors. In 2004 a second regional autonomy Act was implemented: Act 33/2004. This Act emphasized the authority of the Governors and in intent placed the Bupatis under their Governor. A complementary change in fiscal arrangements between the central government and the regional governments empowered the Governors, while authorities were introduced to clarify the devolution of powers of the ministers. Nevertheless this change did not immediately bring about the intent of the Act as the original Act 22 was not specifically rescinded leaving negotiating space for the Bupatis in their relationships with the Governor. Both levels retained their independent political bases through the District and Province Legislature. This situation has only recently been resolved through the passage of Government Regulation 19 of 2010 which explicitly reinforces the role of the Governors, allowing them, for the first time, to generate firm Provincial directives that must be supported by the Bupatis.

Despite this important development, the position of Governor, while an elected representative, remains subject to national legislation and a framework of responsibilities spelt out by Ministry for Home Affairs. This is a critical point in determining the extent of the authority the Governors might exercise as members of the GCF Task Force, where it will recalled the national formation of the United States of America and Brazil are both Federations (I think this is also the case for Nigeria).

### **3. The Authorities of Governors with respect to Forest and Climate Change Issues**

Currently there are four full members of the GCF in Indonesia: Aceh, West Kalimantan, East Kalimantan and Papua. There is in addition an observer status for Central Kalimantan, South Kalimantan and West Papua. Of these Provinces, Aceh, Papua and West Papua have the status of Special Autonomy. In the case of Nanggroha Aceh Darussalam this authority is set out in Act 18 of 2001 while for Papua it is set contained in Act 21 of 2001. The Special Autonomy Status for West Papua was clarified in Act 35/2008.

The purpose of the Acts of Special Autonomy in Papua and Aceh was to promote a greater sense of ownership among populations which had been struggling within internal conflicts directed at achieving independence from the Indonesian state. The provisions of these Acts differ in detail and address specific ethnic/cultural/religious issues that assist in defining these special regions. In both cases the Acts of Special Autonomy provide a more generous allocation of funds from the development of natural resources than is the case for the provinces without Special Autonomy. There is also a broader flexibility in the range of decisions open to the Governors in these Provinces than is the case under the "Regional Autonomy applied across Indonesia since the start of 2001.

How this flexibility plays out into the future remains unclear as the boundaries of the provisions of the Acts remain to be tested. There is no doubt that one of the areas to be tested is the allocation of forest resources and their availability for national forest resource development. In this respect there will also

be a significant debate related to how forest land is allocated and used in relation to climate mitigation through REDD projects. These issues affect the provinces of Special Autonomy as they do the provinces under conventional regional autonomy. The first step in resolving this issue is having provincial Spatial Plans (RTRW Province), prepared under provisions of the Act 26/2007, accepted by the Minister of Forestry and passed by the national parliament (DPR). At the present time the RTRW as it applies to Forest lands in all the member Provinces are still waiting acceptance by the Minister and final approval. While the Spatial Plan for Aceh appears to have been welcomed by the Minister of Forestry, the matter remains subject to sensitive negotiation in all other Provinces. Until this matter is resolved the Governor of each of the Indonesian GCF member states need to be very introspect about the opportunities they can follow. This situation is the same whether it applies to a Special Autonomy Province or not.

The situation with respect to the authorities of the Provinces in relation forest management for climate change mitigation is also not yet clear. Based on Law 32/2004, the national government retains power over six functions that affect the nation including: foreign relations, defense, internal security, judiciary, monetary and fiscal policies and Religious affairs. A major outstanding issue is the control and management over forest lands which the Ministry of Forestry is contesting.

As discussed below in more detail, each of the member Provinces have established REDD working groups and have either incorporated these within climate change or low carbon economy strategic frameworks. However, the national government has also a large investment in these activities, having played host to the historic UNFCCC COP 13 in Bali in 2007 and actively participating in endeavours to break through some of the difficulties encountered at COP 14 in Copenhagen. A major driver of national activity towards climate change management is the President's intention to reduce emissions by 26% by 2020. The President is the Chair of the National Climate change Council which has a former Minister for Environment as Executive Director. A national REDD Working Group has been established in the Ministry of Forestry and the National Planning Board (BAPPENAS), Ministry of Finance and Foreign Affairs have also vested interests. Under these conditions it is critical that the GCF Task Force works closely with its Indonesian members to develop strategies and approaches which effectively enhance the basis and roles for national-provincial partnerships. If this does not occur there is a potential for the two levels of government to work counter-productively and for the effectiveness of the GCF process in Indonesia to be lessened.

#### **4. General Comparison among member Provinces**

Selected socio-economic indicators for the member provinces are presented in Table 1. This analysis is based on data contained in the 2009 official statistics for Aceh, West Kalimantan and East Kalimantan. The data for Papua is presented in is 2008 Statistics. A national census was taken in May 2010 and the inclusion of this data is pending.

As Table 2 shows, Papua is the biggest Province in terms of area and the most sparsely settled. The characteristic of the small population of Papua is that approximately half are found in the major cities of Jayapura, Timika and Merauke and Nabire and Wamena and their surrounds while the remainder are in the rural villages which are often very isolated and small in numbers. A major challenge for the

administration is to identify the locations of these villages as the basis for developing service delivery and this has begun to be systematically addressed in the current spatial planning process. The rural villages continue to be the focus for the settlement of the indigenous Papuans and must be the basis for local community involvement in REDD investments as customary land ownership is a major factor influencing approaches to governance post-special autonomy. Up to half of the population of Papua are residing in the urban centres and this proportion of the population consist of a growing percentage of economic migrants from elsewhere in Indonesia, particularly Java, Sulawesi and NTT attracted by the opportunities of the high levels of investments occurring there from central budget allocations under special and regional autonomy.

West Kalimantan and East Kalimantan are among the largest provinces in Indonesia by area and relatively sparsely settled. West Kalimantan and East Kalimantan are both still largely rural in their demography, a function of their still largely rural economies. East Kalimantan is the wealthiest Province in terms of its GDP and also a province where complex urban economies based upon the multiplier affects of natural resources development in oil and gas, mining and forestry are evident. Samarinda, Balikpapan, Tarakan and Nunukan are all sizeable urban centres. The urban centres in West Kalimantan and in Aceh are smaller and fewer. In Aceh the greatest percentage of the population is in the coastal lowlands and particularly along the east coast. The internal mountain ranges which are the location of the two large conservation projects: UluMasin and the Leuser Ecosystem are sparsely settled. The distribution o population is an important factor in lending significance to these two projects for the protection of watersheds and the management of coastal flooding.

The comparison of GDP demonstrates the importance of the complex multi-layered economy of East Kalimantan. Papua benefits from the mining sector specifically the Freeport mines in Mimika, while the oil and gas incomes in Aceh are declining and the economy is clearly in need of substantial new investments to support its future economic development: a factor contributing to the importance of REDD proving to be a sufficiently successful economic option to offset the opportunity cost of substantial mineral resources which have not been developed as yet.

At the present time it has not been possible to tease out the significance of the forest sector compared to the general agriculture economy in all but West Kalimantan. Further work is required, but it possible to generalize that the forest sector has been little developed in neither Papua nor Aceh. In West Kalimantan there has already been extensive conversion of the original forest cover and oil palm and other estate crops are major earners. East Kalimantan has lost a large percentage of its forest although it still supports a significant natural and plantation timber industry.

Per capita income is consistent with the general economic and population picture expressed through the other data. The relatively high figure for Papua is an expression of the stimulus of Special Autonomy funded infrastructure projects in the main towns and the shared income from the Freeport mines. As mean data it is strongly skewed to urban earnings: a point reflected in the high level of rural poverty and the fact that Papua continues to record the lowest HDI.

Table 1 General Description of Member Province (2008)

Province	Aceh	West Kalimantan	East Kalimantan	Papua
Total Population (millions)	4.3	4.25	3.10	2.00
Urban Population	0.5	0.70	1.60	1.00
Rural Population	3.8	3.55	1.50	
<b>GDP Total</b> (Millions of USD)	3,790	2,914	33,181	5,828
GDP Forest Sector	ND	154.7		
GDP Agriculture	896.7	1351.0	1,649	582.1
Food crops	ND	474.0		
Estate Crops	ND	454.0		
Per Capita Income (USD)	881.3	627	4,120	2,523
HDI/National HDI	69/69.6	66.2/69.6	72/69.6	62.1/69.6

## 5. The Status of the Forests in the Member Provinces

### 5.1 *Forest Administration and Typology*

An analysis of the status of Indonesian forests and deforestation requires an understanding of the administrative framework around which the forests are monitored, the drivers of deforestation and degradation are managed, and the values that might pertain to carbon credits developed from REDD projects

Since the 1960's Indonesia has divided its land area into two for administrative purposes: the national forest estate, *Hutan Negara* and the rest. The forest land, currently of the order of 113 million ha or 55% of the land surface, has been administered by the Ministry of Forestry as a national resource for the nation, while the balance of the land has been administered for agriculture and settlement by the other line agencies, including the Ministry of Agriculture (and Estate Crops). Technically the National Land Administration Agency (*Badan Pertanahan Nasional*) has responsibility for the tenure of all land, land surveying and the issuing of entitlements. Enclaves of rural and forest dwelling people within the state

forest have been accommodated in a number of ways, but their legal rights over the land have been secondary to the interest of the state since the 1967 Basic Forest Law.

Changing demographic circumstances, and increase in population in the outer islands, decentralization of government and a growing economic importance of estate crops, particularly palm oil, have all contributed to increasing pressure on the Ministry of Forestry to convert land for non-forest purposes. In order to do this, forest land is categorized as Convertible Forest (*Hutan Produksi Konversi*) and decisions on the release of land zoned for this forest function are taken by the Minister on the basis of applications from proponents. Once land is released from the Forest Estate it becomes subject to land use decisions which are largely in the hands of local governments (Kabupaten/Kota) and are subject to a regulated process known as spatial planning, whereby land is allocated over a 5-year time frame and within 25 year long term strategic plans to contribute to economic and social development. Forested land (*Hutan Negara*) - the potential subject of management for the natural resource of carbon – is largely under the control of the Forestry Minister and his Department; but forested land outside the national forest estate exists and this is within the scope and decision making capacity of the Local Government, the District Head and the local parliament as well as the Minister of Forestry. Decisions over REDD projects can therefore involve national activities or local activities.

The fundamental management tool used by the Ministry of Forestry is the division of its national forest estate into agreed functional zones (*Tata Guna Hutan Kesepakatan* – TGHK).

Under the TGHK system, Forest Land is divided into three major functional categories: **Production Forest** (*Hutan Produksi*), **Protection Forest** (*Hutan Lindung*) and **Conservation Forest** (*Kawasan Konservasi*). Within each of these categories there are a number of other functional zones which constrain the range of uses to which the forest can be put.

**Production Forest** is divided into two secondary categories:

1. **Permanent Production Forest** for which sustainable forest management is intended to maintain forest ecosystems within the forest estate. Permanent Production Forest is managed as:
  - Natural Production Forest (*Hutan Produksi Alam – HP-A*)
  - Limited Production Forest (*Hutan Produksi Terbatas – HPT*); and
  - Industrial Plantation Forest (*Hutan Tanaman Industri* – industrial forest plantations)

The utilization of the production forests is undertaken through forest concessions that are granted to private companies, individuals, cooperatives, communities, or state enterprises concerned with the forest sector. Concessions are granted for 20 years over natural forests and for up to 35 years over HTI.

Following a review of non-performing natural forest concessions in 1998, the Minister of Forestry at the time cancelled over 200 concessions which reverted to the Forestry Department and have since had little direct management. This land, particularly in Sumatra and Kalimantan is sometimes referred to as *open access* and is the subject of new initiatives from the Ministry to incorporate

them into planned plantation developments through the mobilization of local communities and the granting of a range of community concessions, including *Hutan Tanaman Rakyat – HTR*.

The zoning of the production forests takes into account factors such as soil type, elevation and slope and rainfall, while the distinction between HP and HPT relates to the intensity of permitted logging. The decision to establish a plantation forest HTI can be taken where the damage from concession logging of the natural forest is judged to have caused irreparable damage to the natural forest ecosystem. It is generally acknowledged that the future of Forestry production in Indonesia will be increasingly tied to industrial plantation production.

2. **Convertible Production Forest** (*Hutan Produksi Konversi – HPK*). This forest zone, unlike the previous three, is not intended to remain in the State Forest but to be progressively converted to other non-forest uses, such as agriculture, estate crops (e.g., coffee, oil palm, rubber) and settlement, under greater control by local governments (*kabupaten/kota*).

The decision to release HPK from the forest estate is subject to ministerial approval based on proposals from industry. A standard condition for the release of HPK is that the area is logged of its commercial timber prior to release by a forest industry company. The timber on the HPK thus remains the gift of the National Government through the Ministry of Forestry and is subject to the usual taxes and levies. Once the land is released its new land use may yield products subject to regulation by the local government, who is therefore an interested stakeholder in forest land decisions.

Reflecting long established land planning practice, the majority of the HPK is found in the lowlands of Indonesia, more suitable for non-forest uses than higher and steeper landscapes which are reserved for HP or HPT. Unfortunately, with so much of the HPK forest zone already deforested and converted to other use since the end of the Suharto era, the high value of the remaining biodiversity of the lowland moist tropical lowland forest; and the habitat it provides for specific, highly valued species such as tiger and orangutan, is threatened to the point where there are real land use conflicts to be resolved in relation to the further conversion of these forests.

**Protection Forest** (*Hutan Lindung*). Protected Forest has been set aside largely for the preservation of essential ecosystem functions, such as watershed protection and protection of beachfronts, riversides and steep upper slopes of mountains where uncontrolled human activities or logging could easily create *critical land* through erosion. Limited human activities are permitted including the taking of rattan and the secondary forest products at non-commercial scales. The management of Protected Forests has been devolved to Local Government (*Kabupaten/kota*), which have rights to license use of and payments for environmental services.

**Conservation Areas** (*kawasan konservasi*). These include a range of protected area types specified in Act No.5 of 1990. Their major purpose is the preservation of biodiversity. The types of protected areas are: *National Park; Strict Conservation Reserves, Wildlife Sanctuaries, Recreational Parks, Grand Forest Parks and Hunting Parks*.. Each of these types of protected area is managed directly under the authority of the central government. A further protected area type of grand forest park, termed *TAHURA*, has been

identified in a number of provinces by the Ministry of Forestry, and its management allocated to provincial government.

National Parks form a distinct type of protected area because unlike all other categories they are managed by staff dedicated to the NP, and they have their own budget allocation.

## **5.2 Comparative analysis of the status of forest and forest uses**

These administrative categories are used by the forest planning division of the Ministry of Forestry to monitor change in forest cover. For the purposes of monitoring the significance of these figures for climate change caused by carbon emissions, deforestation is referred to *primary* and *secondary* forest and mangroves and within these categories, dryland forest on mineral soils and peatswamp forests on organic soils with high water tables.

Because of the relatively higher levels of emissions from disturbed and deforested peats than mineral soils, the capacity of Indonesia to meet its 2020 emission reductions objectives will depend on how well the peat forests and the converted peat lands in Sumatra, Kalimantan and Papua are managed. The skewed incidence of Convertible Forest (HPK) in the lowlands has meant that a significant proportion of the original peat ecosystems have been converted to other land uses and are no longer in the forest estate but subject to actions administered through local government in the agriculture and estate crops sectors. The future use of these lands will be an important issue to be addressed by the Provinces under the Governors as they plan for a low carbon economy.

Table 2 presents an analysis of the how forest functions have been allocated in each of the member Provinces and also current estimates of gross deforestation by the Ministry of Forestry.

The data presented below comes from several sources and more work will be necessary to tease out internal inconsistencies between sources. Total land area has been obtained from official province statistics. The total land area for Indonesia is that given by [www.countrystudies.us/Indonesia](http://www.countrystudies.us/Indonesia). Original forest area has been estimated from original documents related to the formulation of the Forested land uses undertaken in each province from 1981. East Kalimantan is a similar TGHK estimate but from the early 1990's. Papua is an estimate based on figures used in the 2007 World Bank funded SEA for Papua Province. It assumes very limited historical deforestation. Better figures will undoubtedly turn up, including possibly the Province RTRW which has yet to be released. The subsequent figures on the areas of forest under each category at present are taken from either the RTRW (Aceh) or the Province Statistics (West and East Kalimantan). The figures for Papua are those used in a RTRW presentation by the Governor to George Soros in 2010. The percentage of each forest type found in each province is based on total figures for Indonesia listed in the Ministry of Forestry publication concerned with forest loss published in 2008. These data express area managements from 2003-2006. This publication has been used to provide annual deforestation rates for the period 2003-2006. Annual deforestation rates for the period 2000-2005 have been obtained from the Ministry of Forestry publication "Reducing Emissions from Deforestation and Forest Degradation in Indonesia, published in May 2009. Data on historic deforestation may be obtained with further research. These data sources are several but it is difficult and somewhat sensitive trying to obtain data which is consistent and accepted by official

sources. These historic data are clearly important in developing an historic REL but the form of the most acceptable REL for Indonesia is subject to further discussion.

The national importance of the GCF member provinces can be appreciated by observing that while they occupy only 38% of the total land area of the country they contained some 60% of the original forest cover.

**Table 2: Area and Status of Forests by Province**

Province	Aceh (Km <sup>2</sup> )	West Kalimantan (Km <sup>2</sup> )	East Kalimantan (Km <sup>2</sup> )	Papua (Km <sup>2</sup> )	Total (Km <sup>2</sup> )	%
<b>Total Land Area (km2)</b>	56,760	146,807	198,441	317,062	729,070	38
<b>Status of Forests (%;km2):</b>						
Original Forest Area	36,120	92,044	171,292	308,998	608,454	60
Permanent Production Forest: Natural (HP-Alami)	6,386	47,118	84,891	98,693	237,088	40.1
Permanent Production Forest: Plantation (HP-Budaya)	ND	ND	12,459	ND	ND	
Convertible Production Forest (HPK)	ND	5,145	Note1	63,662		
Protection Forest (HL)	18,432	23,070	27,570	82,190	151,262	48.0
Conservation Forest (KK)	8,559	14,577	21,652	56,378	101,166	51.5
Non State Forest (APL)	24,427	Note1	Note1	8,205		
<b>Gross Deforestation/year (2000-2005) (Note 2)</b>	100.0	273.4	642	407.6	-	
<b>Gross Deforestation/year (2003-2006)</b>	145.6	386.1	1464.4	253.2		

Note 1: The figures for East Kalimantan are confusing because in the reallocation of forest land there 55,281 sq. kilometers of HPK have been reallocated between 2007 and 2008. This includes an increase in the area of forest for educational, research and training of 23,800 sq. kms. In 2008 there is no apparent HPK suggesting a significant proportion of the remaining forest area has been processed to APL. In addition there is some 12,459 sq.km of HTI plantation. As HTI is regarded as part of the permanent production forest I have taken this off the total for HP and HPT to leave a balance of 84,891 sq.km as native production forest. These figures now add to the estimated total forest area mentioned in the earlier TGHK allocations.

For West Kalimantan there is a significant area of APL which reflects customary ownership along rivers. This area will be a mixture of primary and secondary forest and estate crops including rubber. The data sources do not distinguish between this form of APL and APL formed through the process of release of land from the State Forest via the zoning of HPK.

Note 2. The gross deforestation data is taken from: Ministry of Forestry 2009. Reducing Emissions from Deforestation and Forest Degradation in Indonesia. IFCA: Jakarta. They refer to dryland and peatland losses. The percentage figure is for comparative purposes only and shows the proportion of the original forest estate area estimate that was lost during this time. The importance of the period 2000-2005 is that this overlapped with the extreme events in the Indonesian social and economic fabric: the economic crisis and the decentralization of government, which produced acute rates of loss. As the second set of official MoFor figures show for the period 2003-2006 the rates of loss were substantially reduced after 2004.

The table provides current estimates of the areas of forest within each use category. An attempt has been made to distinguish between natural production forests and plantation forests but figures were

only readily available for East Kalimantan. This is an important distinction to further research as both plantation forests and native forests are regarded by the Ministry as permanent forest and counted accordingly, even though the carbon stocks are quite different. The remaining figures represent the best data for the current situation. For Aceh this is the situation as it relates to the apparently accepted RTRW proposal which is to go to the DPR for final approval. Importantly this situation has been arrived at by reducing the area of permanent production forest and HPK in favour of Protection Forest and Conservation Reserves consistent with uses directed towards biodiversity conservation and the conservation of ecological processes including water conservation and hydrology. A similar approach to forest conservation is being taken in Papua where it is proposed to substantially reduce the areas under production and those subject to conversion. These decisions need to be discussed closely in relation to their impact on emission reduction achievements As questions regarding additionality will need to be raised and clear market interpretations will be required to ensure that the approaches to land use planning are consistent with the optimal marketing of the reduced emissions resource.

### **5.3 Deforestation dynamics monitoring**

Estimates of the historical rates of deforestation in Indonesia vary. FAO estimated the annual rate of deforestation in the early 1970's at about 300,000 ha/year, in the early 1980's at about 600,000 ha/year and in the early 1990's, 1 Million ha per year. FAO estimates for annual losses in the current decade to 2005 increased to 1.9 million The World Bank commonly quoted deforestation rates in the early 1990's of between 700,000 ha/year to 1.2 Million ha/year.

The variation in deforestation estimates is due to differences in the way forest and deforestation has been defined and methods used. Based on long term forest cover data collected from various sources<sup>1</sup> the reduction in forest area over the past 50 years is equivalent to an annual loss of about 1.4 million ha per year. These rates of loss have not been linear during this time and important insights can be gained of the drivers by understanding loss rates over different periods.

For these reasons, estimates of forest loss are regarded as very sensitive in Indonesia and have been subject ot a great deal of work and negotiation to produce current figures. In recent years new information for Indonesia has been produced by the Ministry of Forestry that enable improvements in estimates of national emission levels. These new data include:

1. systematic monitoring of change in forest cover;
2. updated land cover mapping.

Gross annual loss of forest cover between 2000 and 2005 was derived from MODIS, with a resolution of 500x500 m, corrected with Landsat ETM<sup>+</sup> with a resolution 25x25 m. The analysis was performed by the Ministry of Forestry in cooperation with South Dakota State University. The analysis provided the spatial extent and the location of forest cover loss. The map of results was then overlain on the *forest type* map so that losses could be interpreted against land management approaches to produce changes in carbon stocks. Deforestation figures for 2003-2006 utilised the same methodology.

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<sup>1</sup> RePProt, 1990; Hannibal, 1950; Intag, 1990; MoF, 1998, 2000, 2001 and 2002; FWI and GFW, 2001

As a result of these analyses, there are officially accepted figures for the period 2000-2005 and the period 2003-2006 on forest loss in different use categories and by Province. The methods used in these analyses follow the IPCC *Good Practice Guidance for Land Use, Land-Use Change and Forestry*. They are shown in Table 2 as annual losses in square kilometers and it will be most useful to focus on these data for the development of a future REL.

Two key projects within the Forest Planning Agency supported by the Australian Government are the Forest Resource Information System (FRIS) and the National Carbon Accounting System (NCAS). These projects are further upgrading the sophistication and reliability of the national monitoring capacity and should become a basic tool for future climate change assessments.

The socio-economic context of each period are important to understanding the annual variation in deforestation and forest degradation. Although the data presented here is too scant to allow for too much certainty, it is interesting that the increase in the annual deforestation rate in Aceh from 100 to 145.6 is probably an expression of the impact of the Tsunami and the demand for timber for reconstruction, as well as the peace process improving the safety of access to the interior. The increase in deforestation in West Kalimantan is possibly a function of the serious forest fires in the extreme El Nino year of 2006. The very large increase in annual rates in East Kalimantan may reflect the change in status of the HPK to APL in recent years, while the significant reduction in annual rates in Papua would appear to be related to policy changes following Special Autonomy. Each of these circumstances will require further investigation as a fuller understanding of the dynamics of the deforestation drivers is essential in developing the most appropriate for of REL. Historically low rates of deforestation in Aceh and Papua would suggest a strong disadvantage to these Provinces in adopting an historical REL, which ironically would favour West and East Kalimantan with historically high rates of forest loss, with conversion to oil palm plantation and other estate crops as a major factor.

#### 5.4 ***Forest degradation dynamics monitoring***

Forest degradation is defined by the Ministry of Forestry as the *deterioration of forest cover quantity and carbon stock during a certain period of time as a result of human activities*. The monitoring of forest degradation is still considered problematical.

Many activities cause degradation of carbon stocks in forests but not all of them can be monitored well with high certainty, and many of them cannot be monitored well using remote sensing data alone. The following categories of activities are causing degradation.

- Conversion to plantations that have considerably lower carbon stocks than the forest they replaced are relatively straightforward to detect, their area estimated, and the change in carbon stocks assessed.
- Selective logging results in tree felling gaps, roads, and log decks. These can be observed in high-resolution satellite imagery (e.g., Landsat). The reduction in carbon stocks from selective logging can also be estimated without the use of satellite imagery through field measurements or by methods given in the IPCC 2006, AFOLU.



## **5.6 Baseline definition and emissions reduction targets**

At the present time there is no consensus regarding the form of baseline most appropriate for Indonesia or the individual provinces.

While Indonesia in general has undergone extensive deforestation and forest degradation since the 1980's, the temporal and spatial pattern of deforestation has been quite variable from one region to another. The island of Sumatra has generally suffered the most in terms of forest loss but there is a huge difference in scale between South Sumatra, Jambi and Riau Provinces where the deforestation has been extensive and Aceh where deforestation remains relatively small. Similarly fragmentation of original forest covering Kalimantan is more extensive and follows a different pattern than that in East Kalimantan. Neither province have experienced the disastrous environmental destruction that occurred in the lowland peat swamp forests of Central Kalimantan. Papua remains relatively intact although subject to frontier proposals for conversion to estate crops and commercial logging.

Among the member provinces of the GCF there are such differences in historic change in the forests that an historic baseline would on its own deliver quite disproportionate results. The IFCA process (IFCA 2009) proposed that a mixed historic and modeled baseline concept would be most appropriate for a national application as this could be focused on the economic development scenarios most appropriate for individual jurisdictions (District or Province). Current momentum at each level of government towards low carbon economic strategies opens up the importance of debate about how the country and the provinces should proceed.

In discussions with representatives of each of the member Provinces it was clear that consideration of the form of the baseline was not yet being seriously addressed and indeed that greater understanding of REDD as a practical approach to forest resources management remained an urgent requirement.

Nevertheless there are many demonstration projects across Indonesia as well as investments directed towards the voluntary market. These project descriptions, e.g., Ulu Masin in Aceh and Berau in East Kalimantan are focusing on baseline scenarios using historic deforestation projections. In practice there are no projects which have a stage where they could contribute to a national or provincial policy.

## **6 Structural Policies in place for reduction of deforestation**

## **7 REDD Strategy Concept**

## **8. Target populations and rights recognition**

## **9 Participation and Transparency mechanisms**

All projects being designed or under way in the four member provinces were either actively pursuing FPIC processes with resident communities or were in other ways with these communities.

## **10 Benefit sharing mechanisms**

A system for distribution of payments from approved REDD projects on State Forests has been the subject of research by the Forest Research Division of the Ministry of Forestry. It is also the concern of all the projects currently planned. Nevertheless, the general principles and rules are still not clear and the issue of PDM remains among the most important and least understood components of REDD implementation.

PDM's were not yet being actively considered at official levels in any of the Province administrations, but were being left to individual projects to work through.

Aceh has two very large planned REDD projects: the Ulu Masin region which services approximately 700,000 people living in and around the boundaries; and the Leuser Ecosystem which directly influences about three-quarters or 4 million people in the Province. These two projects in the one province differ in this way from those in the other provinces and really raise the question of the role of the Provincial Government as the institutional manager of potential REDD funds which could not be equitably to so many people but could form a special adjunct to the Provincial budget for the provision of enhanced government services to local communities. This arrangement would suggest a complementary income to the Province similar to the Special Autonomy allocation from the National Budget.

The investigation of appropriate PDM systems in each of the Provinces is a real need as these roles, in contrast to roles in resource assessment and accounting are clearly within the ambit of Provincial and local governments.

## **11 Institutional framework and arrangement for REDD Program**

**11.1 The National Government.** The Ministry of Environment, The Ministry of Forestry, The National Planning Agency BAPPENAS, The Ministry of Finance and the Ministry of Foreign Affairs have strong interest in how REDD develops. Environment have the coordinating lead in relation to all climate change issues, REDD is principally vested in Forestry as lead agency, Finance is involved in issues of international markets and in issues related to payment distribution and overall financial and economic implications for REDD. BAPPENAS have a coordinating role and are also concerned with spatial planning in non-forest land. Foreign Affairs has a continuing interest in relation to international commitments related to Indonesia's, membership of the UNFCCC and its obligations under the Kyoto Protocol.

The Ministry of Forestry has established a Forest and Carbon Working Group and is the lead agency in developing governing legislation in relation to REDD projects within the National Forest Estate. Leadership in the Ministry is being provided by the Directorate General for Forest Planning (PLANOLOGI) who are also the lead agency for major projects related to forest inventory (FRIS) and the National Carbon Accounting System (NCAS). Planologi maintain the data bases upon which deforestation rates are

determined and also coordinate national carbon accounting including the carbon stocks of the various forest types.

The governing national legislation for activities on Forest Land is the Basic Forest Act of 1999 (Law 41/1999). This Act is implemented through Government Regulation 6/2007 and its amendment GR 3/2008. The Governing Regulations lay out uses for forest which include Payments for Environmental Services including Carbon sequestration and reduced Carbon emissions. These Governing Regulations revolve around a new concept of a forest management unit (KPH) whose boundaries have some ecological integrity, typically related to water catchments (DAS). KPH may be established at local, province or national level depending on their size and are administered under an Manager appointed by the Leader of the Government (e.g. Governor or Bupati) who is advised by a multi stakeholder forum (MSF). The approach has considerable potential for REDD especially in provinces like Aceh and Papua where there remain strong adat claims to local land management. It allows for the incorporation of community forests and representation of customary owners on the MSF.

The definition and licensing of REDD projects is circumscribed in two Ministerial Decrees: PERMENHUT 30/2009 which sets out the framework and organization of REDD projects; and PERMENHUT 36/2009 which describes the steps required to apply for a REDD project on the Forest Estate.

### ***11.2 Provincial and District Level***

The Province and specifically the District have direct control over non-forest land. The way non-forest land is used is based on a 5 –Year Spatial Plan (RTRWD) which expresses the development priorities of the 5 year strategic plan the (RPJMD). The RTRW in all Provincial and District administrations in Indonesia is currently being revised to bring them into line with the new national Spatial Planning Act 26/2007.

Because of the importance of the State Forest component and the urgent need for land reform to meet growing population and economic objectives at province and local government level, the resolution of the spatial plans for the state forests in highly sensitive and difficult to resolve. Of the four member provinces of the GCF only Aceh appears to have reached the point where its proposals for State Forest have been accepted by the Minister for Forestry and passed on for approval by the national parliament (DPR). In the other provinces the RTRW for Forestry is still unresolved.

In all provinces the approach which has been taken to sort out these issues has been the appointment of a Forest Land Working Group which comprises members from various government agencies, NGO's and independent experts. The Aceh Forestry Working Group finished its activities in December 2009.

In each Province there has been formed a REDD Working Group (Task Force) under a Government Decree. These Government Decrees specify the members of the Task Force and seek a broad range of representation from government, expert (university) and civil society. The roles and activities of the Task Forces are specified and include R&D, coordination and education, training and communication. Although there appears to be a strong commitment to the work of these bodies, they do not appear to have a strong profile in either government or the community. A major factor in this situation is that

while they are established by a Governor's Decree they do not exist as a budget centre within government and their activities depend upon individual commitment or projects with indeterminate funding allocations. This situation is made more difficult because the lead agencies in most situations are the Forestry or Environment agencies which do not receive priority in budget allocations. Unless there is strong personal commitment by the senior staff of these agencies funding for the work of the REDD Task Force is unlikely to be forthcoming. There is therefore an urgent need to arrange priority funding either directly to the REDD groups or through a special budget allocation to the lead agency through which they work.

A Recent development in Indonesia, which is being driven by the President is a overarching strategy for a low Carbon trajectory economy. This is being lead nationally but is also being developed at Provincial levels and also is challenging District Governments. Even more that REDD or Climate Change on its own, the momentum for a Low Carbon based Economy appear to be gaining traction as a umbrella for activities related to reducing carbon emissions as a means of addressing climate change mitigation and adaptation. Aceh Green is an operational model for this approach which is focusing on REDD and CDM as elements in building a sustainable economy, but similar models ar being followed in West and East Kalimantan and Papua.

### **11.3 Law enforcement capacity**

Law enforcement in state forests is routinely the responsibility of the Ministry of Forestry and the Local forest agencies. There has been a separation of the responsibilities of law enforcement between "Jagawana" who are the rangers working within the Conservation Forests (not devolved from the Central Government) and the Forest Police who work in the Production Forests and are also under central jurisdiction (Check). These staff are always under resourced to do their difficult jobs..

The Province of Aceh have appointed approx 2000 State Forest Rangers who are currently undergoing training. These rangers will be paid through a Province allocation. As part of the Ulu Masin Project a further 80 Forest Rangers have been identified by their local "mudik" to work in the Ulu Masin Project area. These staff are being trained by FFI.

There is a real need to improve law enforcement by establishing para professional training programmes for rangers. A combined arrangement with AIT in Bangkok and perhaps the University of Queensland with a reinvigoration of the Forestry Department Conservation Training School in Bogor may be a way of systematically addressing this serious issue.

## **12 Land/Forest tenure administration in relation to REDD**

The situation regarding forest land tenure has been detailed in Section 5.1. Indonesian legislation regarding REDD projects (Ministerial Decrees 30 and 36/2008) detail who may apply for a permit for the use of forest land for REDD. The forest categories that apply and the form of the permit that will be given. In general there are two forms of permit: the IUPHHT – Ecosystem Restoration; and the IUPJL. In common language these are respectively a permit to use forest for production of forest products and a permit to use state forest for its environmental services (including carbon).

The first of these appears to be the most favoured avenue by the Ministry of Forestry at the moment. It requires the permit holder to meet a range of specific management commitments and forms which have been detailed in the legislation. It is based on permits and management requirements for commercial forest cutting concessions and there are significant management costs involved in meeting the requirements. In a logged over forest area where further degradation or deforestation was threatened this approach would support forest restoration and could be the appropriate avenue for REDD+.

The IUPJL on the surface appears to be the most straightforward and tailored permit for general REDD projects and further investigation is required to understand what issues might need to be addressed in proceeding along this path.

Both these permits require central government approval (Need to Check this).

Under the Government Regulation No.6/2007 (amended in GR3/2008) there are several options allowing greater access by local communities to the state forest and its resources, including for the purpose of REDD. The objective of these options is to promote community ownership of forests with the intention of cultivating responsible forest resources use and in this way to ensure a management presence on the large areas of Production Forest that are no longer under active management by the private sector. Of these options, the Village Forest Category is favoured by the Ministry of Forestry and implementing regulations exist for them. The administration of these local community permits lies with the local government under national government policy direction.

**Table 4:** Administrative mechanisms for improved public access to the forest estate and its resources

<b>Community management approach</b>	<b>Comment</b>
Collaborative Management in Protected Areas ( <i>Peraturan Menteri Kehutanan No P19/2004</i> )	<p>NGOs and donor-funded projects in many Protected Areas in Indonesia have experimented with approaches, such as <i>community conservation agreements</i>, participatory boundary marking, and traditional management zones. This regulation is the first to provide a formal framework for multi-stakeholder management. The regulation is important as it gives managers a legal basis to address problems involving local communities in and around protected areas. By limiting collaboration to routine activities such as patrolling, re-forestation and boundary marking, the regulation does not create significant new opportunities for benefit-sharing from joint forest management.</p> <p>Collaborative management requires review to identify money making opportunities for local communities.</p>
Community Forests (Government Regulation 6/2007)	The Forestry Department has a target of 400,000 ha of community forests by 2009 and 2 million ha by 2012. Community forests are still in the early stages of being implemented. Certificates have been given to 6000 households over an area of more than 8000 ha.

	<p>Revision of the concept of community forest (<i>Hutan Kemasyarakatan</i> or HKm) is one of the most important changes introduced by PP6/2007, and the most rapidly developed and implemented. The idea of HKm was first introduced into policy in 1998, but implementation was weak, and the short duration of permitted activity and other obstacles were blamed for making the concept impractical. The revised HKm regulation has addressed many of these concerns. It allows for granting of conditional use rights over designated areas of production forest and protection forest to community-based groups for up to 35 years. The primary policy objective of HKm is poverty alleviation and the restoration of unproductive forest areas<sup>2</sup>. Timber production is not allowed, but non-timber forest products may be collected and tree-based agricultural systems that have already been established are permitted. The focus is on restoring tree-cover, and particular species and management practices are not prescribed (cf. HTR). The new approach is being accepted by communities and within the Forestry Department<sup>3</sup>. It comes closer than any previous scheme to achieving multi-stakeholder agreement on a set of rules to regulate access to resources, partly because community forests are situated in areas that were effectively unmanaged by the Forestry Department and where there was no significant conflict over the land use. The approach has also proved effective in areas of conflict. An example is in Lampung, Sumatra, where ICRAF and local NGOs have promoted the use of community forest regulations to reach solutions to long-standing disputes over rights to access land and resources.</p>
<p>Community Forest Plantations (Government Regulation 6/2007)</p>	<p>Government Regulation No. 6 of 2007 also provides for Community Forest Plantations (<i>Hutan Tanaman Rakyat</i> or HTR). In the HTR community groups are given access to land within degraded portions of the production forest zone for planting trees which they can then sell. The primary policy objective of the program is economic development, job creation, and the need to secure supplies of fiber for the pulp and paper industry. The HTR license can be for up to 100 years, and is given to a group of households, with each household allowed to manage up to 15 Ha. Government guidelines stipulate the species permitted in each location and this may be advantageous in terms of the pulp wood market<sup>4</sup>.</p> <p>The Forestry Department is planning the allocation of 5.4 million ha of for HTR and has identified broad areas where HTR licenses may be granted. Field investigation by ICRAF suggests that large proportions of the land designated for community plantation has already been cultivated by local farmers, highlighting the need for government flexibility in the selection of species and in the design of the plantations. Rigidity may interfere with the commitment of communities to accept the opportunities these initiatives</p>

<sup>2</sup> Noordwijk et al (2007) ibid

<sup>3</sup> Interview with Muayat Ali Muhshi, FKMM Executive secretary, December 2007

<sup>4</sup> Noordwijk et al (2007) ibid

	provide and be counterproductive to the ultimate objective of growing more plantation pulp wood.
Customary Forests (Government Regulation 6/2007)	<p>Historically the rights of local communities to manage the land or forest resources where they claim customary ownership (<i>hak ulayat</i>), has been largely denied since the introduction of the Basic Forest Law in 1967. In most parts of the country customary (<i>adat</i>) institutions and controls, already under pressure from various social, economic, and environmental forces have weakened. G.R. 6/2007 goes some way to fill this gap by providing for the designation of Customary Forests (<i>hutan adat</i>) as a legally recognized category within the forest zone. It is believed that this will now be developed as a separate PP<sup>5</sup>. However, designation of a customary forest requires prior recognition of the <i>adat</i> community that will hold rights to manage it, and this is beyond the Forestry Department's jurisdiction. Recognition of <i>adat</i> communities must be given by local government decree. While the Forestry Department has indicated its support for this in principle, in practice the designation of customary forest may be appropriate and could lead to, or fail to resolve, conflicts with designated forest functions such as watershed protection and biodiversity conservation, which in the Department's view should be maintained regardless of the access rights granted. Management restrictions imposed according to the functional status of forest areas might therefore drastically curtail the scope for community-based management even where the customary rights of communities are recognized.</p> <p>Critics suggest that customary forest may be vulnerable to abuse by <i>adat</i> leaders, who are inadequately accountable to constituents in their communities and may use their position to corruptly sell access to outsiders. It is hoped that the further formalization of customary forest in law will provide mechanisms to check these practices. The Forestry Department and the Indigenous People's Alliance (AMAN) have announced that they will work together to compile an inventory of customary tenure claims in the forest zone as a basis for implementation of this regulation.</p>

Forest ecosystems also exist outside the National Forest Estate in a range of use permitting categories. These non-State Forest lands are known as land for other uses (APL) and the allocation of these lands for specific uses is the responsibility of the District Head (Bupati). In general the process whereby the area of APL is increased is through its release from the State Forest where it needs to be zoned Convertible Forest (HPK). This avenue has been used extensively by private enterprises to increase the areas of estate crops (notably oil palm) through conversion of land with a forest cover to land which has been deforested. Because a large percentage of the State Forest that has been zoned for HPK is lowland forest, the biodiversity and biomass impacts of HPK conversion have been particularly severe. Where

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<sup>5</sup> interview with Muayat Ali Muhshi, FKKM Executive secretary, December 2007

decisions are taken to decline an application or if a private company agreed to forego opportunity costs in favour of REDD, the resulting quality of the credits would be greater.

Kalimantan, and the situation is very clear in the land classification maps for West Kalimantan, has significant areas of land in recognized customary ownership. This land is also classified as APL but it is recognizable as probable customary land by its distribution along the banks of the major rivers. This pattern reflects the history of distribution of the indigenous Dayak people. Because of the ecological significance of riparian forest, the degree of damage that has been focused on this ecotone and the extent of the continuing threats, forest on this land tenure would also rate very highly in terms of reduced carbon emissions.

### **13 REDD MRV systems**

### **14 REDD Projects**

There are currently 9 REDD project in the member Provinces of GCF:

Aceh: Ulu Masin and the Leuser Ecosystem

West Kalimantan: Kapuas Hulu and Ketupang Districts (No great knowledge of these in the government of West Kalimantan)

East Kalimantan: Malinau; Berau and Kapuas Hulu

Papua: Memberamo; Mimika; Merauke (Check these details)

At the present time there are no REDD demonstration projects in West Kalimantan.

### **15 Relationships with the National Government**

Relationships with national government have been dealt with in earlier sections. In terms of the supply chain for REDD Credits the role of the national government is likely to be concerned with standard methods and procedures for carbon assessment and accounting and monitoring of change against a baseline. Provinces and local governments might be actively involved in determining the form of the REL in relation to local socio-economic development. Local government, especially the Province level should address the issue of Payment Distribution. It is most likely that in Indonesia the international carbon market will follow national guidelines.

### **16 REDD Financing**

## **17 Identified needs**

### **17.1 Relationship with national government**

For the constitutional reasons that have been detailed earlier in this document, it is critical for the GCF member Provinces to develop a working partnership with the agencies in national government concerned with climate change, forests and carbon. This relationship should be based on a discussion of clear roles and should also work on an understanding of what activities each level of government can undertake within their legislative responsibilities to reduce emissions. This analysis could form the basis for a practical discussion about how the revenues from a future REDD carbon trade should be allocated to government for services delivered.

This need will require some funding to support the activities of a national GCF Coordinator who will need to be sufficiently senior that he/she is given rights to negotiate and facilitate potentially difficult political relationships.

### **17.2 Understanding REDD as a practical concept and Emissions Reduction as a viable new natural resource.**

There is very strong support for REDD in all jurisdictions because it offers a potential solution to problems of forest loss as well as a means of supporting and funding service delivery to often isolated communities. While there is presently a strong willingness to support REDD there is a lack of understanding about what people in government can do on a day to day basis to move the business along. A member of the REDD Working Group from East Kalimantan reported on how inspired he was by exposure to a demonstration project he visited in Brazil. Opportunities for travel to gain comparative understanding about how different GCF members are dealing with the common challenge is needed. Perhaps this assistance could be offered on a competitive basis as grants to which nominees of the REDD Working Groups could apply (travelling fellowships) would not only enhance information exchange but lend profile and positive personal growth opportunities to regional professionals.

### **17.3 Communication of REDD as a practical option for forest management**

REDD offers many challenges to its communication to potential stakeholders. While a lot of research is being done around the world, the translation of this work to local communication strategies is a necessary next step. East Kalimantan are an example of a province which recognize the need to focus on communication but they lack funding to realize the challenges of developing and extending the messages. It is very important for this role to be institutionalized in government to ensure that it has consistency and sustained credibility. A lot effort has and is being extended by various NGO's towards communication of REDD and in training courses but it is essential for the credibility of governments that they take the lead role in these activities.

### **17.4 Direct Funding for Provincial REDD Working Groups**

Despite being established by Government Decree, the REDD Working Groups are off line with respect to government funding. There is a danger for the activities of the REDD Working Group to be allocated to a

“part time professional hobby” for a select few. This is not a criticism of the select few as much as an acknowledgement that this same select few are critical to a wide range of government initiatives and reforms which leaves them little time for any one. By assisting through targeted direct funding it may be possible for REDD Working Groups to expand their range of available expertise and to support more sustained project work on the ground with a view to providing traction for the line agencies to follow with their on subsequent on-budget activities.

#### **17.5 Institutionalising Province REDD Projects.**

In order to up-scale and broaden REDD projects through government initiatives as part of a low carbon economy it is essential for governments to build their capacity to lead and coordinate REDD project activities. Of the range of activities being pursued in the GCF Provinces, the most common model is that they are being run as projects with limited “on-budget” involvement by local governments. i.e., expertise is being provided to the provinces by the projects but not necessarily building the expertise in the provinces to work independently. This is an issue for local government agencies and their staff who will need to develop mechanisms to avail themselves of the opportunities to work as close counterparts with the projects. This will only occur if there is funding made available for civil servants to occupy these roles. In the mid to long term this funding needs to come from agency budgets but before this happens institutional behavior change needs to be prompted by targeted external facilitative funding.

#### **17.6 The need to focus on Demonstration Projects as a means of learning at the local level.**

The REDD projects in each Province are all characterized by being very large in terms of area. The supply chain to produce a good quality carbon credit and to justly disperse income from its trade seems to be extremely difficult to understand to put into practice. At this stage all the projects are promising a lot but facing a huge challenge to produce tradeable credits within a time frame within which ordinary stakeholders including government officials can remain faithful. Projects designs which focus more on the social aspects of behavior change to produce carbon credits might achieve more learning for local governments than large projects which focus on the technical aspects of measuring the amount of credits which could be produced. As the technological aspects of the supply chain are being dealt with by improving national capacity, it might be better to improve the capacity of local governments to deal with the social aspects of managing potential new income streams.