Appendix I. Schedule of activities per village

Steps/Objectives/Draft schedule	Components	Methods	Instruments Materials	Who Remarks
PREPARATION *Day* <1 To introduce and explain the social, economic, and cultural aspects of the Survey to team members and to finalise arrangements for its implementation	1.1. Overall aims and concept 1.2. Socio-economic and cultural aspects of valuation 1.3. Village team management 1.4. Operational plan (sub-activities, schedule, and responsible persons)	Presentation Discussion	Background documents Checklists etc.	Team members only
INTRODUCTION *Day 1* To introduce concept and team members to local communities, to inform people about the whole program schedule and procedure	2.1. Introduction of Survey team 2.2. Explanation of activities 2.3. General information, questions 2.4. Schedule of activities	Community meeting Presentation Discussion	Flipchart, pens, good lighting Snacks, drinks etc.	Local leaders Village residents Other stakeholders Team
PRACTICAL PREPARATION *Day 2* (Naming features on base maps, informal discussions to identify key people and assess availability etc.)				
LOCAL CONTEXT *Day 3* To obtain baseline information on the demography, culture, economy and history of the study village	3.1. Demography 3.2. Cultural values and practices 3.3. Economic activities, trade goods and consumer trends 3.4 History of settlement, natural disasters, and seasonal events	Document review Informal interviews Questionnaires with key informants	Village statistics QS 1–3 DS 1 & 2 Snacks, cigarettes, etc.	Village leaders Traditional leaders Shopkeepers/ traders
TEAM DISCUSSION *Day 4* (Progress monitoring, data checking, and next steps planning)				
LAND COVER & LAND USE *Day 4–7* To determine and map the extent of traditional territory, and identify and map major components of the landscape	4.1. Labelling features on base map 4.2. Identifying location of categories of land cover/land use 4.3. Identifying location of important natural resources	Community meeting Participatory mapping Key informants Open discussion	Base maps DS 3 & 4 Flipchart, pens, good lighting. Snacks, drinks etc.	Representative sample of village residents (male/ female; old/young)
TEAM DISCUSSION *Day 8* (Progress monitoring, data checking, and next steps planning)				
DEMOGRAPHY AND PERCEPTION *Day 8–16* To collect social and economic data (population, age, ethnicity, etc.), and community aspirations related to local resources	5.1. Household data 5.2. Micro economy 5.3. Education 5.4. Aspirations and perceptions	Document review Household survey Interviews with key informants Questionnaires	Village statistics QS 4 DS 5	Samples: min hh/village; 30 hh. 30 /ethnicity (in case there are several ethnic groups)

Steps/Objectives/Draft schedule	Components	Methods	Instruments Materials	Who Remarks
TEAM DISCUSSION *Day 17* (Progress monitoring, data checking, and next steps planning)				
DETAILED LAND USES AND FOREST PRODUCTS *Day 17–18*. To identify plants and animals which are used by local communities as well as to determine their importance based on their categories	6.1. Forest land use types 6.2. Forest products 6.3. Assessing importance by categories	Interviews with key Informants Land use values assessment	QS 5 & 6	Key informants (3–5 persons/ethnicity)
TEAM DISCUSSION *Day 19* (Progress monitoring, data checking, and next steps planning)				
LOCAL PERSPECTIVES OF LAND USE AND FOREST PRODUCTS *Day 20–27*. To quantify preferences among local communities for various land types and forest products and other values	7.1. Land and forest types 7.2. Land values over time 7.3. Distance and value of land 7.4. Value types and land type origins 7.5. Assessing the most important species by type of use/value	Focus group discussion (FGD) PDM scoring exercise	DS 6.–10 Cards and pebbles or buttons or maize seeds Snacks	Representative (purpose) 4 x (up to) 6 persons/ethnicity (male/female; old/young)
TEAM DISCUSSION *Day 28* (Progress monitoring, data checking, and next steps planning)				
REVIEW & FOLLOW-UP *Day 29–30*. Checking and integrating all collected data (village and field teams)	8.1. Recapitulation 8.2. Revision/editing 8.3. Conclusions	Documentation study Discussion	Summaries Previously collected data.	Team members Local informants

Notes: Excluding transportation/movement, camp establishment; QS=Questionnaire sheets, DS=Datasheets

Appendix II. Further issues and cautions

Our objectives were ambitious, but every method has its limitations, and we have recognised aspects that could be revisited in future work. It is important to note that we made a choice to find out a little about many things, rather than a lot about a few. This inevitably means that follow-up activities and checks are required when important results are found. Our methods provide a baseline, or a diagnosis, not a complete answer to everything. Below we provide a collection of comments and notes that could be useful to bear in mind when using or modifying our methods, and interpreting results.

Multidisciplinary teams - Misunderstandings of purpose and method arose among scientists from different countries and disciplines, and between scientists and local informants. Tolerance and open-mindedness are essential personal characteristics when working together in such circumstances.

Strategic responses and behaviours from informants and perhaps from other team members may be inescapable, and may often be unconscious. For example, informants may emphasise values where they feel these may provide some benefit. Team members must learn to distinguish conflicts of interest from the problems of practicing science.

All team members, even local informants, can become more careless with fatigue. It is probably wiser to plan workdays as a series of short semi-independent data collection tasks that can be postponed or dropped if the team begins to tire and/ or the quality of work declines significantly.

Local informants - Community member availability for research activities can be highly seasonal. It is best to avoid the busiest agricultural periods and major festivals. The choice of informants can impact the quantity, quality and emphasis of the data recorded. Some informants have specialised knowledge. For example, an informant knowledgeable about medicinal plants is not necessarily knowledgeable about building boats. Some information may be considered 'sensitive' and may be hidden from outsiders, for example, we noted that most communities liked to deny or play down implications of intra-community conflict, even when this appeared self-evident.

Time of year and recent events probably affect informants' responses to questions of plant use and importance. For example, some of our work in Rian took place when they were short of rice, which appeared to influence their emphasis on food.

Some informants can dominate others. Some women we noted as unwilling to speak up or to publicly disagree with men. Working with Punan and Merap together sometimes reduced the volubility of the Punan and, we suspect, made them more unlikely to disclose certain kinds of information.

Our methods were sometimes confusing for local people, for instance why we recorded some plants and not others. Perhaps more detailed explanations would be useful.

Some plants, such young lianas, are difficult to identify for local informants.

Intellectual property rights are an issue. Residents in one community had been warned not to give any information on medicinal plants to strangers (though when they eventually understood and trusted our motives, they provided the information we needed).

Sampling and plot design - Plots can never cover the full range of sites found in nature. In our study, inaccessible sites are notably under-represented.

Our recording gave limited attention to shrubs, regeneration and treelets. This was a conscious choice, due to the difficulty of identifying them, but this potentially neglects community values. We also neglected fungi, epiphytes, lichens etc. as well as many classes of fauna, as this limited the crosschecking and taxonomic verification necessary. To some degree, this may not have been a problem given that the local population never included these in their lists of important products.

It should be noted that if there was only a single plant specimen, this was then taken as a herbarium collection sample and therefore there would be no sample to use in community triangulation exercises.

Language - Linguistic borrowing can make it difficult to determine from which ethnic group a name originates, and may lead one to mistakenly think that names that are currently in use should be substituted with older 'original' names. Underlying this problem is an assumption that there is a single correct name for each plant in each language. While triangulation is vital, researchers must accept that languages are dynamic and learn to be inclusive rather than exclusive in recording local names.

Incorrect attribution of uses of one group reported by another was a more serious concern in interviews with groups of mixed ethnicity.

The original series of value classes did not include a variety of reported uses. This is not a serious problem when sufficient data on each use is recorded, though some uses, such as ceremonial foods, seem to lie between classes. We carried out a series of exercises with the communities to assess what use belong to what class, and in most cases there is little disagreement.

There is some secrecy or embarrassment about certain uses/values. For example, to be seen as an 'eater of sago palm' is perceived by some local groups as embarrassing. In other cases some informants were hesitant to disclose medicinal uses. There might also be some 'secret information' that was not shared with us. Christianity has hindered discussion of some values of plants; one informant may dissuade another from talking about pre-Christian taboos, for example.

Reconciling local and scientific knowledge - Verification of the correlation between botanical and local plant names can be difficult as error or inconsistency can be ascribed to many different causes. When there is disagreement between local and botanical identification of an individual plant, special sensitivity is needed, as informants may feel uneasy about arguing their case and botanists may assume that there is no basis for argument. Variation in informant responses highlights the problematic nature of studying local knowledge. Similarly, the limited botanical collections and scientific expertise of many plant taxa highlights the difficulty of correlating knowledge systems.

Measuring Importance - A growing academic literature warns against the detailed interpretation of scoring-based studies of valuation. These studies serve as a rough gauge to identify patterns to be investigated further, not as a precise quantification of values. The more abstract exercises in particular are open to various interpretations that should be clarified by subsequent discussions with the informants.

We could have given more attention to 'negative' values – or the reasons why some taxa or land-types are avoided. While we do have data on this, it seems clear, for example, that not all 'unvalued' plants are equal, some occur as weeds, some cause rashes, some harbour mosquitoes etc. Similarly, living next to the forest has its own disadvantages (e.g. crop predation). Future evaluations could address these gaps.

Some non-animate objects, such as stones, minerals and water, were encountered that obviously do have value to local people, but are not fully included in our valuation exercises. Despite this we should be aware of their existence. The landscape is more than just the sum of its component species. For example salt springs are a significant draw for hunted animals.

Some items have multiple uses or occur in several value classes simultaneously. For instance, an item valued for hunting may produce food, which could be sold and could have ritual values. It is not always easy to assess the implications of such overlap.

The identification of species as having 'recreation value' and even 'value for the future' was hard to interpret both for informants and for interviewers. All species with high value presumably also have a future value, but perhaps others have a particular insurance value, as famine foods, for example. Some informants may see cultural values as having long-term significance. We recognised the difficulties this presented but decided to include the classes as exploratory and see what answers arose. Ultimately this proved more useful to the discussion than to the scoring results.

Since we have chosen to use a holistic definition of 'importance', our data cannot often distinguish what facets contribute to the importance of a species. There is no reason why this cannot be elicited also (as we did for local fish in a separate study where we asked which species were 1) most abundant in catches, 2) most eaten, and 3) most preferred). There is a profound difference between importance based on preference (in a theoretical world where everything is at hand) and availability (a more practical world that accounts for aspects of resource status, such as accessibility and the maturity of individuals).

Some informants may tend to dominate any group. Illiterate respondents were at a possible disadvantage when it came to reading the names on the cards, and we therefore made drawings on the cards as well.

General - We have identified species uses that cannot be replaced by other species but we have not asked if other forms of alternatives might substitute. Nor have we addressed the substitutability of sites or the reversibility of land use changes.

We have not found a totally satisfactory way of recording the 'accessibility' of resources/sites or assessing its importance in the valuation of the landscape. Efforts to collect resources vary a lot between people within a village, and depend on availability of transport, local conditions, product, and various rules and responsibilities.

In our study it was clear that the uncertainty regarding the future, and especially conflicts with powerful outside interests, made land preferences hard to gauge not only for us but also for community members themselves. Thus, we could urgue the need for very clear hypothetical-future scenarios to try to elicit clearer values. Yet, as people are still making choices in the face of massive uncertainty, this context also needs to be addressed.

It would be valuable to quantify and compare more specific intangible aspects of perception that may also play a role in people's assessment of landscape value, for instance history, culture, religion, and aesthetics. What is the importance of heritage?

Appendix III. Briefing note

It is important that all team members are able to provide consistent clear and honest answers to common questions. We drafted and circulated the following to ensure a common approach.

Catatan Mengenai Pertanyaan-Pertanyaan Umum tentang Hal yang Sedang Dikerjakan CIFOR.	**Some notes on commonly asked questions about what CIFOR is doing.**
CIFOR merupakan sebuah organisasi penelitian yang tidak menghasilkan uang dengan membeli atau menjual apapun. Kami melakukan berbagai penelitian lain di banyak negara selain di sini. Kami tertarik tentang bagaimana masyarakat menggunakan hutan, dan bagaimana caranya agar arti penting hutan apapun selain menyediakan informasi yang lebih baik pada yang membutuhkan. Kami yakin bahwa beberapa dari yang kami lakukan suatu saat akan terbukti berguna dalam memberi informasi dan petunjuk tentang bagaimana seharusnya pemerintah dan organisasi lain melakukan perencanaan dan tindakan.	CIFOR is a research organisation, we do not make money by buying or selling anything. We do research in many countries, not just Indonesia. We are interested in how people use the forest, and how the values of the forest and the quality of the environment can be protected while also allowing local people to have improved living standards.
Uang yang digunakan CIFOR bukan milik kami. Aktifitas kami dibiayai oleh banyak negara seperti Jepang, USA, dan juga Indonesia, yang ingin untuk lebih mengetahui tentang wilayah Kalimantan khususnya bagian Malinau, Bulungan, serta ingin mendukung pembangunan yang lebih baik bagi masyarakat setempat dan lingkungan. Kami harus memberitahukan negara-negara dan pemerintahan tersebut tentang bagaimana kami menggunakan uangnya, dan mereka harus merasa puas dengan kegiatan yang dibiayainya atau mereka akan berhenti mendukung kita. Untuk alasan inilah CIFOR tidak dapat secara mudah memberikan uang saat diminta—meskipun alasannya bagus—mohon pengertian bahwa uang tersebut bukan uang kami yang dapat diberikan secara bebas.	Please do not expect too much from us. We do not have any power other than providing better information to those who require it. We believe that some of what we do may sometimes prove helpful in informing and guiding how the government and other organisations decides to plan and act. The money CIFOR spends is not ours. Our activities are paid for by many countries such as Japan and America as well as by Indonesia, that want to know more about this part of Kalimantan and want to promote development that is better for local people and the environment. We have to tell these countries and governments how we have spent their money, and they have to be satisfied that we are spending it for the agreed activities or they may stop supporting us. For this reason CIFOR cannot easily contribute when asked for money—even when the reason for request is clearly a good one—please understand that it is not our money to give freely.
Mungkin banyak pertanyaan dan aktifitas kami yang tampak aneh atau bahkan bodoh. Jika permintaan dan pertanyaan kami terasa terlalu berlebihan atau tidak beralasan, kami mohon maaf. Kami bersyukur terhadap toleransi dan pengertian anda.	Many of our questions and activities may appear strange or even foolish. When our demands and questions seem excessive or unreasonable, we ask for your forgiveness. We are grateful for your tolerance and understanding.
CIFOR berharap untuk dapat bekerja pada wilayah ini beberapa tahun lagi. Namun hal tersebut bergantung pada kemampuan kita untuk memperoleh dukungan dan dana yang berkelanjutan.	CIFOR hopes to work in this area for some years to come. But this will depend on our ability to gain support and continued funds.

Appendix IV. Datasheets used for community-based data collection

Appendix IV-a

Data Sheet 1: SETTLEMENT HISTORY & LAND USE *(SEJARAH PEMUKIMAN & PENGUNAAN LAHAN)* **** Key Informants – Village Head/Traditional Leader***								
Respondent			Date day\month\yr.		/	/	Inputted by	
Village			Booker				Checked by	
Checked by			Original or Copied?	O		C	File name	
Written on back	Y	N	This is page	1	of	1	Backups?	File copied?

Name *(Nama)*		**Gender *(Jenis kelamin)***	**M *(L)***	**F *(P)***
Age *(Umur)*		**Ethnic group *(Suku)***		

Question: Please tell us about the history of this village! If the village was moved from (an) earlier location(s), what was the reason to move and what was done with the old/abandoned settlement?

(Pertanyaan: *Tolong sebutkan sejarah pemukiman/desa ini! Alasan apa yang mendorong warga untuk pindah lokasi dan dipergunakan sebagai apa lokasi yang telah ditinggalkan tersebut?)*

No	**Name of place** *(Nama tempat)*	**Location** (*Lokasi*)	**Year of abandoning** *(Tahun ditinggalkan)*	**Reason for abandoning** *(Alasan ditinggalkan)*	**Present utilisation** *(Kegunaan sekarang)*

Appendix IV-b

Data Sheet 2: DISASTERS AND IMPORTANT EVENTS			***(BENCANA DAN KEJADIAN PENTING)*** **** Key Informants – Village Head/Traditional Leader***					
Respondent			Date day\month\yr.		/	/	Inputted by	
Village			Booker				Checked by	
Checked by			Original or Copied?	O		C	File name	
Written on back	Y	N	This is page	1	of	1	Backups?	File copied?

Name *(Nama)*		**Gender *(Jenis kelamin)***	**M *(L)***	**F *(P)***
Age *(Umur)*		**Ethnic group *(Suku)***		

Question: Please tell us when there have been important events for the village, causes thereof and special remarks if any! Tell us according to the sequence of the events.

(Pertanyaan: *Tolong sebutkan kejadian/peristiwa penting, penyebab dan tanda-tanda khusus bila ada! Sebutkan berdasarkan urutan waktu kejadiannya!)*

No	**Year** *(Tahun)*	**Disasters/important events** *(Bencana/kejadian penting)*	**Causes** *(Penyebab kejadian)*	**Special remarks** *(Tanda-tanda khusus)*

Appendix IV-c

Data Sheet 3: LAND AND FOREST TYPES *(JENIS LAHAN DAN HUTAN)*													**** Community Meeting***
Participants		Group			Date day\month\yr.		/	/		Inputted by			
		Village (Language)			Checked by					Checked by			
		Facilitator			Original or Copied?		O		C	File name			
		Written on back	Y	N	This is page	1	of	1		Backups?		File copied?	

Question: Please tell us what land and forest types can be found in the village area, and where there are good examples of each of them!

(Pertanyaan: *Dapatkah Bapak/Ibu menyebutkan jenis-jenis lahan dan hutan yang dapat ditemui di wilayah desa serta lokasi contohnya!)*

No	Land and forest types (Local names) *Jenis lahan dan hutan (Nama Lokal)*	Location of example (Name of place and river) *Lokasi contohnya (Nama tempat dan sungai)*	No	Land and forest types (Local name) *Jenis lahan dan hutan (Nama lokal)*	Location of example (Name of place and river) *Lokasi contohnya (Nama tempat dan sungai)*

Appendix IV-d

Data Sheet 4: FOREST PRODUCTS *(JENIS HASIL HUTAN)*												
											**** Community Meeting***	
Participants		Group			Date day\month\yr.		/	/		Inputted by		
		Village (Language)			Checked by					Checked by		
		Facilitator			Original or Copied?	O		C		File name		
		Written on back	Y	N	This is page	1	of		1	Backups?	File copied?	

Question: Please tell us about forest products you know (local names), and the location(s) where they are collected!

(Pertanyaan: *Dapatkah Bapak/Ibu menyebutkan nama lokal dari jenis-jenis hasil hutan dan lokasi pengambilannya!)*

No	**Forest products** (Local name) ***Jenis hasil hutan*** *(Nama lokal)*	**Location** (Place and river names) ***Lokasi pengambilan*** *(Nama tempat dan sungai)*	No	**Forest products** (Local name) ***Jenis hasil hutan*** *(Nama lokal)*	**Location** (Place and river names) ***Lokasi pengambilan*** *(Nama tempat dan sungai)*

Appendix IV-e

Data Sheet 5: DEMOGRAPHY *(DEMOGRAFI)*								
							**** Household survey***	
Respondent			Date day\month\yr.		/	/	Inputted by	
Village			Booker				Checked by	
Checked by			Original or Copied?	O		C	File name	
Written on back	Y	N	This is page	1	of	1	Backups?	File copied?

Household name *(KK /nama)*		**Ethnic *(Suku)***		**Age of informant *(Umur)***	

Name *(Nama)*	**Family relationship** *(Hubungan keluarga)*	**Age** *(Umur)*	**Gender** *(Jenis kelamin)*	**Religion** *(Agama)*	**Ethnic group** *(Suku)*	**Education** *(Pendidikan terakhir)*	**Occupation/job** *(Pekerjaan)*	
							Primary *(Utama)*	**Secondary** *(Sampingan)*

Valuable goods/owned facilities *(Barang berharga/fasilitas yang dimiliki)*				**Remarks** *(Keterangan)*
Kind of goods *(Nama barang)*	**Number (unit)** *(Jumlah/satuan)*	**Year of buying** *(Tahun beli)*	**Price** *(Harga)*	
1. Electricity/generator *(Listrik/generator)*				
2. Television/parabola *(Televisi/parabola)*				
3. Tape/Radio *(Kaset/radio)*				
4. Chainsaw *(Gergaji mesin)*				
5. Bicycle/motorbike *(Sepeda/motor)*				
6. Canoe engine *(Ketinting/tempel)*				
7. Canoe *(Perahu)*				
8. Sewing machine *(Mesin jahit)*				
9. Others *(Lainnya)*				
10.				
11.				
12.				
13.				
14.				
15.				

Appendix IV-f

Data Sheet 6: PDM LAND AND FOREST TYPES ***(PDM JENIS LAHAN DAN HUTAN)***													
													**** Key Informants/FGD/PDM***
Respondent				Date day\month\yr.			/	/		Inputted by			
Village				Writer						Checked by			
Checked by				Interviewer						File name			
Written on back	Y	N	This is page	1	of	1	Original or copied?			O	C	Backups?	File copied?

Instruction *(Petunjuk)*:

(1) Among the following land/forest types on these cards, which one do you think is the most important? Please distribute 100 pebbles among the cards to express the importance! *(Diantara jenis-jenis lahan/hutan berikut mana yang paling penting menurut Bapak/Ibu? Distribusikan kancing-kancing berikut (100 biji) ke dalam kartu-kartu yang telah disediakan berdasarkan tingkat kepentingannya!)*

(2) For each of the use categories (food, medicine, …..the future) on the cards, which type of land/forest is the most important? Please distribute 100 pebbles among the cards based on importance of this category of use! *(Untuk setiap kategori guna berikut (makanan, obat-obatan, …, masa depan), di jenis lahan/hutan mana yang paling penting diperoleh menurut Bapak/Ibu? Distribusikan kancing-kancing berikut (100 biji) ke dalam kartu-kartu jenis lahan/hutan yang telah disediakan berdasarkan persentase jumlah/banyaknya jenis kategori guna dimaksud yang terdapat dalam lahan/hutan tersebut!)*

	Overall (1) *Seluruh (1)*	**Food** *(Makanan)*	**Medicines** *(Obat-obatan)*	**Light construction** *(Konstruksi ringan)*	**Heavy construction** *(Konstruksi berat)*	**Boat construction** *(Konstruksi perahu)*	**Tools** *(Perkakas)*	**Firewood** *(Kayu bakar)*	**Basketry** *(Anyaman)*	**Ornament/tradit.** *(Hiasan/adat/ritual)*	**Marketable items** *(Dijual)*	**Hunting function** *(Bahan berburu)*	**Hunting place** *(Tempat berburu)*	**Recreation** *(Rekreasi)*	**The future** *(Masa depan)*
Village *(Kampung)*															
Abandoned village *(Bekas kampung)*															
Garden *(Kebun)*															
River *(Sungai)*															
Swamp *(Rawa-rawa)*															
Current agriculture *(Ladang)*															
Young fallow *(Jekau muda)*															
Old Fallow *(Jekau tua)*															
Forest (*Hutan)*															
Total per use category *(Total per kategori guna)*= **100**															
Primary forest *(Hutan belum ditebang)*															
Logged over forest *(Hutan sudah ditebang)*															
Secondary forest *(Hutan bekas ladang)*															
Swamp forest *(Hutan rawa)*															
Mountain forest *(Hutan gunung)*															
Total per use category *(Total per guna)*= **100**															

Appendix IV-g

Data Sheet 7: PDM PAST-PRESENT-FUTURE ***(PDM MASA LAMPAU - MASA KINI - MASA DEPAN)*** **** Key Informants- FGD/PDM***											
Respondent			Date day\month\yr.		/	/	Inputted by				
Village			Writer				Checked by				
Checked by			Interviewer				File name				
Written on back	Y	N	This is page	1	of	1	Original or copied?	O	C	Backups?	File copied?

Instruction/*Petunjuk*:

(1) How important were/are/will be forest uses and values 30 years ago, at present, and in 20 years from now? Please distribute 100 pebbles among the cards based on the total importance of the forest at a particular time! (*Menurut pendapat Bapak/Ibu bagaimanakah kegunaan hutan pada saat 30 tahun yang lalu, sekarang, dan 20 tahun yang akan datang? Distribusikan kancing-kancing berikut (100 biji) ke dalam kartu-kartu yang tersedia berdasarkan kegunaan hutan pada waktu tertentu.)*

(2) How important were/are/will be forests at present, 30 years ago and in 20 years from now, per use category? Please distribute 100 pebbles among the use category cards, first for '30 years ago', then for 'present', and lastly for '20 years from now'! (S*eberapa penting hutan pada saat 30 tahun yang lalu, sekarang, dan 20 tahun yang akan datang untuk setiap kategori jenis kegunaan? Distribusikan 100 biji kancing berikut pada kartu-kartu yang telah disediakan.)*

	30 years ago *(30 tahun yang lalu)*	**Present** *(Sekarang)*	**20 years from now** *(20 tahun yang akan datang)*	**Total** *(Jumlah)* **=100**
Total importance *(Seluruh kegunaan)*				
Food *(Makanan)*				
Medicine *(Obat-obatan)*				
Light construction *(Konstruksi ringan)*				
Heavy construction *(Konstruksi berat)*				
Boat construction *(Bahan perahu)*				
Tools *(Perkakas/alat)*				
Firewood *(Kayu bakar)*				
Basketry *(Anyaman/tali)*				
Ornament/tradition/ritual *(Hiasan/adat/ritual)*				
Marketable products/ *(Dijual)*				
Hunting function/ *(Bahan berburu)*				
Hunting place *(Tempat berburu)*				
Recreation *(Rekreasi)*				
The future *(Masa depan)*				
Total per time *(Total per waktu)* **=100**				

Appendix IV-h

Data Sheet 8: PDM DISTANCE OF LAND & FOREST TYPES ***(PDM JARAK JENIS LAHAN DAN HUTAN)*** **** Key Informants-FGD/PDM***												
Respondent			Date day\month\yr.		/	/	Inputted by					
Village			Writer				Checked by					
Checked by			Interviewer				File name					
Written on back	Y	N	This is page	1	of	1	Original or Copied?	O	C	Backups?	File Copied?	

Instruction: Compare the importance of 'one unit of' the different land types on the cards (you can think of 'one unit of land' as the size of a football field)! Do this twice: the first time assume that the land can be reached from the village on foot in one hour, the second time in 4 hours. Please distribute 100 pebbles among the available cards for each type of land according to their importance!

(Petunjuk: *Untuk luasan yang sama (misalnya seluas lapangan sepakbola), bandingkan kegunaan dari masing-masing jenis lahan yang tercantum didalam kartu-kartu. Lakukan ini dua kali: pertama, bayangkan apabila lahan-lahan tersebut terletak 1 jam dari kampung; kedua, apabila terletak 4 jam dari kampung. Bagikan 100 biji di antara kartu-kartu yang tersedia untuk setiap jenis lahan. Lahan yang bernilai lebih tinggi mendapat biji yang lebih banyak).*

Name of respondent *Nama Responden*																
Age *Umur*																
Ethnic group *Suku*																
Gender (M/F) *Jenis Kelamin (L/P)*																
1 Hour Walk *(1 Jam tempuh)*																
Abandoned village *Bekas kampung*																
Garden *Kebun*																
Swamp *Rawa-rawa*																
Current agriculture *Ladang*																
Young fallow *Bekas ladang muda*																
Old fallow *Bekas ladang tua*																
Forest *Hutan*																
Total per person =100 *Total perorang*																
4 Hours Walk *(4 Jam tempuh)*																
Abandoned village *Bekas kampung*																
Garden *Kebun*																
Swamp *Rawa-rawa*																
Current agriculture *Ladang*																
Young fallow *Bekas ladang muda*																
Old Fallow *Bekas ladang tua*																
Forest *Hutan*																
Total per person =100 *Total perorang*																

Appendix IV-i

Data Sheet 9: PDM SOURCES OF PRODUCTS *(PDM ASAL-USUL BARANG KONSUMPSI LOKAL)* **** Key Informants-FGD/PDM***											
Respondent				Date day\month\yr.		/	/			Inputted by	
Village				Writer						Checked by	
Checked by				Interviewer						File name	
Written on back	Y	N	This is page	1	of	1	Original or Copied?	O	C	Backups?	File Copied?

Instruction: Compare the different sources of plant and animal products on the cards; wild from the forest or not from the forest, cultivated or purchased, which one is the most important to you? Please distribute 100 pebbles among the cards according to their importance!

*(**Petunjuk:** Dari berbagai jenis tumbuhan dan hewan baik yang liar dari hutan, liar bukan dari hutan, ditanam/dipelihara maupun dibeli, mana yang Bapak/Ibu anggap paling penting? Distribusikan kancing-kancing berikut (100 biji) ke dalam kartu-kartu yang telah disediakan untuk setiap jenis tumbuhan dan hewan yang dianggap lebih penting!)*

Name of respondent *Nama responden*																		
Age *Umur*																		
Ethnic group *Suku*																		
Sex (M/F) *Jenis kelamin (L/P)*																		
Wild plant from forest *Tumbuhan liar dari hutan*																		
Wild plant, not from forest *Tumbuhan liar bukan dari hutan*																		
Cultivated plant *Tumbuhan ditanam*																		
Purchased plant *Tumbuhan dibeli*																		
Wild animal from forest *Hewan liar dari hutan*																		
Wild animal not from forest *Hewan liar bukan dari hutan*																		
Farmed (domestic) animal *Hewan dipelihara*																		
Purchased animal *Hewan dibeli*																		
Total per person =100 *Total perorang*																		

Appendix IV-j

Data sheet 10: PDM MOST IMPORTANT SPECIES PER USE CATEGORY *(PDM JENIS YANG PALING PENTING PER KATEGORI GUNA)*

**** Key Informants – FGD/PDM***

Respondent			Date day\month\yr.			/	/		Inputted by	
Village			Writer						Checked by	
Checked by			Interviewer						File name	
Written on back	Y	N	This is page	1	of	4	Original or Copied?	O	C	Backups?	File copied?

Instruction:

(1) Compare the importance of the use categories on the cards (food, medicine, …., the future), and distribute 100 pebbles among them to express that importance!
(2) Secondly, list the forest products you think are the most important in each use category (agree on up to ten) and
(3) Distribute 100 pebbles again to express the relative importance of each of the products (separately for each use category)
(4) Lastly indicate in 'remaining' how important the remaining unlisted species are compared to the ones listed in this scale (sum of all those listed already = 100)

(Petunjuk:

(1) *Dari berbagai kategori guna hutan (makanan, obat-obatan, …, masa depan) yang manakah yang menurut Bapak/Ibu paling penting?*
(2) *Jenis hasil hutan yang manakah yang paling penting menurut Bapak/Ibu yang termasuk dalam setiap kategori guna hutan?*
(3) *Dari berbagai jenis tumbuhan dan hewan yang manakah yang paling penting menurut Bapak/Ibu?*
(4) Nyatakan di dalam "Tersisa" bagaimana pentingnya bagian yang tersisa dari species yang tidak terdaftar dibandingkan dengan yang terdaftar (yang jumlahnya 100)!

This form has 4 pages

	Use category *(Kategori guna)*														
	Food *(Makanan)*	**Medicine** *(Obat-obatan)*	**Light construction** *(Kontruksi ringan)*	**Heavy construction** *(Konstruksi berat)*	**Boat construction** *(Konstruksi perahu)*	**Tools** *(Perkakas)*	**Firewood** *(Kayu bakar)*	**Basketry** *(Anyaman)*	**Ornament/trad/Ritual** *(Hiasan/adat/ritual)*	**Marketable items** *(Dijual)*	**Hunting function** *(Bahan berburu)*	**Hunting place** *(Tempat berburu)*	**Recreation** *(Rekreasi)*	**The future** *(Masa depan)*	**Total PDM = 100** *(Total pdm)*
General PDM															

Data sheet 10: PDM MOST IMPORTANT SPECIES PER USE CATEGORY ***(PDM JENIS YANG PALING PENTING PER KATEGORI GUNA)*** **** Key Informants – FGD/PDM***											
Respondent			Date day\month\yr.			/	/		Inputted by		
Village			Writer						Checked by		
Checked by			Interviewer						File name		
Written on back	Y	N	This is page	2	of	4	Original or Copied?	O	C	Backups?	File copied?

Instruction 2,3 and 4 *(Petunjuk 2,3 dan 4)*

	General pdm *(pdm umum)*			**Total pdm=100** *(Total pdm)*		**General pdm** *(pdm umum)*			**Total pdm=100** *(Total pdm)*		**General pdm** *(pdm umum)*		**General pdm** *(pdm umum)*		**Total pdm** *(total pdm)*
Food *(makanan)*					**Medicine** *(obat-obatan)*					**Light construction** (*Konstruksi ringan)*		**Heavy construction** *(Konstruksi berat)*		**Boat construction** ***(****Konstruksi perahu)*	
Plants (*Tumbuhan)*		**Animals** (*Binatang)*			**Plants** (*Tumbuhan)*		**Animals** (*Binatang)*								
Plant names *(Nama tumbuhan)*	pdm	Animal names *(Nama binatang)*	pdm		Plant names *(Nama tumbuhan)*	pdm	Animal names *(Nama binatang)*	pdm		Plant names *(Nama tumbuhan)*	pdm	Plant names *(Nama tumbuhan)*	pdm	Plant names *(Nama tumbuhan)*	pdm
Total pdm =100?															
Remaining *(Tersisa)*		Remaining *(Tersisa)*			Remaining *(Tersisa)*		Remaining *(Tersisa)*			Remaining *(Tersisa)*		Remaining *(Tersisa)*		Remaining *(Tersisa)*	

Data sheet 10: PDM MOST IMPORTANT SPECIES PER USE CATEGORY ***(PDM JENIS YANG PALING PENTING PER KATEGORI GUNA)***											
										**** Key Informants – FGD/PDM***	
Respondent			Date day\month\yr.			/	/		Inputted by		
Village			Writer						Checked by		
Checked by			Interviewer						File name		
Written on back	Y	N	This is page	3	of	4	Original or Copied?	O	C	Backups?	File copied?

Instruction 2,3 and 4 *(Petunjuk 2,3 dan 4)*

	General pdm *(pdm umum)*			***Total pdm=100*** *(Total pdm)*		***General pdm*** *(pdm umum)*		***General pdm*** *(pdm umum)*		***Total pdm=100*** *(Total pdm)*		***General pdm*** *(pdm umum)*		***Total pdm=100*** *(Total pdm)*
Tools **(***Perkakas)*					**Firewood** **(***Kayu bakar)*		**Basketry** **(***Anyaman)*				**Ornaments/ritual** **(***Hiasan)*			
Plants *(Tumbuhan)*		**Animals** *(Binatang)*			**Plants** *(Tumbuhan)*		**Plants** *(Tumbuhan)*		**Animals** *(Binatang)*			**Plants** *(Tumbuhan)*		**Animals** *(Binatang)*		
Plant names *(Nama tumbuhan)*	pdm	Animal names *(Nama binatang)*	pdm		Plant names *(Nama tumbuhan)*	pdm	Plant names *(Nama tumbuhan)*	pdm	Animal names *(Nama binatang)*	pdm		Plant names *(Nama tumbuhan)*	pdm	Animal names *(Nama binatang)*	pdm	
Total pdm =100?																
Remaining *(Tersisa)*		Remaining *(Tersisa)*			Remaining *(Tersisa)*		Remaining *(Tersisa)*		Remaining *(Tersisa)*			Remaining *(Tersisa)*		Remaining *(Tersisa)*		

Data sheet 10: PDM MOST IMPORTANT SPECIES PER USE CATEGORY *(PDM JENIS YANG PALING PENTING PER KATEGORI GUNA)*

**** Key Informants – FGD/PDM***

Respondent			Date day\month\yr.			/	/		Inputted by			
Village			Writer						Checked by			
Checked by			Interviewer						File name			
Written on back	Y	N	This is page	4	of	4	Original or Copied?	O	C	Backups?		File copied?

	General pdm (*pdm umum*)			Total pdm=100 (*Total pdm*)		General pdm (*pdm umum*)			Total pdm=100 (*Total pdm*)		General pdm (*pdm umum*)			Total pdm=100 (*Total pdm*)		General pdm (*pdm umum*)		General pdm (*pdm umum*)	sum=100
Marketable prod. (*Dijual*)					**Hunting function** (*Bahan berburu*)					**Hunting place** (*Tempat berburu*)					**Recreation** (*Rekreasi*)		**Future** (*Masa depan*)		
Plants (*Tumbuhan*)		**Animals** (*Binatang*)			**Plants** (*Tumbuhan*)		**Animals** (*Binatang*)			**Plants** (*Tumbuhan*)		**Animals** (*Binatang*)							
Plant names *(Nama tumbuhan)*	pdm	Animal names *(Nama binatang)*	pdm		Plant names *(Nama tumbuhan)*	pdm	Animal names *(Nama binatang)*	pdm		Plant names *(Nama tumbuhan)*	pdm	Animal names *(Nama binatang)*	pdm						
Total pdm =100?																			
Remaining *(Tersisa)*		Remaining *(Tersisa)*			Remaining *(Tersisa)*		Remaining *(Tersisa)*			Remaining *(Tersisa)*		Remaining *(Tersisa)*							

Appendix IV-k

Questionnaire 1.												***Key Informant interview/Village Head***
VILLAGE DESCRIPTION/PERSPECTIVE OF LAND USE *(DESKRIPSI DESA DAN PERSPEKTIF GUNA LAHAN)*												
Respondent				Date day\month\yr.		/	/			Inputted by		
Village				Writer						Checked by		
Checked by				Interviewer						File name		
Written on back	Y	N	This is page	1	of	2	Original or copied?	O	C	Backups?	File copied?	

No.	Questions *(Pertanyaan)*	Answers *(Jawaban)*
	I. Village description *(Deskripsi desa)*	
1.	Since when has this village exist and when was it formally acknowledged by government? *(Sejak kapan desa ini berdiri dan kapan disahkan pemerintah (definitif)).*	
2.	What is the area of the village? What does it border on? *(Berapakah luas wilayah desa? Sebutkan batas-batas wilayahnya!)*	a.Area *(Luas)* ……. .
		b. Borders *(Batas-batas)* -North *(Utara)* ……. -East *(Timur)* ……. -South *(Selatan)* ……. -West *(Barat)* …….
3.	What is the area of forest land, garden, ladang (swidden), swamp, settlement, and others? *(Berapa luas kawasan hutan, kebun, ladang, rawa, pemukiman dan lain-lain!)*	a.Forest Area *(Luas Hutan)*: …….
		b.Swidden Area *(Luas Ladang)*: …….
		c.Garden (*Luas kebun)*:…….
		d. Settlement *(Luas Pemukiman)*:…….
		e. Others *(Luas Lain-lain)*:…….
4.	What is the population of the village? *(Berapa jumlah penduduk desa?)*	…….people *(Jiwa)*
		…….. households *(KK)*
5.	What ethnic groups are living in the village? List from the most to the least numerous. *(Sebutkan suku-suku yang terdapat di desa ini dan urutkan berdasarkan jumlah yang paling dominan)*	
	II. Land use *(Guna lahan)*	
1.	Where do the villagers usually go for swidden cultivation; forest product gathering, gardening, and recreation (attractive places)? *(Sebutkan tempat-tempat yang biasa didatangi penduduk desa untuk berladang, mencari hasil hutan, berkebun, berekreasi (tempat-tempat yang menarik)).*	a. Swidden cultivation *(Berladang):*
		b. Forest product gathering/hunting *(Mencari hasil hutan/ berburu):*
		c. Gardening *(Berkebun):*
		d. Fishing *(Mencari ikan):*
		e. Recreation *(Rekreasi)* :

Questionnaire 1.											***Key Informant interview/Village Head***
VILLAGE DESCRIPTION/PERSPECTIVE OF LAND USE *(DESKRIPSI DESA DAN PERSPEKTIF GUNA LAHAN)*											
Respondent				Date day\month\yr.		/	/			Inputted by	
Village				Writer						Checked by	
Checked by				Interviewer						File name	
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Continued from page 1

2.	Is there any plan of land conversion in the village? For example: for transmigration, mining, plantation or others? If yes, where is the location? *(Apakah ada rencana-rencana untuk pengalihan fungsi (konversi) lahan di desa? Misalnya untuk transmigrasi, pertambangan, perkebunan, dan lain-lain? Bila ya, dimana lokasinya?)*	a. If no, what is the reason? *(Kalau tidak ada , apa alasannya?)* b. If yes, what is the land for? *(Ada, lahan untuk?):* 1. Mining (Where?) *(Pertambangan; dimana?):* 2. Plantation (Where?) *(Perkebunan; dimana?):* 3. Agriculture (Where?) *(Pertanian; dimana?):* 4. Settlement/transmigration (Where?): *(Pemukiman/transmigrasi; dimana?):* 5. Others (Where?):*Lainnya (sebutkan dimana?):*
3.	Are there any changes in the area of the forest utilized by the villagers from year to year? *(Apakah ada perubahan luasan hutan yang dimanfaatkan oleh masyarakat desa dari tahun ke tahun?)*	a. Increase (What for?) *(Bertambah digunakan; untuk?):* b. Decrease (What for?) *(Berkurang digunakan; untuk?):* c. No change *(Tidak berubah digunakan)*
4.	Are there any changes in village rules concerning forest utilisation? *(Apakah ada perubahan aturan desa tentang pemanfaatan lahan hutan ?)*	a. No change, for…? *(Tidak berubah, untuk…?):* b. Getting stricter, for…? *(Menjadi lebih ketat, untuk…?):* c. More flexible, for…? (*Menjadi lebih longgar, untuk…?):*
5.	Is it getting more difficult to utilize/obtain a new forest area? *(Apakah saat ini mulai/sudah sulit menggunakan/mendapatkan areal hutan yang baru?)*	a. More difficult *(Menjadi lebih sulit):* b. Easier *(Lebih mudah):* c. No change *(Tidak berubah):*

Appendix IV-I

Questionnaire 2. CULTURAL BACKGROUND OF LAND USE												***Key Informant Interview-Traditional Leader (LATAR BELAKANG KULTURAL PENGGUNAAN LAHAN)***	
Respondent				Date day\month\yr.			/	/		Inputted by			
Village				Writer						Checked by			
Checked by				Interviewer						File name			
Written on back	Y	N	This is page	1	of	2	Original or Copied?	O	C	Backups?		File copied?	

No.	**Questions** *(Pertanyaan)*	**Answers** *(Jawaban)*
	I. General description of traditional community *(Gambaran umum masyarakat adat)*	
1.	Describe briefly the history of the traditional community of this village! *(Bagaimana asal usul masyarakat adat yang ada di desa ini? (Uraikan!)*	
2.	Are the traditional rules and institutions still functioning significantly here? *(Apakah peraturan dan kelembagaan adat masih berfungsi tinggi di sini?)*	No; reasons *(Tidak, alasan):* Yes; examples *(Ya, sebutkan contohnya):*
3.	How long will the traditional rules be valid and what are the reasons? *(Sampai kapan aturan adat ini akan diberlakukan dan apa alasannya?)*	
4.	To whom do the traditional rules apply and how are they maintained? *Kepada siapa aturan adat berlaku dan bagaimana upaya melestarikan aturan adat tersebut?*	a. Insiders *(Orang dalam):* b. Outsiders *(Orang luar):* c. Measures *(Upaya):*
	II. Traditional rules and regulations (*Norma dan peraturan adat)*	
1.	Are there any places traditionally protected from disturbance (e.g. sacred places or traditional land/forest)? If yes, please name them! *(Apakah ada tempat-tempat yang secara adat dilindungi atau tidak boleh diganggu (misalnya tempat keramat atau tanah/hutan adat)? Bila ya, sebutkan!)*	
2.	Why are those places protected? *(Mengapa tempat-tempat tersebut dilindungi?)*	
3.	Are there any traditional rules used for protecting the forest? *(Apakah ada peraturan adat yang dipakai untuk melindungi hutan?)*	

Questionnaire 2. CULTURAL BACKGROUND OF LAND USE *LAHAN)*							***Key Informant Interview-Traditional Leader (LATAR BELAKANG KULTURAL PENGGUNAAN***				
Respondent			Date day\month\yr.			/	/		Inputted by		
Village			Writer						Checked by		
Checked by			Interviewer						File name		
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Continued from Appendix IV-I

4.	What traditional sanctions are imposed on people who damage the forests? *(Sanksi-sanksi adat apa yang dikenakan bila seseorang merusak hutan?)*		
5.	Are there any changes in the area of the forest being utilized? *(Apakah ada perubahan luasan hutan yang dimanfaatkan?)*	*a.*	Increase (What for?) (*Bertambah; digunakan untuk...?):*
		b.	Decrease (What for?) (*Berkurang; digunakan untuk...?):*
		c.	No change (What for?) (*Tidak berubah; digunakan untuk…?):*
6.	Are there any changes in the traditional rules concerning forest land–uses? *(Apakah ada perubahan aturan adat dalam pemanfaatan lahan hutan?)*	*a.*	No change (What for?) *(Tidak berubah, untuk...?):*
		b.	Becomes stricter (What for?) *(Menjadi lebih ketat, untuk...?):*
		c.	Becomes more flexible (What for?) (*Menjadi lebih longgar, untuk...?)*
7.	Is it difficult to use/find new forest area? *(Apakah sulit untuk menggunakan/ mendapatkan areal hutan yang baru?)*	*a.*	More difficult (Why?) (*Menjadi lebih sulit, karena... ?):*
		b.	Easier (Why?) *(Lebih mudah, karena...?):*
		c.	No change (Why?) *(Tidak berubah, karena...?):*

Appendix IV-m

Questionnaire 3. PRICE OF TRADED GOODS *(HARGA JUAL BARANG)* **** Key Informants – (3–5 shop keepers)***												
Respondent				Date day\month\yr.		/	/			Inputted by		
Village				Writer						Checked by		
Checked by				Interviewer						File name		
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Questions *(Pertanyaan)*	**Answers** *(Jawaban)*		
What are the prices of following goods/products*? (Berapa harga jual barang/produk berikut?)*	**Unit** *(Satuan)*	**Price (Rp)** *(Harga)*	**Remarks** *(Keterangan)*
1) Rice *(Padi)*			
2) Flour *(Tepung)*			
3) Cooking oil *(Minyak makan*)			
4) Kerosene *(Minyak tanah)*			
5) Sugar *(Gula)*			
6) Salty fish *(Ikan asin)*			
7) Cloth *(Kain)*			
8) Tea (*Teh)*			
9) Coffea *(Kopi)*			
10) Gasoline *(Bensin)*			
11) Diesel fuel *(Solar)*			
12) Instant noodle *(Mie instan)*			
13) Sardines *(Sarden)*			
14) Battery (size D – big) *(Batere ukuran D-besar)*			
15) Soap *(Sabun mandi)*			
16) Washing soap/Detergent *(Sabun cuci/deterjen)*			
17) Cigarettes *(Rokok)*			
•			
•			
18) Medicines *(Obat-obatan)*			
•			
•			
•			
•			
•			

Appendix IV-n

Questionnaire 4. HOUSEHOLD SURVEY *(Survei rumah tangga)*												
											**** HH Survey-minimum 30 Households/village***	
Respondent				Date day\month\yr.			/		/		Inputted by	
Village				Writer							Checked by	
Checked by				Interviewer							File name	
Written on back	Y	N	This is page	1	of	3	Original or Copied?	O	C		Backups?	File copied?

HH no./name *(KK No./nama)*		**Ethnic group** *(Suku)*		**Age** *(Umur)*	

No.	**Questions** *(Pertanyaan)*	**Answers** *(Jawaban)*
A. Dangers/threats of human activities to forest *(Bahaya/ancaman kegiatan manusia bagi SDH lokal)*		
1.	According to Bapak/Ibu which human activities can disturb the sustainability of forest functions and benefits to local communities? Why? *(Menurut Bapak/Ibu ancaman kegiatan manusia apa saja yang dapat mengganggu kelestarian dan manfaat hutan di desa ini? Mengapa ?)*	
2.	Could you please list them based on their degree of danger? *(Tolong Bapak/Ibu urutkan berdasarkan bahaya atau ancaman tersebut !)*	
3.	Beside dangers and threats are there also some advantages/benefits from those human activities? Please explain. *(Disamping bahaya/ancaman apakah ada pula keuntungan/jasa lain dari jenis kegiatan yang telah Bapak/Ibu sebutkan tadi? (selain kerugian barangkali ada keuntungannya pula)!*	
B. Perceptions of local communities on dangers/threats *(Persepsi masyarakat tentang bahaya)*		
1.	What threats are very dangerous for human life in this village, according to Bapak/Ibu? (e.g. natural disasters, hunger, pests, always changing government regulations, etc.) (*Ancaman apa saja yang menurut Bapak/Ibu membahayakan kehidupan yang menyangkut desa ini? (Misalnya bencana alam, kelaparan, banjir, penyakit menular, peraturan pemerintah yang berubah dll.)*	
2.	Please, make a priority list of above threats based on their degree of danger, according to Bapak/Ibu *(Tolong diurutkan ancaman yang disebutkan diatas dari yang paling berbahaya menurut Bapak/Ibu).*	
3.	What do you (Bapak/Ibu) do to prevent or to reduce those dangers/threats? *(Apa saja yang Bapak/Ibu lakukan untuk mencegah atau mengurangi bahaya tersebut?)*	
4.	If you (Bapak/Ibu) are being informed that those dangers/threats will come soon, what do you do? *(Jika Bapak/Ibu diberitahu bahwa bencana tersebut akan datang segera, apa yang Bapak/Ibu lakukan?)*	

Questionnaire 4. HOUSEHOLD SURVEY *(Survei rumah tangga)* **** HH Survey-minimum 30 Households/village***												
Respondent				Date day\month\yr.			/		/		Inputted by	
Village				Writer							Checked by	
Checked by				Interviewer							File name	
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C. Sources of income (*Sumber pendapatan*)		
1.	Where does your income come from, besides from forest and ladang? *(Dari mana saja sumber penghasilan Bapak/Ibu selain dari hutan dan ladang?)*	
2.	How big is your income? (Note: according to local unit/value, which will be converted later into Rp/month) *(Berapa besar jumlahnya? (CT. Sesuai ukuran lokal, kemudian dikonversikan nantinya ke Rp/bulan))*	
3.	Are there any other household members, who work and earn money? If 'yes', who, what job, how much do they earn? *(Apakah ada anggota keluarga lainnya yang bekerja dan menghasilkan uang? Bila ya, siapa dan apa pekerjaannya, dan berapa besar penghasilannya sebulan?)*	
D. Taboos and restrictions (*Tabu dan pantangan)*		
1.	Are there any restrictions, beliefs, or traditional norms used, especially concerning utilization of plants, animals, and other forest products? If 'yes', please explain. *(Apakah di kalangan masyarakat di sini masih ada pantangan, kepercayaan, atau aturan adat khusus yang masih diberlakukan dalam menggunakan tumbuhan, binatang dan memanfaatkan hasil/hutan lainnya? Jika ya, jelaskan!)*	
2.	Are there any restrictions, beliefs, or special traditional norms implemented concerning land and forest clearing? *(Apakah ada pantangan, kepercayaan, atau aturan adat khusus yang masih diberlakukan dalam membuka atau menggunakan lahan ataupun lokasi hutan tertentu?)*	
E. Aspiration of local community *(Aspirasi masyarakat lokal)*		
1.	Is your (Bapak/Ibu) life better than five/ten years a go? Why? *(Apakah kehidupan Bapak/Ibu sekarang lebih baik dari pada lima/sepuluh tahun yang lalu? Mengapa?)*	
2.	What future do you hope for your children/young generation? *(Apa yang Bapak/Ibu harapkan terhadap anak-anak/generasi muda di masa depan?)*	

Questionnaire 4. HOUSEHOLD SURVEY *(Survei rumah tangga)* **** HH Survey-minimum 30 Households/village***												
Respondent				Date day\month\yr.			/	/		Inputted by		
Village				Writer						Checked by		
Checked by				Interviewer						File name		
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Continued from page 2

3.	What do you expect/predict will happen in your village in the next few months/years? *(Apa yang Bapak/Ibu harapkan dan perkirakan akan terjadi pada desa ini beberapa bulan/tahun mendatang?)*	
4.	In case the forest is degraded or disappears, what are you (Bapak/Ibu) going to do? *(Seandainya hutan ini berkurang atau habis, apa yang akan Bapak/Ibu lakukan? (Bagaimana caranya agar hutan ini tidak musnah?)*	
5.	Is there any species of plants or animal which may play an important role in protecting and maintaining forest functions and benefits? If there is, please explain! *(Apakah ada jenis tanaman atau binatang yang dianggap penting untuk perlindungan dan pemeliharaan fungsi dari manfaat hutan? Jika ada, apa saja dan mengapa?)*	
6.	If someone wants to know something about the forest (plants, animals, and specific areas), who among the villagers is able to explain it? (note: at least five persons) *Jika ingin belajar atau mengetahui 'tentang hutan' (tumbuhan, binatang dan lokasi-lokasi tertentu) siapa orang-orang di desa ini yang banyak memiliki pengetahuan tersebut? (CT. minimal lima orang)*	

Appendix IV-o

Questionnaire 5.										**** Key Informants (3-5 persons)***	
TRADITIONAL KNOWLEDGE ON LAND USE *(Pengetahuan tradisional tentang penggunaan lahan)*											
Respondent			Date day\month\yr.			/	/			Inputted by	
Village			Writer							Checked by	
Checked by			Interviewer							File name	
Written on back	Y	N	This is page	1	of	1	Original or Copied?	O	C	Backups?	File copied?

Land use/management (*penggunaan/ pengelolaan lahan)*		
1.	What names do you have for different soils/ lands in wetland-paddy/tree-crop farming/ ladang etc surrounding the village? What are these names based on? (location/soil texture/colour/forms/others) *Apa sebutan yang Bapak/Ibu berikan untuk macam-macam tanah/lahan di sawah/kebun/ ladang di sekitar desa ini? Berdasarkan apa penyebutan dan pengelompokan tersebut ? (Lokasi/butiran tanah/warna/bentuk/lainnya)*	a. b. c. d. e.
2.	According to you (Bapak/Ibu) what is the most suitable use of each land location? (e.g. farming, pasture, fish culture, etc.) *Menurut Bapak/Ibu penggunaan sebagai apakah yang paling cocok untuk masing-masing lokasi tersebut? (Bercocok tanam, beternak, memelihara ikan, lainnya …)*	a. b. c. d. e.
3.	What management is needed to use those lands? (burning, weeding, cutting, hoeing or ploughing, fertilizing, others….) *Bagaimana cara mengolah lahan tersebut? (Dibakar, ditebas, ditebang, dibajak, dipupuk, lainnya …….)*	a. Burning *(Dibakar)*: b. Weeding *(Ditebas)*: c. Cutting *(Ditebang)*: d. Hoeing or ploughing *(Dibajak)*: e. Fertilizing *(Dipupuk):*
4.	According to you, is the management of your land easy or difficult? If difficult, how do you overcome the problems? *Menurut Bapak/Ibu berat atau ringankah pengolahan lahan yang harus dilakukan? Jika berat bagaimana cara mengatasinya?*	a. Fertilizing *(Dipupuk)*: b. Fallowing *(Diberakan)* : c. Other *(Lainnya)* :
5.	a. How fertile are your lands? b. What consideration was your statement based on? (soil colour, structure, slope, surrounding vegetation, compactness, others…) c. If not fertile, how do you overcome that problem? *a. Seberapa suburkah lahan Bapak/Ibu ?* *b. Berdasar apakah pernyataan tersebut ? (Warna, butiran tanah, lereng, tumbuhan, kegemburan, lainnya …).* *c. Jika tidak, bagaimana mengatasinya?*	a. Very fertile Fertile Moderate Not fertile b. Colour *(Warna)* Structure (*Butiran Tanah)* Slope *(Lereng)* Vegetation *(Tumbuhan)* Compactness *(Kegemburan*) Other *(Lainnya):.....* c.
6.	Do you know where there are fertile soils near this village? Please give us the names of the location(s). A*pakah Bapak/Ibu mengetahui lokasi yang subur di wilayah desa ini? Jika ya, dimana tempatnya?*	a. b. c. d.

Appendix IV-p

Questionnaire 6.											**** Key Informants – (3-5 Persons/Ethnic)***				
FOREST PRODUCT COLLECTION AND SALE											***(PENGUMPULAN DAN PENJUALAN HASIL HUTAN)***				
Respondent				Date day\month\yr.			/	/			Inputted by				
Village				Writer							Checked by				
Checked by				Interviewer							File name				
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Name *(Nama)*		**Ethnic group** *(Suku)*		**Age** *(Umur)*	

No.	**Questions** *(Pertanyaan)*	**Answers** *(Jawaban)*
1.	What forest products do you mostly /usually get? *(Hasil hutan apa yang paling sering/biasa Bapak/Ibu peroleh dan ambil dari hutan?)*	
2.	When do you usually get the best forest products? *(Kapan Bapak/Ibu bisa memperoleh hasil hutan yang biasa Bapak/Ibu ambil dengan mutu yang paling baik?)*	
3.	Where do you usually get the best forest products? *(Dimana Bapak/Ibu bisa mendapatkan hasil hutan tersebut dengan mutu yang paling baik?)*	
4.	Are there any changes in a) location and b) quantity of forest products that you usually collect? *(Apakah ada perubahan tempat/lokasi dan jumlah hasil hutan yang biasa bapak ibu peroleh dari waktu ke waktu?)*	a) Changing location, previously in *(Tempat/lokasi berubah, dulu di daerah):* ..... Now in *(sekarang di daerah...)*..... Permanent place/location, in *(Tempat/lokasi tetap, di daerah):*..... .....
		b) Increased quantity *(Jumlah bertambah):* ..... Decreased quantity *(Jumlah berkurang):*..... No change *(Tidak berubah)*:.....

Questionnaire 6. ***Persons/Ethnic)***												**** Key Informants – (3-5***
FOREST PRODUCT COLLECTION AND SALE												***(PENGUMPULAN DAN PENJUALAN HASIL HUTAN)***
Respondent				Date day\month\yr.			/	/		Inputted by		
Village				Writer						Checked by		
Checked by				Interviewer						File name		
Written on back	Y	N	This is page	2	of	2	Original or copied?	O	C	Backups?		File copied?

Continued from page 1

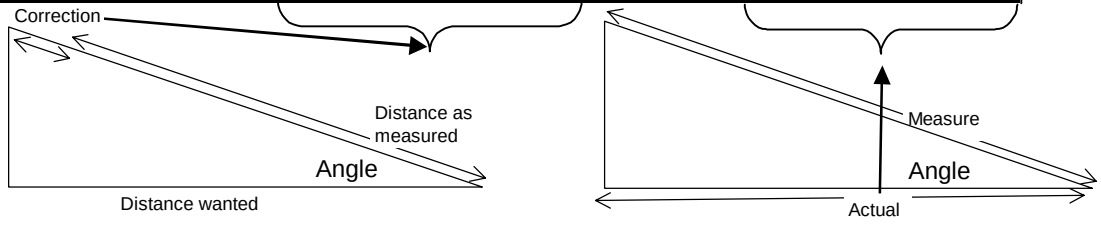
	Prices *(harga)*			
5.	What are the selling prices of the following products from ladang/ garden/forest? *Berapa harga jual dari hasil ladang/kebun/hutan?*	**Unit** *(Satuan)*	**Prices (Rp)** *(Harga (Rp))*	**Remarks** *(Keterangan)*
	Rattan *(Rotan)*			
	Aloe Wood *(Gaharu)*			
	Damar *(Damar)*			
	Hard construction timber *(Kayu konstruksi berat)*			
	Others (please name) Lain-lain *(sebutkan)*			
6.	Please list ten important products, which are easily sold! *(Tolong diurutkan sepuluh barang/produk yang paling mudah dijual)*	(1)		
		(2)		
		(3)		
		(4)		
		(5)		
		(6)		
		(7)		
		(8)		
		(9)		
		(10)		

Appendix V. Slope correction table

Slope correction table for measures taken at a given angle.

Based on Cosine of slope % correction =100(1/Cos(slope) -1), Horizontal = distance x Cos (slope)

SLOPE		*Correction % on slope*	Add to 4m along slope	Add to 20m along slope	Add to 40m along slope	Slope is fraction of horizontal	sloping 4m	sloping 20m	sloping 40m
Degrees	**%**	**%**	**m**	**m**	**m**	Fraction = Cos [slope]	= horizontal m	= horizontal m	= horizontal m
5	*8.75*	**0.38**	0.02	0.08	**0.15**	0.996	3.98	19.92	39.85
10	*17.63*	**1.54**	0.06	0.31	**0.62**	0.985	3.94	19.70	39.39
15	*26.79*	**3.53**	0.14	0.71	**1.41**	0.966	3.86	19.32	38.64
17.5	*31.53*	**4.85**	0.19	0.97	**1.94**	0.954	3.81	19.07	38.15
20	*36.40*	**6.42**	0.26	1.28	**2.57**	0.940	3.76	18.79	37.59
21	*38.39*	**7.11**	0.28	1.42	**2.85**	0.934	3.73	18.67	37.34
22	*40.40*	**7.85**	0.31	1.57	**3.14**	0.927	3.71	18.54	37.09
23	*42.45*	**8.64**	0.35	1.73	**3.45**	0.921	3.68	18.41	36.82
24	*44.52*	**9.46**	0.38	1.89	**3.79**	0.914	3.65	18.27	36.54
25	*46.63*	**10.34**	0.41	2.07	**4.13**	0.906	3.63	18.13	36.25
26	*48.77*	**11.26**	0.45	2.25	**4.50**	0.899	3.60	17.98	35.95
27	*50.95*	**12.23**	0.49	2.45	**4.89**	0.891	3.56	17.82	35.64
28	*53.17*	**13.26**	0.53	2.65	**5.30**	0.883	3.53	17.66	35.32
29	*55.43*	**14.33**	0.57	2.87	**5.73**	0.875	3.50	17.49	34.98
30	*57.73*	**15.47**	0.62	3.09	**6.19**	0.866	3.46	17.32	34.64
31	*60.08*	**16.66**	0.67	3.33	**6.67**	0.857	3.43	17.14	34.29
32	*62.49*	**17.92**	0.72	3.58	**7.17**	0.848	3.39	16.96	33.92
33	*64.94*	**19.24**	0.77	3.85	**7.69**	0.839	3.35	16.77	33.55
34	*67.45*	**20.62**	0.82	4.12	**8.25**	0.829	3.32	16.58	33.16
35	*70.02*	**22.08**	0.88	4.42	**8.83**	0.819	3.28	16.38	32.77
36	*72.65*	**23.61**	0.94	4.72	**9.44**	0.809	3.24	16.18	32.36
37	*75.35*	**25.21**	1.01	5.04	**10.09**	0.799	3.19	15.97	31.95
38	*78.13*	**26.90**	1.08	5.38	**10.76**	0.788	3.15	15.76	31.52
39	*80.98*	**28.67**	1.15	5.73	**11.47**	0.777	3.11	15.54	31.09
40	*83.91*	**30.54**	1.22	6.11	**12.22**	0.766	3.06	15.32	30.64
41	*86.93*	**32.50**	1.30	6.50	**13.00**	0.755	3.02	15.09	30.19
42	*90.04*	**34.56**	1.38	6.91	**13.82**	0.743	2.97	14.86	29.73
43	*93.25*	**36.73**	1.47	7.35	**14.69**	0.731	2.93	14.63	29.25
44	*96.57*	**39.01**	1.56	7.80	**15.61**	0.719	2.88	14.39	28.77
45	*100.00*	**41.42**	1.66	8.28	**16.57**	0.707	2.83	14.14	28.28
46	*103.55*	**43.95**	1.76	8.79	**17.58**	0.695	2.78	13.89	27.79
47	*107.23*	**46.63**	1.87	9.33	**18.65**	0.682	2.73	13.64	27.28
48	*111.06*	**49.45**	1.98	9.89	**19.78**	0.669	2.68	13.38	26.77
49	*115.03*	**52.42**	2.10	10.48	**20.97**	0.656	2.62	13.12	26.24
50	*119.17*	**55.57**	2.22	11.11	**22.23**	0.643	2.57	12.86	25.71
51	*123.49*	**58.90**	2.36	11.78	**23.56**	0.629	2.52	12.59	25.17
52	*127.99*	**62.42**	2.50	12.48	**24.97**	0.616	2.46	12.31	24.63
53	*132.70*	**66.16**	2.65	13.23	**26.46**	0.602	2.41	12.04	24.07
54	*137.63*	**70.13**	2.81	14.03	**28.05**	0.588	2.35	11.76	23.51
55	*142.81*	**74.34**	2.97	14.87	**29.74**	0.574	2.29	11.47	22.94
56	*148.25*	**78.82**	3.15	15.76	**31.53**	0.559	2.24	11.18	22.37
57	*153.98*	**83.60**	3.34	16.72	**33.44**	0.545	2.18	10.89	21.79
58	*160.03*	**88.70**	3.55	17.74	**35.48**	0.530	2.12	10.60	21.20
59	*166.42*	**94.15**	3.77	18.83	**37.66**	0.515	2.06	10.30	20.60
60	*173.20*	**99.99**	4.00	20.00	**40.00**	0.500	2.00	10.00	20.00
62.5	*192.09*	**116.56**	4.66	23.31	**46.62**	0.462	1.85	9.24	18.47
65	*214.44*	**136.61**	5.46	27.32	**54.64**	0.423	1.69	8.45	16.91
70	*274.73*	**192.36**	7.69	38.47	**76.95**	0.342	1.37	6.84	13.68
75	*373.17*	**286.34**	11.45	57.27	**114.54**	0.259	1.04	5.18	10.35
80	*567.05*	**475.80**	19.03	95.16	**190.32**	0.174	0.69	3.47	6.95
85	*1142.68*	**1047.05**	41.88	209.41	**418.82**	0.087	0.35	1.74	3.49



Appendix VI. Sample description sheet

Sample description sheet

Sample[1]		**Date** day\month\yr.		/	/	**Inputted by** [8]	
Location & Type [2]		**Writer** [3]				**Checked by**	
Checked by [4]		**Original**[5] **or Copied**	**O**	**C**		**File name**	
Written on back[6]	**Y** **N**	**Any data sheets omitted**[7]				**Backups?**	**File copied?**

Concise description of 'how site was reached' [9]
How long did it take?[10]

Local name(s) for area [11]	**Type vegetation and site**[12]

GPS reading (UTM50, WGS84)[13]	**E**								**N**							

Altitude[14]	**Why/how site selected** [15]	**Typical**[16]		
mtr		Typical	Restricted	Special

Artefacts and feature [17]		**Position sample in terrain**[18] Top	Surrounding habitats/extent of formation [19]	
Cigarette ends & litter	Cut stems /stumps	Not applicable / Shoulder / Mid slope / Foot slope / Bottom / Irregular		
Old fire	Old camp		Slope Aspect [20]	Slope Degrees [21]
Old swidden	Trail		N NE E SE S SW W NW *na*	

Others	Leaches	Still (ponds, polls, lakes)[22]	Moving (stream, river)[23]	Marsh[24]
	Distance[25]	m	m	m
	Extent[26]	m^2	m wide	m^2
	Depth [27]	m	m	m
Permanent/Seasonal/Ephemeral [28]		***P*** ***S*** ***E***	***P*** ***S*** ***E***	***P*** ***S*** ***E***

Stemmed rattans[29]			**Other Lianas**[30]			**Epiphytes**[31]			**Moss%**[32]			**Tree Seedlings**[33]				**Saplings**[34]			
<3	3-10	>10	<3	3-10	>10	<3	3-10	>10	<3	3-10	>10	<3	3-10	>10	>100	<3	3-10	>10	>100

Most abundant tree seedling (<1.5 m)[35]	**Ref Coll. No**[36]	**Distinctive giant monocots (palms etc. In vicinity)**[37]	**Ref Coll. No**[36]

Most abundant Saplings (≥1.5 m)[38]	**Ref Coll. No**[36]	**Most Abundant Shrubs/treelets (≥1.5 m)**[39]	**Ref Coll. No**[36]

Explanation of numbers in 'Sample Description Sheet'

1	Sample	Sequential, unique number for the sample
2	Location & type	Local name of area (as 11) and type of vegetation (as 12 e.g. x yr old ladang, primary forest, bamboo, etc.)
3	Writer	Who is writing the datasheet?
4	Checked by	Before leaving the site, the datasheets should always be checked. Who checked?
5	Original or copied?	Is this the original sheet (o) or a (hand)copied version of it (c)? Tick right answer
6	Written on back?	Is there any information written on the back? (useful when photocopying…)
7	Any data sheets omitted?	In case some data were not collected: e.g. if no trees, the (>10cm dbh) tree sheet is not used, maybe sometimes no soil data is collected, etc.
8	Inputted by, etc.	*To be filled out later, when data input in the computer takes place.*
9	Description of 'how site was reached'	Briefly describe how you got to the site; helps to remember later which place it was and, together with no.10, an indication of how accessibility to the site is.
10	How long did it take?	Roughly indicate travel time from a given point (usually 'camp' or the last sample site). Mention if (long) rest was taken on the way.
11	Local name for area	Ask the local guide how people refer to the area
12	Type of vegetation and site	A brief note on the type of vegetation and the landscape position – this can be asked from local informants also.
13	GPS reading	Always using UTM50 and the WGS84 datum. Let the GPS calculate an average position with less than 10m if possible. In the GPS: mark the position with sample number and write down the Eastings (top nr.) and Northings (nr. below) on sheet.
14	Altitude	Ideally from an altimeter or a good map position – note GPS altitude reading is often unreliable. If this cannot be filled in it is not a problem.
15	Why/how was site selected?	Indicate whether randomly chosen, or selected for a specific quality/feature, or out of convenience, etc. Were we led by guides or did we we choose the spot to stop?
16	Typical?	Tick/circle whether *typical* =unexceptional example of a widespread kind of vegetation cover, *restricted* =a limited type of cover or with unusual features, or *special* =the sample is located to contain some very local feature or characteristics.
17	Artifacts and features	Tick/circle if any of the signs mentioned can be observed in the site no matter how old.
18	Position in the terrain	Tick/circle the relative position of the site on sloping terrain. Level plains means slope position is 'not applicable'.
19	Surrounding habitats/extent of formation	What is in the direct surroundings of the site in terms of vegetation and features and how far does the formation of the site extend?
20	Slope aspect	For <u>overall</u> slope direction at the site (NOT the direction of the transect line, which is supposed to be roughly at an angle 45 degrees from the slope direction!) read *aspect;* the compass bearing of the slope when you stand on it facing *downslope*.
21	Slope degrees	Measure slope steepness with a clinometer and read the scale in degrees
22	Still(ponds etc.)	Distinct area of standing water
23	Moving (stream etc)	Distinctly linear water course, with (slow-fast) moving water
24	Marsh	Often muddy, marshy, with special vegetation adapted to wet conditions
25	Distance	Rough distance to the closest point of the transect line
26	Extent	Estimation of size of pond or marsh (or width of the stream)
27	Depth	Estimation of depth of pond/stream
28	Permanent etc.	Ask local guide how permanent the water source is *P*=permanent, *S*=seasonal, *E*=ephemeral (only after heavy rain e.g.)
29	Stemmed rattans	Estimate nr. of stemmed rattans over 1.5m high, within the 5x40m
30	Other lianas	Estimate nr. of (living) lianas (woody and herbaceous), within the 5x40m
31	Epiphytes	Estimate nr. of epiphytes, within the 5x40m
32	Moss %	Estimate % of moss covering the ground, within the 5x40m
33	Tree seedlings	Estimate nr. of tree seedlings, within the 5x40m
34	Saplings	Estimate nr. of saplings, within the 5x40m
35	Most abundant tree seedlings	List the species names of the 3 most abundant tree seedlings (< 1.5 m in height) – include tree species only.
36	Ref. Coll. No.	If species was collected for identification/confirmation, write the collection number
37	Distinctive giant monocots etc.	List the species names of the giant monocots (e.g. palms, large ginger species, bamboo, pandanus, banana, Marantaceae) in the vicinity of the transect
38	Most abundant saplings	List the species names of the 5 most abundant saplings over 1.5m high but less than 10 cm dbh. Tree species only.
39	Most abundant shrubs/treelets	List the species names of the 5 most abundant shrubs/treelets over 1.5m high. These are species which rarely achieve 10 cm dbh.

Appendix VII. Herbs data sheet

SAMPLE PLOT SHEET – herbs, palms, climbers>1.5m, epiphytes below 2m, pandans etc..									
Sample[1]			Date day\month\yr.		/	/		Inputted by[8]	
Location & Type[2]			Writer[3]					Checked by	
Checked by[4]			Original or Copied?[5]		O	C		File name	
Written on back[6]	Y	N	This is page[7]			of		Backups?	File copied?

No.[9]	Genus/Species[10]	Ref Coll.no[11]	Life form[12]	Section (4 m x 5 m) [13]										Planted? [14]	Notes[15]
				1	2	3	4	5	6	7	8	9	10		

Instructions for 'Sample plot sheet'.

This sheet records herbs, climbers >1.5m, epiphytes below 2m, and all monocots except for short lianas (no trees, shrubs or treelets)

[1] Sample number (each new plot is numbered in sequence, old numbers are not reused)

[2] A useful name of location

[3] Who is writing the data sheet

[4] Who has checked the data sheet and believes it is clear (initials)

[5] Is this an original data sheet? (Great care must be given in copying any spoilt sheets – best that these are not thrown away but attached with the new sheet).

[6] Notes and explanation may be written on the back of sheets and may become lost during copying etc.

[7] This tells us the number of this sheet of the total for THIS TYPE of data sheet at THIS sample site.

[8] This whole box is not filled in until the data has been entered on computer.

[9] Numbers are useful for referring to the individual plant entries. If more than one sheet is used the numbers continue from the previous sheet.

[10] This is used for giving the scientific name – or best guess at the current time. This will be verified later.

[11] When identification is not 100% confident, or is of botanical interest, a voucher specimen will be collected and the reference to this should be inserted here.

[12] The 'life form' is recorded as follows:

Plant	Code	When recorded*
Liana (**W**oody climber)	**WL**	**Transect sheet** when any part 1.5m long
Climber (non woody **L**iana)	**L**	**Transect sheet** when any part 1.5m long
Pal**m**s family/**T**ree **Pa**l**m**s	**Pl / TPl**	**Transect sheet** when 1.5m tall, or adult plant
Pandanus/tree	**Pa / TPa**	**Transect sheet** - any
Epiphytes	**E**	**Transect sheet** when apparently established within 2m of ground
Fern/**T**ree **F**ern	**F / TF**	**Transect sheet** - any
Epiphytic **F**erns	**EF**	**Transect sheet** - when within 2m of ground
Climbing **F**erns	**CF**	**Transect sheet**
Strangler **F**igs/**L**iana **F**ig	**SFig / LFig**	**Transect sheet** - any /**Tree sheet** if 10 cm dbh
Other **H**erbs (even large)	**H**	**Transect sheet** (if more than cotyledons only)
Aquatic	**A**	**Transect sheet** (if more than cotyledons only)

All have to be alive and rooted in the sample unit area. The sample unit area is corrected for slope

[13] Presence in each of the transect's ten consecutive 4 m x 5 m units is recorded by a tick.

[14] A tick is used to note when a tree is understood to have been planted. Note such plants *should* be fully recorded.

[15] Any notes about the plant or difficulties in recording.

Appendix VIII. Trees data sheet

Variable area plot: woody stems over 10 cm dbh [– 15m - empty transect maximum]									
Sample[1]			Date day\month\yr.		/	/	Inputted by[8]		
Location & Type[2]			Writer[3]				Checked by		
Checked by[4]			Original or Copied?[5]	O		C	File name		
Written on back[6]	Y	N	This is page[7]		of		Backups?	File copied?	

No[9]	Genus/Species[10]	Ref. Coll. No[11]	DRH Cm[12]	Ht. (m)[13]	Distance (m)[14]	F Index[15]	Planted[16]	Notes[17]
1								
2								
3								
4								
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16								
17								
18								
19								
20								

Instructions for the (variable area) plot for woody stems over 10 cm diameter

1 Sample number (each new plot is numbered in sequence, old numbers are not reused)

2 A useful name of location

3 Who is writing the data sheet.

4 Who has checked the data sheet and believes it is clear (initials)

5 Is this an original data sheet? (Great care must be given in copying any spoilt sheets – best that these are not thrown away but attached with the new sheet).

6 Notes and explanations may be written on the back of sheets and may become lost during copying etc.

7 The number of THIS TYPE of data sheet at THIS sample site (generally 2).

8 This whole box is not filled in until the data has been entered on computer.

9 Numbers are useful for referring to the individual tree entries.

10 This is used for giving the scientific name – or best guess at the current time to be verified later in an herbarium.

11 When identification is not 100% confident, or of botanical interest, a voucher specimen will be collected and the reference to this should be inserted here.

12 Diameter at Reference Height. Usually recorded with a forester's diameter tape at 1.3m above the ground. If the stem is deformed the point of measurement can be adjusted. For large buttressed trees an estimate of the higher diameter is acceptable. We adopt an unorthodox convention for multi-stemmed plants. These qualify where one stem is 10 cm at 1.3 m, the diameter is recorded below the fork (at ground level if needed – n.b. we are less interested in multiple stems than in individuals).

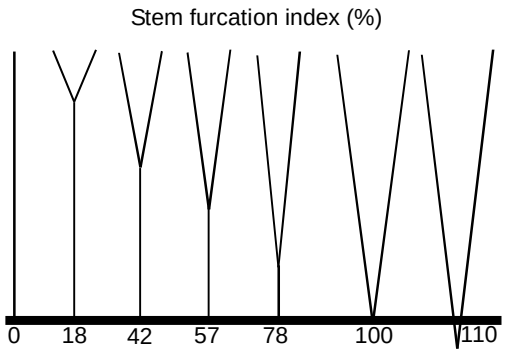
13 Estimated total height from the ground to the top of the plant. Good to compare and test estimates.

14 The shortest horizontal distance from the centerline of the transect to the center (at 1.3m) of the 5th most distant stem in each of the four 10 m wide 5 tree transects (d_1 to d_8 in the figure).

15 Furcation index – an estimate of the % of plant height where apical dominance is no longer a property of a single clearly defined stem and is recorded on a continuous scale of 0 to 110 % (see figure for some examples).

16 A tick is used to note when a tree is understood to have been planted. Note such trees *should* be fully recorded.

17 Any notes about the tree or difficulties in recording (such as buttressed or inaccessible stems). Record **slope** here (degrees) if the distance measure is not slope corrected.



Appendix IX. Local site description data sheet

Plot: data sheet for local site description (1)												
Sample			Date day\month\yr.						Inputted by			
Location			Booker						Checked by			
Checked by			Original/Copied?						File name			
Written on back	Y	N	This is page			1	of	4	Backups?		File copied?	
Informant :			M	or	F	Age :			Ethnicity :		Language :	

Description of the site/local names *(Deskripsi lokasi/nama lokal)*

L.1. Name of location (*Nama tempat)* :

_____

Specific name? *(Nama khusus)*:

_____

L.2. Description of the location *(Deskripsi lokasi)*:

(a) Local term for physical landscape (*Sebutan tempat yang memiliki keadaan lapangan seperti ini*):

_____

(b) Local term for vegetation cover *(Sebutan tempat yang ditumbuhi tumbuh-tumbuhan seperti ini):*

_____

(c) Age of the vegetation *(Umur tanaman/tumbuhan)*:

_____

(d) What does the community use this area for? *(Tempat ini dimanfaatkan oleh masyarakat dengan cara):*

_____

(e) Can one find many sites like this around? *(Apakah tempat seperti ini banyak terdapat di desa ini?)*

_____

L.3. Has this area ever been disturbed? If so, how and when and what was the effect? *(Apakah pernah terjadi kerusakan alam ditempat ini, kapan dan apa pengaruhnya?):* _____

_____

_____

_____

_____

L.4. How quickly can this site be reached? *(Lokasi ini dari pusat desa dapat dicapai dengan)*:

(a) By foot (*Jalan kaki saja selama*)_____hours *(jam)* or *(atau)* (b)

(b) By outboard boat *(Ketinting/boat selama)* ____ hours *(jam)* and by foot *(dan jalan kaki)* ____ hours *(jam)*

L.6. Are there any taboos or traditional rules applying here? Why? *(Apakah tempat ini termasuk tempat yang tabu/larangan? mengapa?)*_____

_____

_____

_____

_____

L.5. Who comes here most regularly, and why/for what? (Siapa yang paling sering mendatangi tempat ini dan mengapa ?) _____

_____

_____

_____

Plot: data sheet for local site description (1)												
Sample			Date day\month\yr.						Inputted by			
Location			Booker						Checked by			
Checked by			Original/Copied?						File name			
Written on back	Y	N	This is page		2	of	4		Backups?		File copied?	
Informant :			M	or	F	Age :		Ethnicity :			Language :	

The site as a wildlife habitat (*Kesesuaian tempat hidup satwa)*

KS.1. Is this area often used for hunting? *(Apakah ditempat ini sering dilakukan perburuan ?)*

(4) Very often *(Sering sekali)* (3) Often *(Sering)* (2) Seldom *(Jarang)* (1) Never *(Tidak pernah)*,

When do people hunt here (season)? *Kapan? Musim, bersamaan dengan kegiatan lain dll.)*

_____

_____

_____

_____

What tools do people use for hunting here?*(Dengan peralatan apa?)*

_____

_____

_____

_____

KS.2. How easy is it to encounter the following animals here? *(Apakah di tempat ini mudah untuk melihat/menemukan binatang/satwa?)*

No.	**Name of the wildlife** *(Nama satwa)*	**Ease/difficulty to encounter** *(Kemudahan untuk menemukan)*			
		Very easy (*Sangat mudah)*	**Easy** *(Mudah)*	**Hard** *(Sulit)*	**Not there** *(Tidak ada)*
1	Bearded pig *(Babi hutan)*				
2	Sambar deer *(Rusa (payo, temang, payau))*				
3	Barking deer *(Kijang (telo raw, telao pawen, telau rauwe))*				
4	Gibbon *(Lutung (aci', kelasi, pangsih, hacei))*				
5	Macaques *(Kera ekor panjang (koyat, kura', kara'))*				
6	Rhinoceros hornbill *(Ungko klampian, Wak-wak (klowat, klabet, klavet))*				
7	Helmeted hornbill (*Rangkong papan/gading (pecaku, teva'un, tebun))*				

Plot: data sheet for local site description (1)											
Sample			Date day\month\yr.					Inputted by			
Location			Booker					Checked by			
Checked by			Original/Copied?					File name			
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Informant :			M	or	F	Age :		Ethnicity :		Language :	

Usefulness of site per value category (*Kesesuaian tempat tumbuh dan penggunaan lain*)

KT. 1. How useful is this site for the respective use categories? (A*pa manfaat tempat ini bagi masyarakat ?)*

Value category *(Jenis manfaat)*	**Use value *(Nilai manfaat)***			
	Very useful *(Sangat Bermanfaat)*	**Useful** *(Bermanfaat)*	**Less useful** *(Kurang Bermanfaat)*	**Useless** *(Tidak Bermanfaat)*
Food (*Makanan)*				
Medicine (*Obat-obatan)*				
Light construction (*Konstruksi ringan)*				
Heavy construction (*Konstruksi berat)*				
Boat construction (*Konstruksi perahu)*				
Tools (*Perkakas)*				
Fire wood *(Kayu bakar)*				
Basketry/cordage (a*nyaman keranjang /tali)*				
Ornaments/tradition (*Hiasan/upacara adat)*				
Marketable products (*Barang yang mudah dijual)*				
Hunting function (*Bahan-bahan untuk berburu)*				
Hunting place (*Makanan binatang/tempat berburu)*				
Recreation (*Rekreasi)*				
Future security *(Pencadangan areal untuk masa depan)*				
Special use: (*Kegunaan khusus:)*				
a.				
b.				
c.				
d.				
e.				
f.				
g.				
h.				
i.				
j.				
k.				
l.				
m.				
n.				

Plot: data sheet for local site description (1)											
Sample			Date day\month\yr.					Inputted by			
Location			Booker					Checked by			
Checked by			Original/Copied?					File name			
Written on back	Y	N	This is page		4	of	4	Backups?		File copied?	
Informant :			M	or	F	Age :		Ethnicity :		Language :	

History of land use and natural events at the site *(Sejarah penggunaan lahan dan kejadian alam)*

S.1. List the changes in land use and natural events that have taken place at this site used period (*Perubahan apa saja yang pernah terjadi pada tempat ini?*)

Period *(Jangka waktu)*	**Land use changes** *(Penggunaan/kejadian)*	**Impacts on land** *(dampak)*

Appendix X. Plant uses data sheet

Plot: Plant uses data sheet													
Sample		Date day\month\yr.				Inputted by		Informant					
Location		Booker				Checked by		Age		Gender	M	or	F
Checked by		Original/Copied?	O	or	C	File name		Ethnicity					
Written on back	Y	or	N	This is page		of		Backups?	File copied?	Language			

Local name ***(Nama lokal)***	**Language** ***(Bahasa)***	**Ref no.**	**Description of use** ***(Kegunaan Tanaman)***	**Used part of plant** ***(Bagian tanaman yg dipakai)***											**Preference**	**Frequency of use** ***(Frekuensi)***					**Exclusivity**
				A	**Ky**	**D**	**Bu**	**Bng**	**Klt**	**B/S/C/S**	**Pc**	**G/R**	**Semua**	**Lain**		**1 Th**	**2 Th**	**2 - 5 Th**	**5-10 Th**	**> 10 Th**	

Appendix XI. Soil data sheet

Soil data sheet									
Sample				Date day\month\yr				Inputted by	
Location				Booker				Checked by	
Checked by				Original/Copied				File name	
Written on back	Y		N	This is page		of		Backups?	File copied?

Parent Material:	**Drainage:**	**BAF :**			**Land Use:**	**Site Name:**		**Surface pH:**	**Erosion:**		
	Groundwater table:	**1**	**2**	**2**		**Map Number:**					
Horizon Symbol	Depth (cm)	Colour			Texture	Structure	Consistency	Matrix Node	Soil Pores		Root
									Micro	Macro	

No.	Land characteristics	No.	Land characteristics
1.	Soil Surface Condition:	2.	Landform:
3.	Temperature Regime:	4.	Moisture Regime:
5.	Classification:	6.	Suitable for:

No.	**Question** *(pertanyaan)*	**Answer** *(jawaban)*
1.	What is the former use of this land? (Forest/Garden/Fallow/Sawah/Others….) *Sebelumnya lahan ini digunakan untuk apa saja ?* *(Hutan/Kebun/Ladang/Sawah/Lainnya….)*	
2.	What is this soil's name? (location/colour/Texture/Others…) *Apa nama dari jenis tanah ini?(Lokasi/Warna/Tekstur/Lainnya…….)*	
3.	What are the characteristics of this soil? *Apa ciri-ciri dari jenis tanah ini?*	
4.	What kind of use is this land suitable for? Why? Forest/Garden/Fallow/Sawah/Others… *Cocok untuk apa tanah ini digunakan? Mengapa?* *(Hutan/Kebun/Ladang/Sawah/Lainnya…..)*	
5.	How do you prepare this kind of land for cultivation? Burn/slash/Others…. *Bagaimana cara mengelola tanah ini (bila digunakan untuk berkebun/ ladang/sawah)? (Dibakar/Dibabat/Dibajak/Lainnya…….)*	
6.	How fertile is this land? Based on what indicator? What will you do if it is unfertile? *Seberapa suburkah tanah ini? (Sangat/subur/lumayan/tidak)* *Berdasar apakah (Warna/Tekstur/Lereng/Vegetasi/Konsis-tensi/Lainnya….)? Jika tidak, bagaimana cara mengatasinya?* *(Pupuk/Bera/Lainnya…….)*	
7.	Is it easy or difficult to cultivate this land? What will you do if it is difficult to cultivate? *Apakah tanah ini mudah/sulit diolah?Jika sulit, bagaimana cara mengatasinya?*	