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7th Meeting of RSPO Compensation Task Force (CTF)

Date	19-20 Mar 2013		
Venue	Park Royal Hotel, Singapore		
	Olivier Tichit (OT)	Sipef	Co-chair
	Simon Siburat (SS)	MPOA	Member
	Calley Beamish (CB)	MPOA	Member (alternate)
	Gan Lian Tiong (LT)	Musim Mas	Member
	Sabarinah Marzuky (SM)	Sime Darby	Member
	Sophie Persey (SP)	REA Holdings	Member
	Richard Kan (RK)	GAR	Member (alternate)
	Alexandra Booth (AB)	OLAM International	Member
	Michal Zrust (MZ)	ZSL	Member
	Anders Lindhe (AL)	WWF International	Member
	Adam Harrison (AH)	WWF	Member
	Dani Rahadian (DR)	WWF Indonesia	Member
	John Payne (JP)	BORA	Member
	Annette Olsson (AO)	Conservation International	Member
	Glen Reynolds (GR)	Royal Society SEARRP	Invited
	Anne Rosenbarger (AR)	WRI	Invited
	Petrus Gunarso (PG)	Tropenbos	Invited (consultant)
	G Manjela Eko Hartoyo (GM)	TBI Indonesia	Invited (consultant)
	Katrina Engelsted	PT Earthline	Invited (consultant)
	Ismu Zulfikar	PT Smart	Invited
	Norman FM	PT Smart	Invited
	Amrei von Hase	Forest Trends	Invited
	Salahudin Yaacob (SY)	RSPO	Secretariat
	Asril Darussamin (AD)	RSPO	Secretariat
	Audrey Lee Mei Fong (ALMF)	RSPO	Secretariat

Agenda

1. Welcoming remarks from co-chair
2. Review previous minutes
3. Recap comments on compensation guidance
4. Review compensation guidance
    a. Review compensation matrix for non-member
    b. Review monetary compensation
    c. Review remote sensing guidance
    d. Coefficient
5. Follow up action and AOB

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1. Welcoming remarks from co-chair

OT welcomed all participants.

2. Review of previous minutes

No comments. RSPO will publish meeting note on the website.

3. Recap comments on Compensation Guidance

Summary of comments is attached as annex 2. There are four main issues which need to be finalized i.e. monetary compensation, coefficient, and compensation matrix for non-member after endorsement of Compensation Mechanism and finalization of remote sensing guidance.

4. Review Compensation Guidance

a. Monetary compensation

CB questioned the conservation outcome of applying a monetary formula across different regions. Liability of a company should be linked to the final conservation outcome and not the total funding.

AL replied that the Compensation Panel will approve on the compensation plan including a budget over a time period. Compensation Panel will guide the compensation plan in order to achieve the conservation output.

Amrei von Hase from Forest Trends commented that the case assessment by the Compensation Panel without a set of transparent criteria is a risk to the RSPO.

MZ stated that an estimated funding will assist companies to set realistic targets and objectives, and it will then be evaluated by the Compensation Panel.

SP asked what is the consequences if budget run out before the project ends. AL replied that all companies are required to submit progress report to ensure deliverables of outputs. The Compensation Guidance has listed some fundamentals on quality reporting e.g. scientific base, address additionally etc.

b. Review Compensation Matrix

For any future clearance cases conducted by a non RSPO member, subgroup members AL, AB, AR, MZ, GR, and CB proposed the following compensation action:

> "*Restoration of native vegetation on all areas cleared except for the area with vegetation co-efficient at 0.0 [at the time of EB approval of this compensation guidance.]*
>
> *Restoration of native vegetation on all areas cleared to the status of the vegetation [at the time of approval of this compensation guidance]."*

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GLT proposed to adopt the same concept for certified RSPO members and RSPO members after endorsement of the Compensation Mechanism i.e. restoration is not required for degraded land. SP added that she did not agree to restoration as the best compensation action as it is impractical for large area.

AL did not agree to this conceptual change as it entails future development by RSPO members can happen without any HCV assessment and restoration is not required for degraded area. OT further explained that CTF has agreed to full restoration for future clearance without HCV assessment after adoption of Compensation Procedures by RSPO certified members and RSPO members to outline a clear message to the general public that no development should happen without HCV assessment. AR suggested replacing restoration with an extraordinary high multiplier such as three times the cleared area without HCV assessment after adoption of Compensation Procedures. AL said RSPO members should have an awareness of and embrace the RSPO P&C and that full restoration is only for exceptional cases in small area.

The compensation matrix for non-member is accepted as above. Compensation action for RSPO members and certified members after endorsement of the Compensation Mechanism remains as full restoration.

c. Review Remote Sensing Guidance

PG from Tropenbos presented on the proposed remote sensing guidance. Presentation is attached as annex 3.

SS asked about the vegetation analysis for undisturbed forest. JP asked about the location of the satellite imagery. PG explained that analysis should be done using different time series and in comparison with the adjacent landscape.

GLT asked about issues around cloud cover. PG explained said SPOT 5 and quick bird allows purchaser to specify date and percentage of cloud cover. The group also acknowledged on the cloud cover problem from the historical satellite imagery, growers might be to select the best available image/ obtain images from other satellites to generate a clear image.

GR asked on the difficulty to differentiate our current coefficient categories using remote sensing technology.

AH said that the Compensation Mechanism states Nov 2005/ Jan 2006 as the cut-off date, but he asked PG on time series analysis and if it is necessary to include analysis before or since 2000. PG said Landsat image from 1995 has been provided to the RSPO.

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Katrina Engelsted from Earthline presented on their landuse change analysis using SPOT 5 image. The case study was conducted in North Sumatra on two estates. The first estate was about 1255 ha, and second estate was about 7,811 ha. In this analysis, Earthline used SPOT 5 and Landsat 5 imagery. There was a small discrepancy in hectare size based on different imagery but it was due to the different time period when the satellite imagery was taken. SS asked how can one differentiate between uneven and even canopy. KE said it is possible to differentiate uneven canopy from even canopy but she did not explain the details.

OT clarified that the proxy approach is applicable for compensation on HCV1-3 and part of HCV4.

SS suggested conducting land use change analysis over certain time series to differentiate between young forests from matured forest. SS also proposed to use NDVI in landuse change analysis as the images are comparable to photographs taken on the ground.

AR asked on our minimum requirement on image. Current remote sensing guidance is based on landsat 30m only. OT explained that landsat 30m can be the minimum requirement. If there are disputes than other image with higher resolution can be sourced.

There is no consensus at this point for growers within the CTF who are committed to conduct a case study with PT Earthline on landuse analysis.

d. Coefficient

SS suggested CTF to consider using ISCC definition of forest which includes native species in forest area. Hence rubber plantation and other non-native plantation should not be compensated. AH said that there are some values of mixed native and non-native plantation.

JP highlighted that more than 95% of conversion in Indonesia and Malaysia are converted from logged over forest, hence he suggested including logged over forest under coefficient 1.0.

AR highlighted on swamp shrub/ savannah which might contain HCV but are categorised as coefficient 0.

On rubber plantation, AH proposed an alternative whereby rubber plantation adjacent to vegetation categorised under coefficient 0.7 and 1.0 shall be considered as coefficient 0.4. If it is not then it can be categorized as coefficient 0. Mixed tree crop plantation is defined under coefficient 0.4. CTF agreed on the principle. WWF Indonesia will seek expert views on the size of buffer in rubber plantation. SS proposed to adopt same concept for mixed tree crop plantation which is also categorized under coefficient 0.4.

JP and GR did not agree to the coefficient and will submit a new draft to CTF by end of the day for consideration.

5. Follow up action and AOB

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For the remaining issues, subgroups will discuss and propose alternatives based on comments received during the meeting before next meeting in June.

Subgroup	What	Who	By when	Note
1	Refine description of four co-efficient classification	John and Glen	20 Mar evening	None
2	Dollar value formula group	OLAM (lead), IFC, GAR, SDP, ZSL, WRI, Bora, Sipef	End of Apr	Apply liability identified through LUC analysis
3	LUC analysis using SPOT, NDVI and Landsat	John, Glen, Wilmar, SDP, Sipef, REA, Earthline, WRI	Last week of May	Companies to provide coordinates (select one estate) Earthline will conduct LUC analysis using four categories, geo tag photo with specific co-efficient Produce summary of LUC analysis
4	Refine Compensation for HCV 4, 6 and part of HCV 4	Social NGOs	End May	Refer to compensation guidance section 7

CTF has agreed to the following timeline. SY highlighted the need to conduct a public consultation and finalise a Compensation Guidance before RT11.

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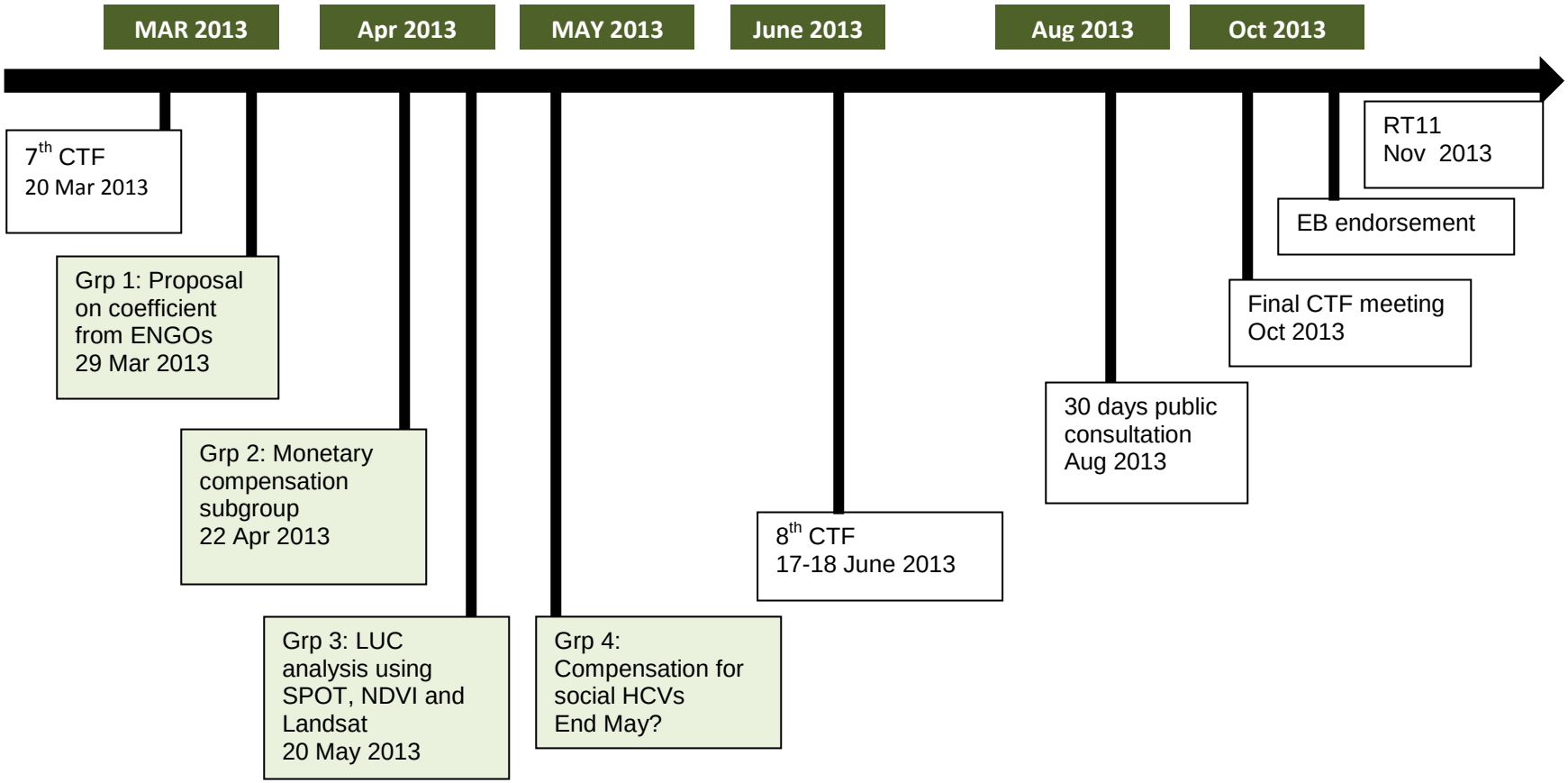
Road towards Endorsement of Compensation Guidance (agreed during 7th CTF meeting)



End of Meeting

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Annex 1

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No.	Name	Organization	Signature
1.	Petrus Gunarso	Tropenbos	
2.	G Manjela Eko Hartoyo	TBI Indonesia	
3.	Sarin Sibarat	Wilmar Int. Ltd.	
4.	Salahuddin Yaacob	RSPO	
5.	Gan Liam Tiong	PT Musim Mas	
6.	Sabarinah Marsully	Sime Darby	
7.	Anne Rosenbarger	WRI	
8.	SOPHIE PERSEN	REA HOLDINGS	
9.	MICHAL ZRUST	ZSL	
10.	IGNU ZULFIKAR	PT SMART	
11.	Richard Kan	GMK	
12.	NORMAN PM	PT Smart	
13.	Asril Darussalam	RILO	
14.	Calley Beaming	MPOA/Wilmar	

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15.	ALEXANDRA BOOTH	OLAM INT'L	
16.	Annette Olsson	CI	
17.	DANI. RAHADIAN	WWF INDONESIA	
18.	ADAM HARRISON	WWF	
19.	ANDERS LINDHE	WWF INT	
20.	OLIVIER TICHIT	SIPEF	
21.	John Payne	BOHA	
22.	GLEN REYNOLDS	ROYAL SOCIETY	
23.			
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ANNEX 2

Compensation Guidance (draft 3)			
Page no.	**Subject**	**Comment**	**Suggestion**
Page 3	**Section 3** **Guiding principles**	(Sophie P.) I assume that this refers to the membership status of the company at the time when clearing took place, rather than the point at which the non-compliance was identified? 'non-compliant clearing by RSPO members, and especially RSPO certified growers, carry more compensation liability than such clearing by non-RSPO members'.	Please could the meaning of this be made more explicit in the text so that it is not open to debate.
Page 3	**Section 4** **Compensation Panel**	(Sophie P.) A suggestion in relation to this comment: 'The RSPO will appoint a Compensation Panel made up of four members of the BHCV WG and one member of the RSPO secretariat, supported by extra capacity as needed, within 15 days of contact.'	It would be good to clarify the composition of the compensation panel that will be set up, eg. at least one grower and at least one environmental expert, at least one social expert member of the BHCV will be included in each compensation panel to ensure a balanced perspective.
Page 3	**Section 5** **Disclosure of non-compliant land clearance**	(Sophie P.) 'Growers applying for certification shall disclose to an accredited Certification body and to the RSPO technical Director any clearance for expansion after 2005 without prior HCV assessment on land under their control, or else state in writing that no such clearance exists. To be eligible for certification, growers must develop compensation proposals, approved by a Compensation Panel, for all non-compliant clearance.'	Will growers with a number of subsidiary companies that have disclosed an issue of clearance prior to an HCV assessment in one subsidiary company be able to proceed with certification in accordance with their time bound plan for other subsidiary companies where there are no issues of clearance prior to an HCV assessment whilst they are developing their compensation proposal and getting this approved? Based on experience to date the development and approval of a compensation proposal is likely to take a long time, particularly if lots of cases are brought to the RSPO at the same time. It would therefore be a good idea to allow companies with compensation issues in some subsidiaries to continue with the certification process in other subsidiaries as long as they have disclosed all cases of clearance without a prior HCV assessment in writing, can demonstrate changes to the relevant SOPs and are pro-actively

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		(Sophie P.) Request for clarification: 'any clearance for expansion after 2005 without prior HCV assessment' – for land cleared prior to the introduction of the new plantings procedure and the list of RSPO approved HCV assessors it is not very clear in the RSPO P&C as far as I am aware whether or not it is acceptable for a company to conduct an HCV assessment internally if they have the expertise (eg. Conservation/Com Dev department) or whether this needs to be done by an external/independent party in order to be acceptable.	progressing with their compensation proposal. Please could this be clarified as this could be very important in determining whether or not an HCV assessment was done prior to land clearing or not.
Page 4	**Section 6 Landuse change analysis**	(Sophie P.) In relation to this statement: 'Identifying all individual cases of land clearance after first of January 2006 without prior, adequate HCV assessment'	Need to define what is meant by an 'adequate' HCV assessment. Relating to my point above, would an HCV assessment conducted by an internal team be considered to be adequate?
Page 4	**Section 6 Landuse change analysis**	(Sophie P.) '6.2. Any loss of HCV 4-6 shall be identified and assessed through dialogue with affected stakeholders and communities.'	Determining stakeholders/communities which have been genuinely affected in retrospect is going to be extremely challenging, particularly if consultation is carried out over 7 years after the clearance took place. The RSPO is going to need to provide some guidance to assist companies to do this in a transparent and fair way that reduces as far as possible the potential for opportunistic/false claims by communities.
Page 5	**Section 6 Landuse change analysis (Coefficient 0.7)**	(J Payne) I know this issue has been debated before, but as it stands with current wording, we have no guidance on how to assign logged old-growth forests; this is a wording that I suggest; it has to be subjective; there is no wording that can provide a sharp differentiation; and we cannot risk adding more categories.	Secondary closed forest with even canopy *and heavily logged forests where few or no original high canopy tree remain*
Page 4-5	**Section 6 Landuse change analysis (Coefficient)**	(Anne R) It is very difficult to distinguish different types of forest with remote sensing. It is doable. Min of forestry , ICRAF and SarVision all have several forest classes. However, the confusion matrix between different forest classes is high and you need experts to do this. In addition there is also no definition of primary	1.0 a) IFL (intact forest landscapes) in 2010; b) < 100 m from stream or river 0.7 a) IFL in 2005 but not in 2010 0.2 a) IFL in 2000 but not in 2005 and 2010 b) forest not ever IFL

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		forest or secondary forest. I would propose to make the classification simpler and based on measurable GIS analysis 1. Use intact forest landscape. This has a definition and maps exist for 200, 2005, 2010. See (http://www.intactforests.org/) In summary: - A territory which contains forest and non-forest ecosystems minimally influenced by human economic activity, with an area of at least 500 km2 (50,000 ha) and a minimal width of 10 km (measured as the diameter of a circle that is entirely inscribed within the boundaries of the territory). 2. Use remote sensing 2005 tree cover percent > 30% to classify all types of forest 3. The difference between 2 and 3 is secondary or degraded forest 4. There is a GIS layer of river streams. It is illegal anyhow to plant something less than 50 m from a stream and 100 m from a river. So easy GIS exercise is to make a 100 m buffer around streams and rivers. It is not really important what land cover there is, forest or not else.	0 a) Not forest not IFL
Page 5	**section 6 Landuse change analysis**	(Sophie P.) 60 days is not enough time to complete the analysis and get it validated by an approved HCV assessor as this is likely to require the grower to identify external consultants and there is likely to be high demand for this work once the Compensation Mechanism comes into force.	This should be changed to 90 days or longer.
Page 5	**Section 7 Compensation for HCV4-6**	(Sophie P.) There is a need for further definition as to what 'adequate' compensation for the loss of HCV 4-6 would be - 'provide adequate compensation for loss of HCV 4-6'	It would be helpful to state the evidence that would need to be provided for it to be accepted that no HCV4-6 was lost.
Page 5	**Section 8**	(J Payne) small thing but to avoid unnecessary debate or query over	In addition to compensating communities for loss *(if any)*

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	Calculating conservation liability	whether or not all sites have HCVs 4, 5 or 6 (J Payne) maybe a missed something, but this wording seems to imply that all sites will have HCV 4, 5 or 6, and that the HCV 1, 2 or 3 compensation is an add-on, so I suggest just delete "additional" (J Payne) maybe this is clarified elsewhere, but it is good to have it explicit here also	of HCV 4-6, growers in control of areas cleared without prior HCV assessment after 2005 are required to make ~~additional~~ contribution (s) to biodiversity conservation on site or off site. The total conservation liability depends on when lands were cleared, by whom and for what purpose, *and on the quality of the vegetation at time of clearance.* The liability, expressed in numbers of hectares set aside or managed primarily to conserve biodiversity, is calculated using the below table
Page 6	**Section 8** **Calculating conservation liability (matrix)** **Non-member, between 2006-NPP**	(J Payne) One view was that this has to be "Sum of: all areas cleared commercially without prior HCV assessment X their year 2006 vegetation coefficient(s)" because (a) when a company buys something, it buys all its liabilities as well as its assets, and (b) companies get others (so-called "local community" to do the dirty work, then deny responsibility. Another view (from me in 2011) was "No liability" because (a) the person who commits any act (e.g. clears the land) takes ultimate responsibility, as in all human endeavours unless they are deemed mentally unfit, and (b) this is an NGO concession / compromise/ tactic to companies operating in confusing times (especially in Indonesia) (= "give them a break"). I will not argue either way anymore. Can see both viewpoints.	Sum of: all areas cleared commercially without prior HCV assessment X their year 2006 vegetation coefficient(s)" Or No liability
Page 6	**Section 8** **Calculating conservation liability (matrix)** **Non-member, future clearance after implementation of guidance**	(J Payne) difficult one, but to make life simple, probably either (if we are bothered about deliberate scams) either "Twice the sum of: all areas cleared without prior HCV assessment" or if we feel more lenient, "Sum of: all areas cleared commercially without prior HCV assessment X their year 2006 vegetation coefficient(s)" (J Payne) if we have such a mechanism, it will also be good in that the company is not forced to work with a government agency (unless it wants to), while non-performing and underperfming NGOs will evetually get shown up in public. Hopefully, serious	Twice the sum of: all areas cleared without prior HCV assessment Or Sum of: all areas cleared commercially without prior HCV assessment X their year 2006 vegetation coefficient(s)

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		companies will be drawn to make agreements with the better NGOs, and vice versa. If a company feels forced to make an agreement with a government agency, the public complaint mechanism can be used to expose weak, incompetent and corrupt government agencies. All these sorts of things can be subveretd and abused (e.g. a non-serious company can pay off a useless NGO to do crap work), but at least it's worth a try. If the compensation involves protection, maintenance, improvement or re-establishment of a specific forest or land area, it will be difficult to cover fake work and failure over the long term.	
Page 6	**Section 8 Calculating conservation liability (matrix)** **RSPO certified producer, between 1st Jan 2010 until EB approval of HCV Compensation Procedure**	(Sophie P.) For land cleared by an RSPO certified producer at the time of clearance between 1st Jan 2010 until EB approval of HCV Compensation Procedure I think this should be 'Twice the sum of: all areas cleared without prior HCV assessment' X the vegetation co-efficient? At present the vegetation co-efficient is not taken into account.	'Twice the sum of: all areas cleared without prior HCV assessment' X the vegetation co-efficient'
	Section 8 Calculating conservation liability (matrix) **RSPO certified producers, after approval of compensation procedures**	(Sophie P.) For land cleared by an RSPO certified producer at the time of clearance after EB approval of the HCV Compensation Mechanism I'm not sure that restoration of the native vegetation would always be possible or provide the best conservation outcome.	I think there also needs to be the option of conserving alternative areas where restoring the natural vegetation is unlikely to be effective or provide a good conservation outcome.
Page 7	**Section 9 Monetary equivalent of hectares for conservation**	(J Payne) if we have such a mechanism, it will also be good in that the company is not forced to work with a government agency (unless it wants to), while non-performing and underperforming NGOs will eventually get shown up in public. Hopefully, serious companies will be drawn to make agreements with the better NGOs, and vice versa. If a company feels forced to make an agreement with a government agency, the public complaint mechanism can be used to expose weak, incompetent and corrupt	

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		government agencies. All these sorts of things can be subverted and abused (e.g. a non-serious company can pay off a useless NGO to do crap work), but at least it's worth a try. If the compensation involves protection, maintenance, improvement or re-establishment of a specific forest or land area, it will be difficult to cover fake work and failure over the long term.	
		(Gan LT) Monetary compensation must be discouraged as it will encourage 'clear and pay later' and defeat the purpose of conservation. Also monetary compensation has deep and broad implications on governance practices, management of funds and other ramifications.	The RSPO must be consistent in its principle of not infringing with the anti-trust laws and should not get itself involved in monetary or financial deals.
Page 7	**Section 9 Monetary equivalent of hectares for conservation**	(Glen R.) I fully agree that any compensation will have to involve payments on an area basis - and am at a loss to understand why this is an issue and/or what possible alternative there would be to a financial transaction. I'm not at all expert in this field, but the formula suggested by Andrew Hamilton (ref. Catherine's email of the 7th February) seems eminently sensible to me. Personally, I don't feel strongly whether payments are front-loaded or amortised (if that's the correct term) over the production cycle. Being pragmatic, and assuming growers would prefer the latter, I don't see a huge issue with annual payments.	
Page 7	**Section 9 Monetary equivalent of hectares for conservation**	(Catherine C.) This idea came from my consulting with our IFC palm oil industry specialist, Andrew Hamilton (who is also the current IFC rep in RSPO). Conversations with Andrew have resulted in an interesting suggestion to use the long term price of CPO that we can get from LMC and multiply by the average yield in SEA or LAC (same) and in Africa (different) and then take a percentage and get a sum to be paid per harvest year for as many years as in production. He suggests the payments can be made per year. I am inclined to use one payment only for the whole cycle. But there would be indeed the issue of when to pay.	Use long term price of CPO that we can get from LMC and multiply by the average yield in SEA or LAC (same) and in Africa (different) and then take a percentage and get a sum to be paid per harvest year for as many years as in production. He suggests the payments can be made per year. I am inclined to use one payment only for the whole cycle

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		So if the LT price is, say $500 per t and average yield is 3t per ha then one could take 5% penalty out of $1500 per year. So $75 per ha per year.	
Page 7	**Section 9 Monetary equivalent of hectares for conservation**	(H. S Barlow) Catherine's formula suggested by Andrew Hamilton looks to me sensible. However we need to go firm on: 1. The percentage. 5% has been used. What is the justification for this? We shall certainly be asked and need to have an answer ready. 2. Presumably the 'fine' will be calculated on the average Palm Oil price each year? 3. The current proposal appears to recommend an annual payment for as long as the offending oil palm stand is not replanted. Say 25 x 75 = RM1,875 per ha over the years. Can this be compounded by an upfront payment? If so, what is the calculation? It then becomes 'a cost of doing business' which gives unscrupulous producers the right to pay a fine upfront and destroy whatever they want. It is hard to see what alternative deterrent would be effective, but we must realize this will be the attitude of the more unscrupulous. 4. Can a producer who is paying a yearly fine reduce his liability by replanting early e.g. after say 16 years, which is quite possible if the original planting was less than ideally laid out and implemented? There is much to be said for early replanting, but avoidance of RSPO penalties should not be one of the reasons!	
Page 8	**Section 11 Approval of compensation proposal**	(John P/) Transparent criteria for when to invoke peer review?	"As part of this process, the Panel will submit the whole or part of the proposal to peer review at the expense of the grower, in any case where at least one panel member is not satisfied that the Panel has the necessary expertise

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			to judge the quality and feasibility of the proposal".
		(John P.) Maximum timeline for review process?	2 months
		(Glen R.) I think we discussed briefly, but which doesn't seem to be explicit in the suggested procedure either in the text or flow diagram - would be the submission of a very brief outline (1 page max) of the proposed compensation to the Compensation Panel for preliminary approval (with a fast turnaround - I would suggest 2 weeks from submission) before the grower is invited to submit a full proposal - and thus avoid the wasted expense and time in the submission of a total lemon of a compensation plan. I would emphasise the importance of John's point 6 (explainability) below – The whole compensation proposal that we collectively recommend needs to be explainable in a short written summary, along the above lines (current text and comments are great for us and the RSPO archives, but inappropriate for when we spring this on to the public globally) not just in respect of external scrutiny and publicity, but by the industry itself. If whatever we propose seems to complex, and cannot be adequately explained and justified in a paragraph or two, it probably is too complex.	Submission of a very brief outline (1 page max) of the proposed compensation to the Compensation Panel for preliminary approval (with a fast turnaround - I would suggest 2 weeks from submission) before full proposal submission.
Page 7	**Section 11 Approval of compensation proposal** **Peer review**	There definitely needs to be transparent criteria for when a peer review would be required. This cannot simply be because the Compensation Panel doesn't have the necessary expertise to make an effective judgement. It should be rare that a peer review would be required.	
Page 7	**Section 11 Approval of compensation proposal**	'Once proposals are approved by the Panel, temporary suspensions will be lifted allowing growers to proceed with applications for membership and /or certification.'	It needs to be made clear earlier on in the document in which situations members will be temporary suspended/prevented for continuing with certification of other subsidiaries etc.

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Remote Sensing Guidance (draft 3)			
Page no.	**Subject**	**Comment**	**Suggestion**
General		(Anders Lindhe) Too long and detailed to be included as an annex in the Procedures.	Suggest to present as a separate methodology document (it would be good to give it a language check and possibly do both some editing and lay-outing as part of the finalisation process.
General		(Anders Lindhe) The sheer volume and technical complexity may turn off others than remote sensing specialists	It may be useful to provide a popular summary (and maybe include that as an annex in the procedures) to give less specialist readers an idea of what the methodology implies).
6	Image interpretation	(Gan LT) Landsat satellite data required is January 2006, while the data available on http://glovis.usgs.gov/ is February 2006 with a high level of cloud cover. We found an average of 69% of the areas assessed. The large cloud cover would affect interpretation and estimation of land cover which would have serious implication on the accuracy of the outcome final result. We are found a large number of GAP in Satellite Landsat ETM 7 in February 2006 image. We found an average of 15% of the areas is with GAP. These GAPs constitutes 'missing data' and will lead to either over or under estimation of landuse depending on how these GAPs are filled up.	RSPO to provide guidelines on how to extrapolate from cloud covers and guidelines on how to fill the GAP in Landsat ETM 7 in the estimation of land use
3	Co-efficient	(Gan LT) The FAO definition of forest cover in Annex 1 of the "RSPO compensation procedures related to land clearance without prior HCV assessment (Third draft 2013-01-12)" specifically excludes stands of trees established primarily for agricultural production and trees planted in agroforestry system in the definition. However, in Table 3 on coefficient, rubber plantation and agroforestry are included in the FAO definition of forest cover. Rubber and agroforestry should be removed from this row which has a coefficient of 0.4. Agriculture land and agroforestry should have a zero coefficient as these lands have been cleared much earlier for cultivation and the values of HCV would have been lost long ago.	Agriculture land and agroforestry should have a zero coefficient as these lands have been cleared much earlier for cultivation and the values of HCV would have been lost long ago.

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		The compensation mechanism cannot work unilaterally, in isolation and not consistent with the accepted definition of forest covers. It should be guided by what it believes when using the FAO definition of forest covers in Annex 1 of the guidance document. Also in the GHG WG2 document, land with agricultural crops or cultivated areas are recommended to be included in the expansion of oil palm. The compensation task force should not define its own criteria in contradiction to the outcome of the other working group within the RSPO. There must be consistency within the RSPO standards.	
3	Co-efficient	(Sophie P.) Table 3 should not include Agroforestry or crop plantations either in the categories of land cover that are listed as meeting the FAO definition of forest because in the definition of this it says that these categories of land cover are specifically excluded: 'The term specifically excludes stands of trees established primarily for agricultural production, for example fruit tree plantations. It also excludes trees planted in agroforestry systems.'	
3	Co-efficient	A co-efficient of 0.4 is too high for areas that meet the FAO definition of forest. I would have thought it is highly unlikely that crop plantation, agroforestry or timber plantation would support HCV 1, 2 or 3. They would never be classified as HCV2 or 3 and I think it would be very rare that they supported HCV 1.They may support HCV 4 or 5 but this is assessed using a different methodology so is not relevant to the land use change analysis.	I would suggest that a review of HCV assessments is carried out to determine the frequency that categories of land cover that meet the FAO definition of forest have been identified to support HCV 1-3 to date. This would provide a logical basis for determining the compensation co-efficient.
6-12	Image interpretation	The process and the method recommended for use is a common and easy methodology to understand (for those who have training on satellite image interpretation). We tested the RSPO methodology and guidance in interpretation based on the satellite images to examine its accuracy and identify if there are any problems with it. From our test analysis a big flaw is found in areas identified as young disturbed forest based on the definition of the	This is the common problem in interpreting land use from satellite images. It is important that the estimation in areas which will form the basis for calculation of the areas to be compensated must be accurately done. Any mismatch between readings from the satellite images and actual on the ground will lead to debates and arguments. RSPO needs to find ways to circumvent this

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		satellite image. When compare the satellite data with the data from the actual land use, based on the land/vegetation compensation data via the free prior informed consent (FPIC), we found mismatch between the two sets of data. What is derived from the satellite image as young disturbed forests is actually agriculture land (rubber), shrubs and cultivated crops as per the land evaluation via the FPIC process.	problem.
37-40	Ground truthing	Groundthruthing is useful in confirming the land use classification using Landsat Data. However the RSPO proposal does not recognise that land use has changed between 2006 and 2013. Groundthruthing is not possible in 2013 to verify the landuse that existed in 2006, derived from 2006 satellite images.	The land compensation data (practised in Indonesia) via the FPIC process provides historical land use as compensation was on the vegetation that existed on the land at the material time. This is fairly accurate as the inputs are from the local communities whose lands are being purchased and compensated. There are witnesses to the evaluation process and pictorial records taken. We used this data source to cross check the 2006 landuse data from satellite image. In our test assessments, cultivated land (mixed tree crops) showed a fair accuracy between landuse data from satellite images and from the compensation data. The exception is that satellite image that represents young disturbed forest was not correct, as the data from land/vegetation compensation data showed that the same land consisted of agriculture crop, shrubs and cultivated land.

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Annex 3

USING REMOTE SENSING METHODOLOGY FOR HCV COMPENSATION PROXY APPROACH

RSPO Compensation Task Force (CTF)
Park Royal, Singapore – 20th of March 2013

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Objective

Develop Guidance on using Remote Sensing for
RSPO Compensation Procedures Related to Land Clearance without Prior HCV Assessment

Prerequisite : Cheaper Imagery, data available from 1980 until present and enough accuracy

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Imagery data that can be used for compensation approach

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- High Resolution

  Landsat Imagery (TM 4, TM 5, Tm 7)

  (scale 1: 60.000 – 1: 250.000)

  Spot 4

  Rapid eye (1: 50.000), Alos AVNIR, etc
- Very High Resolution

  Ikonos

  Quick Bird, etc

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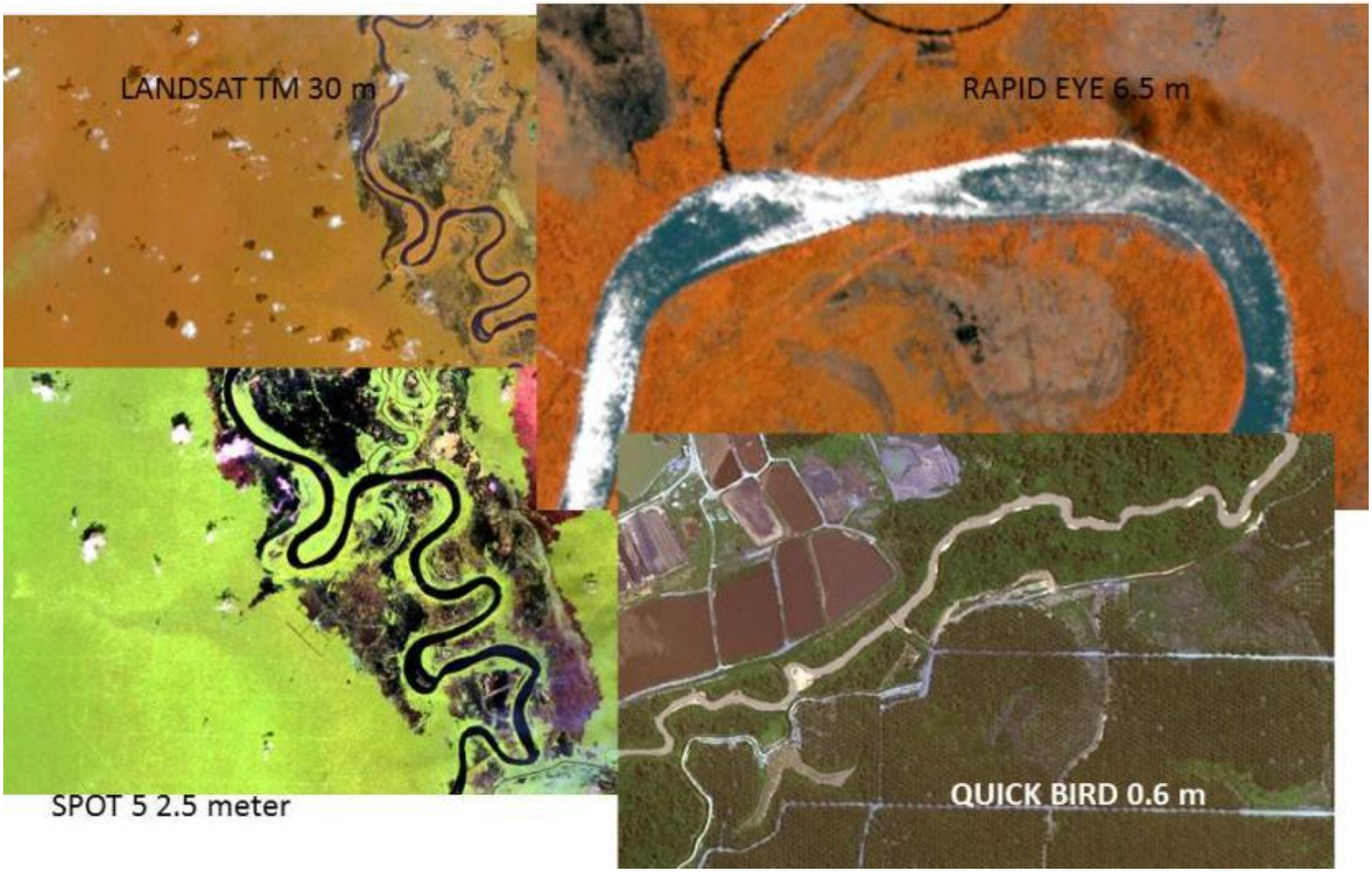
Spatial Resolution of Imagery



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Coefficient of RSPO Compensation PA

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Coefficient	Status of vegetation in February 2006
1.0	a) Legally required set aside areas of riparian and other native vegetation; b) Multi-layered old growth forest, affected by (at most) low-intensity selective logging (< 5 trees/ha?) and/or by long rotation shifting agriculture (> 25 years?); c) Well-developed secondary, closed canopy forest regenerated after logging, fire or other large scale disturbance before (or in) 1980(?).
0.7	Secondary closed canopy forest regenerated after logging, fire, other large scale disturbances, and/or short rotation shifting agriculture after 1980 .
0.4	Other areas with trees that meet FAO's forest definition (>10% canopy, > 5 m tall trees).
0	Areas that do not meet any of the above definitions.

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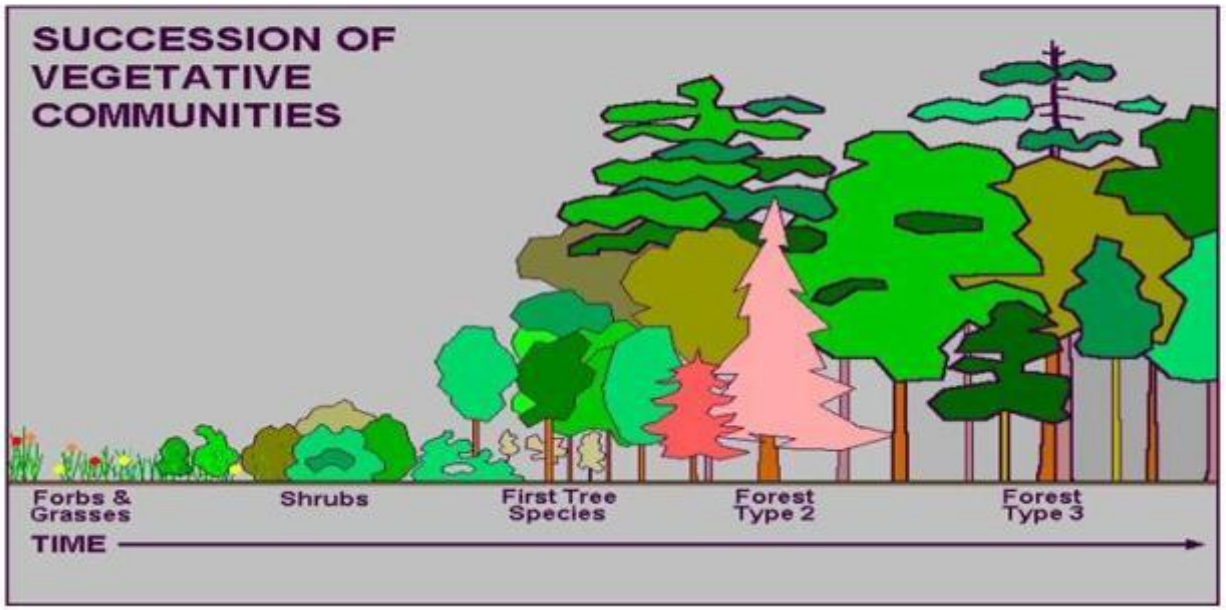
Forest Growth

- Disturbed forest will grow (forest succession) toward a climax
- After 26 year, disturbed forest has biomass content that almost similar with undisturbed forest (primary forest). (see Dharmawan, 2012)
- We assumed that old forest class is forest that has been experiencing disturbance more than 13 years ago and no disturbance ever since, to date.



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Land Cover Classification used by GHG-WG 3

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UDF	Undisturbed Forest	Natural forest, highly diverse species and high basal area; logging roads absent; often with hilly and mountainous terrain; assumed to have a canopy cover >80%.
DIF	Disturbed Forest	Same as above, but with evidence of logging, including roads and small-scale clearings typical of logging platforms
USF	Undisturbed Swamp Forest	Natural forest featuring temporary or permanent inundation,
UDM	Undisturbed Mangrove	Forest habitat near coast with high density of mangrove tree species; featuring temporary or permanent inundation, as .
DSF	Disturbed Swamp Forest	Same as 3, but evidence of logging, canals or small-scale clearing.
DIM	Disturbed Mangrove	Same as category 4, but with evidence of logging or small-scale clearing.
CPL	Crop Plantation	Large industrial estates planted to rubber (*Hevea brasiliensis*), typically greater than 100 hectares.
OPL	Oil Palm Plantation	Large industrial estates planted to Oil Palm with easily distinguishable patterns of plant rows and internal road network; typically greater than 100 hectares.
TPL	Timber Plantation	Large industrial estates planted to timber or pulp species (typically greater than 100 hectares) (e.g. *Gmelina* sp., *Paraserianthes falcataria, Acacia mangium*); typically greater than 100 hectares; canopy cover is around 30-50%.
MTC	Mixed Tree Crops	Agroforest, usually located 0.5-1 km of settlement or road; canopy cover between 5 and 60%; assumed to be small-scale plantings of commercial species, such as rubber coffee, cocoa and citrus, as well as a broad class of fruit producing species as part of a home garden, as well as secondary regeneration of forest habitat.

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SCH	Shrub land	Woody vegetation usually less than 3-6 m in height; genesis often due to swidden agriculture activities or a combination of logging and wildfire.
SSH	Swamp Shrub land	Woody vegetation usually less than 5-6 m in height, in areas subject to temporary or permanent inundation.
GRS	Upland Grassland	Extensive cover of grasses with scattered shrubs or trees.
SGR	Swamp Grassland	Extensive cover of grasses with scattered shrubs or trees in inundated area.
DCL	Dry Cultivation Land	Open area characterized by herbaceous vegetation with evidence of being intensively managed for row crops or pasture; typically associated with human settlements.
SET	Settlements	Villages, urban areas, harbors, airports, industrial area, open mining; typically associated with road network.
RCF	Rice Field	Open area characterized by herbaceous vegetation and other attributes characteristic of a rice paddy, such as seasonal or permanent inundation, reticular patterns of dikes, irrigation canals and association with human settlements; featuring temporary or permanent inundation, as evidenced in band 4.
CFP	Coastal Fish Pond	Permanently inundated open areas with reticular patterns in coastal areas; featuring temporary or permanent inundation, as evidenced in band 4..
BRL	Bare land	Bare rock, gravel, sand, silt, clay, or other exposed soil; includes recently cleared (deforested) areas, landscapes impacted by fire and portions of estates undergoing replanting procedures.
MIN	Mining	Open area with surface mining activities.
WAB	Water bodies	Water bodies; identified in satellite images by high absorbance in all spectral bands; featuring temporary or permanent inundation, as evidenced in band 4.
NCL	Not Classified Cloud	Not classified including Cloud cover.

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Land Cover Classification based on Coefficient of RSPO CPA

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Coefficient Factor		Land Cover Class	Note
1.0		1.a Riparian Forest and other native vegetation	Forest on river and lake sides
		1.b Undisturbed Forest (Dry Land, Swamp and Mangroves)	
		1.c Disturbed Old Forest (Dry Land Forest, Swamp Forest, Mangroves)	Forest that disturbed by logging activity before 1995
0.7		Disturbed Young Forest (Dry land Forest, Swamp Forest and Mangroves)	Forest that disturbed after 1995 and still forest until land clearing for oil palm
0.4		Crop Plantation (Rubber Plantation and others) connected to 0.7	N/A
		Mixed Tree Crop (Agroforestry)	
		Timber Plantation connected to 0.7	
0		Crop Plantation (Rubber Plantation and others) NOT connected to 0.7	N/A
		Timber Plantation NOT connected to 0.7	

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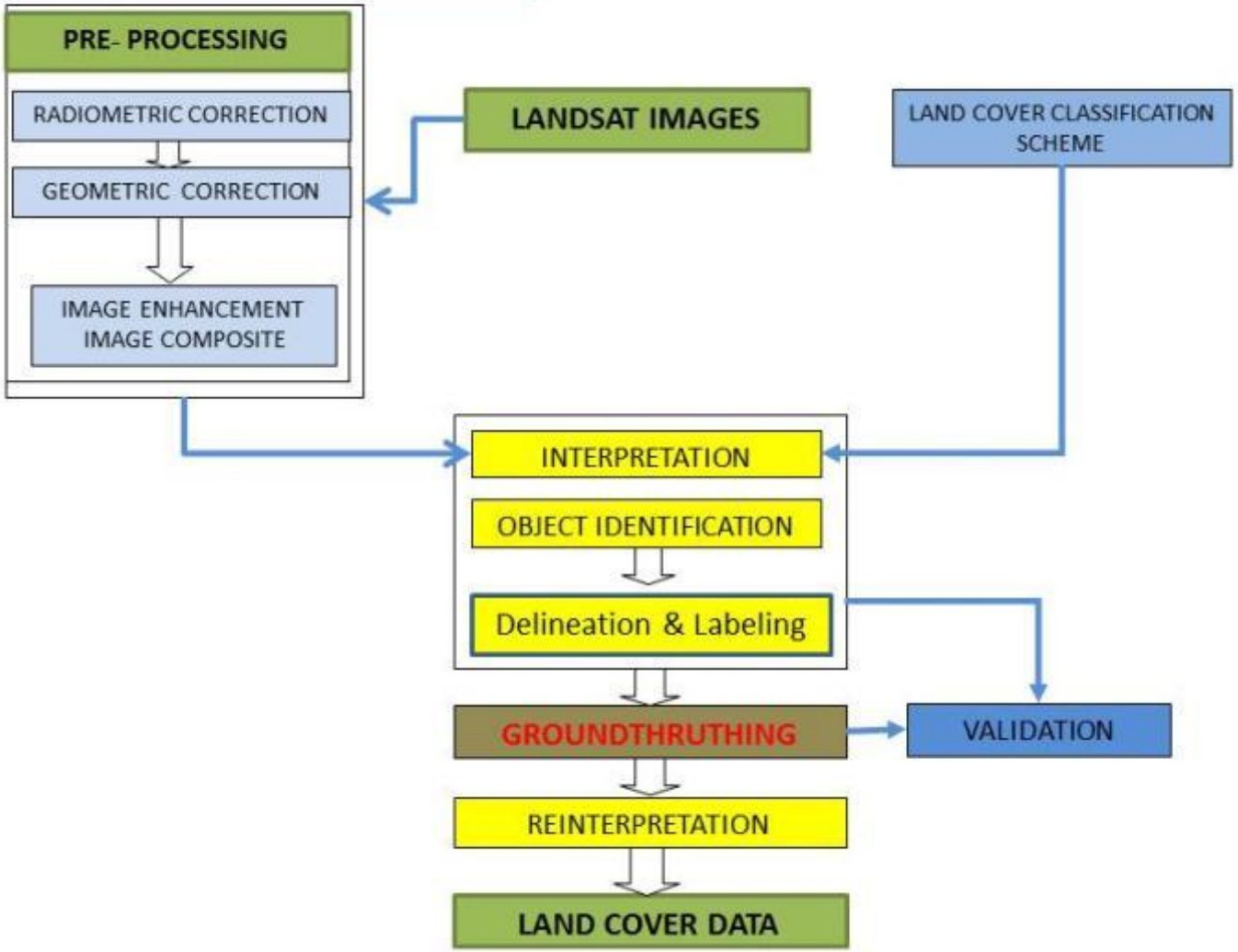
Framework for Land Cover Analysis



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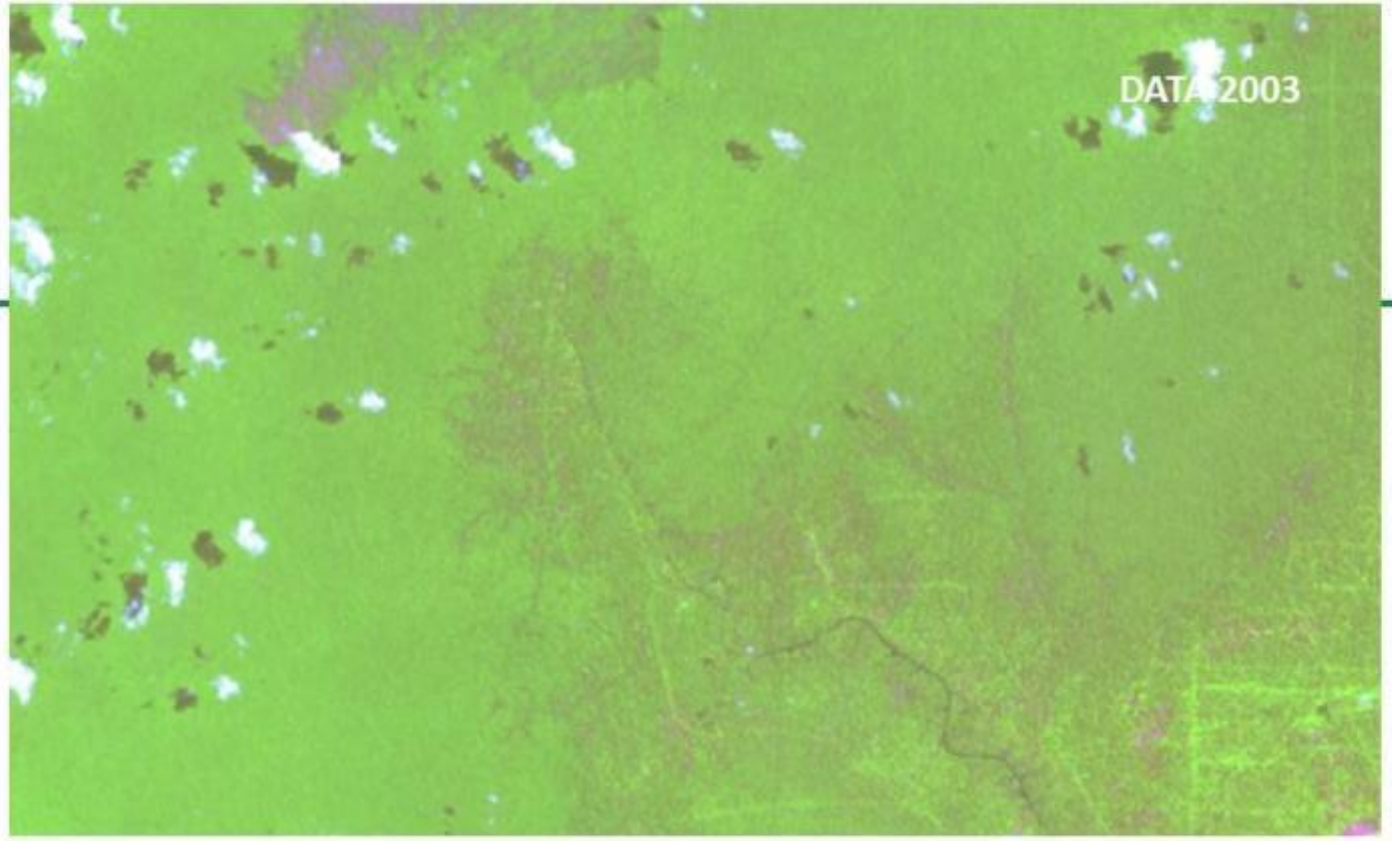
Some times we need not just one satellite images to identify the current landcover



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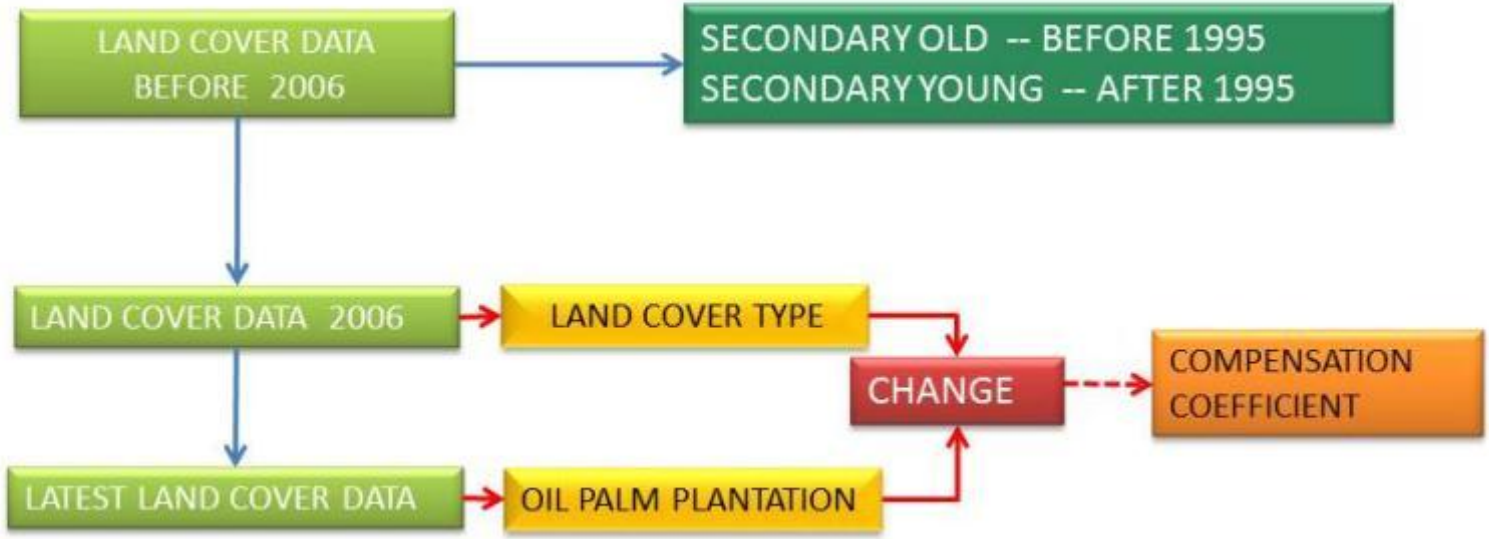
Frame work analysis of Compensation Coefficient



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Compensation Coefficient 1.0

Undisturbed Forest 2006 (February) ----- Oil Palm (after February 2006)

Old Disturbed Forest 2006 (February) ----- Oil Palm (after February 2006)

Forests on river sides or around lakes
(Riparian Forest 2006) ----- Oil Palm (after February 2006)

<u>Forest area on river sides (riparian forest)</u>

- Land cover delineation on river sides of a Unit Management using Image data of Remote sensing before 2006, 2006, and the latest data.
- If we found land cover change to oil palm area after 2006, the Management unit has to compensate as required and using coefficient 1 a.
- Based on existing regulation, in Indonesia 100 meter (for large river) and 50 meter on a smaller river has to be protected and designated as local protected area.

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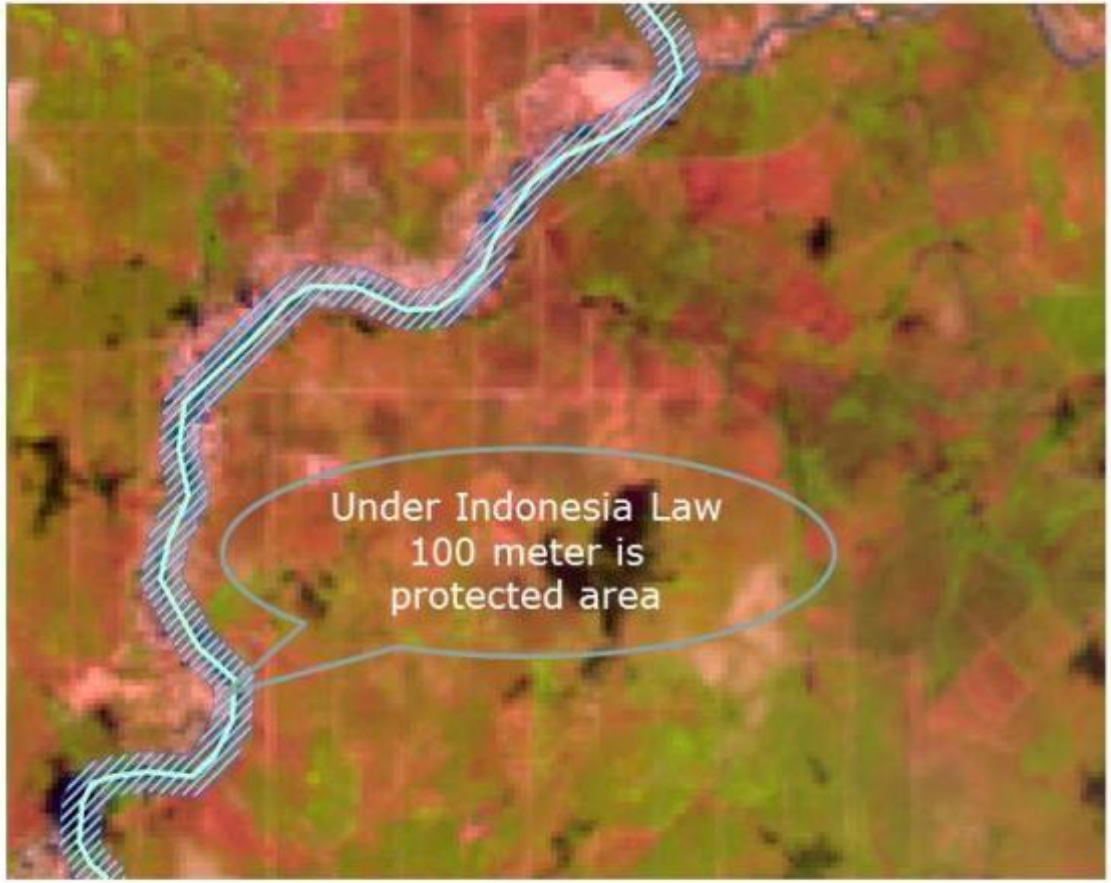
Riparian Area (Forest open for oil palm --- coefficient 1.0)



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Coefficient 1.0

Primary forest and secondary closed forest with uneven canopy (Undisturbed/Old Disturbed forest)

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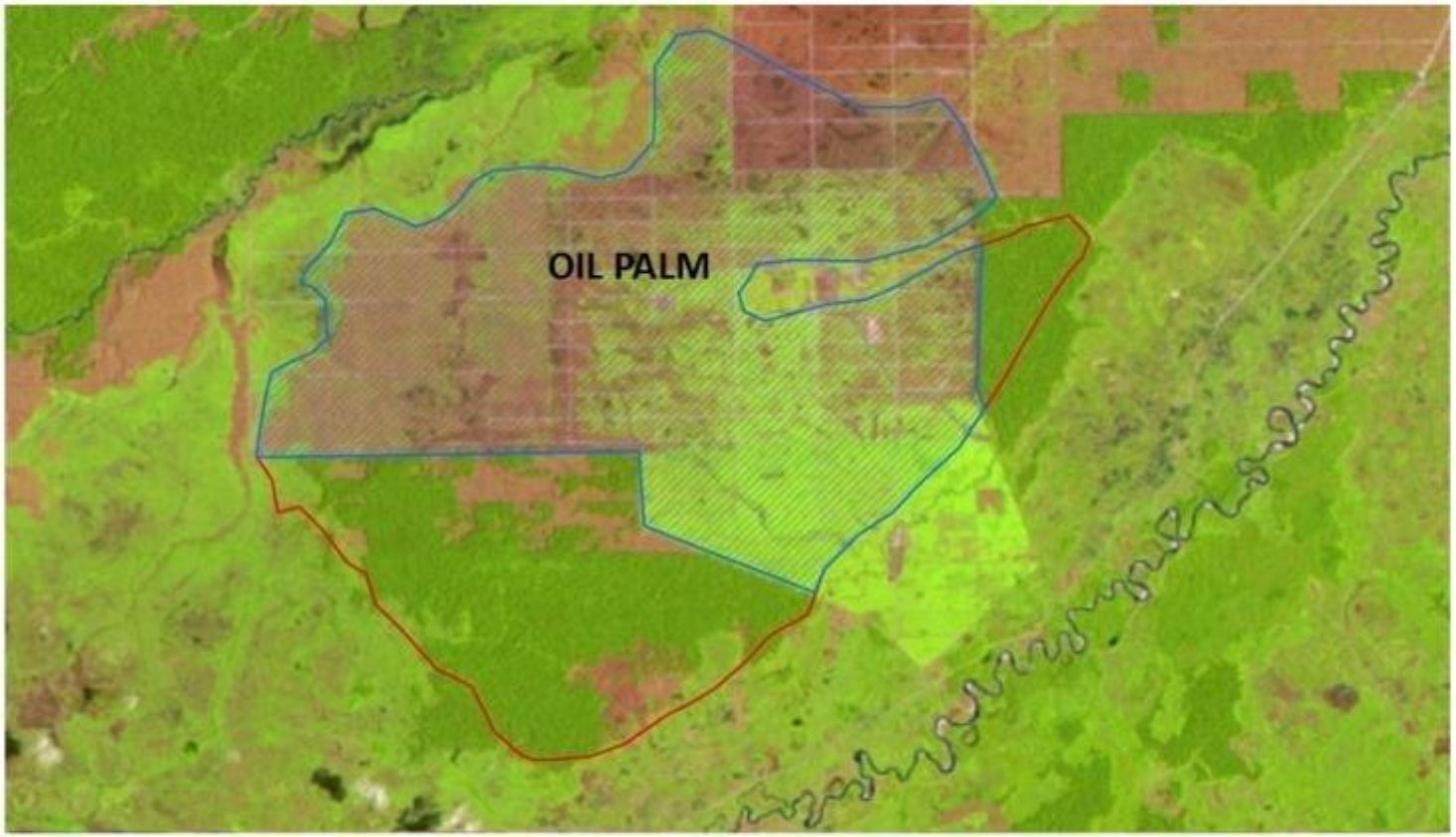

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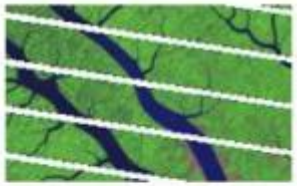
Coefficient 0.7

2.1 **Young disturbed Forest**

2.1.1 Young disturbed Upland Forest

2.1.2 Young disturbed Swamp Forest

2.1.3 Young disturbed Mangroves



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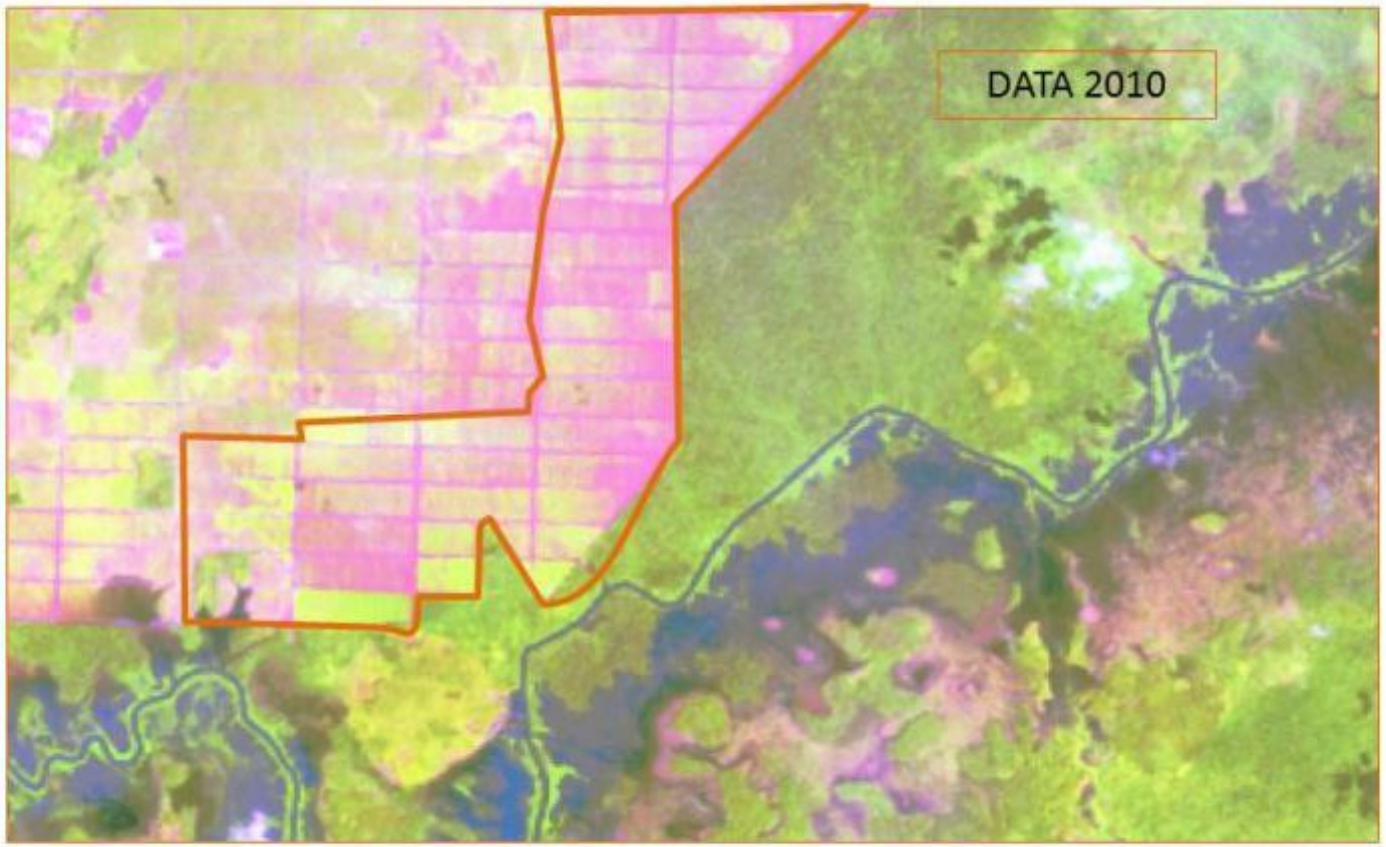
Coefficient of 0.7
Young Disturbed Forest in (2006)



Sample : Young disturbed swamp forest to oil palm

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COEFFICIENT 0.4

3.1 Rubber Plantation or Others Plantation

3.2 Timber Plantation

3.3 Mixed Tree Crop

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Roundtable on Sustainable Palm Oil

RSPO Secretariat Sdn Bhd
Company No.: 787510-K
Unit A-33A-2, Level 33A, Tower A
Menara UOA Bangsar,
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Malaysia

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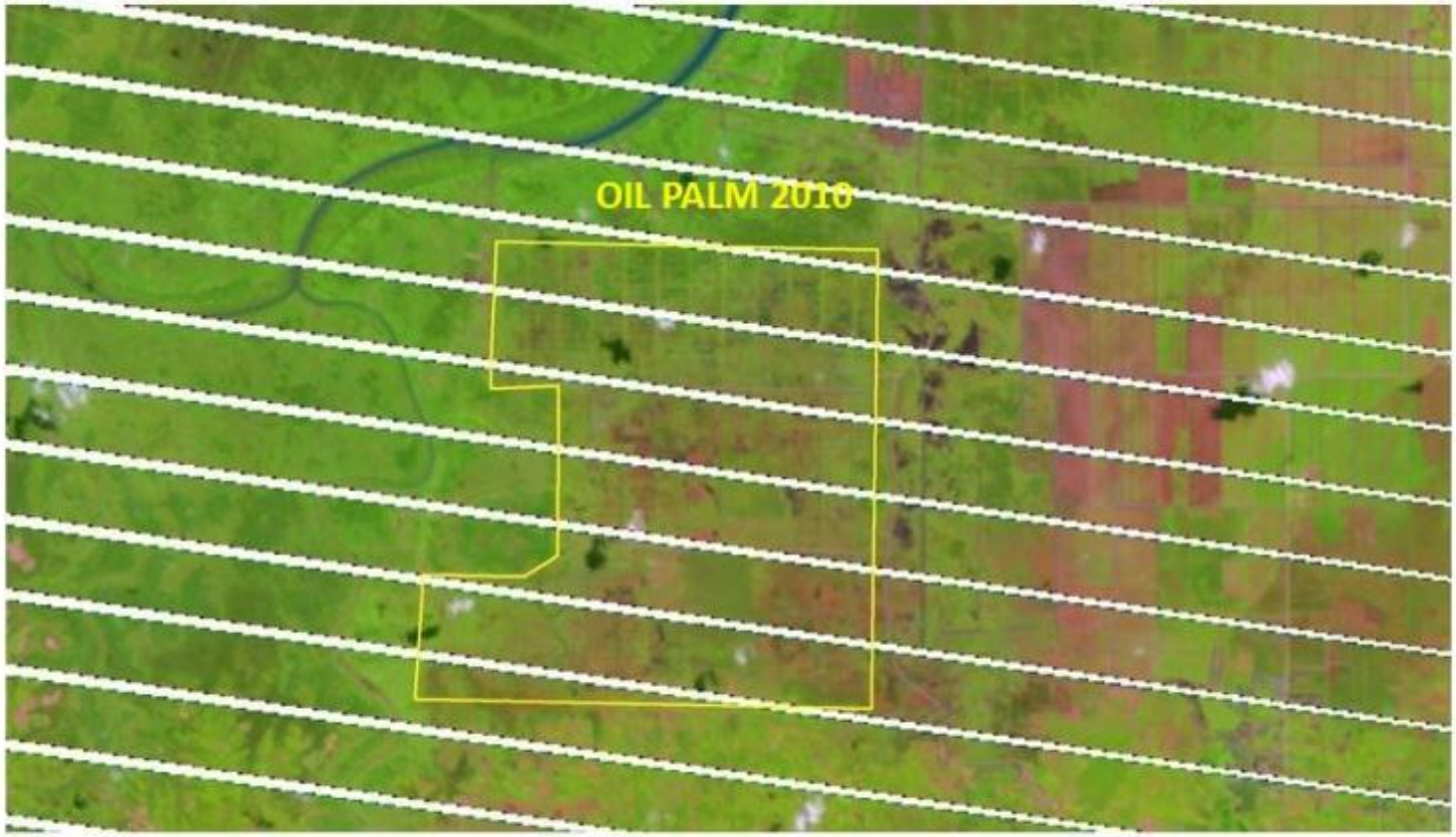
Fax : +603 2201 4053
Email : rspo@rspo.org

TROPENBOS INTERNATIONAL
Indonesia

Rubber plantation to oil palm



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COEFFICIENT 0

4.1 Shrub

4.2 Swamp Shrub

4.3 Annual Upland Cultivation

4.4 Grass

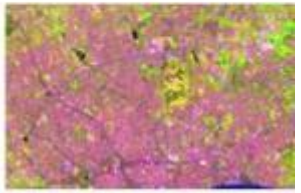
4.5 Rice Field

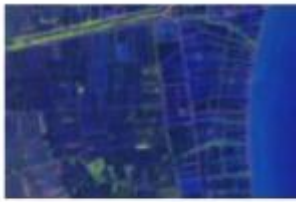
4.6 Bare Land

4.7 Settlement

4.8 Coastal Fish Pond

4.9 Mining





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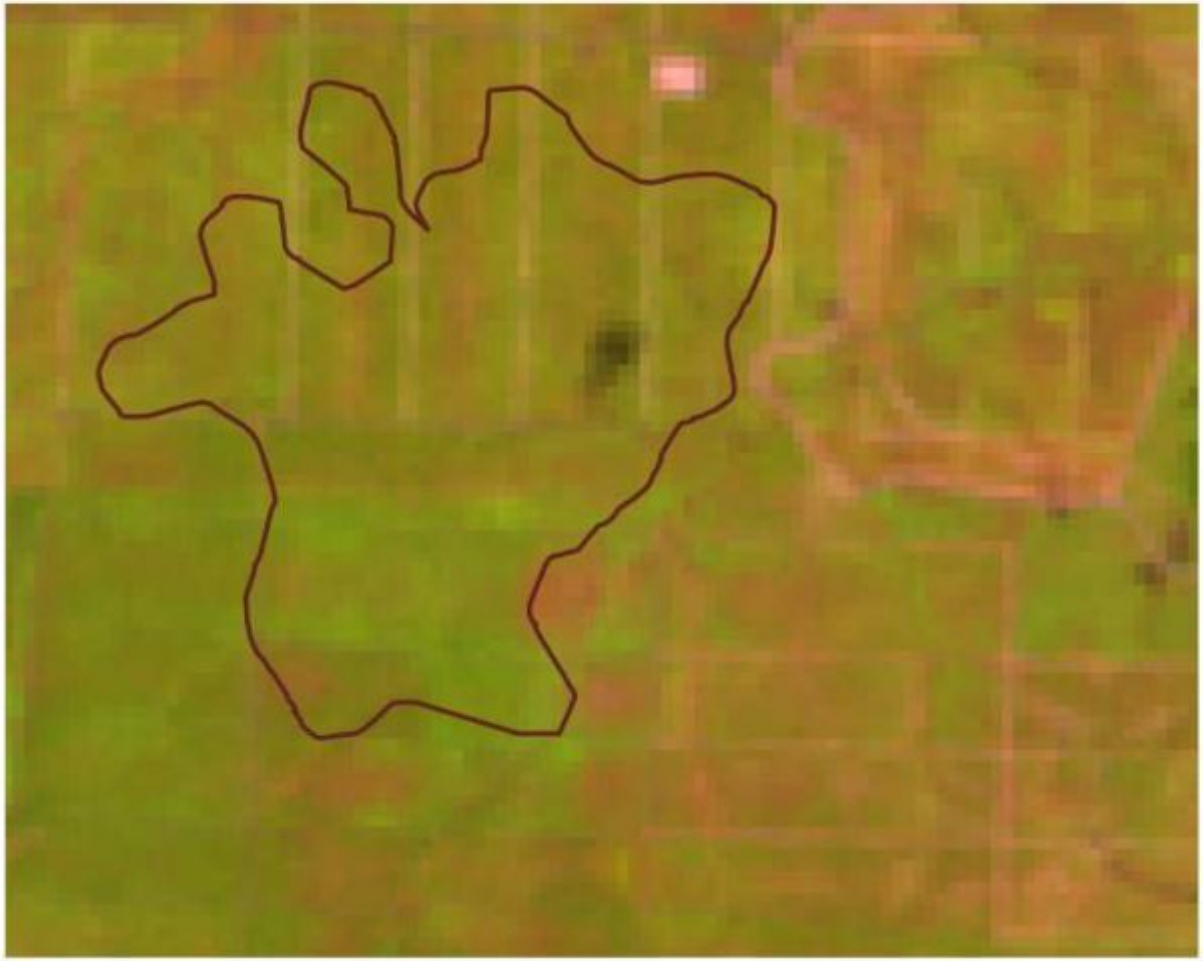
Coefficient 0 shrubs to Oil Palm



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Closing Question

Why don't we use the existing information that currently available with RSPO?

From the GHG Working Group 3 on Land use Change we have provided shape files of the map for Indonesia, Malaysia, and Papua New Guinea from 1990 – 2010.

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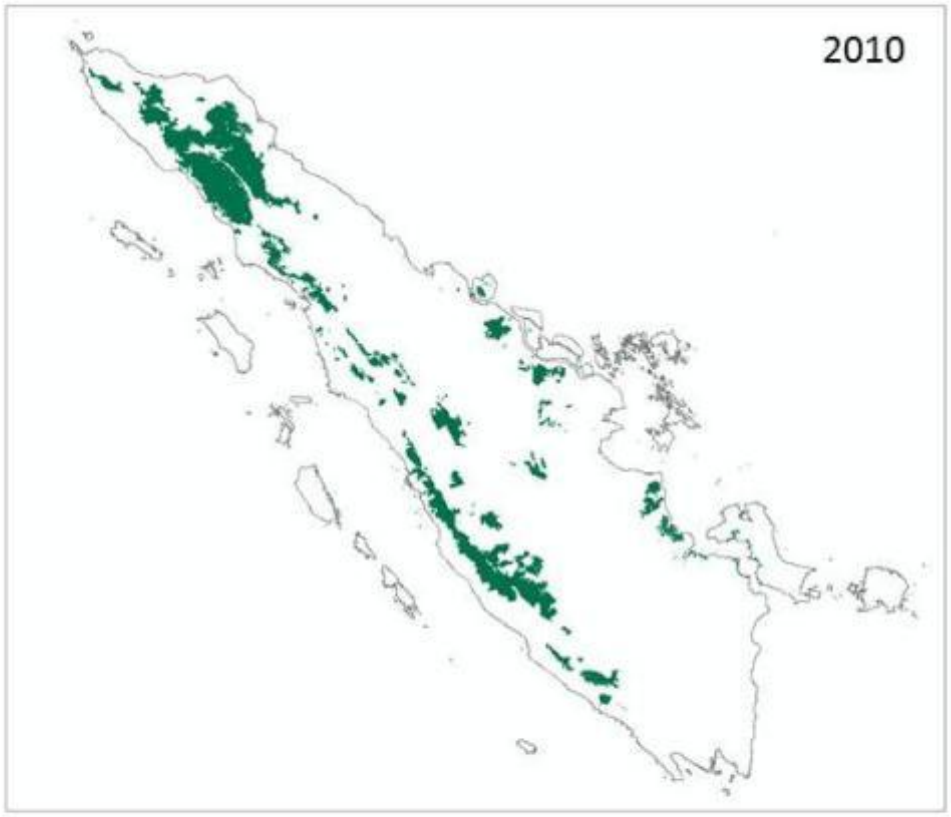
Undisturbed (Primary) Forest in Sumatra 2000-2010



2000 - 6.507.495 Ha

2005 - 6.034.364 Ha

2010 - 5.489.412 Ha

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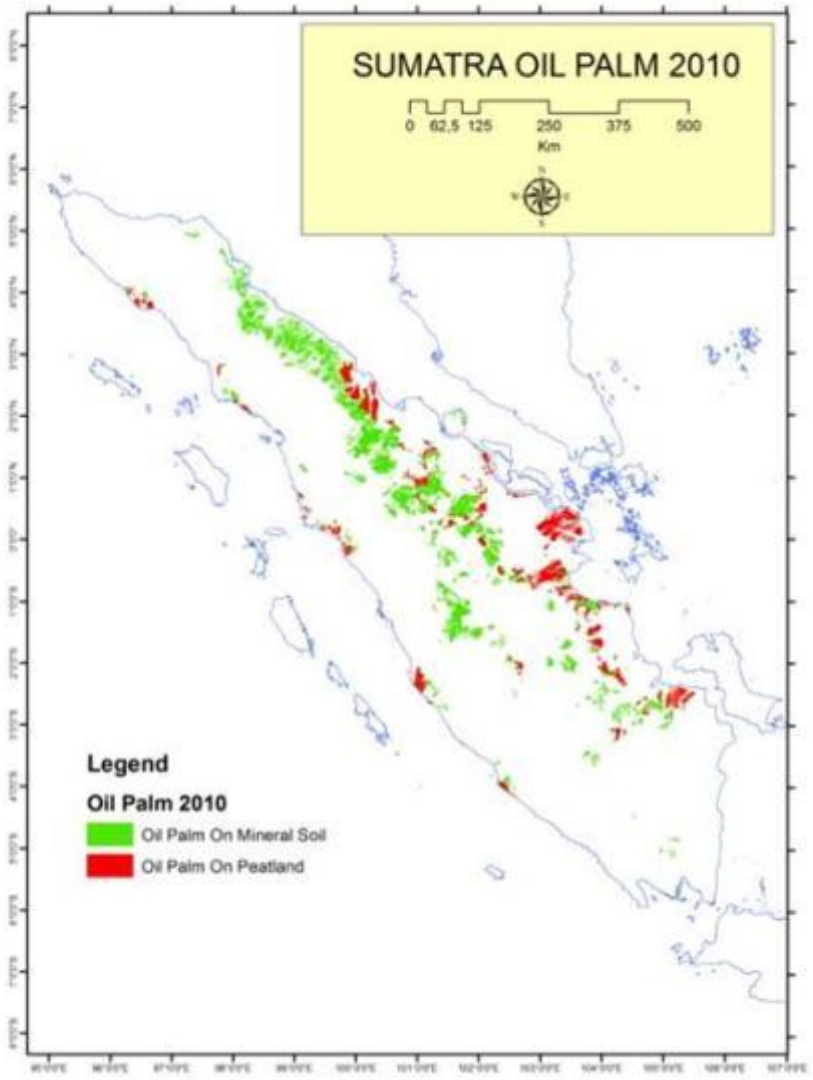
Oil Palm Development in Sumatra 1990 -2010



Total Oil Palm :

1990	958,000 ha
2000	2,893,000 ha
2005	3,990,000 ha
2010	4,743,000 ha

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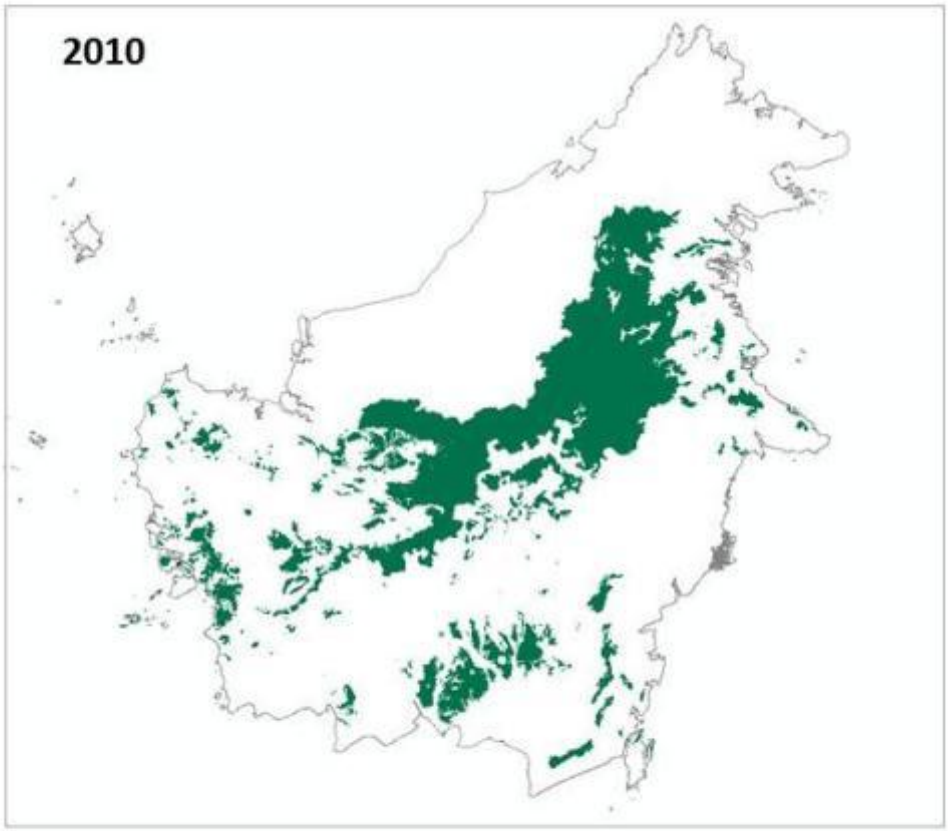
Undisturbed (Primary) Forest in Kalimantan 2000-2010



2000
16.923.560,44
2005
15.575.166,46
2010
14.070.935,95

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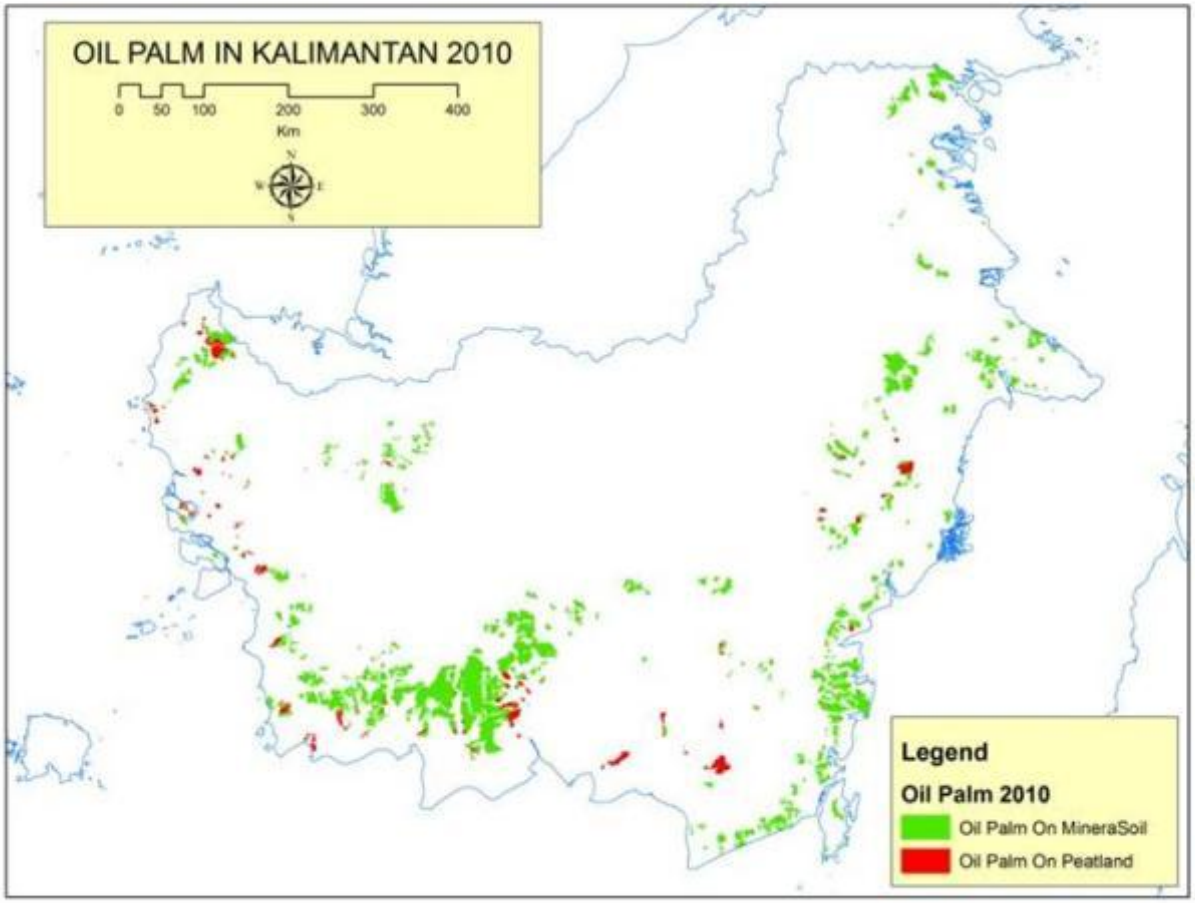
Oil Palm Development in Kalimantan 1990 -2010



Total Oil Palm :

1990	85,000 ha
2000	737,000 ha
2005	1,096,000 ha
2010	2,897,000 ha