Annex 8.1. Sample based estimates of area (ha) of deforestation and forest degradation for each pair of land cover maps

Land cover maps exist for the years 2006, 2009, 2011, 2012, 2013, 2014, 2015, and 2016. The tables below show the transition for deforestation (forest condition to non-forest condition) and for forest degradation (primary forest condition to secondary forest condition) for each adjacent pair of map years. These estimates reflect the final sample-based estimates of area developed following application of the accuracy assessment of the 2006-2016 change (see Annex 12.1, Estimation of Uncertainty of Activity Data) for details. The data in these tables represent the detailed Activity Data which were combined with the respective Emission Factors to derive estimates of emissions for deforestation and forest degradation.

The row and column heads in each table correspond to the 24 classes of land cover/land use mapping:

Forest Classes	Forest Class Code	Non Forest Classes	Non Forest Class Code
Primary dry land forest	2001	Plantation forest	2006
Secondary dry land forest / logged forest	2002	Dry shrub	2007
Primary swamp forest	2005	Wet shrub	20071
Secondary swamp forest / logged forest	20051	Savanna and Grasses	3000
Primary mangrove forest	2004	Pure dry agriculture	20091
Secondary mangrove forest / logged forest	20041	Mixed dry agriculture	20092
		Estate crop	2010
		Paddy field	20093
		Transmigration areas	20122
		Fish pond/aquaculture	20094
		Bare ground	2014
		Mining areas	20141
		Settlement areas	2012
		Port and harbor	20121
		Open water	5001
		Open swamps	50011

DEFORESTATION

Note, the rows and columns in each table are limited to those cover classes where deforestation or degradation occurred in each specific time interval, thus the specific combination of (rows, columns) varies for each table.

Deforestation (Forest to Non-Forest) Transition Matrix for 2006-2009 (ha)										
2006 Forest Class	**2009 Non-Forest Class**									
	2006	**2007**	**2010**	**2012**	**2014**	**20071**	**20092**	**20094**	**20141**	**2006 Total**
2001	-	2,866	-	-	-	-	-	-	-	2,866
2002	945	167,680	74,676	160	34,788	-	7,111	-	7,645	293,005
2004	-	-	3	-	-	146	-	21	-	170
2005	-	-	76	-	-	-	-	-	-	76
20041	-	-	189	13	280	5,277	429	1,270	19	7,477
20051	-	-	283	-	-	1,503	62	-	64	1,913
2009 Total	945	170,546	75,226	172	35,068	6,927	7,602	1,292	7,728	305,507

Deforestation (Forest to Non-Forest) Transition Matrix for 2009-2011 (ha)									
2009 Forest Class	**2011 Non-Forest Class**								
	2007	**2010**	**2012**	**2014**	**20071**	**20092**	**20094**	**20141**	**2009 Total**
2002	37,663	16,326	-	25,418	-	1,827	-	9,586	90,820
2004	-	-	-	36	-	-	-	-	36
20041	-	-	19	100	394	-	85	-	598
20051	-	-	-	1,488	77	446	-	-	2,011
2011 Total	37,663	16,326	19	27,041	471	2,273	85	9,586	93,465

Deforestation (Forest to Non-Forest) Transition Matrix for 2011-2012 (ha)										
2011 Forest Class	**2012 Non-Forest Class**									
	2006	**2007**	**2010**	**2012**	**2014**	**20071**	**20092**	**20094**	**20141**	**2011 Total**
2001	-	3,855	1,583	-	161	-	35	-	-	5,634
2002	1,621	57,202	49,547	2	30,945	-	10,911	-	3,428	153,656
2004	-	-	40	-	64	-	-	14	-	118
2005	-	-	656	-	-	-	-	-	-	656
20041	-	-	118	-	298	94	-	630	-	1,140
20051	-	-	-	489	-	-	-	-	-	489
2012 Total	1,621	61,057	51,943	491	31,468	94	10,946	644	3,428	161,693

Deforestation (Forest to Non-Forest) Transition Matrix for 2012-2013 (ha)									
2012 Forest Class	**2013 Non-Forest Class**								
	2006	**2007**	**2010**	**2014**	**20071**	**20092**	**20094**	**20141**	**2012 Total**
2001	-	78	-	-	-	-	-	-	78
2002	86	64,167	17,053	14,970	26	4,445	-	2,645	103,392
2004	-	-	-	-	180	-	-	4	185
20041	-	37	-	87	1,451	-	1,102	66	2,742
20051	-	115	497	2,990	4,064	-	2,350	-	10,016
2013 Total	86	64,397	17,550	18,048	5,720	4,445	3,452	2,715	116,413

Deforestation (Forest to Non-Forest) Transition Matrix for 2013-2014 (ha)										
2013 Forest Class	**2014 Non-Forest Class**									
	2006	**2007**	**2010**	**2012**	**2014**	**20071**	**20091**	**20092**	**20141**	**Total**
2001	-	5	-	-	33	-	-	157	-	195
2002	23,625	16,259	292	14	8,643	16	573	891	1,102	51,414
20041	5	-	-	-	231	290	-	32	-	558
20051	-	-	1,809	-	209	17	54	-	-	2,089
2014 Total	23,630	16,264	2,101	14	9,115	323	628	1,080	1,102	54,257

Deforestation (Forest to Non-Forest) Transition Matrix for 2014-2015 (ha)								
2014 Forest Class	**2015 Non-Forest Class**							
	2006	**2007**	**2010**	**2014**	**20092**	**20094**	**20141**	**2014 Total**
2001	-	11	-	1,658	-	-	-	1,669
2002	170	19,358	9,004	48,729	5,223	-	2,595	85,079
2004	-	-	-	188	-	-	-	188
2005	-	-	-	195	-	-	-	195
20041	-	-	2,361	1,087	-	2,678	107	6,232
20051	-	-	-	4,770	-	1,128	-	5,898
2015 Total	170	19,369	11,365	56,627	5,223	3,806	2,702	99,261

Deforestation (Forest to Non-Forest) Transition Matrix for 2015-2016 (ha)															
2015 Forest Class	**2016 Non-Forest Class**														
	0	**2006**	**2007**	**2010**	**2012**	**2014**	**5001**	**20071**	**20092**	**20094**	**20121**	**20122**	**20141**	**50011**	**2015 Total**
2001	0	-	307	-	-	1,186	2	-	411	-	-	-	-	-	1,906
2002	0	40,444	121,976	23,456	104	66,020	44	1,358	46,859	-	-	-	6,499	2	306,762
2004	0	-	83	29	-	27	38	65	12	175	-	-	-	-	430
20041	4	-	16	854	36	1,585	94	132	905	1,188	30	4	164	-	5,012
20051	-	-	-	523	80	1,983	-	5,214	125	144	-	-	-	-	8,070
2016 Total	4	40,444	122,383	24,862	220	70,801	177	6,769	48,312	1,507	30	4	6,663	2	322,179

FOREST DEGRADATION

Degradation (Primary to Secondary Forest) Transition Matrix for 2015-2016 (ha)				
2006 Primary Forest Classes	**2009 Secondary Forest Class**			Total
	2002	20041	20051	
2001	83,282	-	-	83,282
2004	-	1,584	-	1,584
2005	-	-	-	-
Total	83,282	1,584	-	84,865

Degradation (Primary to Secondary Forest) Transition Matrix for 2015-2016 (ha)				
2006 Primary Forest Classes	**2011 Secondary Forest Class**			Total
	2002	20041	20051	
2001	18,944	-	-	18,944
2004	-	-	-	-
2005	-	-	-	-
Total	18,944	-	-	18,944

Degradation (Primary to Secondary Forest) Transition Matrix for 2015-2016 (ha)				
2011 Primary Forest Classes	2012 Secondary Forest Class			Total
	2002	20041	20051	
2001	5,937	-	-	5,937
2004	-	-	-	-
2005	-	-	-	-
Total	5,937	-	-	5,937

Degradation (Primary to Secondary Forest) Transition Matrix for 2015-2016 (ha)				
2012 Primary Forest Classes	2013 Secondary Forest Class			Total
	2002	20041	20051	
2001	42	-	-	42
2004	-	9	-	9
2005	-	-	2,225	2,225
Total	42	9	2,225	2,276

Degradation (Primary to Secondary Forest) Transition Matrix for 2015-2016 (ha)				
2013 Primary Forest Classes	2014 Secondary Forest Class			Total
	2002	20041	20051	
2001	17,932	-	-	17,932
2004	-	-	-	-
2005	-	-	242	242
Total	17,932	-	242	18,174

Degradation (Primary to Secondary Forest) Transition Matrix for 2015-2016 (ha)				
2014 Primary Forest Classes	2015 Secondary Forest Class			Total
	2002	20041	20051	

2001	138,526	-	-	138,526
2004	-	78	-	78
2005	-	-	2,065	2,065
Total	138,526	78	2,065	140,669

Degradation (Primary to Secondary Forest) Transition Matrix for 2015-2016 (ha)				
2015 Primary Forest Classes	**2016 Secondary Forest Class**			Total
	2002	20041	20051	
2001	30,325	-	-	30,325
2004	-	20	-	20
2005	-	-	-	-
Total	30,325	20	-	30,345