FCPR—Forest Conservation Performance Rating for the Pan-Tropics

David Wheeler, Dan Hammer, and Robin Kraft

Abstract

This note introduces and illustrates fCPR (Forest Conservation Performance Rating), a system of color-coded ratings for tropical forest conservation performance that can be implemented for local areas, countries, regions, and the entire pan-tropics. The ratings reward tropical forest conservation in three dimensions: (1) exceeding expectations, given an area's forest clearing history and development status; (2) meeting or exceeding global REDD+ goals; and (3) achieving an immediate reduction in forest clearing. We assign green ratings to areas that meet condition (2); yellow to areas that meet (1) only; and red to countries that fail to meet either condition. We have developed fCPR at the Center for Global Development (CGD), using monthly forest clearing indicators from CGD's FORMA (Forest Monitoring for Action). This first release rates the quarterly conservation performance of 27 countries currently tracked by FORMA, as well as 242 of their states and provinces that contain tropical forests. The 27 countries accounted for 94 percent of tropical forest clearing during the period 2000–2005. Future releases will include additional countries as FORMA begins tracking them.

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Summary

This note introduces and illustrates **fCPR** (Forest Conservation Performance Rating), a system of color-coded ratings for tropical forest conservation performance that can be implemented for local areas, countries, regions, and the entire pan-tropics. The ratings reward tropical forest conservation in three dimensions: (1) Exceeding expectations, given an area's forest clearing history and development status; (2) meeting or exceeding global REDD+ goals; and (3) achieving an immediate reduction in forest clearing. We assign Green ratings to areas that meet condition (2); Yellow to areas that meet (1) only; and Red to countries that fail to meet either condition.

We have developed **fCPR** at the Center for Global Development (CGD), using monthly forest clearing indicators from CGD's FORMA (Forest Monitoring for Action). This first release rates the quarterly conservation performance of 27 countries currently tracked by FORMA, as well as 242 of their states and provinces that contain tropical forests. The 27 countries accounted for 94% of tropical forest clearing during the period 2000-2005. Future releases will include additional countries as FORMA begins tracking them.

We also combine the **fCPR** country ratings to produce ratings for major regions and the entire pan-tropics. We find grounds for optimism in the pan-tropical rating, which has been Green in recent quarters. But this is a size-weighted average, which masks great diversity among regions and countries. Latin America has been consistently Green because of Green Brazil's dominance; the Asia/Pacific region has recently been Yellow because Green Indonesia is counterbalanced by Red Malaysia, Cambodia and Papua New Guinea, and Yellow Myanmar; and Africa has been persistently Red because its Red countries have most of the clearing.

While **fCPR**'s current pan-tropical rating is hopeful, many countries remain Red, and many provinces within Green-rated countries are also Red. These provide reminders that tropical forest clearing will not halt without a sustained effort during the coming decade. We hope that the **fCPR** ratings, and FORMA itself, will contribute by monitoring progress toward this goal, and indicating problem areas where focused attention may promote more rapid progress. We will publish frequent updates on CGD's website (http://www.cgdev.org) and inform subscribers to our newsletter at http://www.cgdev.org/section/topics/climate_change/newsletter_archive.

1. Why We Developed fCPR

fCPR (Forest Conservation Performance Rating), developed by the authors at the Center for Global Development (CGD), mobilizes the latest forest monitoring technology to produce frequently-updated conservation performance ratings for local areas, countries and regions in the pan-tropics. We have designed **fCPR** to support the mission of REDD+ (Reducing Emissions from Deforestation and Forest Degradation in Developing Countries) in three ways. First, **fCPR** directly promotes conservation by recognizing governments that protect their forested lands. Second, the system aids priority-setting by highlighting areas where forest conservation is lagging. Third, **fCPR** offers the global community an open-source, unbiased, frequently-updated view of global, regional and national progress toward achieving the goals of REDD+. Its ratings reward tropical forest conservation in three dimensions: (1) Exceeding expectations, given an area's forest clearing history and development status; (2) meeting or exceeding global REDD+ goals; and (3) achieving an immediate reduction in forest clearing.

We have developed **fCPR** using monthly forest clearing indicators from CGD's FORMA (Forest Monitoring for Action). Our first release rates the conservation performance of 27 countries currently tracked by FORMA, as well as 242 of their states and provinces that contain tropical forests. The countries included in this first release accounted for 94% of tropical forest clearing during the period 2000-2005.

We also provide summary ratings for the Asia/Pacific region, Latin America, Africa, and the entire pan-tropics. Future releases will include additional countries as FORMA begins tracking them.

2. How fCPR Rates Tropical Forest Areas

Rating performance requires benchmarks for judging progress. In REDD+ programs, a common benchmark is forest clearing during a previous period. We begin with a benchmark based on average monthly forest clearing during the first three years of FORMA coverage: 2006-2008.[1] To recognize previous conservation efforts, we raise the benchmark for areas whose deforestation rates during 2000-2005 were lower than the expected rates at their per capita income levels. Our adjustment is proportional to the gap between their actual and expected deforestation rates.

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[1] The first global FORMA report is available at http://www.cgdev.org/content/publications/detail/1425835. A technical description of FORMA is available at http://www.cgdev.org/content/article/detail/1423248/.

2.1 Incorporating the Forest Transition

Once the initial benchmark is set, we rate progress relative to the normal "forest transition" that accompanies economic development, as conservation values and forest management capability increase. After extensive analysis of the data, we have conservatively set $15,000 per capita (in purchasing power parity) as the terminal income for tropical forest clearing.[2] Incorporating the forest transition changes a country's performance benchmark from a fixed value to a target path that declines to zero clearing in the year when per capita income is predicted to reach $15,000. We base our predictions on countries' income growth during the past 20 years.

2.2 Incorporating REDD+ Goals

REDD+ reflects the global community's recognition that we are unlikely to avoid a climate catastrophe unless carbon emissions plummet in the near future. But this may not happen under "business as usual" – the normal forest transition. To incorporate the REDD+ imperative, we introduce a second path that declines from the initial benchmark for each country to zero clearing in a common target year for all countries. No consensus target year has emerged from international negotiations, although drafts circulated at Cancun apparently included references to a target date of 2030. We prefer a more ambitious target, so we set a REDD+ path that declines to zero clearing in 2025.

2.3 Rating Conservation Performance

Once the forest transition and REDD+ paths are established for the 27 countries tracked by FORMA, we assign quarterly performance ratings as illustrated in Figure 1.

We develop the ratings from 12-month moving averages (MA) of FORMA's monthly clearing indicators, to remove seasonal fluctuations.[3] We further stabilize the series by calculating quarterly averages of the MA. Countries are Green if their quarterly averages are below their REDD+ lines. Green countries are on track to achieve zero clearing by 2025. We assign Yellow to countries whose quarterly averages are between their forest transition and REDD+ lines. Yellow countries are doing better than expected, given their development status, but are not yet on track to zero clearing by 2025. Finally, we assign Red to poor performers: countries whose quarterly averages are above their forest transition and

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[2] For a detailed technical description of our approach, see Wheeler, Hammer and Kraft, From REDD to Green: A Global Incentive System to Stop Tropical Forest Clearing, Center for Global Development Working Paper No. 282. We have refined our estimates since publication of that paper.

[3] The moving average for a month is calculated from its clearing indicator and the indicators for the previous 11 months.

REDD+ lines. To recognize incremental progress, we assign light red to countries where clearing is falling or stable, and bright red to countries where clearing is still increasing.

Figure 1: Assigning Performance Ratings
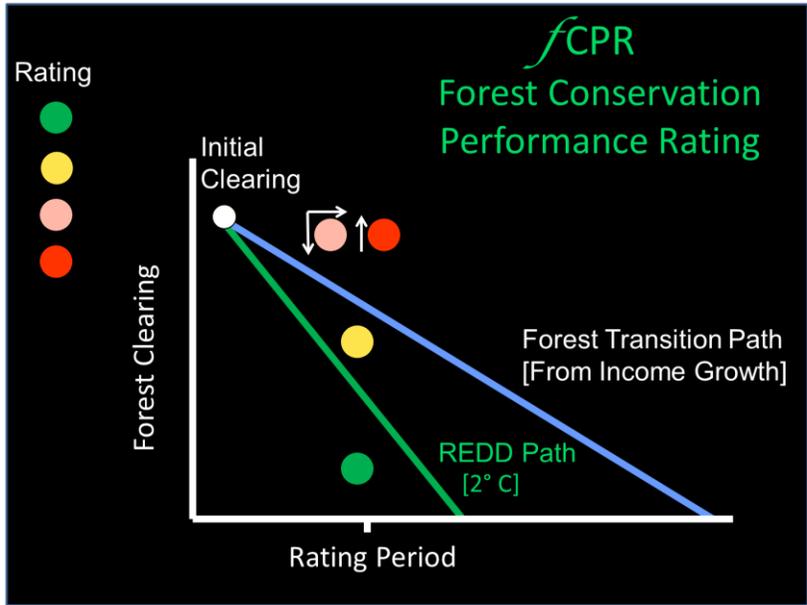
FORMA's monthly database currently spans December, 2005 to August, 2011. Using a three-year period (2006-2008) to set the initial benchmark for each country, we develop twelve quarterly performance ratings for Q4 2008 - Q3 2011.[4]

3. fCPR Ratings

Table 1 presents ratings for the 27 countries, along with regional and global ratings.[5] To aid interpretation, we include average monthly clearing during the period 2006 - 2011 as a measure of relative scale. We separate the countries by region and sort to highlight countries whose current ratings are Red. Figure 2 maps the ratings for Q4 2008, Q2 2010 and Q3 2011.

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[4] We use two months for this rating; it will be extended to three months in the next update. The rating for Q4 2008 is based on the 12-month moving average for December, 2008. We have checked to see whether longer benchmark periods significantly affect country ratings, and they do not: The correlations between scores for 3-, 4- and 5-year benchmark periods are all 94% or higher.

[5] To develop the summary ratings, we assign numerical scores to color codes as follows: Green (4); Yellow (3); light Red (2); dark Red (1). For a regional rating, we calculate each country's share of total clearing in the region during the rating quarter. Then we weight country scores by these shares; add the share-weighted scores; round the result to the nearest whole number; and assign the color associated with that number. For the global rating, we follow the same procedure with countries' scores weighted by their shares in total (27-country) clearing during the rating quarter.

Figure 2: Country Performance Ratings
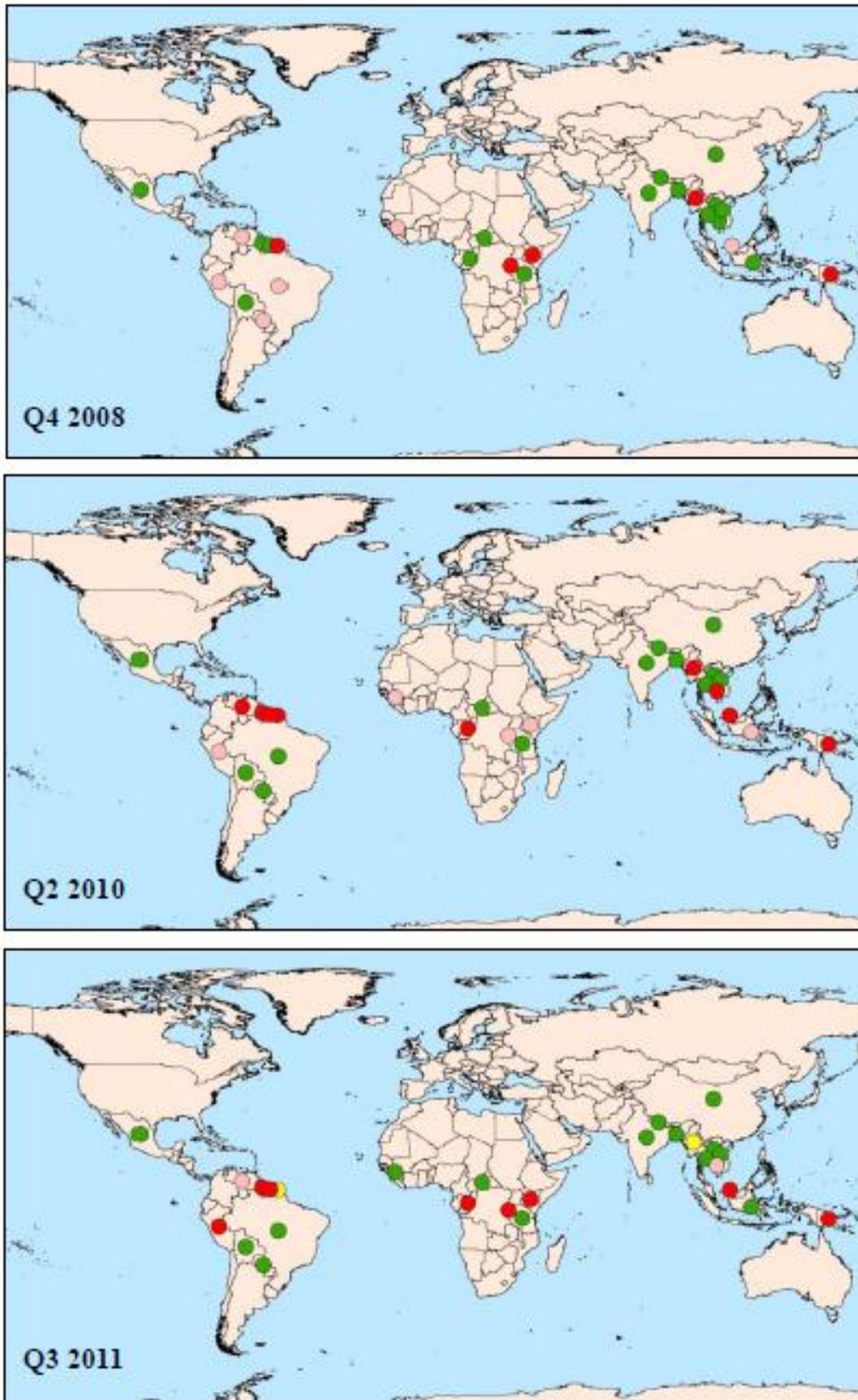
Our global rating in Table 1 provides encouraging news: It has fluctuated between Green and Yellow since Q1 2009, and the most recent quarters have been Green. This indicates that the countries which have dominated tropical forest clearing are currently on track to zero clearing in 2025.

The global Green rating depends heavily on the dominance of clearing in Latin America (rated Green), which in turn depends on the dominance of Brazil (Green). Asia/Pacific is rated Yellow because the Green status of Indonesia, the dominant country in regional clearing, is counterbalanced by the Red status of Papua New Guinea, Malaysia and Cambodia, and the Yellow status of Myanmar.

Africa is rated Red because its Red-rated countries have much more clearing than its Green-rated countries. But average total clearing in Africa (8.99) is tiny compared to clearing in Latin America (1346.88), so Africa's Red rating does not alter the global rating. Similarly, total clearing in Asia/Pacific (731.86) is only 65% of Latin American clearing, so its Yellow status is dominated by Latin America's Green status at the global level.

A strong cautionary note about the global Green rating is obviously warranted, since many countries in Table 1 are not on track to zero clearing in 2025. Table 1 and Figure 2 provide striking pictures of global diversity. In Q3 2011, for example, 10 countries are light or dark Red, 2 are Yellow, and 15 are Green. Similar diversity appears in each region. Long runs of Red ratings characterize many countries in Asia/Pacific (Papua New Guinea, Malaysia, Cambodia, Myanmar); Latin America (Peru, Suriname, Guyana, Venezuela, and French Guiana); and Africa (Burundi, Kenya, Republic of Congo, Guinea). A great deal of work remains if we are to achieve zero clearing by 2025.

Within the 27 countries, Table 2 provides ratings for 242 states and provinces that contain tropical forest areas. Once again we see the magnitude of the task that remains, even for countries rated Green overall. For example, Brazil owes its Green status to the recent Green ratings of several states with large-scale clearing: Minas Gerais, Maranhão, Pará and Rondônia. But ratings have deteriorated from Green to Red in Tocantins, Goiás, Paraíba, and Acre and to Yellow in Amazonas.

Figure 3 puts Brazil in context by displaying state- and province-level ratings for South America in Q4 2008, Q2 2010 and Q3 2011. In a striking contrast, the "Greening" of Brazil and its southern neighbors, Bolivia and Paraguay, is accompanied by the dominance of Red areas to the north and west, in Peru, Venezuela, Guyana, Suriname and French Guiana.[6]

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[6] Colombia, Ecuador and the Central American countries will be included in future releases of FORMA and **fCPR**. Uncolored areas in currently-tracked countries are provinces that have no uncleared tropical forest land in the GIS databases available to us.

Table 1: Country Performance Ratings, Q4 2008 - Q3 2011

Region/Country	Average Clearing	2008 Q4	2009 Q1	Q2	Q3	Q4	2010 Q1	Q2	Q3	Q4	2011 Q1	Q2	Q3
GLOBAL	2087.73	R	G	G	G	Y	Y	Y	Y	Y	G	G	G
ASIA/PACIFIC	731.86	Y	Y	Y	Y	R	R	R	R	R	Y	Y	Y
Papua New Guinea	8.89	R	R	R	R	R	R	R	R	R	R	R	R
Malaysia	231.83	R	R	R	R	R	R	R	R	R	R	R	R
Cambodia	11.04	G	G	Y	G	Y	R	R	R	R	R	R	R
Myanmar	77.86	R	R	R	R	R	R	R	R	R	R	R	Y
Indonesia	385.76	G	G	G	G	Y	G	R	Y	G	G	G	G
Bangladesh	0.02	G	G	G	G	G	G	G	G	G	G	G	G
China	4.02	G	G	G	G	G	G	G	G	G	G	G	G
India	0.81	G	G	G	G	G	G	G	G	G	G	G	G
Laos	9.88	G	G	G	G	G	G	G	G	G	G	G	G
Nepal	0.06	G	G	G	G	G	G	G	G	G	G	G	G
Thailand	0.8	G	G	G	G	G	G	G	G	G	G	G	G
Vietnam	0.88	G	G	G	G	G	G	G	G	G	G	G	G
LATIN AMERICA	1346.88	R	G	G	G	G	G	G	G	G	G	G	G
Peru	17.24	R	R	R	R	R	R	R	R	R	R	R	R
Suriname	0.63	G	G	G	R	R	R	R	R	R	R	R	R
Guyana	0.65	G	G	G	R	R	R	R	R	R	R	R	R
Venezuela	24.67	R	R	R	G	G	R	R	R	R	R	R	R
French Guiana	2.33	R	R	R	R	R	R	R	R	R	R	R	Y
Paraguay	75.8	R	G	G	G	G	G	G	G	G	G	G	G
Brazil	1207.92	R	R	G	G	G	G	G	G	G	G	G	G
Bolivia	14.75	G	G	G	G	G	G	G	G	G	G	G	G
Mexico	2.88	G	G	G	G	G	G	G	G	G	G	G	G
AFRICA	8.99	R	R	R	R	R	R	R	R	R	R	R	R
Burundi	1.84	R	R	R	R	R	R	R	R	R	R	R	
Kenya	2.51	R	R	R	R	R	R	R	R	R	G	G	R
Republic Of Congo	3.29	G	G	G	G	G	R	R	R	R	R	R	R
Guinea	1.23	R	R	R	R	R	R	R	Y	R	G	G	G
Central African Republ	0.05	G	G	G	G	G	G	G	G	G	G	G	G
Tanzania	0.06	G	G	G	G	G	G	G	G	G	G	G	G

Figure 3: Provincial Performance Ratings, South America
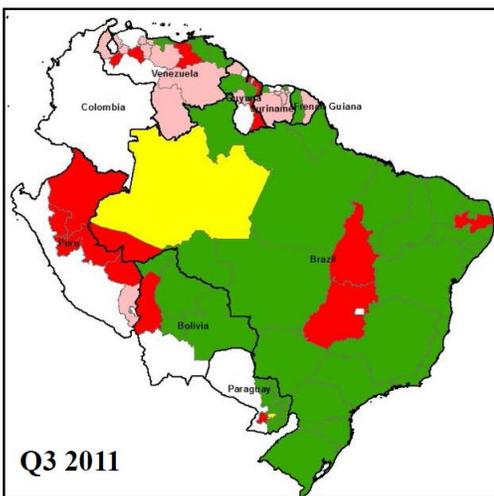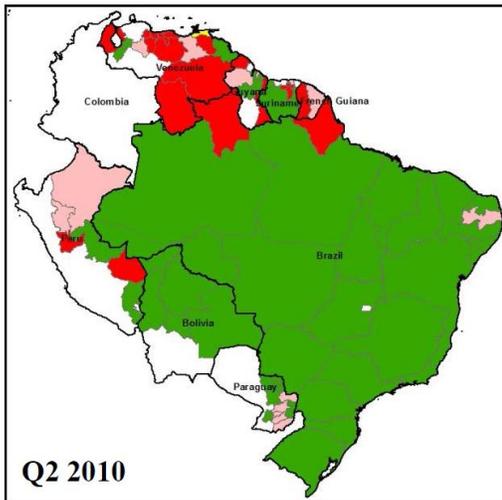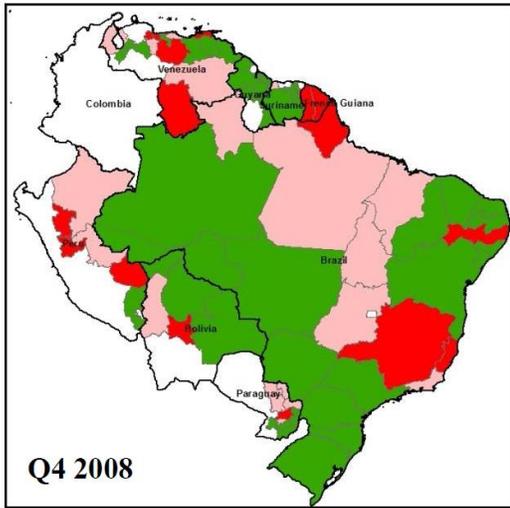
Indonesia displays a highly-varied pattern in Table 2. Some provinces with large-scale clearing have consistent Green ratings on the islands of Sumatra (Riau, Sumatera Selatan) and Borneo (Kalimantan Tengah). Some have moved from Red to Green (principally Jambi, Sumatera Barat and Lampung on Sumatra), while others have moved from Green to Red (most notably Kalimantan Timur on Borneo). And some are persistently Red (particularly Aceh and Sumatera Utara on Sumatra, and Kalimantan Barat on Borneo). Another striking pattern is the Red status of three provinces on the island of Sulawesi (Sulawesi Selatan, Sulawesi Barat and Sulawesi Tengah).

Figure 4 displays ratings for the provinces of Indonesia and other Southeast Asian countries in Q4 2008, Q2 2010 and Q3 2011. Three patterns are evident:

(1) General deterioration of ratings from Q4 2008 to Q2 2010 in mainland Southeast Asian countries, particularly peninsular Malaysia and Myanmar, followed by improvement to Q3 2011; (2) Steady improvement in Indonesian Sumatra, from numerous dark Red ratings in Q4 2008 to none in Q3 2011; (3) Marked deterioration from Q4 2008 ratings in the eastern and northern areas of Borneo (both Malaysian and Indonesian).

4. Conclusion

In this note we have introduced **fCPR** (Forest Conservation Performance Rating), which color-codes performance in 27 pan-tropical countries and 242 of their states and provinces. We assign Green ratings to countries, states and provinces that are on track to zero tropical forest clearing in 2025; Yellow when their progress is better than expected, given their development status, but insufficient to achieve the 2025 target; and Red when their performance is worse than expected.

We find grounds for optimism in our composite rating for the pan-tropoics, which has been Green in recent quarters. But this is a size-weighted average, which masks great diversity among regions and countries. Latin America is rated Green because of Green Brazil's dominance; the Asia/Pacific region is Yellow because Green Indonesia is counterbalanced by Red Malaysia, Cambodia and Papua New Guinea, and Yellow Myanmar; and Africa is Red because its Red countries have most of the overall clearing.

Many countries remain Red, and many provinces in Green countries are also Red. These ratings are reminders that tropical forest clearing will not halt without a sustained effort during the coming decade. We hope that the **fCPR** ratings, and FORMA itself, will contribute to monitoring progress toward this goal, and indicating problem areas where focused attention may promote more rapid progress. We will publish frequent updates on CGD's website and inform our newsletter subscribers at http://www.cgdev.org/section/topics/climate_change/newsletter_archive.

Figure 4: Provincial Performance Ratings, Southeast Asia

Q4 2008

Q2 2010

Q3 2011

Table 2: Performance Ratings of Provinces and States, Q4 2008 - Q2 2010

Circle color legend: G = green, R = red, P = pink (light red), Y = yellow

Region/Country	ISO3	Province/State	GADM ID	Average Clearing	2008 Q4	2009 Q1	Q2	Q3	Q4	2010 Q1	Q2	Q3	Q4	2011 Q1	Q2	Q3
ASIA/PACIFIC																
Bangladesh	BGD	Chittagong	326	0.0185	G	G	G	G	G	G	G	G	G	G	G	G
Cambodia	KHM	Bântéay Méanchey	1533	0.3704	P	G	G	R	P	R	P	P	P	P	R	R
Cambodia	KHM	Kâmpóng Thum	1538	0.5694	G	R	P	R	R	R	R	R	P	R	P	R
Cambodia	KHM	Kâmpóng Spœ	1537	0.1273	G	G	G	G	G	G	G	G	G	G	R	R
Cambodia	KHM	Batdâmbâng	1534	4.1887	R	R	R	R	P	R	R	R	R	R	P	P
Cambodia	KHM	Pouthisat	1549	2.0706	G	G	R	R	P	R	R	R	R	R	P	P
Cambodia	KHM	Kâmpôt	1539	0.5069	G	G	G	G	G	R	R	R	R	R	P	P
Cambodia	KHM	Kaôh Kong	1541	1.9583	R	R	P	P	P	Y	Y	R	R	P	P	Y
Cambodia	KHM	Kâmpóng Cham	1535	0.4398	G	G	G	G	G	Y	R	P	P	R	P	Y
Cambodia	KHM	Krâchéh	1543	0.0278	R	R	P	G	P	G	G	G	G	G	G	G
Cambodia	KHM	Kâmpóng Chhnang	1536	0.0278	G	G	G	G	G	R	R	P	P	P	G	G
Cambodia	KHM	Krong Pailin	1544	0.1551	G	G	G	G	G	G	G	G	R	G	G	G
Cambodia	KHM	Krong Preah Sihanouk	1545	0.3727	G	G	G	G	G	G	G	G	G	G	G	G
Cambodia	KHM	Kândal	1540	0.0278	G	G	G	G	G	G	G	G	G	G	G	G
Cambodia	KHM	Siemréab	1553	0.2014	G	G	G	G	G	G	G	G	G	G	G	G
China	CHN	Zhejiang	602	0.0278	G	G	G	G	G	R	P	P	P	G	G	G
China	CHN	Jiangxi	586	0.0093	G	G	G	G	G	G	G	G	G	G	G	G
China	CHN	Guangxi	577	1.6782	G	G	G	G	G	G	G	G	G	G	G	G
China	CHN	Hainan	579	0.0116	G	G	G	G	G	G	G	G	G	G	G	G
China	CHN	Yunnan	601	0.0718	G	G	G	G	G	G	G	G	G	G	G	G
China	CHN	Fujian	574	0.287	G	G	G	G	G	G	G	G	G	G	G	G
China	CHN	Guangdong	576	1.9387	G	G	G	G	G	G	G	G	G	G	G	G

Region/Country	ISO3	Province/State	GADM ID	Average Clearing	2008 Q4	2009 Q1	Q2	Q3	Q4	2010 Q1	Q2	Q3	Q4	2011 Q1	Q2	Q3
India	IND	West Bengal	1321	0.0255	🔴	🔴(pink)	🔴(pink)	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
India	IND	Bihar	1291	0.0764	🔴	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
India	IND	Andaman and Nicoba	1287	0.0579	🔴	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
India	IND	Andhra Pradesh	1288	0.0023	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
India	IND	Orissa	1312	0.1956	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
India	IND	Meghalaya	1309	0.0648	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
India	IND	Assam	1290	0.1748	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
India	IND	Manipur	1308	0.1412	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
India	IND	Arunachal Pradesh	1289	0.0035	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
India	IND	Mizoram	1310	0.0405	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
India	IND	Nagaland	1311	0.0278	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢

Color legend for quarterly cells: G = green, R = red, P = light red/pink, Y = yellow.

Region/Country	ISO3	Province/State	GADM ID	Average Clearing	2008 Q4	2009 Q1	2009 Q2	2009 Q3	2009 Q4	2010 Q1	2010 Q2	2010 Q3	2010 Q4	2011 Q1	2011 Q2	2011 Q3
Indonesia	IDN	Sulawesi Selatan	1279	2.213	P	G	G	G	R	R	R	R	P	P	R	R
Indonesia	IDN	Sulawesi Utara	1282	0.1898	G	G	G	G	R	R	P	R	G	G	G	R
Indonesia	IDN	Sulawesi Barat	1278	1.1146	R	R	R	P	R	R	R	P	R	R	R	P
Indonesia	IDN	Sumatera Utara	1285	40.3009	R	R	P	R	R	R	P	P	R	R	R	P
Indonesia	IDN	Sulawesi Tengah	1280	6.2674	R	R	R	P	R	R	R	R	P	P	P	P
Indonesia	IDN	Kalimantan Barat	1266	61.728	R	R	R	R	R	R	R	P	P	P	P	P
Indonesia	IDN	Aceh	1254	25.8611	R	R	R	R	P	P	P	P	R	P	P	P
Indonesia	IDN	Maluku Utara	1273	0.2315	G	R	R	P	P	P	R	R	P	P	P	P
Indonesia	IDN	Kalimantan Timur	1269	22.8796	G	G	G	R	R	R	R	R	P	P	P	P
Indonesia	IDN	Yogyakarta	1286	0.0278	G	G	G	G	G	G	G	G	G	G	R	P
Indonesia	IDN	Banten	1257	0.1528	R	R	P	P	P	R	P	G	G	G	G	G
Indonesia	IDN	Jawa Tengah	1264	0.2708	R	P	P	P	R	R	P	G	G	G	G	G
Indonesia	IDN	Sumatera Barat	1283	9.2535	R	R	R	P	G	G	G	G	G	G	G	G
Indonesia	IDN	Jawa Barat	1263	1.8032	R	R	P	P	G	G	G	G	G	G	G	G
Indonesia	IDN	Jawa Timur	1265	0.4097	R	P	P	P	G	G	G	G	G	G	G	G
Indonesia	IDN	Lampung	1271	3.191	R	P	G	G	G	G	G	G	G	G	G	G
Indonesia	IDN	Jambi	1262	14.6748	P	P	G	G	G	G	G	G	G	G	G	G
Indonesia	IDN	Kalimantan Selatan	1267	9.7303	G	G	G	G	R	R	R	P	Y	G	G	G
Indonesia	IDN	Maluku	1272	0.3819	G	G	G	G	R	R	R	P	G	G	G	G
Indonesia	IDN	Bangka-Belitung	1256	1.8345	G	G	G	G	R	R	P	G	G	G	G	G
Indonesia	IDN	Irian Jaya Barat	1260	0.3275	G	G	G	G	G	G	R	P	G	G	G	G
Indonesia	IDN	Papua	1276	2.581	G	G	G	G	G	G	G	G	G	G	G	G
Indonesia	IDN	Gorontalo	1259	1.0174	G	G	G	G	G	G	G	G	G	G	G	G
Indonesia	IDN	Bengkulu	1258	6.4502	G	G	G	G	G	G	G	G	G	G	G	G
Indonesia	IDN	Kalimantan Tengah	1268	46.1898	G	G	G	G	G	G	G	G	G	G	G	G
Indonesia	IDN	Kepulauan Riau	1270	0.0093	G	G	G	G	G	G	G	G	G	G	G	G
Indonesia	IDN	Riau	1277	95.5231	G	G	G	G	G	G	G	G	G	G	G	G
Indonesia	IDN	Sumatera Selatan	1284	26.6678	G	G	G	G	G	G	G	G	G	G	G	G
Indonesia	IDN	Sulawesi Tenggara	1281	4.4792	G	G	G	G	G	G	G	G	G	G	G	G

Color legend for quarterly cells: 🟢 = green, 🔴 = red, 🟠 = light red/pink, 🟡 = yellow

Region/Country	ISO3	Province/State	GADM ID	Average Clearing	2008 Q4	2009 Q1	2009 Q2	2009 Q3	2009 Q4	2010 Q1	2010 Q2	2010 Q3	2010 Q4	2011 Q1	2011 Q2	2011 Q3
Laos	LAO	Khammouan	1604	3.4618	🟢	🟢	🟢	🔴	🔴	🔴	🔴	🟠	🟠	🟠	🟠	🔴
Laos	LAO	Vientiane [prefecture	1612	0.2234	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟡	🔴	🔴
Laos	LAO	Xiangkhoang	1616	0.1435	🟢	🟢	🟢	🔴	🟠	🔴	🟠	🔴	🟠	🟠	🔴	🟠
Laos	LAO	Champasak	1602	0.0961	🔴	🟠	🟠	🔴	🟠	🟠	🔴	🟠	🟠	🟠	🟢	🟢
Laos	LAO	Savannakhét	1610	1.7755	🔴	🟠	🟠	🟠	🟠	🔴	🔴	🟠	🟠	🟡	🟢	🟢
Laos	LAO	Xaisômboun	1614	0.3646	🔴	🟢	🔴	🔴	🟠	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Laos	LAO	Xékong	1615	0.1134	🟠	🟠	🟠	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Laos	LAO	Phôngsali	1608	0.1944	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Laos	LAO	Oudômxai	1607	0.2662	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Laos	LAO	Bolikhamxai	1601	1.706	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Laos	LAO	Houaphan	1603	0.1609	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Laos	LAO	Louangphrabang	1606	0.1389	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Laos	LAO	Xaignabouri	1613	0.228	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Laos	LAO	Bokeo	1600	0.1852	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Laos	LAO	Louang Namtha	1605	0.1736	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Laos	LAO	Vientiane	1611	0.6493	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Malaysia	MYS	Sabah	1988	21.4178	🟢	🟢	🟠	🟢	🔴	🔴	🔴	🔴	🔴	🟠	🟠	🔴
Malaysia	MYS	Melaka	1982	0.4259	🟢	🔴	🟢	🔴	🔴	🔴	🟠	🟠	🟠	🔴	🔴	🔴
Malaysia	MYS	Kelantan	1981	20.2558	🔴	🔴	🔴	🔴	🟠	🟠	🔴	🔴	🔴	🔴	🔴	🟠
Malaysia	MYS	Kedah	1980	6.2674	🔴	🟠	🟢	🔴	🟠	🔴	🟠	🔴	🔴	🔴	🔴	🟠
Malaysia	MYS	Perak	1985	16.1227	🔴	🟠	🟠	🟠	🟢	🔴	🔴	🔴	🔴	🟠	🟠	🟠
Malaysia	MYS	Negeri Sembilan	1983	4.309	🟢	🔴	🟠	🔴	🔴	🔴	🔴	🟠	🟠	🟠	🟠	🟠
Malaysia	MYS	Johor	1979	12.7778	🟢	🟢	🔴	🔴	🟠	🟢	🔴	🔴	🔴	🔴	🟠	🟠
Malaysia	MYS	Trengganu	1991	11.4016	🟢	🟢	🟢	🟢	🟢	🔴	🔴	🔴	🔴	🟠	🟠	🟠
Malaysia	MYS	Pahang	1984	36.3484	🟢	🟢	🟢	🟢	🔴	🔴	🔴	🔴	🟠	🟠	🟠	🟠
Malaysia	MYS	Sarawak	1989	98.3125	🟠	🟠	🔴	🟠	🔴	🟠	🟠	🟠	🟢	🟢	🟢	🟢
Malaysia	MYS	Perlis	1986	0.0208	🟠	🟠	🟠	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Malaysia	MYS	Pulau Pinang	1987	0.2847	🟢	🟢	🟢	🔴	🔴	🔴	🟠	🔴	🟠	🟠	🟢	🟢
Malaysia	MYS	Selangor	1990	3.8854	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢

Region/Country	ISO3	Province/State	GADM ID	Average Clearing	2008 Q4	2009 Q1	2009 Q2	2009 Q3	2009 Q4	2010 Q1	2010 Q2	2010 Q3	2010 Q4	2011 Q1	2011 Q2	2011 Q3
Myanmar	MMR	Chin	1855	3.0984	G	G	G	R	R	R	R	p	p	p	p	R
Myanmar	MMR	Kachin	1856	2.0799	R	R	R	p	R	R	p	R	R	p	p	p
Myanmar	MMR	Ayeyarwady	1853	1.9676	p	p	p	R	R	R	R	R	p	p	p	p
Myanmar	MMR	Magway	1859	0.3275	G	p	R	p	R	R	R	R	R	p	p	p
Myanmar	MMR	Tanintharyi	1865	0.9988	G	G	G	G	G	G	R	R	R	p	p	p
Myanmar	MMR	Rakhine	1862	60.794	R	p	R	R	R	R	R	p	p	p	p	Y
Myanmar	MMR	Kayin	1858	1.9931	R	R	p	G	G	G	Y	R	p	p	p	G
Myanmar	MMR	Mon	1861	0.2963	p	p	G	G	G	G	G	G	G	G	G	G
Myanmar	MMR	Mandalay	1860	0.162	G	p	R	G	G	G	G	G	G	G	G	G
Myanmar	MMR	Shan	1864	4.6424	G	G	G	G	G	R	R	R	p	p	p	G
Myanmar	MMR	Sagaing	1863	0.6956	G	G	G	G	G	G	R	R	R	R	p	G
Myanmar	MMR	Bago	1854	0.8009	G	G	G	G	G	G	G	G	G	R	Y	G
Nepal	NPL	Far-Western	2108	0.0139	G	G	G	G	G	G	G	G	G	G	R	p
Nepal	NPL	Central	2106	0.0347	G	G	G	G	G	G	G	G	G	G	G	G
Nepal	NPL	Mid-Western	2109	0.0116	G	G	G	G	G	G	G	G	G	G	G	G
Papua New Guinea	PNG	Western	2306	4.3947	R	R	R	R	R	R	R	R	p	R	R	R
Papua New Guinea	PNG	East New Britain	2291	0.5775	G	G	G	G	R	R	R	R	R	R	R	R
Papua New Guinea	PNG	Sandaun	2303	0.2616	R	R	p	p	p	G	G	R	R	R	R	p
Papua New Guinea	PNG	Madang	2296	0.4745	G	G	G	G	G	G	Y	R	R	p	Y	
Papua New Guinea	PNG	Northern	2302	1.3009	R	R	R	p	p	p	p	G	G	G	G	G
Papua New Guinea	PNG	Gulf	2295	1.3958	R	R	R	p	p	G	G	G	G	G	G	G
Papua New Guinea	PNG	Morobe	2299	0.1933	G	R	R	R	p	p	p	G	G	G	G	G
Papua New Guinea	PNG	East Sepik	2292	0.0278	G	R	R	G	G	G	G	G	G	G	G	G
Papua New Guinea	PNG	Southern Highlands	2304	0.0833	G	G	R	p	p	G	G	G	G	G	G	G
Papua New Guinea	PNG	Eastern Highlands	2293	0.0139	G	p	G	G	G	G	G	G	G	G	G	G
Papua New Guinea	PNG	West New Britain	2305	0.1343	G	G	G	G	G	G	G	G	G	G	G	G
Papua New Guinea	PNG	Western Highlands	2307	0.0069	G	G	G	G	G	G	G	G	G	G	G	G
Papua New Guinea	PNG	Chimbu	2290	0.0278	G	G	G	G	G	G	G	G	G	G	G	G

Region/Country	ISO3	Province/State	GADM ID	Average Clearing	2008 Q4	2009 Q1	2009 Q2	2009 Q3	2009 Q4	2010 Q1	2010 Q2	2010 Q3	2010 Q4	2011 Q1	2011 Q2	2011 Q3
Thailand	THA	Ratchaburi	2872	0.1065	red	pink	pink	pink	green	green	red	red	red	pink	pink	pink
Thailand	THA	Tak	2890	0.044	green	green	green	green	green	red	red	pink	pink	pink	pink	pink
Thailand	THA	Nan	2851	0.1157	green	green	green	green	green	green	green	red	pink	red	pink	pink
Thailand	THA	Chiang Mai	2829	0.0278	green	green	green	green	green	green	green	green	red	pink	pink	pink
Thailand	THA	Surat Thani	2888	0.0556	green	green	green	green	green	green	green	green	green	green	green	yellow
Thailand	THA	Chiang Rai	2830	0.0231	red	pink	pink	green	green	green	green	green	green	green	green	green
Thailand	THA	Lampang	2838	0.0694	pink	pink	green	red	red	pink	red	pink	green	pink	green	green
Thailand	THA	Lamphun	2839	0.0162	pink	pink	pink	green	green	green	green	green	green	green	green	green
Thailand	THA	Prachuap Khiri Khan	2870	0.0208	pink	green	green	green	green	green	green	green	green	green	green	green
Thailand	THA	Phitsanulok	2865	0.0556	green	pink	pink	pink	green	red	pink	pink	green	green	green	green
Thailand	THA	Udon Thani	2894	0.0278	green	red	red	pink	pink	pink	green	green	green	green	green	green
Thailand	THA	Chanthaburi	2828	0.0278	green	green	green	green	green	green	green	red	pink	pink	pink	green
Thailand	THA	Nakhon Si Thammara	2850	0.1227	green	green	green	green	green	green	green	green	green	green	green	green
Thailand	THA	Krabi	2837	0.0035	green	green	green	green	green	green	green	green	green	green	green	green
Thailand	THA	Narathiwat	2852	0.0787	green	green	green	green	green	green	green	green	green	green	green	green
Thailand	THA	Phrae	2867	0.0093	green	green	green	green	green	green	green	green	green	green	green	green
Vietnam	VNM	Tay Nguyen	3296	0.5602	green	green	green	green	green	green	green	green	green	green	green	green
Vietnam	VNM	Nam Trung Bo	3294	0.0301	green	green	green	green	green	green	green	green	green	green	green	green
Vietnam	VNM	Dong Nam Bo	3293	0.0046	green	green	green	green	green	green	green	green	green	green	green	green
Vietnam	VNM	Tay Bac	3295	0.0417	green	green	green	green	green	green	green	green	green	green	green	green
Vietnam	VNM	Dong Bang Song Cuu I	3291	0.0093	green	green	green	green	green	green	green	green	green	green	green	green
Vietnam	VNM	Dong Bac	3290	0.0069	green	green	green	green	green	green	green	green	green	green	green	green
Vietnam	VNM	Bac Trung Bo	3289	0.2292	green	green	green	green	green	green	green	green	green	green	green	green

Region/Country	ISO3	Province/State	GADM ID	Average Clearing	2008	2009				2010				2011		
					Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
LATIN AMERICA																
Bolivia	BOL	La Paz	424	0.0995	🔴(light)	🔴(light)	🔴(light)	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🔴	🔴
Bolivia	BOL	Cochabamba	422	0.1771	🔴	🔴	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Bolivia	BOL	El Beni	423	6.9965	🟢	🔴	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Bolivia	BOL	Santa Cruz	428	6.2523	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Bolivia	BOL	Pando	426	1.228	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢

Region/Country	ISO3	Province/State	GADM ID	Average Clearing	2008 Q4	2009 Q1	Q2	Q3	Q4	2010 Q1	Q2	Q3	Q4	2011 Q1	Q2	Q3
Brazil	BRA	Tocantins	456	11.0046	P	Y	G	G	G	G	G	G	G	R	R	R
Brazil	BRA	Goiás	438	0.8148	P	G	G	G	G	G	G	G	G	G	R	R
Brazil	BRA	Paraíba	444	0.1528	G	G	G	G	G	R	P	P	R	R	R	R
Brazil	BRA	Acre	430	31.7083	G	G	G	Y	G	G	G	G	G	G	R	R
Brazil	BRA	Amazonas	433	80.1435	G	G	G	G	G	G	G	G	G	G	Y	Y
Brazil	BRA	Amapá	432	2.2813	R	P	P	G	G	R	R	P	G	G	G	G
Brazil	BRA	Minas Gerais	442	42.7963	R	P	P	P	G	G	G	G	G	G	G	G
Brazil	BRA	Espírito Santo	437	6.6192	R	P	P	G	G	G	G	G	G	G	G	G
Brazil	BRA	Pernambuco	446	0.1829	R	G	G	G	G	G	G	G	G	G	G	G
Brazil	BRA	Roraima	452	5.831	P	G	G	G	G	G	R	R	P	P	G	G
Brazil	BRA	Maranhão	439	87.1921	P	P	G	G	G	G	G	G	G	G	G	G
Brazil	BRA	Rio de Janeiro	448	0.5058	P	G	G	G	G	G	G	G	G	G	G	G
Brazil	BRA	Pará	443	469.0637	P	G	G	G	G	G	G	G	G	G	G	G
Brazil	BRA	Rio Grande do Norte	449	0.0278	G	R	P	P	P	G	G	G	G	G	G	G
Brazil	BRA	Bahia	434	23.3021	G	R	Y	G	G	G	G	G	G	G	G	G
Brazil	BRA	Mato Grosso	440	258.3241	G	G	G	G	G	G	G	G	G	G	G	G
Brazil	BRA	São Paulo	454	4.8438	G	G	G	G	G	G	G	G	G	G	G	G
Brazil	BRA	Rondônia	451	169.6759	G	G	G	G	G	G	G	G	G	G	G	G
Brazil	BRA	Paraná	445	4.9664	G	G	G	G	G	G	G	G	G	G	G	G
Brazil	BRA	Rio Grande do Sul	450	0.875	G	G	G	G	G	G	G	G	G	G	G	G
Brazil	BRA	Mato Grosso do Sul	441	0.9479	G	G	G	G	G	G	G	G	G	G	G	G
Brazil	BRA	Sergipe	455	0.4896	G	G	G	G	G	G	G	G	G	G	G	G
Brazil	BRA	Piauí	447	3.7014	G	G	G	G	G	G	G	G	G	G	G	G
Brazil	BRA	Ceará	435	1.0185	G	G	G	G	G	G	G	G	G	G	G	G
Brazil	BRA	Santa Catarina	453	1.419	G	G	G	G	G	G	G	G	G	G	G	G
Brazil	BRA	Alagoas	431	0.037	G	G	G	G	G	G	G	G	G	G	G	G

Color legend: G = green, R = red, P = light red/pink, Y = yellow/amber

Region/Country	ISO3	Province/State	GADM ID	Average Clearing	2008 Q4	2009 Q1	Q2	Q3	Q4	2010 Q1	Q2	Q3	Q4	2011 Q1	Q2	Q3
French Guiana	GUF	Cayenne	1136	0.9248	🔴	🔴	🔴	🔴	🔴(lt)	🔴(lt)	🔴(lt)	🔴	🔴(lt)	🔴	🔴	🔴(lt)
French Guiana	GUF	Saint-Laurent-du-Mar	1137	1.4097	🔴	🔴	🔴(lt)	🔴(lt)	🔴(lt)	🔴	🔴(lt)	🔴(lt)	🔴(lt)	🔴(lt)	🟢	🟢
Guyana	GUY	Mahaica-Berbice	1162	0.2986	🟢	🟢	🟢	🔴	🔴	🔴	🔴	🔴	🔴(lt)	🔴	🔴(lt)	🔴
Guyana	GUY	Demerara-Mahaica	1159	0.0093	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🔴	🔴
Guyana	GUY	Essequibo Islands-We	1161	0.0069	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🔴
Guyana	GUY	East Berbice-Corentyr	1160	0.0787	🟢	🟢	🟢	🔴	🔴	🔴(lt)	🔴(lt)	🔴(lt)	🔴(lt)	🔴	🔴(lt)	🔴(lt)
Guyana	GUY	Barima-Waini	1157	0.1111	🟢	🟢	🟢	🟢	🔴	🔴	🔴	🔴	🔴	🔴(lt)	🔴(lt)	🔴(lt)
Guyana	GUY	Potaro-Siparuni	1164	0.0231	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🔴	🔴	🔴(lt)	🔴(lt)
Guyana	GUY	Pomeroon-Supenaam	1163	0.0556	🟢	🟢	🔴	🔴(lt)	🔴(lt)	🔴(lt)	🔴	🔴(lt)	🟢	🟢	🟢	🟢
Guyana	GUY	Upper Takutu-Upper I	1166	0.0648	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Mexico	MEX	Campeche	1807	0.5972	🔴	🔴	🔴(lt)	🔴(lt)	🔴(lt)	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Mexico	MEX	Yucatán	1834	0.1389	🟢	🟢	🟢	🔴	🔴	🔴	🔴(lt)	🔴(lt)	🟢	🟢	🟢	🟢
Mexico	MEX	Quintana Roo	1826	2.0567	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Mexico	MEX	Tabasco	1830	0.0833	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Paraguay	PRY	Paraguarí	2452	0.0116	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🔴	🔴
Paraguay	PRY	Guairá	2448	0.6296	🔴(lt)	🔴(lt)	🔴(lt)	🔴(lt)	🔴	🔴	🔴(lt)	🔴(lt)	🟡	🟢	🟡	🟡
Paraguay	PRY	Caaguazú	2442	6.4595	🔴	🔴(lt)	🟢	🔴	🔴	🔴	🔴(lt)	🟢	🟢	🟢	🟢	🟢
Paraguay	PRY	Canindeyú	2444	19.515	🔴(lt)	🔴(lt)	🔴(lt)	🔴	🔴	🔴(lt)	🔴(lt)	🟢	🟢	🟢	🟢	🟢
Paraguay	PRY	Amambay	2439	8.8102	🔴(lt)	🔴(lt)	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Paraguay	PRY	San Pedro	2454	25.3194	🔴(lt)	🔴(lt)	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Paraguay	PRY	Concepción	2446	3.8819	🔴(lt)	🔴(lt)	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Paraguay	PRY	Caazapá	2443	4.6701	🟢	🔴	🔴	🟢	🔴	🔴	🔴(lt)	🔴(lt)	🟢	🟢	🟢	🟢
Paraguay	PRY	Itapúa	2449	2.456	🟢	🟢	🟢	🟢	🔴	🔴	🔴(lt)	🟢	🟢	🟢	🟢	🟢
Paraguay	PRY	Alto Paraná	2438	4.0475	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢

Region/Country	ISO3	Province/State	GADM ID	Average Clearing	2008	2009				2010				2011		
					Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Peru	PER	Huánuco	2178	0.5579	●	●	●	●	●	●	●	●	●	●	●	●
Peru	PER	San Martín	2190	8.7697	●	●	●	●	●	●	●	●	●	●	●	●
Peru	PER	Madre de Dios	2185	1.4711	●	●	●	●	●	●	●	●	●	●	●	●
Peru	PER	Loreto	2184	3.3032	●	●	●	●	●	●	●	●	●	●	●	●
Peru	PER	Ucayali	2193	3.0949	●	●	●	●	●	●	●	●	●	●	●	●
Peru	PER	Puno	2189	0.0463	●	●	●	●	●	●	●	●	●	●	●	●
Suriname	SUR	Wanica	2738	0.0093	●	●	●	●	●	●	●	●	●	●	●	●
Suriname	SUR	Brokopondo	2729	0.2477	●	●	●	●	●	●	●	●	●	●	●	●
Suriname	SUR	Para	2734	0.2708	●	●	●	●	●	●	●	●	●	●	●	●
Suriname	SUR	Sipaliwini	2737	0.0625	●	●	●	●	●	●	●	●	●	●	●	●
Suriname	SUR	Nickerie	2733	0.0093	●	●	●	●	●	●	●	●	●	●	●	●
Suriname	SUR	Commewijne	2730	0.0278	●	●	●	●	●	●	●	●	●	●	●	●
Venezuela	VEN	Portuguesa	3280	0.066	●	●	●	●	●	●	●	●	●	●	●	●
Venezuela	VEN	Anzoátegui	3263	0.0694	●	●	●	●	●	●	●	●	●	●	●	●
Venezuela	VEN	Mérida	3276	0.0093	●	●	●	●	●	●	●	●	●	●	●	●
Venezuela	VEN	Yaracuy	3284	1.1227	●	●	●	●	●	●	●	●	●	●	●	●
Venezuela	VEN	Amazonas	3262	10.9641	●	●	●	●	●	●	●	●	●	●	●	●
Venezuela	VEN	Guárico	3274	0.2685	●	●	●	●	●	●	●	●	●	●	●	●
Venezuela	VEN	Carabobo	3268	0.1968	●	●	●	●	●	●	●	●	●	●	●	●
Venezuela	VEN	Zulia	3285	1.4375	●	●	●	●	●	●	●	●	●	●	●	●
Venezuela	VEN	Cojedes	3269	0.7477	●	●	●	●	●	●	●	●	●	●	●	●
Venezuela	VEN	Bolívar	3267	5.2384	●	●	●	●	●	●	●	●	●	●	●	●
Venezuela	VEN	Trujillo	3283	0.0162	●	●	●	●	●	●	●	●	●	●	●	●
Venezuela	VEN	Distrito Capital	3272	0.0556	●	●	●	●	●	●	●	●	●	●	●	●
Venezuela	VEN	Sucre	3281	1.0347	●	●	●	●	●	●	●	●	●	●	●	●
Venezuela	VEN	Miranda	3277	0.9873	●	●	●	●	●	●	●	●	●	●	●	●
Venezuela	VEN	Aragua	3265	0.0833	●	●	●	●	●	●	●	●	●	●	●	●
Venezuela	VEN	Monagas	3278	1.228	●	●	●	●	●	●	●	●	●	●	●	●
Venezuela	VEN	Delta Amacuro	3270	1.1424	●	●	●	●	●	●	●	●	●	●	●	●

Region/Country	ISO3	Province/State	GADM ID	Average Clearing	2008 Q4	2009 Q1	Q2	Q3	Q4	2010 Q1	Q2	Q3	Q4	2011 Q1	Q2	Q3
AFRICA																
Burundi	**BDI**	**Cibitoke**	**246**	**1.4294**												
Burundi	**BDI**	**Bubanza**	**241**	**0.1829**												
Burundi	**BDI**	**Bujumbura Rural**	**243**	**0.1921**												
Burundi	**BDI**	**Muramvya**	**252**	**0.0324**												
Central Afr. Rep.	**CAF**	**Sangha-Mbaéré**	**516**	**0.0532**												
Guinea	**GIN**	**Nzérékoré**	**1064**	**1.0255**												
Guinea	**GIN**	**Kindia**	**1061**	**0.2083**												
Kenya	**KEN**	**Rift Valley**	**1524**	**2.1412**												
Kenya	**KEN**	**Western**	**1525**	**0.0648**												
Kenya	**KEN**	**Central**	**1518**	**0.2222**												
Kenya	**KEN**	**Eastern**	**1520**	**0.0833**												
Republic of Congo	**COG**	**Cuvette**	**643**	**1.4201**												
Republic of Congo	**COG**	**Plateaux**	**649**	**1.0995**												
Republic of Congo	**COG**	**Likouala**	**647**	**0.6701**												
Republic of Congo	**COG**	**Sangha**	**651**	**0.1042**												
Tanzania	**TZA**	**Iringa**	**3055**	**0.0648**												