

## P., F.

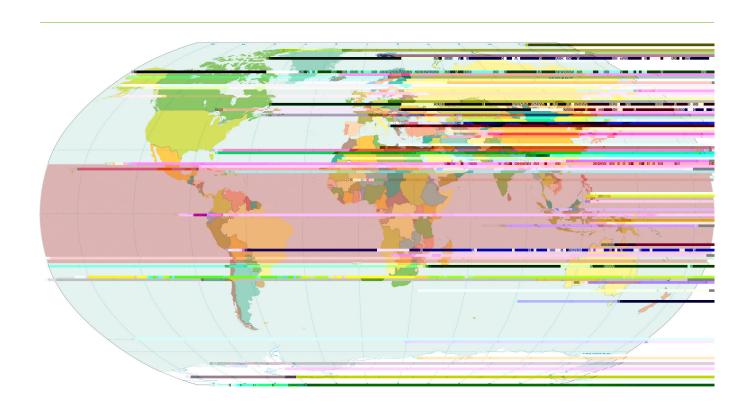
A number of leading institutions from across the world have joined forces to assess and report on the critical questions facing one of the world's most important and fastest growing regions: the Tropics.

Over the past half-century the Tropics has emerged as an increasingly critical region. More than 40% of the world's population now lives in the Tropics and this is likely to be close to 50% by 2050. The region generates around 20% of global economic output and is home to some 80% of the world's biodiversity.

However, the resources to sustain larger populations and

economic growth are imposing ever-increasing pressures. Issues of concern include relatively poor health outcomes, with more than one billion people suffering from tropical diseases, unacceptable levels of infant mortality and reduced life expectancy; extreme poverty; poor educational outcomes; environmental degradation; and, in some cases, political and economic instability.

In early 2011 a group of leading institutions decided to examine the condition of life in the Tropics. The group met in Singapore in mid-2011 to scope a project, and decided to sha3tp2Gir T(12e)20snd IG0ud-2011 to



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In the ten years to 2010 FAO reports that, based on country reported data, the world's area of primary forest decreased by about 42 million hectares, a loss on average of 0.4% annually<sup>13</sup> (see Table 1). This represents a reduction in the total area of primary forest of 3.7%. The vast majority of the losses were in the Tropics, with almost 70% of global losses occurring in South America.

In South America the sheer vastness of primary forests combined with their accessibility are contributing to huge and ongoing losses. Although nothing rivals South America in terms of the area of primary forests being lost, in some other tropical regions percentage loss rates are high (and considerably higher than in South America), and increasing, notably in Central & Southern Africa and Oceania.

Nonetheless, driven by improvements in South America and South East Asia, the annual loss of primary forests in the Tropics fell by 389,000 hectares (8.5%) in the period 2000-2010 compared with 1990-2000, from 4.56 million hectares per annum in 1990-2000 to 4.17 million hectares in 2000-2010. More modest improvements occurred in Central & Southern Africa and South Asia, while in Oceania annual losses of primary forests increased by an additional 148,000 hectares.

In the Tropics, Northern Africa & Middle East reported the biggest improvement in the rate of primary forest loss, falling from -0.8% per annum in 1990-2000 to -0.1% in 2000-2010. Oceania and Central & Southern Africa were the only two tropical regions to report increases in the rate of primary forest losses. Declining rates of nationally-reported primary forest losses

are encouraging, but alternative assessments using remote sensing technology suggest that actual losses may be considerably higher in some regions, notably in South East Asia (see Box 2).

This is concerning, as the remaining primary forests and the biodiversity they hold are especially important as in many parts of the world forests were significantly depleted prior to 1990 (the start of the time series here). For example, in Bangladesh it is estimated that total forest cover (that is, primary, secondary and plantation forests) around this period was only 10% of the original cover, and in India it was around 22%8.

The destruction of primary forest in Asia is well-advanced, but in other regions, especially in the Amazon in South America and the Congo in Central & Southern Africa, the opportunity exists to

protect a greater proportion of primary forests and biodiversity from human threats.

The loss of primary forests across the world has the potential to impact biodiversity. These risks are significantly greater in the Tropics given its greater richness of species. The biodiversity in many tropical rainforests is poorly documented, and globally it is estimated that only 14% of existing terrestrial species have been described<sup>14</sup>.

Habitat loss is a major factor contributing to extinctions, and the risk is that many species will become extinct before they are described, with potential impacts on the genetic resources available for use by humans for medicinal and other purposes.

Table 1: Primar Forests

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					1990-2000		2000-2005		2005-2010		2000-2010	
	1990	2000	2005	2010	1,000	%	1,000	%	1,000	%	1,000	%
The Tropics	866,960	821,381	799,180	779,695	-4,558	-0.5%	-4,440	-0.5%	-3,898	-0.5%	-4,169	-0.5%
Central & Southern Africa	42,196	36,548	33,768	31,050	-565	-1.4%	-556	-1.6%	-543	-1.7%	-550	-1.6%
Northern Africa & Middle East	17,752	16,455	16,340	16,235	-130	-0.8%	-23	-0.1%	-21	-0.1%	-22	-0.1%
South Asia	10,462	10,402	10,372	10,372	-6	-0.1%	-6	-0.1%	0	0.0%	-3	0.0%
South East Asia	70,873	67,300	65,531	65,000	-357	-0.5%	-354	-0.5%	-106	-0.2%	-230	-0.3%
Caribbean	206	205	204	206	0	0.0%	0	-0.1%	0	0.2%	0	0.0%
Central America	29,480	26,526	25,690	25,087	-295	-1.1%	-166	-0.6%	-121	-0.5%	-144	-0.6%
South America	662,460	632,249	616,762	603,360	-3,021	-0.5%	-3,097	-0.5%	-2,680	-0.4%	-2,889	-0.5%

Forests deliver a wide range of ecosystem services to the environment and to humanity, through provisioning (food, wood etc) and regulating (nutrient, water and carbon cycles) services. As such, habitat destruction through deforestation or other impacts that affect forest biodiversity may not only affect species diversity, but also the performance of broader ecological systems and regulatory processes. Focusing conservation efforts on protecting habitats is therefore more likely to conserve both biodiversity and underlying systems15.

The importance of primary forests in protecting biodiversity is increasingly acknowledged, but demand for timber products, industrial and subsistence farm land and access to resources is putting pressure on the stock of primary forests. For example, something as simple as a road through a primary forest to a remote mine site can open up vast areas of forest to exploitation.

Growing concerns about the ever increasing impacts of anthropogenic pressures on tropical biodiversity and natural ecosystem services have led to increases in the number and extent of protected areas across the Tropics<sup>16</sup>. Protected areas are now a key part of global conservation efforts and, as such, an important indicator for policy makers.

Nonetheless, as with forests, not all protected areas are the same, and the performance of each will be affected by factors

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