Online Supplementary Materials

Figure S1. The location of each image in the 2002 imagery classification. Dates of acquisition are 1: 01/12/2002; 2: 20/10/2001; 3: 7/10/2002.

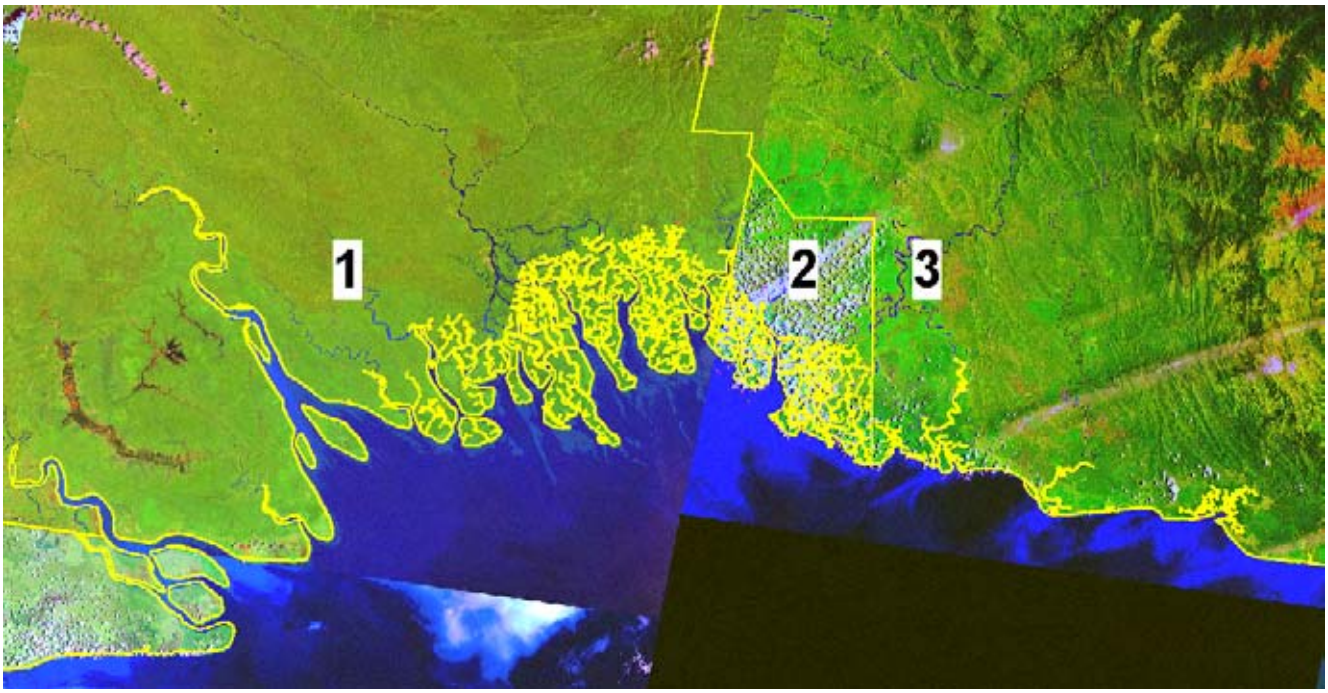

Figure S2. A recent aerial photograph (November 2008) of the mouth of the Purari showing a heavy sediment loading disbursing to the west.

Table S1. Decision rules used to define land-cover classes are outlined in Table 1S based on our Tasseled Cap and red/green/blue/infrared image enhancements. Each polygon was classified using expert visual interpretation (Lu *et al*. 2004).

CLASS	**CLASS CHARACTERISTICS**
Intact Rainforest (F)	Generally dark green, and homogeneous. Polygons large relative to other classes and possess distinct mottled texture due to differences in individual canopy reflectances.
Scrub (D)	Generally light-green or yellow-brown in colour on most backdrops. Relatively small and irregularly shaped polygons of variable texture. Secondary vegetation or scrub is generally found surrounding village areas on the sides or roads or in riverine successions. Where gardens are present they are often interspersed with the red speckles of newly cleared sites (N).
Non-Forest (N)	Grassland, roads, and other non-vegetated areas generally reflect a high proportion of incident radiation in all bands. For this reason these features are generally bright, and usually pink or red in coloration. Freshly cleared areas in gardens appear as small red speckles. Areas of grassland appear as very homogenous, large red areas, contrasting with surrounding green vegetation.
Swamp Forest (S)	Swamp Forest can be discerned by its smooth texture, light green coloration and in the southern provinces, its dendritic pattern of occurrence. It occurs in areas that are relatively flat, often in proximity to water courses and the coast.
Herbaceous Swamp (H)	Non-Woody Swamp Vegetation appears in relatively small areas, usually surrounded by water or swamp forest. Usually it is coloured lime green and possesses a very smooth texture.
Water (W)	Blue areas. In the case of rivers, the features are sinuous in shape and occur in valley bottoms. Lakes are generally delineated as regularly shaped polygons
Mangrove (M)	Mangroves appear as intensely dark green features, often with a blue tinge, and occur in close proximity to the sea.