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RESPONSE TO THE BRAZILIAN EMBASSY IN LONDON

The note entitled “Plans for the Sustainable Development of the Amazon” issued by the Brazilian Embassy in London (2001) accuses our study (Laurance *et al.*, 2001) of “including incorrect and misleading information about ‘Avança Brasil’”, which the note claims to “clarify”. Unfortunately, it is not our study that is misleading.

Contrary to the Embassy’s implication, our scenarios are not based on projections of population growth. Rather, they are based on the way deforestation and other forms of disturbance spread out when access is provided by infrastructure construction. There is no evidence that the “environmentally-sensitive technology” emphasized by the Embassy has altered how this process takes place. It is worth noting, however, that the large number of young people the population assures rapid growth over the 20-year period of our scenarios regardless of the decline in birth rates mentioned by the Embassy. It is also relevant that the highway paving financed by Avança Brasil will facilitate migration to Amazonia from more densely populated parts the country.

The assumptions used in our studies for infrastructure types such as gas pipelines, transmission lines railways and industrial waterways are not simply that they will be the same as “highways”, but rather that they will be similar to unpaved roads. Paving of highways results in substantially greater deforestation. The greatest worry regarding this “other” infrastructure is the effect of the gas pipelines planned in the heart of the undisturbed block of forest in western Amazonia. Construction of pipelines inevitably involves an accompanying access road that, especially in the case of the connection to the migration focus in Rondônia, is likely to lead to entry of migrants despite any number of signs and warnings. An ominous example is provided by the Cuyabena reserve in Ecuador, which was bisected by an oil pipeline and shortly thereafter invaded by squatters despite signs, barriers and government promises that no entry would be allowed along the access road.

The Embassy statement suggests that the Avança Brasil program of infrastructure construction in Amazonia will have minimal environmental impacts because it will employ “environmentally-friendly technology” with federal and state environmental impact assessment report requirements, and because the Avança Brasil program includes a selection of “environmental projects” in addition to the infrastructure construction. Unfortunately, none of this alters the basic nature of Avança Brasil and the scenarios for the future of Amazonia as presented in our paper.

The existence of environmental impact studies does not mean that damaging projects would not be undertaken. The Embassy’s claim that “if any project involves environmental damage, it must be reformulated or dropped” does not fit with experience. One of the problems is that Brazil’s environmental impact reporting requirements only cover direct impacts, such as laying down a roadbed. The much more damaging impacts of activities carried out by third parties, such as ranching and logging that are attracted by the provision of access, are not covered. Ironically, descriptions of project benefits often extol the economic returns of these activities, which Avança Brasil planners call the

“dragging effect”, but the same does not apply to their impacts (Fearnside, 2001). The BR-163 (Santarém-Cuiabá) highway provides a dramatic example. This highway opens access to vast areas of relatively intact forest that is particularly susceptible to degradation through fire due to the strong dry season in the area (Nepstad *et al.*, 2000; Carvalho *et al.*, 2001). Paving the BR-163 is a top priority under *Avança Brasil*, and sawmills are already migrating to the area.

Another example is the Araguaia-Tocantins Waterway, also a top priority under *Avança Brasil*. In this case, when statements regarding heavy impacts on indigenous populations along the route were included in the report, the outcome was to alter the report rather than to drop the project (Carvalho, 1999). More common than scandals such as this is the more subtle effect of the licensing system requiring only that of each step in the process be completed (report submission, public hearing, etc.), with little regard, in practice, to the content of the information. In effect, the consultants writing the reports and the witnesses at the hearings can say whatever they like, pointing out major impacts, and the project approval process simply moves ahead based on the fact that the reports have been duly submitted and the population has been “consulted” (Eve *et al.*, 2000; Fearnside and Barbosa, 1996).

The Embassy statement emphasizes the existence of federal and state environmental agencies, police, etc., giving the impression that the process of land occupation and deforestation is orderly and controlled in Amazonia. This is very misleading, as much of this activity occurs illegally. Enforcement of the regulations that exist on paper is a tremendous problem at the frontier. A recent report of the Secretariat of Strategic Affairs (SAE) indicated that 80% of the logging in the region takes place illegally. Illegal deforestation is also rampant, as is goldmining, hunting and other activities that damage the environment.

The existence of PROBEM and other non-destructive projects under the aegis of *Avança Brasil* does not change the effect of the infrastructure components that were the subject of our paper. This infrastructure is massive, including substantial increases in the impact of the road network. The Embassy’s claim of “no new highways” gives the misleading impression that the highway network funded through *Avança Brasil* would not cause deforestation. Unfortunately, the plan to pave 7,500 km of highways greatly increases the accessibility of remote areas of Amazonia to ranchers, loggers and others. The BR-163 and BR-319 are especially damaging because they bisect major blocks of relatively intact forest.

Much of the infrastructure is justified by export of soybeans, a crop with minimal social benefits (Fearnside, 2001). Constructing a massive infrastructure network to support soybean growing is difficult to imagine as coming under the Embassy’s title of “Plans for the Sustainable Development of the Amazon”.

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