

Oral (Invited Symposium: Planning for biodiversity conservation in the várzea floodplains of the Amazon; organizers: Bob Pressey, Ana Albernaz, Carlos Scaramuzza and Antonio Oviedo)

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THREATS TO THE VÁRZEA FROM ACTIVITIES OUTSIDE ITS BOUNDARIES

Várzeas (Amazonian floodplain) can be severely affected by alterations in terra firme (upland) areas in the watersheds that feed them. Várzeas and other wetland ecosystems depend heavily on the annual pulse of water and sediments, and any alteration of this cycle has severe consequences. One alteration that is rapidly proceeding is deforestation, with attendant increases in peak runoff and decreases in flow between rainfall events, as well as increases in sedimentation. Hydroelectric dams are another major change, decreasing the amplitude and changing the timing of streamflow downstream of the dams. Long-range plans for dam construction total 79 dams in Brazil's "Legal Amazon" region, blocking all Amazon tributaries except those in flat terrain in the extreme western part of the region. Dams retain sediments that would otherwise be deposited in floodplains. The water released from the turbines has little or no oxygen, making downstream river stretches inhospitable for many fish species. Hydroelectric reservoirs create artificial floodplain ecosystems. The scale of planned hydroelectric development in Amazonia makes this significant as a factor in global change, as well as having great local effects. All projected dams in Brazilian Amazonia flood a total of 10 million hectares, an area larger than Portugal.

Várzea, deforestation, Hydroelectric Dams, Reservoirs, Floodplain

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Powerpoint projector