

PANAMAZONIA: COOPERATIVE PROJECT TO MONITOR SOUTH AMERICA TROPICAL RAIN FOREST

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ABSTRACT:

Panamazonia Project was proposed just few months before UNCED-Rio 92 and the main goal was to develop technical cooperation between Amazonia countries, in order to monitor the tropical forest of South America by means of Remote Sensing data. To pursue such purpose a technical team was selected from well experienced agencies of Bolivia, Peru, Ecuador, Colombia, Venezuela, Guyana, Suriname, French Guyana and Brazil. Besides the technical team a group of senior Remote Sensing specialists from each country was also selected to head the Project locally. The selection of the teams and the heads was strongly supported by the members of SELPER the Latin America Society of Remote Sensing Specialists.

The methodology was adopted following the one applied in Brazil which takes in account a wall-to-wall image analysis and GIS procedures on PC platforms. Firstly a very careful selection was carried out over the image data banks of CLIRSEN-Ecuador, EOSAT-USA and INPE-Brazil. Two sets of 250,000 TM color images covering about 2.7 mega square kilometers (area of forest out of Brazil) was purchased and transferred to the teams in the Amazonia countries. The sets were of two periods: one ranging from 1985 to 1988 and other from 1988 to 1991. A set of 345 frames of TM bands 5R4G3B were distributed to the countries.

Training courses for the scientific and managing staff were followed in the years of 1993 and 1994 at the headquarters of the Brazilian National Institute of Space Research. By late 1993 some interesting results arose from Bolivia team. The figures of deforestation in Bolivia (80,087 ha/year) coming from the Panamazonia procedures were harder lower than those numbers issued elsewhere in the literature (FAO: 117,000 ha/year). By September of 1994 the teams of Venezuela and Colombia came up with 250,000 scale quadrangles from their Amazonia Region.

These computer-aided maps with temporal figures processed through GIS showed very low numbers for deforestation. French Guyana reported in early 1995 the numbers and the spatial distribution of deforestation ranging from 1985 and 1991. Results showed that except for urban surroundings of Cayene and Kourou the clear - cuttings are depicted in a very thin path close to the ocean border. Results from Peru were reported in May 1996 showing that less than 10% of the rain forest were affected by burning followed by deforestation. The lack of good cloud free images between 1985 and 1990 over Ecuador, Suriname and Guyana restrained even partial results.

For Suriname and Guyana there is still the lack of dedicated hardware to undertake the project. Panamazonia was not able to grant the funds that would provide adequate computer support to all Amazonia countries involved with the Project. Dedicated hardware PC-based is a key element because it is the right platform to run the GIS model that Brazil is delivering to house the data base. While the Project is looking for funds, the Panamazonia countries are asking for a new round of study ranging from 1990 to 1995. Panamazonia Project shows that international cooperation on horizontal basis can be a key paradigm to monitor environment.