

## **Interim Report about the fire situation in Kalimantan Timur and the on- going activities**

update as of 7. July 1998

### **Drought and Wildfires 1997**

The dry season for the most fire prone islands of Indonesia (Sumatra and Kalimantan) began simultaneously around mid-May. El Niño predictions were available and IFFM began to issue warnings about the upcoming drought. The Provincial authorities took the warnings seriously. When the fire danger rating (FDR) calculated by IFFM/gtz reached high levels on August 2, the Governor of East Kalimantan put the Province on red alert and strictly prohibited any burning activities. This happened a month earlier here than in the other provinces and on the national level. Therefore East Kalimantan had only moderate fire activity compared with other provinces in Kalimantan and Sumatra.

By September wildfires in Sumatra and Kalimantan had escalated to such an extent that it was impossible even to think of getting them under control. The general situation can be described as Indonesia having big problems to overcome its own bureaucracy and the international community being absolutely helpless and wasting money for the sake of having done something.

After months of extreme fire activity and haze that covered large parts of Indonesia, Malaysia and Singapore, rains finally started to fall again in mid November and gave a respite to the country. Nevertheless it was predicted that rains would only fall for a short while and the drought would pick up again. El Niño sea surface temperature peaked only in December 1997. Related weather anomalies in Indonesia were predicted to diminish sometime between March and July 1998.

Roughly 40 plantation and timber companies are currently being prosecuted by the Indonesian Police Headquarters (Markas Besar Polri) for having had fires in their respective areas. Apart from these legal sanctions that might be applied, administrative sanctions, like the withdrawal of timber use licences or the rejection of annual work plans of these companies are being taken into consideration.

### **Drought and Wildfires 1998**

Dry weather conditions prevailed again in East Kalimantan since early this year. No substantial rainfall was recorded in Samarinda and Balikpapan since early January until end of April, whereas all the other provinces in Kalimantan and Sumatra and also northerly parts of East Kalimantan had basically experienced normal to heavy rainfalls. Around 15. January IFFM/gtz again issued warnings to all concerned parties. Updates on El Niño activities were available on the Internet confirming earlier predictions about a prolonged drought for Indonesia until March-July. Only a few days later the province was put on high alert again by the governor when the fire danger reached 1500 (high) on the 0-2000 point IFFM/gtz scale. The local newspapers reported almost daily about the fire situation since then. A small number of hotspots detected by the IFFM/gtz NOAA satellite receiver started to show up in East Kalimantan in the first weeks of January. Around 28. January the number of hotspots began to rise, the highest concentration located in the central parts of East Kalimantan, roughly between 150 km north and 100 km south of the Mahakam River.

The IFFM team hence decided to hire a helicopter to get an overview of the fire situation. The area where most of the hotspots were detected was overflown on 3. February with representatives of the Provincial

Government, the Environment Impact Agency and the Department of Forestry joining the party. The situation which could be observed was terrifying. Small and large fires were burning virtually everywhere. A very rough estimate made after the flight came up with 15-20.000 ha of burned land with 5000 ha still actively burning. Among the burnt and burning areas were grassland, brushland, degenerated forests, secondary forest, swamp forests and huge areas of collapsed *macaranga* stands, with surface fires also burning into large areas of unspoiled forests.

The IFFM helicopter flight had an immediate political impact. The coordinates of the fires were recorded and plotted on a map of timber concession and plantation company boundaries. The local newspaper published an article the next day, accusing 15 concession companies of having fires in their respective areas. Only two days later a special team from Jakarta arrived and again made a survey flight by helicopter. This time several high-ranking government officials joined the party guided by an IFFM/gtz team member. Based on these surveys and satellite data provided by IFFM/gtz, the Government began to take legal action against the accused companies. On March 17 a big palm oil company was finally convicted of large-scale illegal conversion burning during a ground check in the area of Lake Jempang. Though this allone has been a huge step for law enforcement against powerful companies in Indonesia, no substantial legal measures seem to have followed so far.

During the fire season IFFM/gtz conducted additional training sessions (one per week) in fire suppression for the Indonesian Armed Forces for all the Territorial Commands of Kalimantan and Sumatra. The trainees were officers from all over the respective provinces, who are in charge of training soldiers and commanding fire suppression efforts. At the same time prevention campaigns in villages were intensified, and jointly produced TV spots (Ministry of Forestry, WWF, EU, IFFM/gtz) for fire prevention were readied and finally broadcasted on the national TV, after experiencing considerable delay.

Despite these efforts, the fire situation in East Kalimantan escalated to an extent that extinguishing the fires was far beyond any suppression capabilities. Several large fire burned in forest conversion and concession areas for weeks, and though the Provincial Government was very serious about handling the situation, law enforcement still seemed too weak and too slow to get them under control. The Government agencies themselves were concentrating their suppression efforts on protected forests under their *direct* responsibility (Kutai National Park, Bukit Soeharto). The Army was deployed to the Kutai National Park and the Park Management was fighting fires around the clock. Unfortunately there is a strong tendency to expensive high-tech solutions (water bombing, use of retardants) that have little or no effect, as long as infrastructure and fire-fighting capacities on the ground are deficient. Cloud seeding efforts under such conditions seem to be of little use other than for scientific purposes.

### **Recent Weather and Haze Situation**

Thick haze was blanketing vast areas of East Kalimantan for weeks since February. Reports came in about extreme levels of pollution in the interior of East Kalimantan. Coastal towns like Balikpapan and Samarinda had moderate to thick haze until about 9 a.m., which was then diluted by north-easterly winds during day-time. Haze and pollution reached extreme levels in Samarinda and Balikpapan when the easterly winds ceased to blow in March. On Saturday 21.3. visibility was down to 50 m (!) in Samarinda. On the other hand, the change of climate brought high humidity and cloudy but rainless weather. Hence the fires calmed down considerably for some time all over East Kalimantan, after having been flared up by the dry and hot winds that prevailed since January. They flared up immediately as the winds picked up again in April.

The question, when this drought would finally end was difficult to answer. IFFM was right with its forecast that rains would fall again by end of April. The base for this assessment was the El Niño drought 1982/83 and a comparison of fire danger ratings of those two periods. The drought patterns were almost exactly the same. East Kalimantan has experienced plenty of rain since May this year.

El Niño (and the anomalies used to measure its strength, e.g. the anomalies of the sea surface temperatures in the Pacific Ocean) has now diminished considerably. The newest predictions of the Climate Research Center in Hamburg/Germany suggest the opposite process (*La Niña*) to begin, peak in November and slowly phase out until May 1999. This means wetter than normal climate in Indonesia and dryer than normal climate in areas usually receiving little rain anyway (West Coast of South America).

All the fires in East Kalimantan are out now, with the exception of coal seam fires. There are coal seam fires that have been burning for more than 10.000 years, many of them started in 1982/83 and now many

new ones have been added with the 1997/98 El Niño drought. Recent fire activity is being reported from Jambi province in Sumatra.

So far the official figure, based on field reports, is roughly 550.000 ha of burnt forest in East Kalimantan, but this seems to be much too low. IFFM will come up with a precise satellite based assessment of the total damage hopefully by July. For this purpose NOAA and high resolution ERS Radar satellite information will be combined.

A rough estimate only from our NOAA data and from a recent flight survey organized by WWF Indonesia suggests that the total area burnt is in the order of 3 million ha. It includes most of the peat swamp and freshwater swamp forests of East Kalimantan, which have been widely destroyed and almost all of the Kutai National Park. Also previous and recent fires destroyed a considerable part of the unique limestone forests in the north of the province. The causes of the fires are currently under more thorough investigation (see also other section of this homepage).