



Initial Steps towards Forest Fire Prevention in East Kalimantan/Indonesia: The Integrated Forest Fire Management Approach



1. Frame conditions and background

The fires within the rural and wild land areas in East Kalimantan are virtually all human-induced. Only in very limited areas, burning coal seams, mostly ignited by previous fires, have some significance in causing wildfires. A large number of all ignitions result from forest conversion activities for industrial plantations and from escaped small-scale agricultural fires. Fire is the cheapest tool to reduce vegetation cover, and for many smallholders the only one available.

After the disastrous fires of 1997/98 particularly in the province of East Kalimantan, it is obvious that approaches towards the prevention of fires face a complex set of constraints, like:

- A general lack of awareness and concern about forest and land fires in all levels of the society;
- Institutional constraints such as lack of clear authority and responsibility, and law enforcement;
- Available budgets at operational level insufficient;
- Overlapping claims to land and forest resources and tenure insecurity for both large companies and smallholders, but particularly for smallholders in indigenous communities;
- Human-induced changes in vegetation cover resulting in the rapid spread of fire-prone vegetation types, which create hazards for future fires over large areas in the province.

Such conditions make the prevention of wildfires a big challenge. Human-induced wildfires, however, are generally preventable. To reduce their occurrence, human resource and institutional development along with general awareness campaigns are the foremost tasks at target group level. Furthermore, in a province like East Kalimantan with yet limited and insufficient technical fire management capacities to reduce the spread of large-scale fire events, the prevention of wildfires from starting at all is possibly the most effective and efficient part of a fire management system.

2. Community Based Forest Fire Management (CBFFM)

Grass-roots approaches are the backbone of fire prevention concepts in East Kalimantan. Many of the local people are upland farmers and use fire as a tool for land clearing. On the other hand, many of them also have experienced damages and losses due to the fires in 1997/98. Therefore, fire management at village level is first of all a self-help-oriented approach.

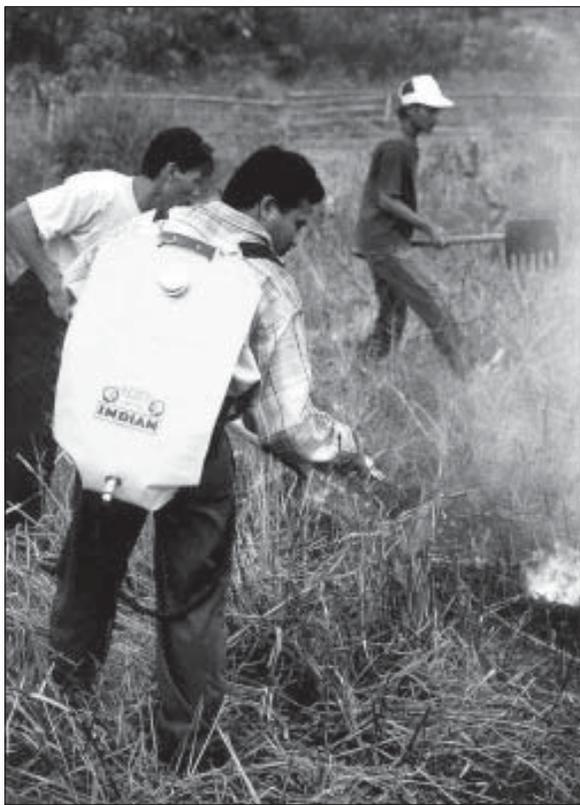
Extension work, which includes village awareness campaigns and the distribution of information materials, is the first essential step to plant “fire prevention seeds” at village level. This is followed by the provision of basic fire management training and fire fighting hand tools. The next step is to form volunteer village fire crews and to institutionalize the approach in planning workshops together with village fire crews, formal and informal community leaders and government agencies involved.

Besides those activities, nature camps for children and “roadside campaigns” are further activities to support CBFFM, developed and carried out by IFFM.

The Integrated Forest Fire Management Project IFFM

IFFM is a technical co-operation project under bilateral agreement between the governments of Indonesia and Germany. It is under the responsibility of the Ministry of Forestry and Estate Crops (MoFEC) of Indonesia, implemented by the two provincial forestry agencies Kanwil Kehutanan and Dinas Kehutanan. The project began in 1994 and is scheduled to last 9 years. With phase II (1997-2000), IFFM has become a co-operation project with the German Development Bank (KfW), which provides financial grant of 10 million DM for the purchasing of fire equipment. GTZ (German Agency for Technical Cooperation), who is in overall charge, provides for necessary training and advice to set up a complete fire management. Indonesia provides the premises, personnel and the budget for operating fire management in East Kalimantan.

For the success of the programme, an incentive system has to be designed benefiting local people who participate in the CBFFM. This further enhances the sustainability of such a programme in general. The following incentives should be part of a CBFFM system along with training and the provision of equipment:



Volunteer village fire crew at work

- Village fire crews should have regular access to relevant fire information (early warning aspect, communication, coordination and cooperation in the field, etc.);
- Career opportunities in fire management within the forestry department but also job opportunities (volunteer fire crews, village trainers, etc.) have to be created;
- Government support of community development (e.g. income generating programmes like the rehabilitation of burnt forest areas, etc.; provision of seedlings in the framework of community forestry; technical support like water supply facilities, further equipment, etc.);
- Awards for outstanding fire prevention performance during high fire danger events given to successful villages.

3. State of implementation of the programme

So far, about 80 villages in the six most fire affected forestry districts and one national park (Kutai National Park) of East Kalimantan have been included into this programme. Extension work and fire prevention and suppression training have been successfully carried out and the villagers in more than 20 communities have established volunteer fire crews. IFFM is currently preparing participatory planning workshops to integrate the approach into the institutional framework of those villages. Main issues to be addressed are responsibilities and coordination, legal aspects, budgets, and communication. Fire-fighting equipment (hand tools) has been purchased in the framework of the financial cooperation with KfW and is ready to be distributed.

4. Public relations work as part of fire prevention

The public awareness of forest fires is still small in Indonesia. Only during ENSO events like in 1997/98, did fire become a “hot” issue. Hence, continuous public relations work is indispensable towards the prevention of forest fires. IFFM has been very active in designing and carrying out fire prevention campaigns in East Kalimantan, often in cooperation with local TV and radio stations and a number of newspapers.

To promote the Indonesian fire prevention mascot, “Si Pongi”, various extension materials have been produced and events organized so far. Since more than a year, the



“Si Pongi” show



Nature camp participants

famous Indonesian TV Star *Kak Seto* and his *Mutiara Indonesia Foundation* have been cooperating with IFFM to help raise the awareness of children about forests and forest fires. In April 1999, Kak Seto presented “Si Pongi” in a big show in Samarinda together with about 3000 children and adults. Since then, Kak Seto and IFFM have together produced a “Si Pongi” video clip for the national TV, which intends to introduce the mascot to a broader

audience and to promote a professionally produced “Si Pongi” music cassette. “Si Pongi” dolls and other items are very much liked by children and “Si Pongi” has of course the potential to become a successful figure on the toy market.

Within the framework of an established environmental education (EE) working group together with local NGOs, a “nature camp” concept has already been designed and successfully been carried out. This programme may become another promising approach to address fire prevention with children in villages as part of the CBFFM programme.

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Six Steps towards Community Based Forest Fire Management

Step 1: Orientation process/identification of villages

- Villages selected particularly in or near fire hazardous forest areas;
- Formal and informal meetings carried out with key resource persons from the local government and communities to discuss fire management approaches;
- Socio-economic studies carried out to identify and assess the motivation, potential and constraints (problems) of local communities in the project areas with respect to fire management.

Step 2: Fire prevention campaigns

- Extension meetings carried at strategic locations/villages with participants from up to 10 sub-villages/hamlets;
- Villagers are encouraged to form volunteer village fire crews.

Step 3: Fire prevention and suppression training for volunteer village fire crews

- Hand tools provided to each participating sub-village/hamlet;
- Crews provide for proper storage and maintenance of hand tools (small warehouse, standard operating procedures, etc.).

Step 4: Institutionalizing of fire prevention work at village level

- Participatory planning workshop at village level (with representatives of village fire crews, formal and informal leaders), which also considers gender issues;
- Workshop results proposed to local and provincial government;
- Provincial government should provide for legal framework as part of the overall fire management system;
- Village fire crews integrated in “village structure”.

Step 5: Training of trainers

- Up to five trained villagers per district appointed by village crews to participate;
- Village trainers to extend village fire prevention programmes in close cooperation with crews of the provincial forestry service and concession crews.
- Job descriptions provided, also compensation for services by local government.

Step 6: Networking

- Regular meetings established between crew bosses of village fire crews, the forestry extension service and other government agencies involved, and concessions;
- Communication established. Early warning information reaches the local level in time, and vice versa.

For further information about fire events, IFFM activities, concepts, and reports, please visit the IFFM website at <http://www.iffm.or.id>.

IFFM cooperates with the Global Fire Monitoring Center (GFMC). Find this page at <http://www.uni-freiburg.de/fireglobe/>