

# 1997 REGIONAL HAZE ACTION PLAN

*Adopted in Singapore on 23 December 1997*

## INTRODUCTION

1. Smoke haze had affected Southeast Asian countries during the dry seasons in 1991, 1994 and 1997. From July to October 1997, ASEAN countries in particular Brunei Darussalam, Indonesia, Malaysia, and Singapore, were badly affected by smoke haze caused by land and forest fires. The Philippines and Thailand were affected to a lesser degree. The severity and extent of the smoke haze pollution was unprecedented, affecting millions of people across the region.
2. The economic loss suffered by countries during this environmental disaster was enormous and has yet to be fully determined. Several economic sectors, including air, water and land transport, shipping, construction, tourism, forestry and agriculture, have been severely affected. The haze pollution has also resulted in considerable health impact on the people of the countries affected and the long-term health effects have yet to be determined.
3. ASEAN Environment Ministers had in June 1995 agreed on an ASEAN Co-operation Plan on Transboundary Pollution. The Co-operation Plan contains broad policies and strategies to deal with transboundary pollution. In light of the latest haze experience, the ASEAN Environment Ministers have agreed on this Regional Haze Action Plan, which sets out cooperative measures needed amongst ASEAN member countries to address the problem of smoke haze in the region arising from land and forest fires.

## OBJECTIVES

4. The primary objectives of this Plan are :
  - a. to prevent land and forest fires through better management policies and enforcement;
  - b. to establish operational mechanisms to monitor land and forest fires; and
  - c. to strengthen regional land and forest fire-fighting capability and other mitigating measures.

## PREVENTIVE MEASURES

5. ASEAN countries recognise the need to strengthen national policies and strategies to prevent and mitigate land and forest fires. While some member countries have already developed their national policies and strategies, others are in the process of advancing them based on their own development needs, priorities and concerns.
6. ASEAN countries will develop National Plans to encapsulate their policies and strategies to prevent and mitigate land and forest fires. The National Plans should contain the following common elements:

- a. Policies to curb activities that may lead to land and forest fires and control emissions from mobile and stationary sources, including the prohibition of open burning and the strict control of slash-and-burn practices during the dry period.
  - b. Strategies to curb activities that may lead to land and forest fires and control emissions from mobile and stationary sources, including the following:
    - formulation of air quality management legislation to prohibit open burning;
    - strict enforcement of laws and legislation;
    - implementation of air quality monitoring and reporting regimes, and setting up surveillance on local sources of emissions, both mobile and stationary;
    - establishment of national task force/committee to develop strategies and response plans to deal with fires and smoke haze; and
    - utilisation of information technology to provide haze-related information to relevant agencies to prevent and control spread of fire, and to enhance public awareness on the haze situation.
  - c. Guidelines and support services to discourage activities which can lead to land and forest fires.
  - d. b. Operating procedures for the early mobilisation of resources to prevent the spread of fires.
  - e. Development of markets for the economic recovery and utilisation of biomass (eg briquette) and appropriate methods for the disposal of agricultural waste.
7. These National Plans would be completed by March 1998. An ASEAN workshop will be conducted in April 1998 to facilitate cross-comparison of the National Plans and exchange of information, including the exchange of legal experience in managing land and forest fires.

## **REGIONAL MONITORING MECHANISMS**

8. The Plan will strengthen the region's early warning and monitoring system to provide an alert of the first outbreak of land and forest fires, an assessment of meteorological conditions, a prediction of the spread of smoke haze, a systematic tracking of the control and spread of fires and haze, and the necessary data to support enforcement action. As part of this effort, the ASEAN Specialised Meteorological Centre (ASMC) will be further streamlined and strengthened. ASMC will serve as a regional information centre for compiling, analysing and disseminating information derived from satellite imagery and meteorological data necessary to detect and monitor land and forest fires and the occurrence of smoke haze.
9. ASMC will operationalise, by March 1998, an "intranet" among the relevant ASEAN meteorological service and environmental agencies to improve communications and enhance the effectiveness of existing early warning and monitoring systems. Information that will be made available on the intranet will include the following:
  - Satellite Imagery
  - Wind Charts

- Visibility Information
- Air Quality Information
- Other Meteorological and Environmental Information useful for haze monitoring

10. In early 1998, the ASMC will conduct a regional workshop involving meteorological experts from within and outside ASEAN to discuss the climate prediction for the region in 1998/99.

In the longer term, ASMC will further enhance the intranet system by including, among others, the following :

- Seasonal Climate Prediction
- Haze Dispersion Modelling Products
- Forest Fire Danger Rating Index

## **FIRE FIGHTING CAPABILITY**

11. National and regional land and forest fire-fighting capability will be strengthened through the following measures:

- a. complete by March 1998 the on-going preparation of the inventory of land and forest firefighting capability of each country (agencies, manpower, equipment, available land and forest fire hazard maps and other resources) and identify resources that can be made available for regional fire-fighting efforts;
- b. formulate by March 1998 a programme to strengthen the fire-fighting capability of individual countries and the region, and compile a list of equipment and technical expertise that is needed at the regional level to tackle land and forest fires;
- c. identify by March 1998 the sources of technical assistance for (b) within and outside ASEAN and, if required, formalise an assistance programme with each donor country. Technical assistance may include forest fire-fighting equipment, aircraft such as water bombers, and high-tech equipment and experts for command post operations;
- d. establish by June 1998 an operating procedure to activate the deployment of the firefighting resources in each country for regional fire-fighting operations; and
- e. establish by June 1998 a mechanism in each country to provide, in the event of an outbreak of land and forest fires, regular updates to the Haze Technical Task Force on progress made in efforts to fight the fires. The updates would include the number of hot spots and their locations, analysis of fire types, problems encountered, adequacy of deployed resources, and effectiveness of enforcement and ground operations.

12. ADB's assistance will be sought to provide consultancy services in support of the Plan.

13. The Haze Technical Task Force will meet monthly to review the progress of implementation of the Regional Haze Action Plan. The ASEAN Environment Ministers will meet regularly to provide guidance on the implementation of the Plan.