

Shri. S. K. DAS., I.F.S.,
Principal Chief Conservator of Forests.

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Sub: Protection to Natural forests and Plantations against Fire - SMC works in
Natural Forests - Use of CCTs as fire lines -An integrated approach for
more benefits and better results - Certain guidelines -Issued - Regarding.

1. The Forest Department has been taking up fire tracing operations as a measure to prevent fire in Natural Forests and Plantations. The Department has also been taking up creation and maintenance of fire lines of various widths under different schemes. Apart from this, fire watchers are being engaged in many cases for maintenance of fire lines and combating the fires when it occurs.
2. Although these measures have given varying degree of success, they are quite temporary in nature namely fire lines are to be formed every season and maintained. More over they are neither effective nor do they serve any other purpose to benefit the forests. Although the forest fire is surface bound in nature in our country, its colossal damage is not adequately highlighted. But it is at least realized that this does not allow the natural regeneration to establish, deforms the existing trees, accelerates the process of soil erosion and reduces the soil fertility.
3. The forests have been earmarked as the key area for development not only to ensure the ecological security of the nation but also to provide much needed income and employment to the needy people living in the forest fringe villages. The subject has therefore been given serious thought in order to evolve the concept of a multipurpose fire line that will not only act as an effective fire line but also will give substantial benefit to the existing vegetation directly.
4. We have taken up the Watershed Programmes (Neeru - Meeru) in a big way for the last three years. We are also implementing the externally aided Projects namely Community Forest Management (CFM) where there is a provision for fire control in the treatment areas. In addition to this, the Government of India has been providing funds under fire control schemes as a centrally sponsored Scheme. If an element of integration is brought out in these projects to evolve the most effective fire line in the form of a CCT with usual septa and natural interruptions depending upon the topography of the area, the forests will not only be immensely benefited due to additional moisture available to the plants but also the fire line in the form of CCT will be almost of permanent nature.
5. With the above idea, the following guidelines are issued : -
 - (a) The provision of creation of fire line and maintenance available under fire control scheme of Government of India/ CFM/ FDA can be effectively utilized by

taking up CCTs. The RIDF IX also has a provision of digging up of CCTs. For the purpose of a fire line, it may be sufficient to have a contour trench of top width of 1.5 m, bottom width of 1 m and a depth of 50 cm. This will enable a side slope of 1: $\frac{1}{2}$ which will prevent the collapse of the trench. In case of extreme difficulty in getting a suitable strip of 1.5 m, the top width of the trench may be reduced to 1 m and the bottom width to 0.8 m.

- (b) The dug out soil should be deposited on the downward slope leaving a clear 1 m distance from the trench. The deposited soil can be made into a trapezium shape where sowing of seed of important species like Pongamia, Neem, Palmyrah etc., can be taken up.
- (c) At the advent of fire season, care should be taken to see that there is no inflammable material in the one m strip between the trench and the deposited soil. This arrangement will result in 3.5 m to 4 m wide fire line and it will be sufficient to prevent the spread of the fire.

6. We may face a number of problems in the field while implementing this programme

- (a) There may be a number of trees on the contour line (fire line)
- (b) There may be sharp depression/elevation along the ordinary line of contour (fire line)
- (c) Digging of the contour trench could be done only to a part of the total length of the forest area due to peculiar topography etc.

All these problems can be solved using our common sense and practical experience. For example, the problem in (a) above can be solved by providing septa at the points where trees exist, (b) can be solved by treating the elevation/depression as the septum and (c) above can be solved by digging a staggered contour trench above or below the first line. The septa, elevation/depression should be cleared off the inflammable material before the fire season starts.

7. Fire watchers can be engaged for keeping a watch on fires. They should be supplied with simple but effective fire fighting implements. The main job of the Fire Watchers is to drag the dry leaves, twigs etc. in the forest floor to the nearest trench (fire line) and carry out control burning repeatedly apart from keeping a vigil on the occurrence of fire.

It may be relevant to mention here that such an approach has been adopted for the plantations of Andhra Pradesh forest Development Corporation (APFDC) wherein the existing net work of trenches is being utilized as fire line and the fire watchers are sweeping the dry leaves/litters from the floor into the trenches for carrying out repeated control burning in the fire season. The whole idea is to keep the floor of the plantations free from fire hazard. This has proved to be a total success.

8. This system of fire tracing will result in the fire line (CCTs) playing the dual role of harvesting rain water and preventing fire. For the large tracks of the forest area, it is a gigantic task and cannot be achieved within a short time. But with a determined

will and a proper planning if we put all our efforts to achieve the goal, the face of the entire forests will undergo a sea change within a few years.

The most important point to be noted here is that with no additional cost for any item other than whatever is the existing practice, we get the following benefits by integration of different activities:

- (a) Almost a permanent and more effective fire line.
 - (b) Fire lines in the form of CCTs impounding rain water benefit the forest all over the area.
 - (c) Sowing of seed in the dug out earth improves the composition of species.
 - (d) The fire lines (CCTs) can be utilized for heaping dry leaves/twigs for controlled burning.
9. Fire control plans are to be prepared by all Divisional Forest Officers. Maps showing existing fire lines and lines to be created should be available with all the Divisional Forest Officers. Prioritization of fire control lines basing on GIS maps should be done. This work should be taken up whenever funds are available from any source. The GIS wing of the Forest Department has already mapped the forest areas prone to higher risks of fire. All the Conservators of Forests are requested to follow these instructions at least in one block to start with in each division from funds available under different schemes like CFM, FDA, RIDF and fire control schemes of Government of India.

They are requested to prepare a time bound programme for 3 years to cover all the forest blocks in their area. This work has to be taken up on top priority.

Sd/- **(S.K. DAS)**
Principal Chief Conservator of Forests