

crops can be raised from a basket of options in advance. Thus the country would have some sort of assurance of likely availability of food supply, with sound planning and mandatory number of crops to be raised in a year. Similar planning can be worked out for other water-consuming

sectors, e.g. further development of a mega city and water-consuming industry in a water-stressed region can be resisted and new urban centres be encouraged near water sources. Extravagant urban consumption and houses/residential complexes having tube wells should be heav-

ily taxed to protect the lowering water table.

A. K. BIYANI

*Department of Geology,
DBS College,
Dehradun 248 001, India
e-mail: biyani_ajay@yahoo.com*

How technology advances and man decays

'Global warming' and 'climate change' have now become buzzwords. With the IPCC and Al Gore receiving the Nobel Prize for Peace, the message about the current situation has been communicated to the wider public and governments have also become more concerned about this problem and its implications. It is now recognized as a world threat, much more dangerous than nuclear wars.

Efforts are being made internationally to cut-off carbon emissions (as recommended by the Kyoto Protocol). Scientists are trying to develop new methods and techniques to reduce the emission of greenhouse gases (GHGs) leading to global warming. Different national and international, government and non-government agencies are working to spread awareness among the public about these issues, so that the living planet could be saved from further heating up.

But what if people, instead of reducing emissions of GHGs, release comparatively much more carbon into the air. No doubt, developing countries like India cannot follow strict guidelines for reducing carbon emissions. For the sake of their developmental needs, these countries need some concession in the capping of carbon emissions.

When tonnes of carbon are released for no genuine reason but for luxury and comfort, then it is not tolerable. I am talking about the carbon emissions in huge amounts from the intentional agricultural fires.

Earlier, man used to harvest crops manually, which took weeks or months to complete. With the advent of harvest-

ing machines called 'combines', harvesting of crops (cutting, thrashing and winnowing altogether) became easy and can be done within hours or days.

In the plains of Jammu province, even the small and medium farmers hire these combines from the neighbouring state of Punjab for harvesting crops, mainly wheat. This trend has continued for about the last ten years. There is no problem if farmers are using this advanced technology to collect their ripe crop spread over acres of land in a few hours. These huge machines can cut an acre of crop in less than half an hour. Moreover, it is economical and costs only Rs 500 per acre. On the other hand, the manual process may cost over Rs 3000. Then, why am I writing about it?

The reason is as follows. In the manual process of harvesting, there is no wastage or burning of biomass, and the straw or husk is also preserved for fodder and other uses. But these combines reap the crops by decapitating the plants and collecting only the ripe inflorescences, while the rest of the crop plants remain standing in the fields. These decapitated crops need to be cleared from the fields, so that the fields can be prepared for the next crop. Burning is the easiest way to clear the fields of the standing crop waste.

This way, thousands of acres of agricultural land are burnt here every year. Lakhs of tonnes of agricultural biomass (waste) are reduced to ashes, unleashing gigantic clouds of GHGs in the atmosphere. This is not only contributing to the avoidable addition of GHGs in the air and to global warming, but also to a re-

duction in the fodder availability for cattle. Such massive fires roast the agricultural soil up to a certain depth, thus killing the important soil flora and fauna beneficial for agriculture itself. It can also lead to destruction of agricultural biodiversity. Numerous insects, their eggs, larvae or pupae, seeds, tubers, rhizomes and eggs of birds get burnt mercilessly in such fires. These fires also burn the humus necessary for cultivation and growth of plants. It also reduces the moisture-holding capacity of the soil. Further, such agricultural waste could have otherwise been used for making paper, cardboard, as packaging material, etc. Such massive fires also burn the neighbouring wastelands or jungles, and plants and trees on the mads (bunds) and hedges. This causes a reasonable reduction in the production of oxygen by destroying the greenery.

India can go for carbon emissions as far as sustainable and genuine development is concerned. But the above-mentioned agricultural fires are not contributing towards this. Such an activity is a result of lethargy and a desire for luxury and comfort. In this scenario of global warming and the pressing need for reducing carbon emissions, can we afford such a luxury?

ABHAY S. D. RAJPUT

*(S. Ramaseshan Fellow),
59, Munshi Chak, Opp. Old Chungi,
Camp Road, Talab Tillo,
Jammu 180 002, India
e-mail: abhaysdr@yahoo.co.in*
