assessment. For example, solar energy though acceptable for socio-political and environmental criteria, is not market-friendly. Coal is acceptable for the market and fulfils sociological needs, but does not fit into the environmental and political agenda. Use of clean coal technologies can help reduce CO_2 emissions, but there still remain challenges.

In climate-related energy technologies, carbon capture and storage (CCS) is emerging as a CO_2 mitigation option. CCS is characterized by three main technologies – first is capture technology where CO_2 is separated from the flue gas of a large power plant or a heavy industry; the second is safe transportation of the captured CO_2 to its place of disposal. The third is storage technology for removal of CO_2 from the atmosphere, which requires its injections in a suitable geo-environment. CCS-enabling technologies are not an important issue for India yet because of their high cost. Whereas CO_2 capture continues to be a major thrust in many R&D laboratories and academic institutions, India's CCS policy does not consider underground storage for safety reasons.

Although latest industry projections suggest that the entire CCS chain may not be commercially feasible until 2025, keeping in view the dominance of coal in India's energy in the foreseeable future, it is desirable that we look beyond carbon capture. Understanding the behaviour of supercritical CO_2 in the subsurface, be it a coal mine or an oil reservoir or a mineral rock, is a scientific necessity to develop a knowledge base about the disposal of the captured CO_2. We need to develop a scientific basis for these technologies[3] through investment in R&D and also take actions for their development/demonstration, as is the case with other energy technologies. There are several risks involved, such as investment decisions, safety concerns and leakage into the atmosphere.

The responsibility of creating awareness about the CCS technologies lies with both natural scientists as well as social scientists to generate scientific understanding and then applying it to get insights from social science research. This would help in creating a bridge between environmental science and environmental sociology to improve our understanding of the various concerns and also our position in the political arena. This could be the way forward towards a policy on this contentious issue.

1. Balaram, P., *Curr. Sci.*, 2010, **98**, 1267–1268.
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Ethno-medicinal use of a threatened cucurbit from Bihar

Bihar is floristically rich but poorly explored and the complete documentation of its floristic wealth is still awaited. During a floristic exploration in the areas of Katihar district (Bihar), a rare cucurbit *Luffa echinata* Roxb., locally known as *Bindol* (Figure 1), has been observed growing in the wild near Mirchaibari. The plant was first collected by Haines[1] from the neighbouring Purnea district. Thereafter, it has not been observed. A scrutiny of the herbarium specimens housed in herbaria such as CAL, BHAG, BSHC, ASSAM and Herbarium of North Bengal University, revealed that the species was not recorded thereafter from Purnea or any other locality of Bihar. All parts of the plant are bitter in taste and traditionally utilized by the local people as a cure to diabetes. The whole plant is crushed into a fine powder and one teaspoon of it is given with water twice a day to a diabetes patient. The juice of fresh leaves is also consumed as a blood purifier. Fine powder of mature fruits with 'Bael' (*Aegle marmelos*) leaves and Betle (*Piper betle*) leaves is given for dog bite for 21 days once a week. The plant is continuously being over exploited by the local people from the wild and no efforts for its conservation are being made. About 185 individuals were recorded in Mirchaibari area and nowhere else in Katihar. Only 6–10 seeds were recorded from each fruit though the number of fruits ranges from 23 to 35 in each plant. A few seeds were collected from the same vicinity and successfully grown at the botanic garden of T. M. Bhagalpur University, Bhagalpur. A score of 7% for seed germination was recorded under standard growth conditions. The percentage of survival was also considerably low. Habitat destruction due to rapid urbanization in the Mirchaibari area of Katihar is causing a serious threat to the existence of this rare taxon. Considering the medicinal importance of this taxon, conservation efforts should be made soon to protect it in its natural population.

Figure 1. *Luffa echinata* in flowering.

1. Haines, H. H., *The Botany of Bihar and Orissa*, Allard and Son and West Newman Ltd, London, 1921–1924.

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