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# **HPP activities that reduce emissions of greenhouse gases – mitigation**

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**HPP food producing  
Productive Units  
reducing emissions of  
greenhouse gases by  
storing carbon in soils**

Living soils store great amounts of carbon, carbon that would otherwise be in the atmosphere and as a greenhouse gas contribute to global warming. The more life the farmers, such as these in Guinea Bissau, can build up in the soils, the better for the climate.



▫ **Farmers Clubs build up healthy and fertile soils that produce good harvests year after year and require little or no chemical fertilizer – fertilizer that otherwise would contribute to global warming through production and use.**



□ **One of the ways to produce fertile soils is by using legume plants in the crop rotation, such as these soy beans in Zimbabwe grown with Conservation Farming.**



□ **Conservation Farming is used by thousands of farmers in Farmers' Clubs. By plowing minimally and keeping the ground covered, such as here in Zimbabwe with beans, the soil gradually gets richer and stores more carbon.**



□ **Frontliners preparing a field for Conservation Farming, with set spacing between the planting holes, adding compost and keeping the ground covered with mulch. They have managed to get 60% of local farmers to copy this.**



▫ Instead of making potholes manually, some Zimbabwean farmers do Conservation Farming by ripping a thin line into which the seeds are sown.





Most Farmers' Club members rely on composts, cover crops and fertilizer trees to supply the nutrients needed for their crops – such as these women bringing out compost in a Zimbabwean Farmers' Club.



- **Getting nutrients from natural fertilizers, as opposed to chemical fertilizer, add to the life in the soil and the amount of carbon stored in it – here at the garden farm at DNS Niassa, Mozambique.**



- **Frontliners preparing “Chinese compost”, in small heaps, where ash is added to the organic material and covered with mud. This compost is ready within weeks.**



- **Farmers' Clubs in India have promoted vermicompost production for a number of years, such as here in Rajasthan. Adding this compost made by earthworms is an efficient way of getting more life in soils.**



- **The garden farms store more carbon, because the irrigation water and the added organic material result in more life in the soil – here at Frontline Institute.**



- **Hundreds of Chinese Farmers' Club members try out various methods of planting, irrigation and of adding compost in order to make their rice fields emit less methane – one of the powerful greenhouse gases.**



- **Scientists taking samples to measure the amount of methane. Methane is formed by microorganisms in the mud, mainly during the periods when rice is under water.**

