

A Quantification of Virtual Water Trade of Major Agricultural Commodities in India

*Kamesh¹, T.M.

¹Department of Agricultural Economics, Tamil Nadu Agricultural University, India

*Corresponding E-mail: kameshnl@gmail.com

This paper provides the economics of Virtual Water (VW) exporting to other countries through major agricultural commodities from India. VW is interconnected with food sustainability and it is the amount of hidden water transferred to other countries through trade. India produces and exports high water-consuming products but contains only 2.56 % of total water available in the world. By analyzing VW, the comparative advantage in producing the commodity in India can be obtained. VW for major crops was estimated by dividing the total water required or applied for the specified crop by the total yield of the crop. In this paper, Virtual Water Trade (VWT) was computed for the major crops in India and analyzed the comparative advantage for India in producing the crop. The data required for the analysis were collected from various secondary sources such as the Directorate of Economics and Statistics (DES, GoI), Indian Agricultural Statistical Research Institute (IASRI), EXIM Bank, and FAO Aqua Stat. In the years 2018-19 and 2017-18, India exported 34515 MCM and 41080 MCM of VW through rice followed by 420 MCM and 622 MCM of VW through wheat, 276 MCM and 184 MCM of VW through maize. When comparing the production of rice and groundnut in China and India in water requirement aspect, India has the comparative advantage in the production of groundnut and China has the comparative advantage in the production of rice and also showed the same in the yield aspect. With the growing water scarcity in India, we should shift the focus from the high water requirement crop to the lower crop to sort out the water scarcity problem and attain sustainability.

Keywords: Comparative Advantage, Sustainability, Virtual Water Trade, Water Scarcity.