

# **Reconsidering Climate Change Mitigation and Its Co-benefits, and Impact of a Non-climate Policy on Global Warming Mitigation – A Case Study of Rice-fed-hen Egg Production in Chikujo, Fukuoka –**

Takashi HAYASHI • Koichiro TANAKA

## **Summary**

This study aims to reconsider a definition of climate change mitigation policies (CCMP) and accompanying co-benefits, and to investigate whether rice-fed-hen egg production in Chikujo, Fukuoka Prefecture, Japan can reduce greenhouse gas (GHG) emissions and bring co-benefits. In this study, we originally define CCMP as the policies which can actually reduce GHG emissions, and then we classify CCMP into two different categories, broad and narrow, depending on their primitive purposes. As an example of broad CCMP, we investigate whether domestically produced eggs from rice-fed hens can reduce GHG emissions. To conduct the analysis, we compare GHG emissions from egg production using rice-fed hens with production using corn-fed hens using a case study in Chikujo, Fukuoka, Japan.

Our definition of CCMP helps policy makers implement efficient and effective CCMP, and we found that our definition is consistent with that of the Intergovernmental Panel on Climate Change (IPCC). In Chikujo's case, GHG emissions can be reduced by roughly 7% compared with conventionally-produced eggs from maize-fed hens. From this result, we can conclude that using rice feed produced in Chikujo instead of imported maize feed can slash GHG emissions as a co-benefit of "broad CCMP".