SESSION 4A: EFFICIENCY IN AGRICULTURAL WATER USE

SUMMARY SESSION
OVERALL

• Session chaired by Garth Taylor, University of Idaho
  ▪ Two strong-evidence based cases were presented to illustrate the allocation efficiency of a canal water management in Pakistan and the economic/environmental benefits of a traditional communal irrigation system in Thailand.
  ▪ In addition, a clear/clever example to illustrate the four key-must-follow steps to assess irrigation improvements was showcased.
TAKE AWAYS

• Agricultural Water Allocation Efficiency in a Developing Country Canal Irrigation System by Agha Ali Akram
  ▪ Good quality data regarding water withdrawals (volumetric measures) per farm is A MUST to assess allocation efficiency of irrigation systems. Traditional measures say very little about the efficiency of the system. Knowledge about conveyance efficiency is also required.
  ▪ Welfare gains from improved efficiency allocation were estimated between 12-14%. CAUTION - when assessing welfare gains from improved efficiency allocation, make sure you account for groundwater.
TAKE AWAYS

• Estimating the Economic and Environmental Benefit of a Traditional Communal Water Irrigation System: The Case of Muang Fai (Canal Weir) in Northern Thailand by Arriya Mungsunti

  ▪ Traditional small-scale communal system is more efficient than privately-owned groundwater system in terms of productivity, water use efficiency and water quality
    • Not a panacea – maintenance problems (token fee paid by users).

  ▪ Drought situations managed through the traditional Queue System – Village Council allocates Queue Card to farmer that needs the water the most.
    • Can pass the card to others at no compensation/payment – reason for the system to be more than 700 years old, no money has ever been involved with the Queue Card!
TAKE AWAYS

• Economic Rivalry, Irrigation Abstraction, and Partition to Fates by Bryce A. Contor

  ▪ When irrigation efficiency is improved, increases in consumptive use in the basin must be accounted for. Four-step rules:

    • Consider irrigator response
    • Sort out and close the water budget
    • Consider economic rivalry
    • Do the numbers please!

  ▪ Any inaction or gap likely to lead to unintentional water reallocation and consequences.

  ▪ Tools are available, e.g., Irrigation Demand Calculator. Put them to a good use!