Sustainable Irrigation: Changing Practice in the Australian Murray Darling Basin. (A08-meyer182124-Oral)

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Abstract:

Irrigation within the Murray Darling Basin accounts for 70% of the total irrigated area of Australia (2.2 million ha). Most areas are situated on highly weathered alluvial materials with sodic saline soils. Surface irrigation is predominant. Many areas have developed shallow watertables and groundwater mounds due to inefficient irrigation causing an imbalance between regional outflow capacity and groundwater recharge. In most cases, this exacerbates the frequency and duration of waterlogging and increases the rate of upper profile salinization. Managing these processes and the consequences on production, on soils, water and vegetation is challenging especially with management and market uncertainty. Engaging with these resource sustainability issues has involved changing our traditional research approach. We have used more participative research with a greater integration of social, economic and biophysical understanding. We have helped bring a better balance of production and conservation and provided a factual base for regional policy. The presentation will illustrate the processes, tools and effects that have moved irrigated areas towards more sustainable practices.

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