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“Biophysical and Socio-economic Frame Conditions  
for the Sustainable Management  
of Natural Resources”

**Facilitating Adoption of Best Practices — More Work for Research  
Than Extension!**

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**Abstract**

The presentation points at the implementation challenges we are facing in tropical agriculture when recommended ‘best’ practices e.g. to stop erosion or change irrigation or food handling practices do not have obvious short-term benefits like increased yields or reduced labour but maybe even increase production costs, and this without market incentives for farmers to accept the extra burden.

The resulting low technology adoption rates are a major bottleneck we are facing in the Research for Development continuum since decades despite increasing efforts to move more research from stations to farms.

While many still argue about missing research extension linkages, unsupportive socio-economic frame conditions etc., we might miss the point that understanding and facilitating adoption requires at least as much social and economic research than the more biophysical development of a ‘recommended’ technology.

The presentation draws mostly - but not only - from research work in West Africa on safer irrigation and food handling practices where wastewater is used in market gardening putting thousands of consumers at risk of diarrhoeal diseases. It outlines the importance of understanding farmers’ and food caterers’ knowledge and perceptions of health risks and risk reduction measure to understand possible adoption drivers and barriers. The studies also show that probably only a mix of approaches might lead to a lasting adoption, which builds on social marketing research, incentive systems, awareness creation/education and applied regulations, even if these can not be enforced. There are also many examples of innovations at farmers’ end which might have a different cause and purpose but support the same larger ‘social’ objectives to build on.

An important conclusion is that all this analysis requires serious research of the target group, strongly involving social sciences, which we should not underestimate in the planning of related projects. It also shows that relying on imported strategies and dissemination materials to support technology adoption might not fit local conditions.

**Keywords:** Behaviour change, on-farm research, safer irrigation practices, social marketing, technology adoption