

## Oral presentation

### Session IV

#### Use of the community capitals framework to understand adaptation of silvopastoral systems: bridging the gap between research and development

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#### Abstract

Research on sociology of adoption and diffusion seems to highlight the separation between agricultural and natural resources research efforts, and its relevance and application (so called adoption) by local producers. Trying to address these issues and in order to bridge the gap, we propose the use of the community capitals framework (CCF) within agro ecological research efforts as a twofold to: by the one hand include, analyze, and process socioeconomic data (within the context of an agro ecological research); and by the other hand to open spaces where producers (key stakeholders) can be part of a participatory research process and based on evidence and a deep and systematic contextual analysis, start the *adaptation* of SPS.

Results from Rivas- Nicaragua, highlight the fact that producers have local knowledge (cultural capital) to identify functions and ecosystem services from trees within the pastures: i. e., timber and wood production; feed resources and shade for livestock; soil, water and biodiversity conservation, carbon sequestration and others. This local knowledge (cultural capital) combined with relationships with neighbors', family and friends (social capital) are a starting point to promote the development of multi-functional silvopastoral systems (SPS) toward the improvement of productivity of livestock farms.

FUNCITREE participatory research experiences along with our experience in the Mesoamerican Agroenvironmental Program (MAP) with farmer field schools (FFS), have shown a key role of these efforts of capacity building (human capital) toward the generation of a learning environment in which participants can learn, share and apply more and better knowledge and skills to improve their farms. Knowledge sharing or *wisdom dialogue* (cultural capital) within FFS, allow participants to build and strengthen relationships (social capital) and conserve the ecosystem services (natural capital) through the use of innovative sustainable land use practices, such as SPS. Additionally, the process seeks to empower participants to increasingly take part in local and national decision making structures (political capital). Finally, there is also an enhancement of the productive infrastructure (physical capital) and an increase of income and/or savings (financial capital) coming from the improvement of the productivity.