17:00 Climate-smart coffee systems in East Africa

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It is well known now that in East Africa climate change will have a massive impact on the productivity of coffee and on the livelihoods that depend on it. In this study, current and future suitability of coffee were mapped using 19 climatic variables and 21 IPCC models. The maps were validated with field data. Furthermore, long-term historical data was used to confirm the impact of climate change on coffee productivity. Although we know that climate change will have an impact on the productivity of coffee, smallholder coffee systems also face other constraints at various levels that need to be understood in order to develop climate-smart systems. With the proof that climate change will lead to a decrease of coffee productivity and with knowledge of the major constraints in the different coffee-based systems not only at plot level but also at household, community and landscape level, we have developed shaded systems combining cash and food crops that can play a major role in adapting East African coffee smallholder systems into areas where population pressure keeps on increasing. Developing these strategies, we show that only thinking about getting farmers more 'technified' is not the right solution. More cash in the pocket does not necessarily mean more food security and more resilience. Furthermore, strategies currently promoted by the industry often lead to more gender imbalances than before. We show how developing CSA practices need to take constraints and actors at nested scales (*i.e.* from plot to region) into consideration. Doing this in a participatory way is crucial to ensure impact in the long term.