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Country: Costa Rica
Subject: September 2004 Survey

1. Climate change scenarios – both for National Communication purposes, and more general projects you may have. Global climate runs are now available projecting future climate change until 2100 AD according to the scenarios mandated by the IPCC. For the MM5 regional runs, which time periods are most important to you, and what model output would be most meaningful?

Most of climate change scenarios for Central America have been developed by using an integrator software (Magicc and Scengen). Emission scenarios for first communications varies widely from country to country but IS92a,c and d, were mainly used.

Regarding climate models, HadCM2 and HadCM3 were more common, they tend to have a good representation of actual climate in the region.

Regarding SRES, eventhough differences are not necessarily significant for the results, here at CRRH for the AIACC project we develop a study based on socio economic projections for the countries in order to give an orientation for selecting emission scenarios.

Based on these considerations we are working with Magicc and Scengen and HadCM3, for time horizons 2015, 2030, 2050.

These time horizons are useful for potable water (2015 and 30) regarding investments for adaptation, as well as for hydropower sector in particular for Panama and Costa Rica whose energy sector is hydropower. Agriculture could use these 15-30 results too and forestry 2050.

A sector that is becoming more important for CA is tourism, we are considering it from a water supply and demand perspective.

Based on that and discussing with Patricia after the Panama workshop, we consider that MM5 results could be more beneficial for periods shorter than 2015. I consider that very little has been done for having results for climate changes on that time horizon.

2. Land use changes – What MM5 runs would be most helpful? Are there specific changes you would like to see made? Is there specific output that would be helpful?

I would live this information to the people related to CCAD or CAC (Agriculture).

3. Water resources and hydrometeorology – especially, what model output would be most helpful as input into DSS.

Regarding water resources we have 14 experiments for 14 basins where CLIRUM3 was used, this is a very simple rain, runoff model, that allow us to use very little information, however in the region there are a lot of expertize regarding hydrological models (from Sacramento to the Mikes). The problem we always face is that for some models there are not all the parameters available so we ended introduciong more uncertainties to the results. But the main output is mainy cahnges in runoff.

Regarding the agriculture sector most of the climate change people have worked with DSSAT.