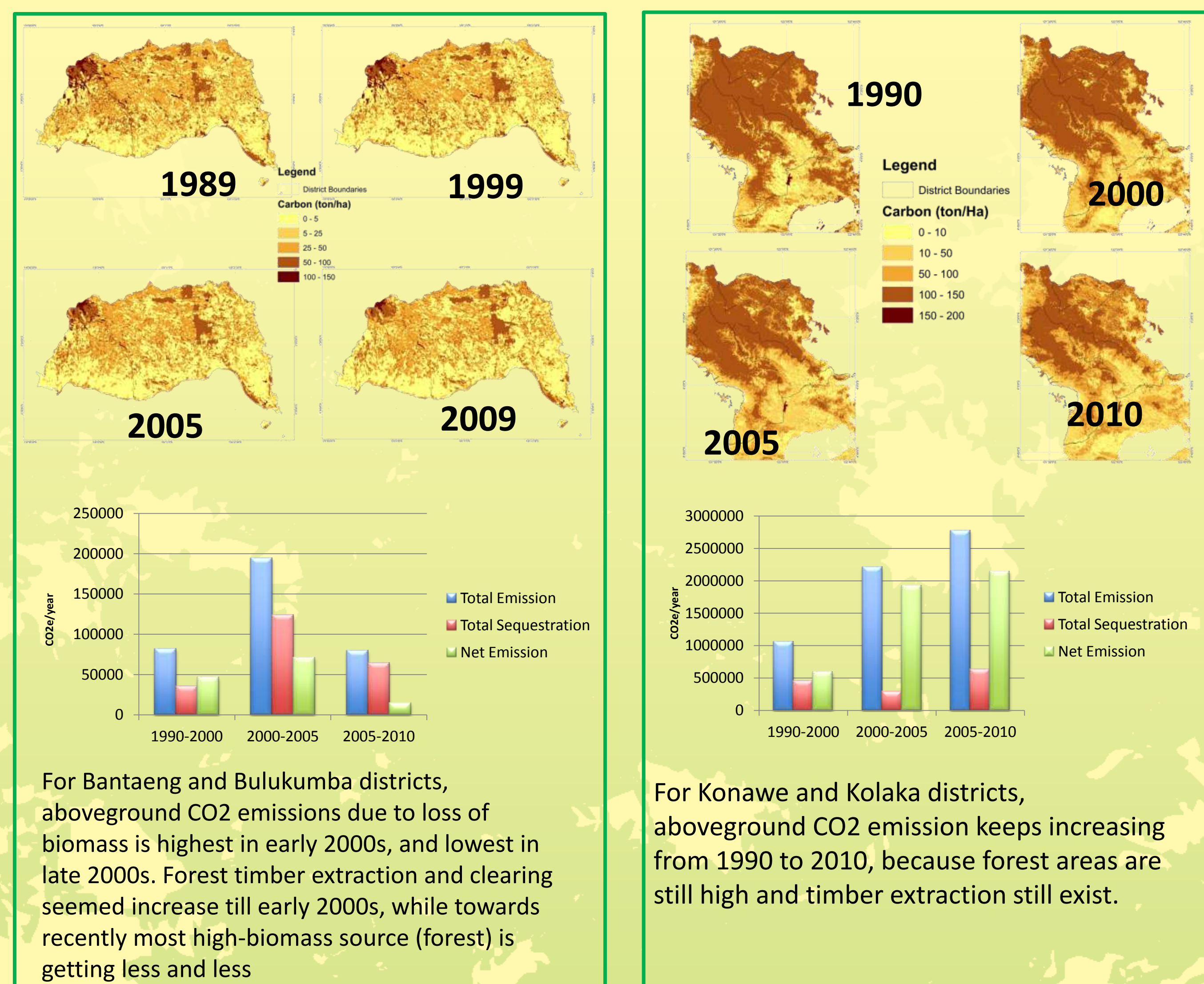
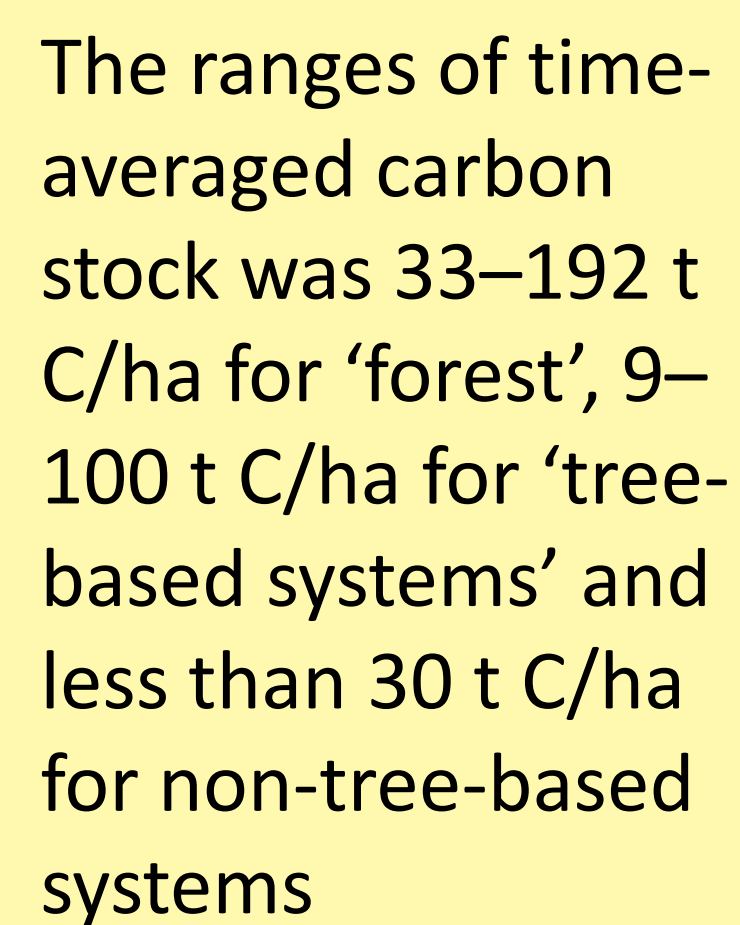




Annual Rainfall:  
2000-4000 mm South Sulawesi  
1600 mm Southeast Sulawesi

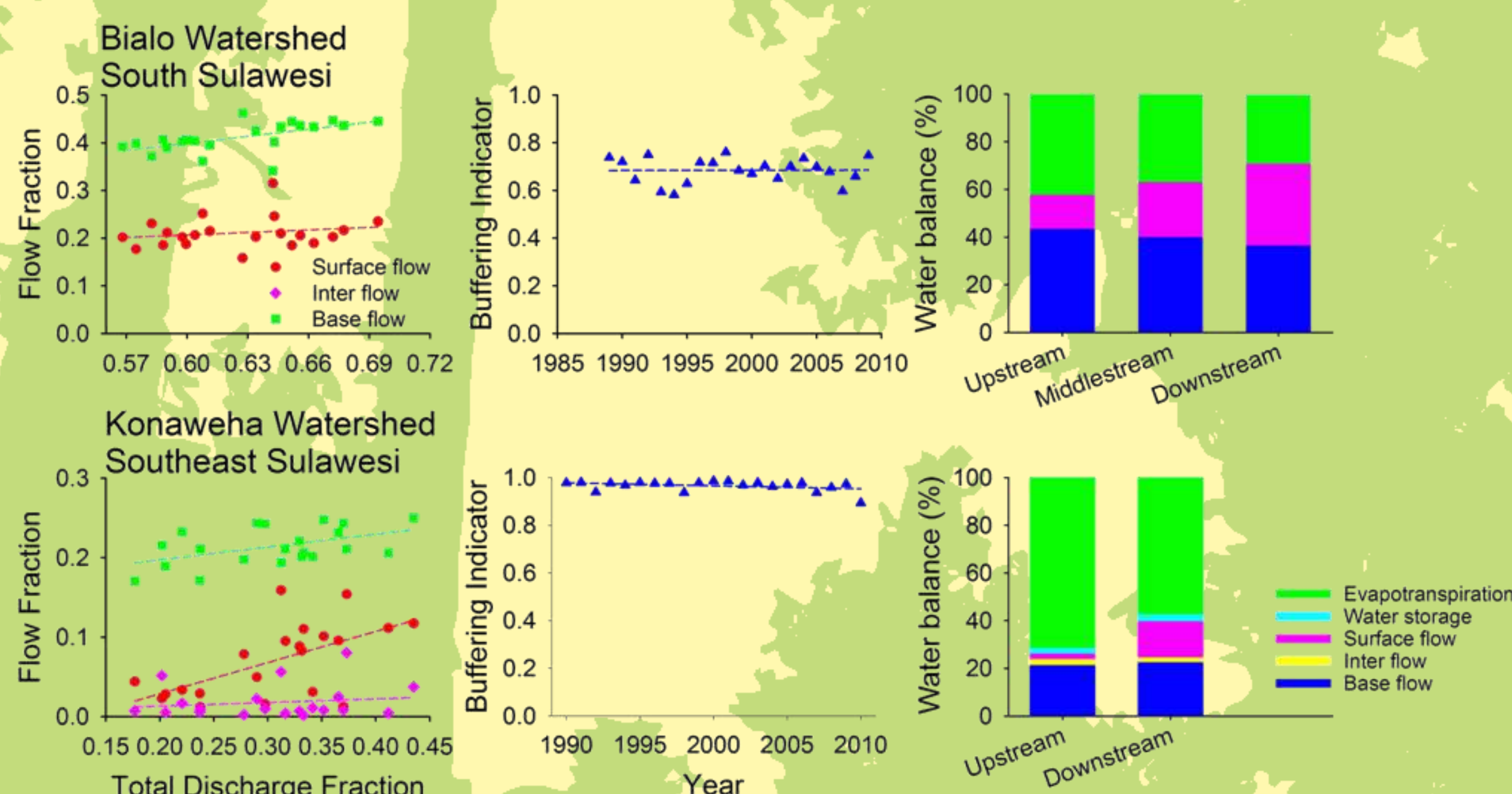
# Trees link to ecosystem services?

## Carbon stock and emission

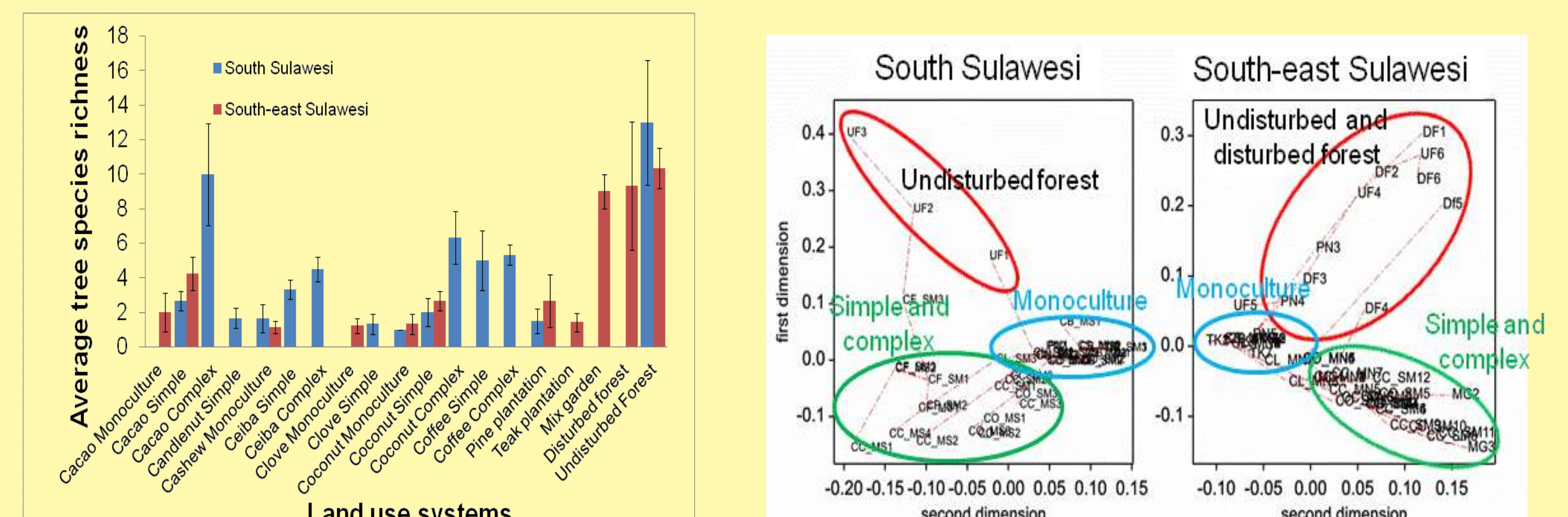


## Historical and Current Condition of Watershed: GenRiver Model

- ❖ Increasing total discharge fraction both in Bialo and Konawehea watershed is positively correlated with surface and base flow.
- ❖ The present of forest cover in the upstream area increases base flow and contributes to the current hydrological condition of Bialo and Konawehea Watershed.
- ❖ Konawehea watershed in Southeast Sulawesi has a higher buffering capacity compared to Bialo watershed in South Sulawesi, but both watersheds show relatively stable trend in buffering capacities for the past twenty years, with higher year-to-year fluctuations in Bialo.

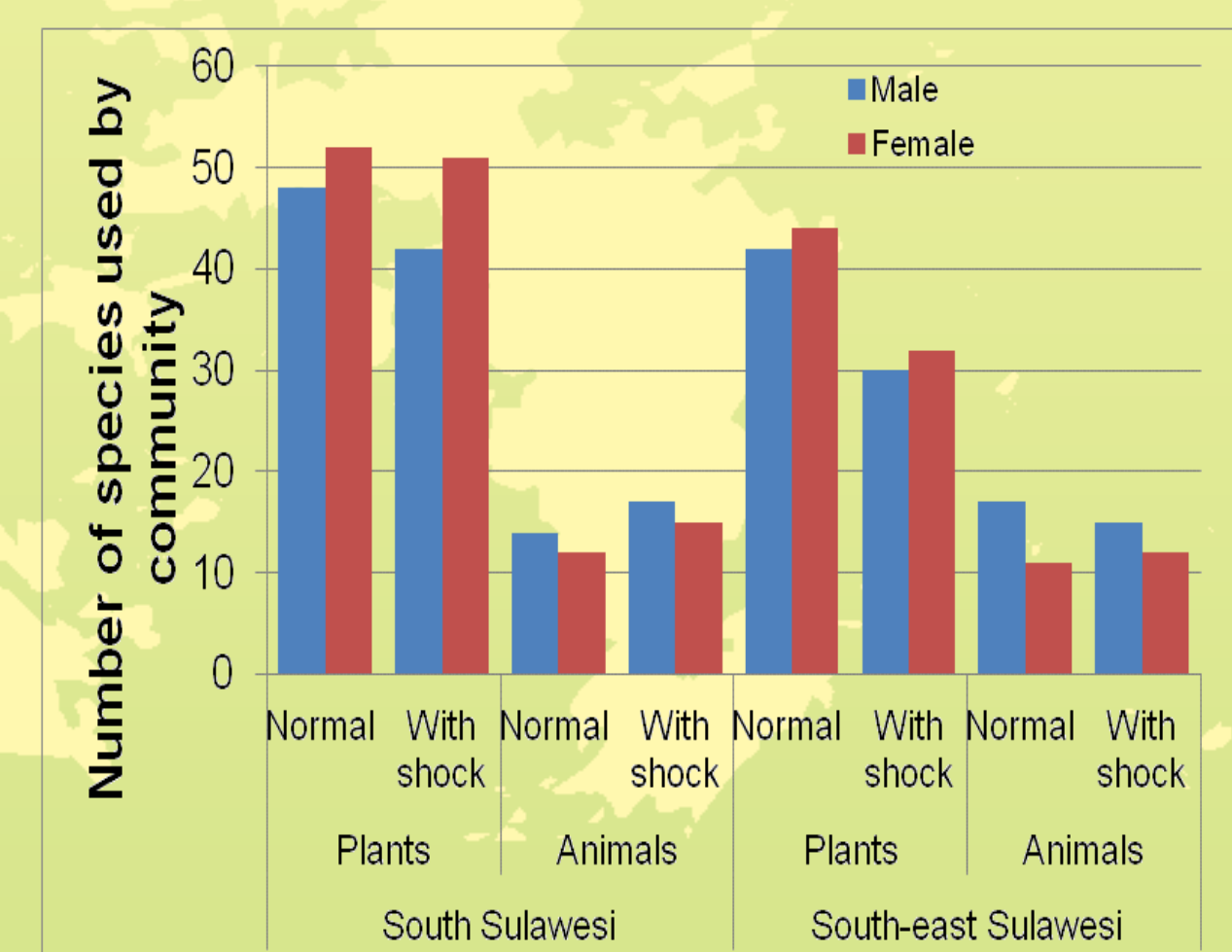


## Species Richness and Similarity: plot level survey



- ❖ Complex agroforestry system is common practice in South Sulawesi where timber and fruit trees species are the two common species integrated into the system. In simple agroforestry, shade tree is the dominant integrated species in the system.
- ❖ Tree species planted by community in their land are totally different with forest species. However, tree species integrated among the simple and complex system is similar.
- ❖ Community tend to grow varies function of tree species as source of foods, materials building, fuels and marketed trees in complex agroforestry systems, but only for materials building and source of foods grow in the simple agroforestry systems.

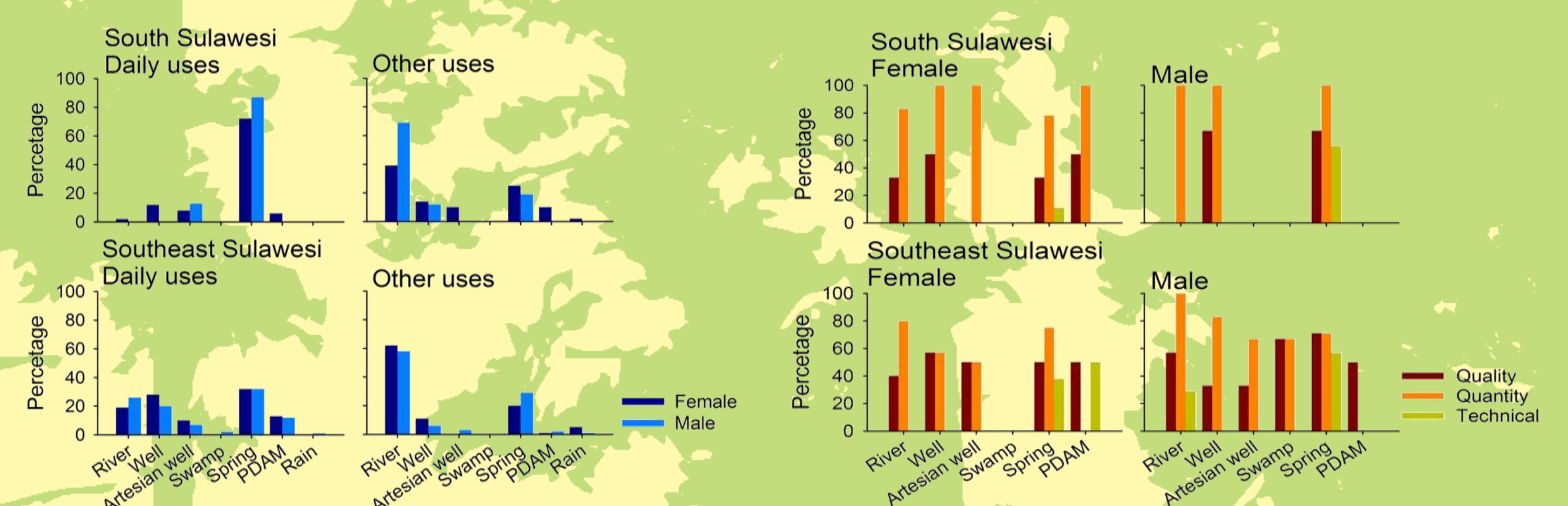
## Uses of Tree: local perception through FGD



- ❖ Female tend to use more plant species and less for animal species than male
- ❖ Increasing animal uses occurred during the shock condition in South Sulawesi
- ❖ Number of tree species used during normal years tend to be higher than those during years with shocks.

## Water Uses and Resources: local perception through FGD

- ❖ The main sources of water for daily uses in Southeast Sulawesi vary, while that in South Sulawesi is mainly spring
- ❖ For other uses main sources of water are river and well, both in South and Southeast Sulawesi
- ❖ Quality and quantity are the two main problems encountered in almost all sources of water, with quantity is the main problem across different sources of water, provinces and gender groups



Daily uses: cooking, washing, drinking, bathing  
Others uses: agriculture, livestock, micro hydro, transportation, others.

Quality: muddy, contaminated  
Quantity: less amount of water in dry season, more amount of water in wet season, flooding  
Technical: broken/clogged pipe

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