# Supplementary Material

## Supplementary Material S1

**Supplementary Table 1:** Meaning of concepts used in the FCMs

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| **Categories** | **Variables** | **Meaning** |
| Ecosystem denomination  | Mangrove  | Two types are identified : estuarine and coastal |
| Biological compartments | Biodiversity |  Rarely defined explicitly, and viewed differently according to actors. Generally perceived as an indicator of the richness of the mangrove ecosystem in terms of species abundance and diversity. |
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| Mudflat/Mud bank |  Formed by sediment inputs to the intertidal zone, mudflats are mobile over time  |
| Ecosystem services and human well-being | Climate regulation | Influence on climate generally considered at the global rather than local scale |
| Water purification |  Greenery treatment of urban waters in response to failing  water sewage networks |
| Storm/coastal protection |  Protection from coastal risk, erosion by sea rise  |
| Provisioning of habitat | Serves important ecological functions : hosting of species, support to early life stages, food tank. Turbidity of water in the mangrove has a protective role. |
| Education and knowledge systems |   |
| Landscape aesthetic values |  Participates in spiritual values, social relations, well-being. Essentially mentioned w.r.t the shoreline   |
| Heritage values |  Mangrove inspires local cultural life and participates to local communities identity  |
| Recreational activities | Leisure activities practiced either by tourism or local inhabitants : Kayaking, bird watching, hunting (mangrove deer, birds), hinking.   |
| Fishery resources  |  Provisioning service of wild food |
| Public health |  Mentioned as threatened with respect to insects and to bacteriology on beachesowing to lake of water sanitation |
| Ecosystem disutilities | Insects |  Essentially ash butterfly, a moth that scatters stinging darts causing rashes  |
| Accessibility issues |  Refers to access limitations to the coast line caused by mangrove forest and mudbanks : problematic for certain activities/communities. |
| Anthropic activities | Tourism |  Meant as the range of economic activities directly or indirectly supported by tourism (hotel, transport, restaurants, outdoor activities, etc.). Sector providing jobs and contributing to national income.  |
| Aquaculture | Production in French Guiana is not very developed at this stage, and concerns mainly freshwater and brackish water aquaculture  |
| Recreational and professional fishing |  Crabe picking within the mangrove is reported as a typical recreational practice, along with finfish fishing. Amerindian populations also rest up on fishing. Professional fishing is a heterogeneous category with different forms of dependence/relation to mangrove. Target species reported : white fish, snapper, shrimp. |
| Local development |  Understood as local economic dynamism (development of new economic activities, expansion of existing sectors, demographic growth) |
| Beekeeping |  Small scale economic activity : production of mangrove honey in Sinnamary and Macouria |
| Estuary dredging |  Aims at removing sediment accumulation to maintain passage depth for shipping |
| Transport and security |  Circumstances of port activities |
| Territory planning | Emergence of constructions and development projects in support to local economy and in relation to the living environment of the population |
| Agricultural activities (affecting mangrove) |  Essentially rice field in the Mana area, limited in scope |
| Legislation |  Refers either to existing legislation in favor of mangrove conservation, or need of legislation to supervise territorial development |
| Impact factors | Pollution |  Mentioned in relation to water pollution from urbanization, industries, agriculture, residential areas |
| Artificialization |  Land conversion for human settlements |
| Deforestation |  Cut down of mangrove forest |
| Climate change |  Thought through sea level rise, ocean acidification, biodiversity decline. Evidences of local consequences not fully/clearly established |
| Sargassum |  Raised as a concern rather than a local reality |

## Supplementary Material S2

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**Supplementary Figure 1** - Community map after workshops with only variables and links mentioned by all stakeholder’s groups (Blue arrows (with a ‘+’ sign) indicate a positive relationship, while orange (with a ‘-’ sign) indicate a negative relationship. Thickness of the arrow reflects the strength of the relationship from |1| (when reported by every group) to |0,25| (when reported by only one group). Box colors are selected to assist the reading of the FCM: Blue boxes for biological compartments, green boxes for ecosystem services, pink boxes for disservices, orange boxes for anthropic activities and yellow boxes for pressure vectors).