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UNESCO Category II Centre on Integrated and Multidisciplinary Water Resources Management, Thessaloniki, Greece (CIMWRM)

Behavioral modelling of decision making in water resources

Carlos Galvão,

Gustavo Nogueira and Cybelle Braga

University of Campina Grande and Tech Institute of Paraíba

Brazil

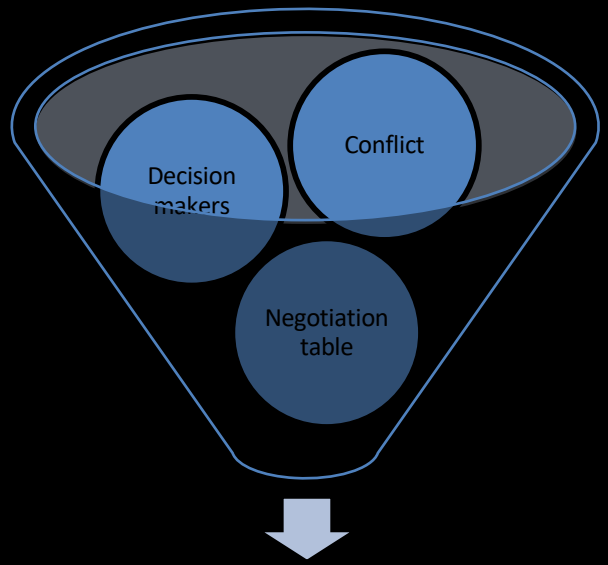
carlos.galvao@ufcg.edu.br, cybellefcb@gmail.com, gmfnogueira@gmail.com

decision making in water resources and climate change

the decision environment related to climate change and water resources is participative (shared) and dynamic, with decision makers representing users, governments and civil society

depending on several factors, such as complexity of object, actors and decision-making stage (“ the table”), the decision process needs several rounds of negotiation until consensus

in this same environment, the decision makers negotiate, establish relationships, avoid and influence each other



decision making setting

Loucks & van Beek (2005)

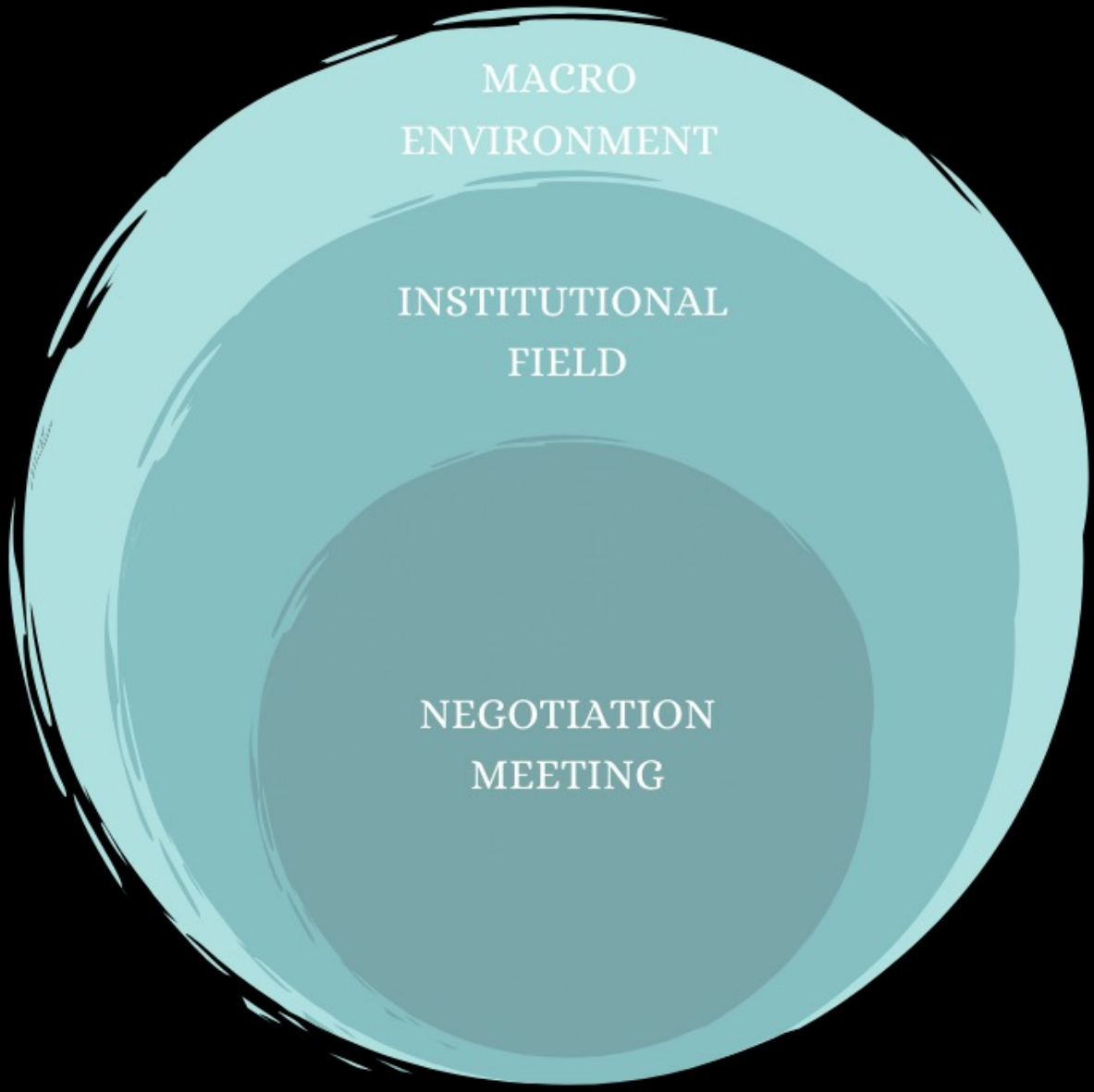
modelling water resources for decision making

Loucks & van Beek (2005)

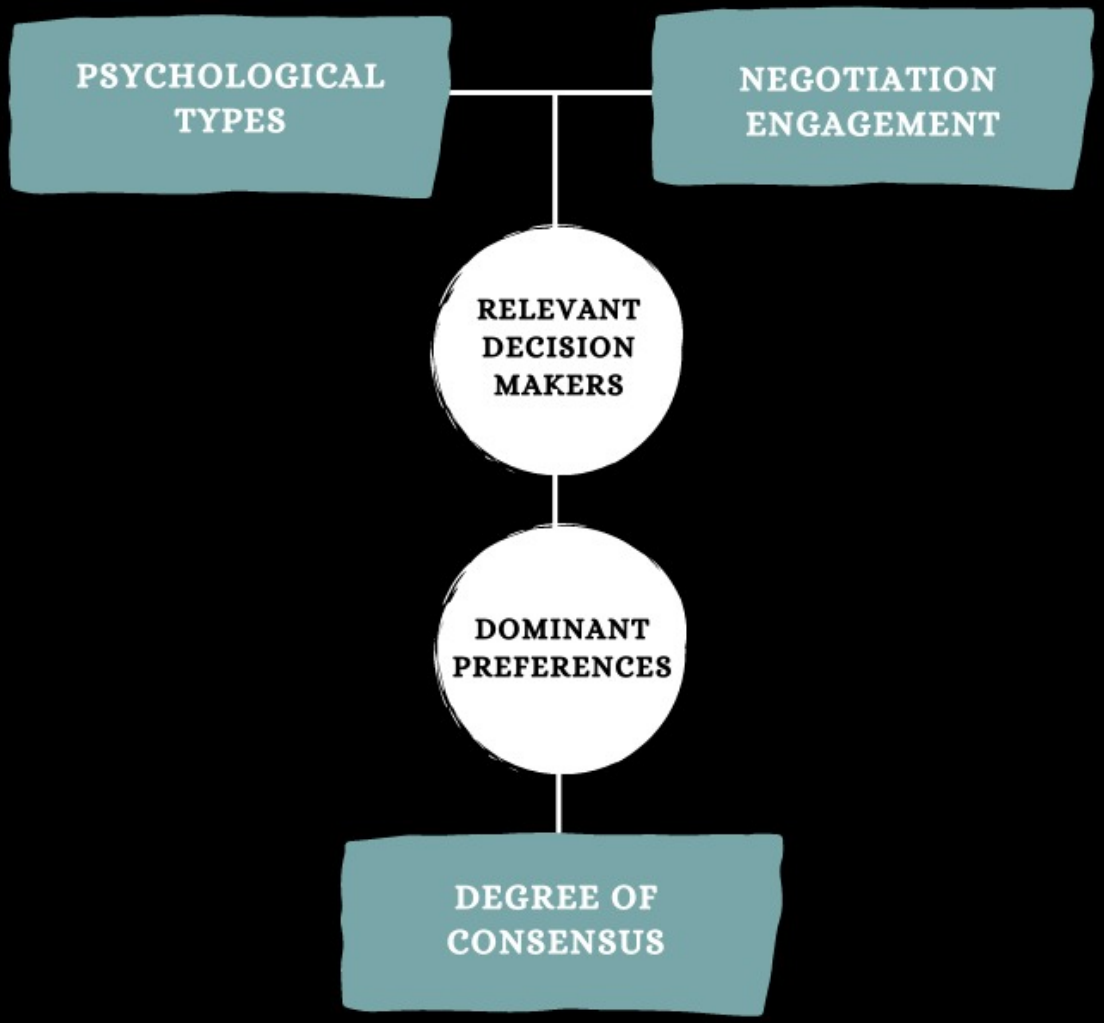
modelling water resources **and** decision making

sequential decision processes

Decision spheres



negotiation meetings

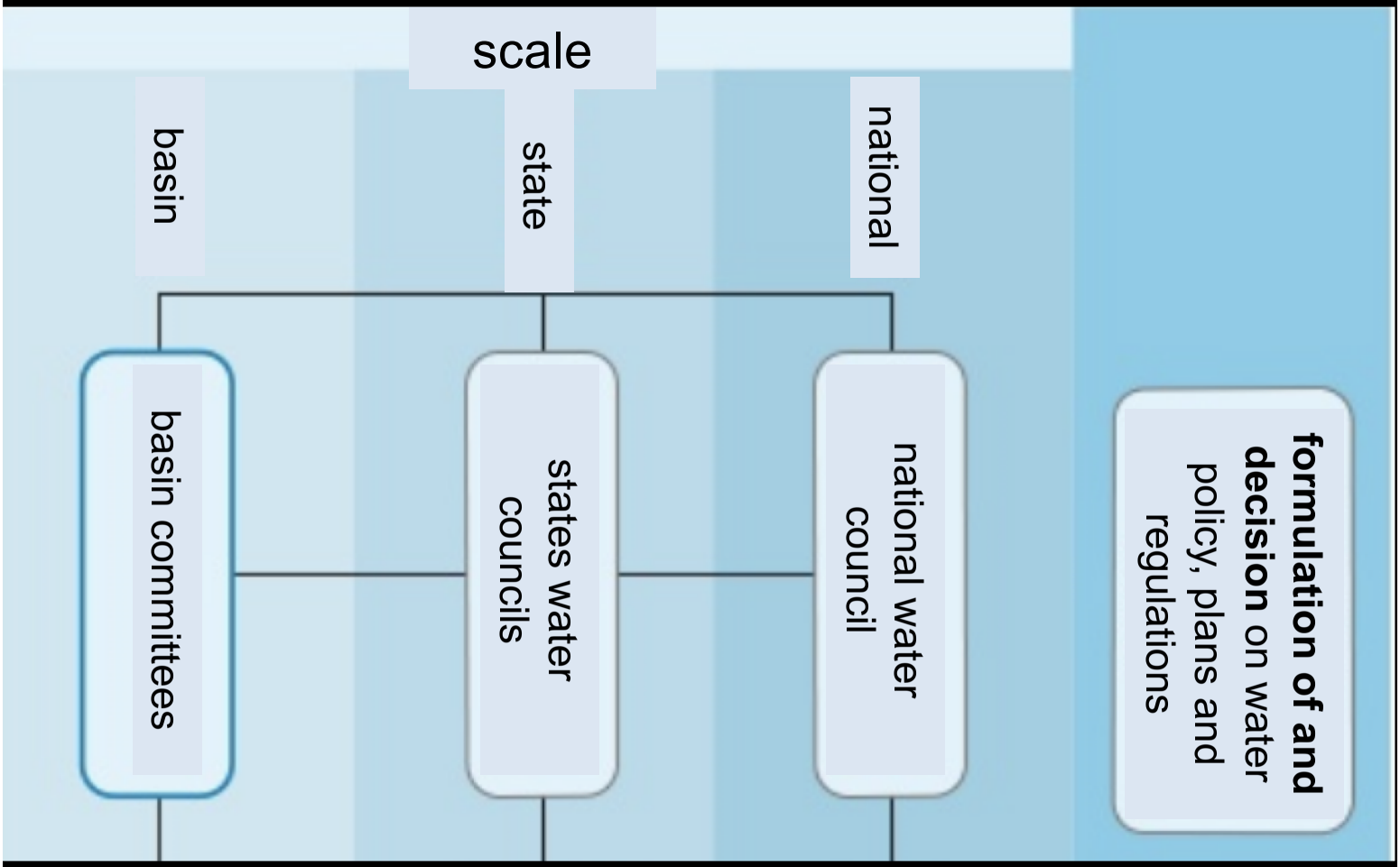


Fuzzy logic modelling approach

Savage et al. (1989), Lewick et al. (2016), Myers & Myers (1995), Kacprzyk et al. (1992), Nogueira (2006), Braga (2008)

Brazilian water resources policy and management system

decentralised and participative



model validation

inter-state transboundary basin conflict resolution

7 negotiation meetings during 12 months

28 decision makers in each meeting

6 institutions: 2 federal and 2 for each state

psychological types collected for each DM

monitoring DM's negotiation engagement

validation of negotiation outcomes against model results