

Chapter 6 - Population Sub-Structure and Management

QUESTIONS ASKED

- Does it matter how fish populations are divided spatially?
- How do we deal with different spatial linkages, configurations and populations sizes in fisheries management?
- How much biomass or money do we lose by not fishing or by over-fishing small and large mixed populations?

BACKGROUND INFORMATION

- Compendium: Santos (2015a)
- Wikipedia: [Insular biogeography](#), [Metapopulation](#)
- YouTube: Robertandkylie, [Bugger off with Metapopulation Theory](#)
- YouTube: scienceclassisgreat, [Metapopulation](#)



COVERAGE

- Colonization, depletion and rescue effects
- Mainland-island structure (peripatry)
- Mixed-stocks metapopulation structure (sympatry)
- Stepping-stone structure (parapatry)

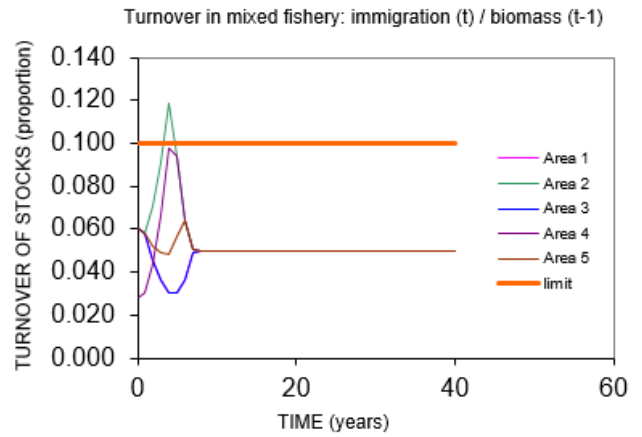
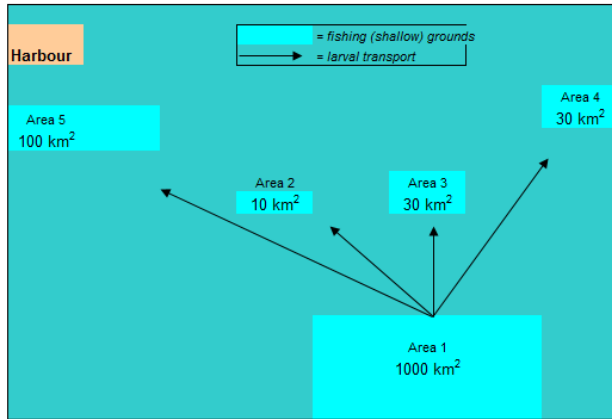
INSPIRATION AND SOFTWARE

Although the issue of mixed stocks and stock discrimination has long been discussed in fishery biology, the works of *i.a.* Wilson, MacArthur and Levins were critical to bring ecology and genetics together and construct theories of biogeography. Here simple fishery dynamic models are applied to their ideas. Contains macros.



- [Ch6a ConservArea I Mainland Island whelk macro JdS.xlsm](#)
- [Ch6b ConservArea II Metapopulation sardine macro JdS.xlsm](#)
- [Ch6c ConservArea III Stepping-stone salmon macro JdS.xlsm](#)

SNAPSHOTS



Population size

