

Experience and Benefits of Marine Reserves for Conservation, Science and Society

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In New Zealand, the consequences of Marine Reserves (= no-take Marine Protected Areas) were unexpected and surprising:

1. The public came in their tens of thousands to see the abundance of fish;
2. Socio-economic benefits included species spillover, tourism, and education;
3. Fish behaviour changed, allowing people to swim close to them;
4. Discovered direct and indirect fishing effects on ecosystems through altered food webs and habitats.

Internationally,

5. Marine Reserve ‘control’ sites showed fishing caused ‘trophic cascades’ globally
6. Both benthic and pelagic fish benefited from protection

But

7. No Marine Reserves selected to maximise fishery benefits (genetics, broodstock, nursery)
8. Most reserve networks developed piecemeal
9. Over 95% of MPA allow fishing of some kind so they do not protect ecosystems.

The ‘Marine Reserve human chain’ (see video on YouTube).

Photograph by Annelies Struijcken.



Benefits

- Conservation of species and habitats
- Public can see the natural abundance of marine life
- People better understand the effects of fishing
- Controls to understand ecosystem effects of fishing
- Reference sites to inform fishery management
- Reservoirs for brood-stock, nurseries for juveniles

To achieve benefits

- Some reserves need to be accessible to public
- Reserves locations need to be selected to maximise benefits (not be compromises)

For more details see journal *Biological Conservation* 176 (2014):
Ballantine, W.J. Fifty years on: lessons from Marine Reserves in New Zealand and principles for a worldwide network. p. 297–307.
Costello MJ. Long live Marine Reserves: A review of experiences and benefits. p. 289–296.

Image by Tony and Jenny Enderby