

Appendix 1 – Building the Social-Ecological Resilience Index

This appendix contains the data source and information used to calculate the social-ecological resilience index (SERI) of fishers.

Table A1.1: Sub-indicators and indicators of each of the three components of the social-ecological resilience index (SERI), as well as the source of variables in different approaches. $SERI = (SRi + SRc + ER/3)$.

Component	Indicators	Sub-indicators	Different approaches to the use of indicators
Social Resilience (Individual) – SRi $SRi = (FLEi + AL + AO + ASi) / 4$	Flexibility (FLEi) $FLEi = (FC + PTM + RUD + GD)/4$	Flexibility to change (FC)	Cinner et al. 2009a Silva and Lopes 2015
		Perception toward MPA (PTM)	
		Resource use diversification (RUD) Gear diversification (GD)	Silva and Lopes 2015
	Ability to learn (AL) $AL = (YS + FE + AFI)/3$	Years of schooling (YS) Fishing Experience (FE) Awareness of fishing impacts (AFI)	Cinner et al. 2009b,c Marshall and Marshall 2007, Cinner et al. 2009a, Marshall et al. 2010
	Ability to organize (AO) $AO = (FS + FI + MI + AI)/4$	Financial Security (FS) Fishing Investment (FI) Migration (MI) Association Involvement (AI)	Cinner et al. 2009a, Cinner et al. 2011, Adger et al. 2002 Bené et al. 2016

	Assets (ASi)	Material style of life (MSL)	Marshall and Marshall 2007
Social Resilience (Community) - SRc $SRc = (FLEc + SC + ASc) / 3$	Flexibility (FLEc)	Economic diversification (ED)	Adger 2003, Gutierrez et al. 2011
	Social Capital (SC) $SC = (FE + KOM + CA + SO + FP) / 5$	Fisher engagement (FE) Knowledge of management (KOM) Collective action (CA) Social organizations (SO) Fisher participation (FP)	Marshall et al. 2010
	Assets (ASc)	Community infrastructure	
Ecological Resilience - ER $ER = (BS + FSE) / 2$	Biological Sensitivity (BS) $BS = (CE + CBR + RES + VUL) / 4$	Climate Exposure (CE) Coral bleaching risk (CBR) Resilience of target species (RES) Vulnerability of target species (VUL)	Metcalf et al. 2015, Martell and Froese 2013, Damasio et al. 2016
	Fish Species Exposure (FSE) $FSE = (PC + TL) / 2$	Price Category of target species in the community (PC) Threat Level of target species in the community (TL)	Metcalf et al. 2015, Jardine and Sanchirico 2012

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