

2. Seagrass Restoration Trade-offs Paper - Using PrioritizR for identifying potential areas for conservation and restoration to optimize multiple ecosystem service outcomes

SE Lester, J McHenry, & A Rassweiler

09/27/2023

Contents

Paper Resources	1
Setup (i.e., loading data, setting targets etc).	2
FYI - 1 = Nursery Habitat, 2 = Blue Carbon, 3 = Recreation, 4 = Coastal Protection, 5 = Biodiversity	2
Functionalizing a prioritization for 1 ES from Confirmed Beds	2
Functionalizing a prioritization for 2 ES from Confirmed Beds	2
Functionalizing a prioritization for 3 ES from Confirmed Beds	2
Functionalizing a prioritization for 4 ES from Confirmed Beds	3
Functionalizing a prioritization for 5 ES from Confirmed Beds	3
Plotting out the number of services vs solution area	4

Paper Resources

Click [here](#) to see the latest meeting notes in the Google Doc.

Click [here](#) to see a tutorial on PrioritizR

Click [here](#) to see a tutorial about calibrating tradeoffs in PrioritizR

Setup (i.e., loading data, setting targets etc).

FYI - 1 = Nursery Habitat, 2 = Blue Carbon, 3 = Recreation, 4 = Coastal Protection, 5 = Biodiversity

Functionalizing a prioritization for 1 ES from Confirmed Beds

##	Order	Solution_Area	NurseryHabitat_Rep	BlueCarbon_Rep	Recreation_Rep
## 1	1	41	0.05	0.01	0.00
## 2	2	161	0.01	0.05	0.03
## 3	3	28	0.02	0.01	0.05
## 4	4	184	0.08	0.02	0.01
## 5	5	145	0.02	0.01	0.01
##		CoastalProtection_Rep	Biodiversity_Rep		
## 1		0.01	0.01		
## 2		0.03	0.02		
## 3		0.01	0.01		
## 4		0.05	0.04		
## 5		0.03	0.05		

Functionalizing a prioritization for 2 ES from Confirmed Beds

##	Order	Solution_Area	NurseryHabitat_Rep	BlueCarbon_Rep	Recreation_Rep
## 1	1 2	162	0.05	0.05	0.02
## 2	1 3	49	0.05	0.01	0.05
## 3	1 4	184	0.08	0.02	0.01
## 4	1 5	147	0.05	0.02	0.02
## 5	2 3	162	0.02	0.05	0.05
## 6	2 4	192	0.06	0.05	0.02
## 7	2 5	165	0.05	0.05	0.03
## 8	3 4	188	0.08	0.03	0.05
## 9	3 5	148	0.04	0.02	0.05
## 10	4 5	187	0.08	0.02	0.01
##		CoastalProtection_Rep	Biodiversity_Rep		
## 1		0.04	0.05		
## 2		0.01	0.01		
## 3		0.05	0.04		
## 4		0.03	0.05		
## 5		0.03	0.03		
## 6		0.05	0.05		
## 7		0.04	0.05		
## 8		0.05	0.04		
## 9		0.03	0.05		
## 10		0.05	0.05		

Functionalizing a prioritization for 3 ES from Confirmed Beds

##	Order	Solution_Area	NurseryHabitat_Rep	BlueCarbon_Rep	Recreation_Rep
----	-------	---------------	--------------------	----------------	----------------

## 1	1 2 3	163	0.05	0.05	0.05
## 2	1 2 4	192	0.06	0.05	0.02
## 3	1 2 5	165	0.05	0.05	0.03
## 4	1 3 4	188	0.08	0.03	0.05
## 5	1 3 5	148	0.05	0.02	0.05
## 6	1 4 5	187	0.08	0.02	0.01
## 7	2 3 4	194	0.07	0.05	0.05
## 8	2 3 5	166	0.06	0.05	0.05
## 9	2 4 5	192	0.07	0.05	0.02
## 10	3 4 5	191	0.08	0.03	0.05
##	CoastalProtection_Rep	Biodiversity_Rep			
## 1		0.04	0.04		
## 2		0.05	0.05		
## 3		0.04	0.05		
## 4		0.05	0.04		
## 5		0.03	0.05		
## 6		0.05	0.05		
## 7		0.05	0.05		
## 8		0.04	0.05		
## 9		0.05	0.05		
## 10		0.05	0.05		

Functionalizing a prioritization for 4 ES from Confirmed Beds

##	Order	Solution_Area	NurseryHabitat_Rep	BlueCarbon_Rep	Recreation_Rep
## 1	1 2 3 4	194	0.07	0.05	0.05
## 2	1 2 3 5	166	0.06	0.05	0.05
## 3	1 2 4 5	192	0.07	0.05	0.02
## 4	1 3 4 5	191	0.08	0.03	0.05
## 5	2 3 4 5	196	0.08	0.05	0.05
##	CoastalProtection_Rep	Biodiversity_Rep			
## 1		0.05	0.05		
## 2		0.04	0.05		
## 3		0.05	0.05		
## 4		0.05	0.05		
## 5		0.05	0.05		

Functionalizing a prioritization for 5 ES from Confirmed Beds

##	Order	Solution_Area	NurseryHabitat_Rep	BlueCarbon_Rep	Recreation_Rep
## 1	1 2 3 4 5	196	0.08	0.05	0.05
##	CoastalProtection_Rep	Biodiversity_Rep			
## 1		0.05	0.05		

Plotting out the number of services vs solution area

