

L'intégrité écologique, les partenaires et le public

Ecological Integrity, the partners and the public

Parc national Kouchibouguac National Park

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The park and its regional context

FIGURE 1: Landsat Image of the GKE showing the overall boundary and the GKE's terrestrial (watersheds) and marine (Miramichi Estuary) components.



EI Monitoring Program (KNP)

EI Indicator Ecosystem	Project/measure	components	Processes	Biodiversity	Stressor
Acadian forest	Trees/Shrubs dominance, growth and condition	Dominance, growth and condition of key species	X	X	
	Salamanders	Abundance		X	X
	Lichens	Air quality index-diversity		X	X
	Exotic Invasive	Invasive Plant Index			X
	Climate		X		
Freshwater (Aquatic)	Juvenile salmon productivity	Productivity/abundance	X		X
	Water Quality	Water Quality Index	X		X
	River otter	Density		X	X
	Benthic invertebrates	Diversity/abundance		X	X
Peatland	Bog vegetation, water quantity & quality	Vegetation diversity/ abundance, water wells	X	X	
Coastal (sand dune and bird dynamics)	Barrier Islands dynamics	Erosion rate/habitat change	X		
	Red breasted merganser	Abundance/productivity	X	X	
	Common tern population	Abundance/productivity	X	X	
	Piping plover (SAR)	Abundance/productivity	X	X	X
(estuaries)	Estuarine Index of Biotic Integrity (IBI)	Abundance/diversity	X	X	X
	Soft-shell clam	Abundance/productivity	X	X	X
(salt marshes)	Salt marsh productivity	Accretion and productivity above and below ground	X		

Tern Monitoring question & Thresholds



1. During the last five years, did the Common Terns maintained an average of >5000 nests ?

2. During the last five years, did the Common Terns maintained an average productivity of 1.1 hatched chicks/nesting pair ?

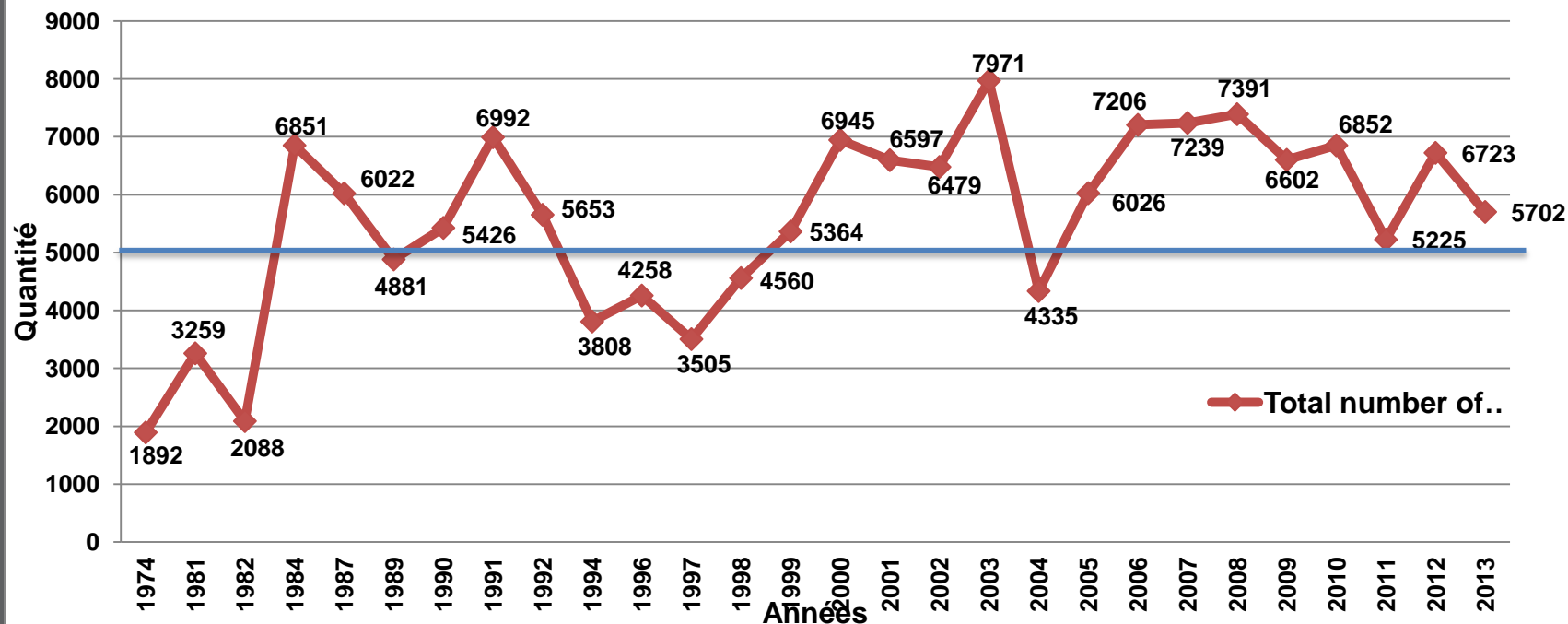


	Poor	Fair	Good
# of nest	<4000	4000>5000	5000
# chicks fledged/pair	0.66	0.88	1.1





Figure 1. Quantité total de Sterne au parc national de Kouchibouguac, 1974-2013



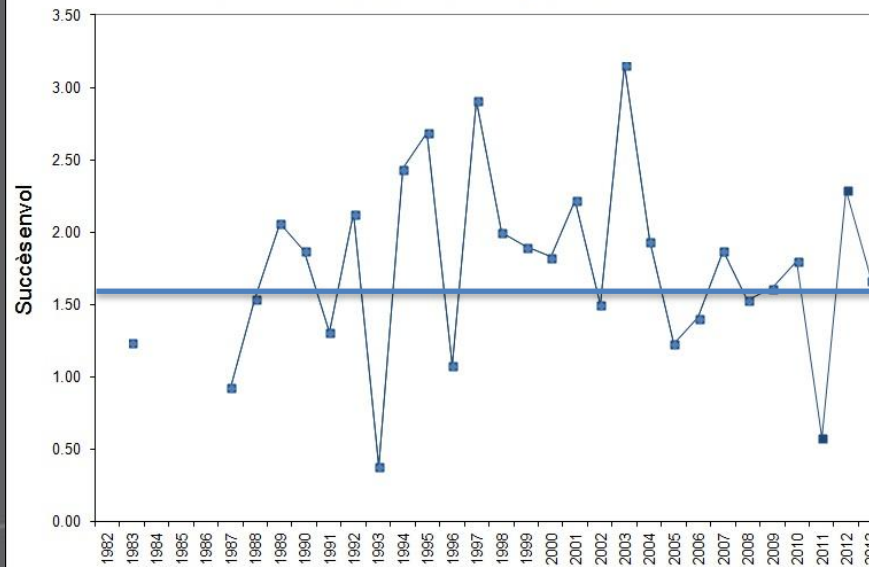
Monitoring Questions

During the last five years, did the Piping Plover maintain a productivity of 1.65 fledged chicks/nesting pair

Thresholds

Poor	Fair	Good	Fair	Poor
<1.32 chicks/pair	1.32>1.65 chicks/pair	1.65 chicks/pair	-----	-----

Productivité (succès envol) du Pluvier siffleur
Parc national Kouchibouguac 1982 - 2010



John Chardine 2007

Monitoring Questions

Did the Red-Breasted Merganser of KNP maintain an average of 40 pairs for the last five years period ?

Did Red-Breasted Merganser nest success exceed 0.55 on Tern Islands for the last five years?

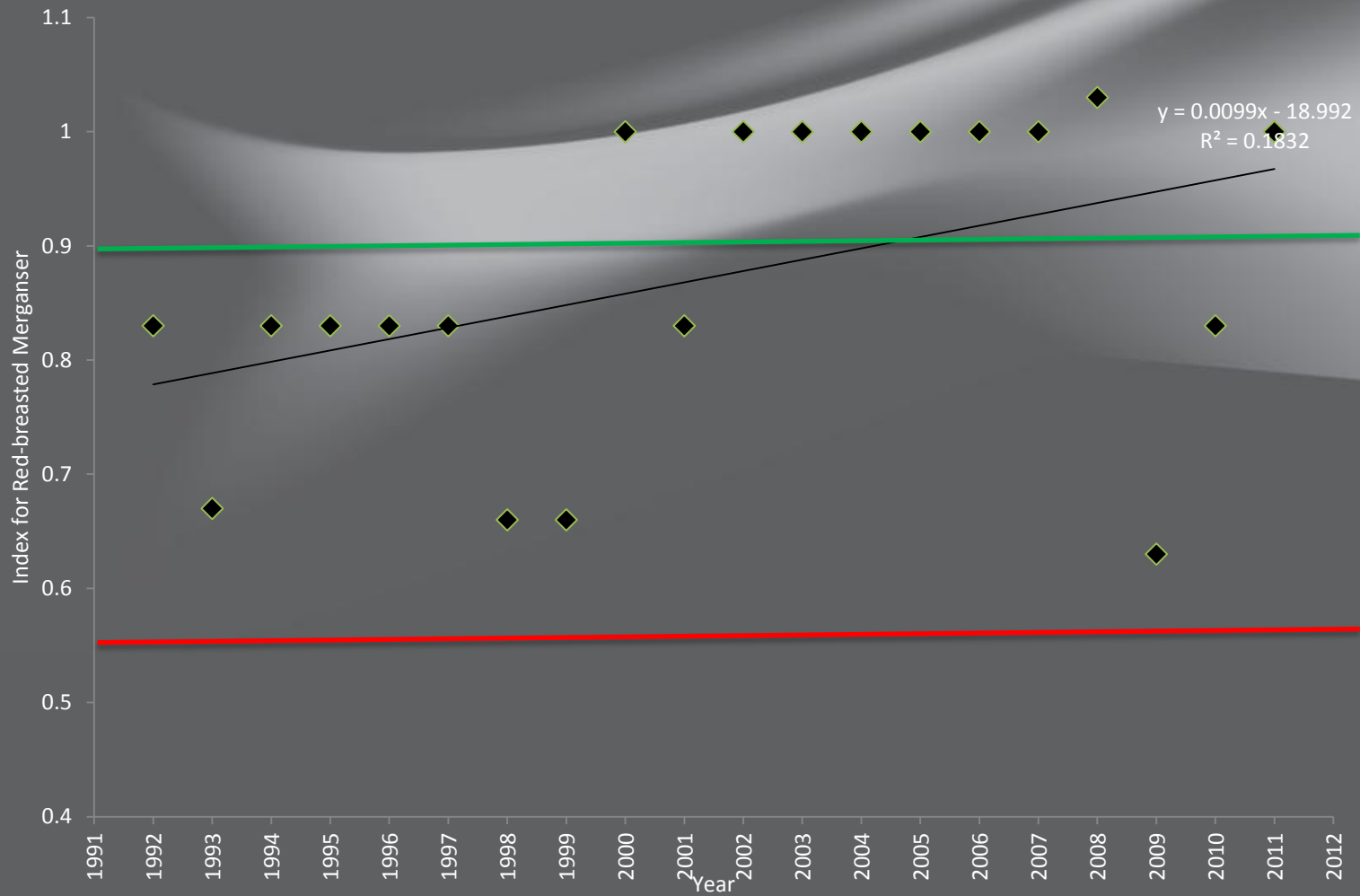


Thresholds

	Poor	Fair	Good	Fair	Poor
# of nests ^a	<25	26-40	>40	-----	-----
apparent nest success (%) ^a	<0.30	0.30 – 0.55	>0.55	-----	-----

^a Parameter estimates are based on ranges of merganser nest data from 1992 to 2007 (R. D. Titman, unpub. data) and are subject to modifications





Partnership:

- EI program was developed in partnership with several academic institutions, other departments (feds & prov.), NGOs (Birds Studies Canada, nature NB), the fishing industry and First nations.

Public involvement in EI program:

- Three sessions of public information during the park management Process (Park management Plan, 2010)
- Volunteer involvement in monitoring program and research since 1992
- Actions on the ground program encourages volunteer participation

