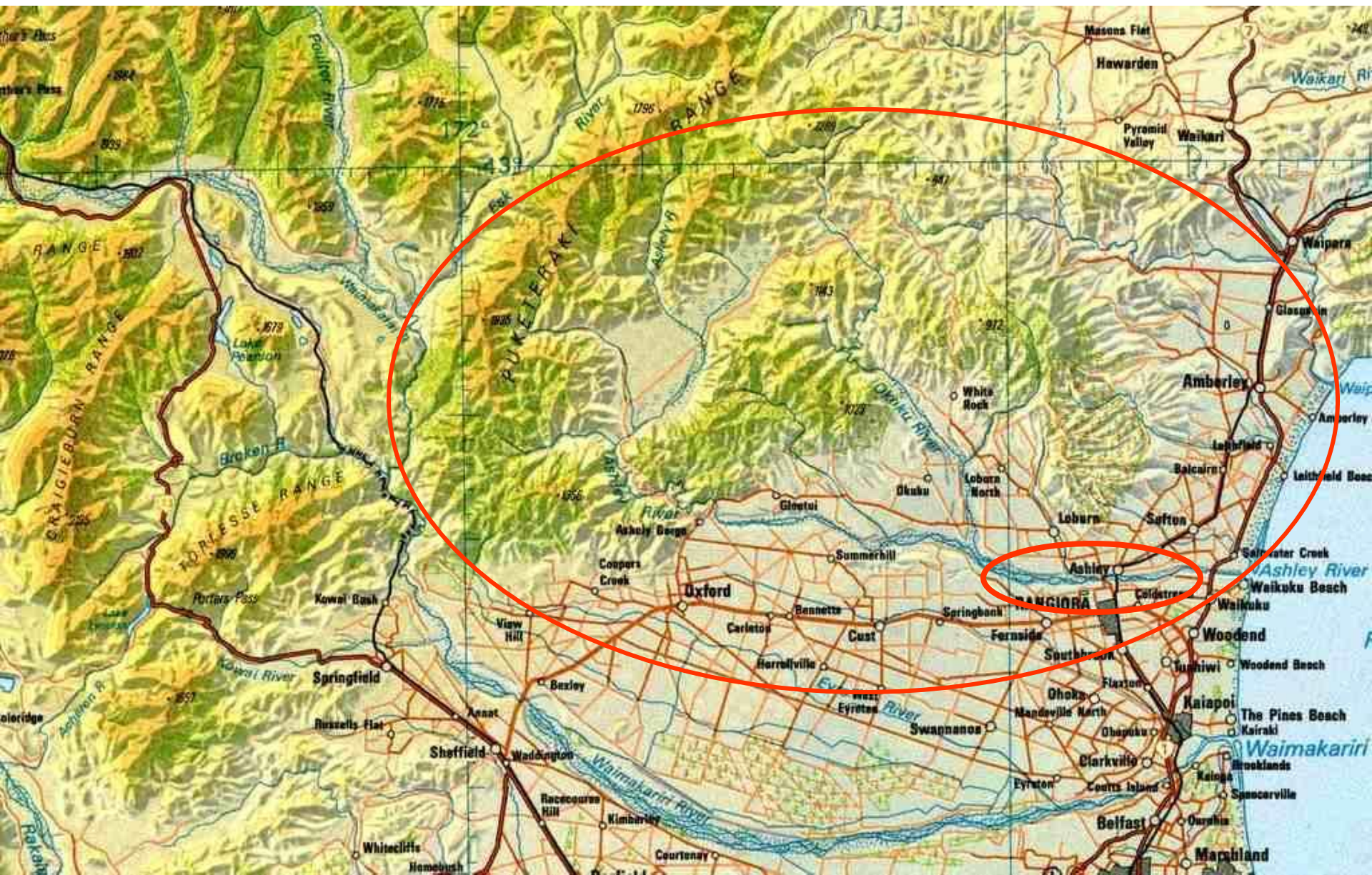


# Bird surveys, breeding and predator trapping in the Ashley-Rakahuri river

Ashley-Rakahuri Rivercare Group Inc

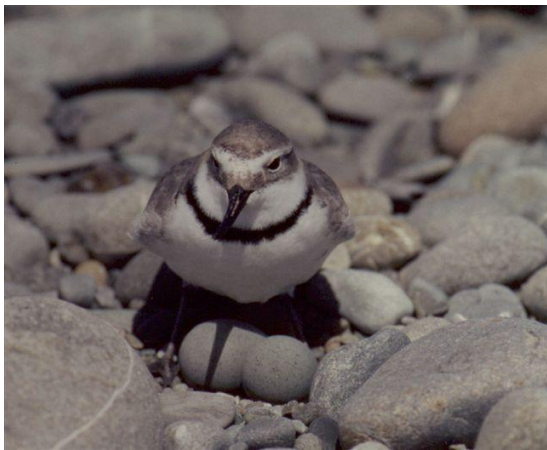


# Ashley-Rakahuri river, plus major shore bird breeding section



# Birds Breeding in Riverbed

- Three 'core' threatened shorebird species – wrybill, black-fronted tern, black-billed gull
- Plus banded dotterel, SI pied oystercatcher, pied stilt, white-fronted tern, spur-winged plover, Caspian tern, black-backed gull



# Ashley/Rakahuri Rivercare Group

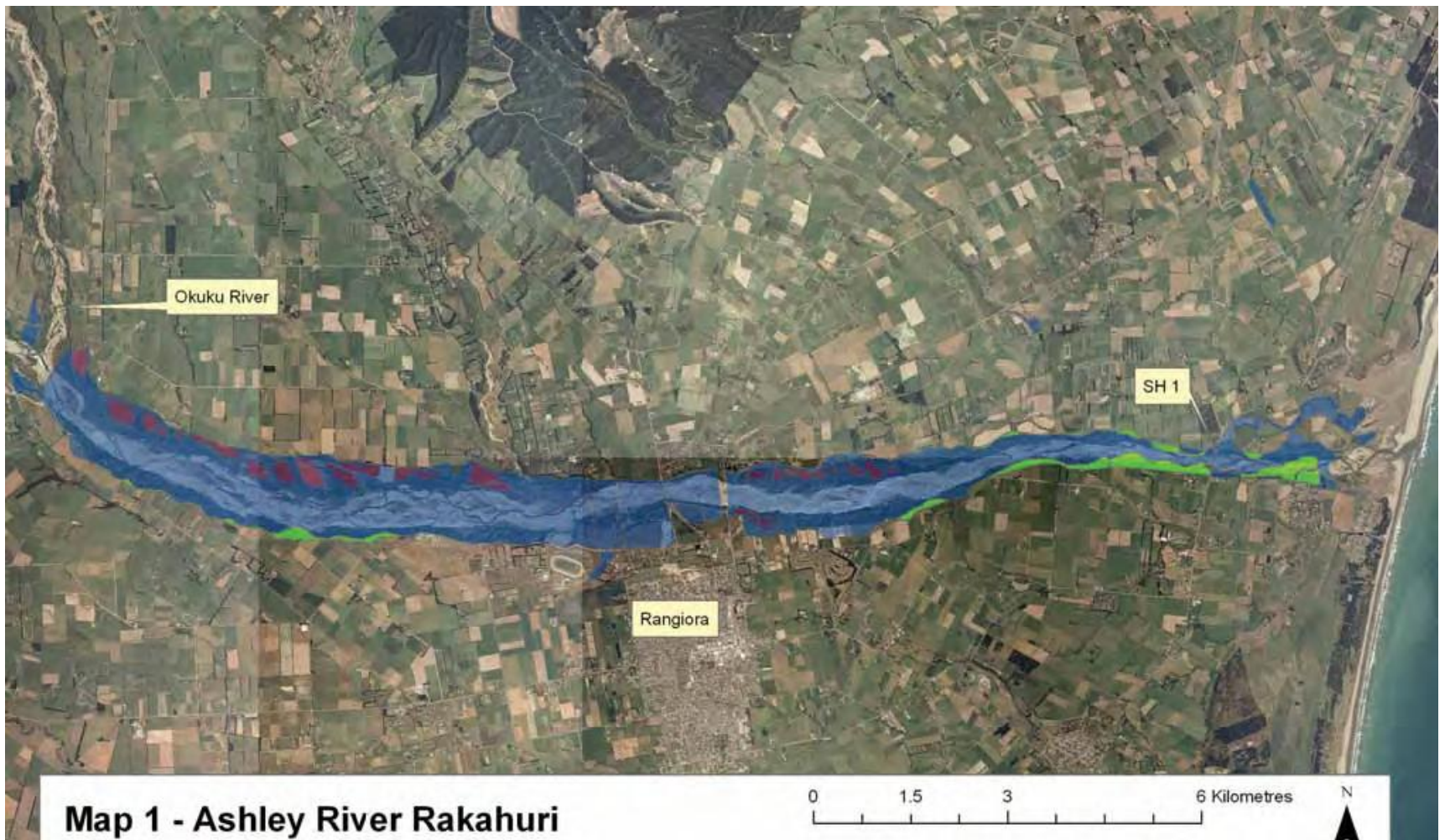
- Formed in 1999 to protect the threatened river birds and their habitat
- Regular predator trapping and bird monitoring
- Strong emphasis on improving public awareness
- Surveys to monitor bird population trends (since 2000) and breeding success (since 2004) in the riverbed

# Bird Surveys

- Seven surveys before 2000 (first in 1963), but over different parts of river (hard to compare)
- First ARRG survey in year 2000, now completed 14 annual surveys over same stretch of river
- Initially attempted to do two surveys (early October and mid November)
- October surveys done in only 3 of 10 years (2000, 2002, and 2005)
- November surveys done in 13 of 14 years (not 2002, and not until December in 2 years)

# Survey Area

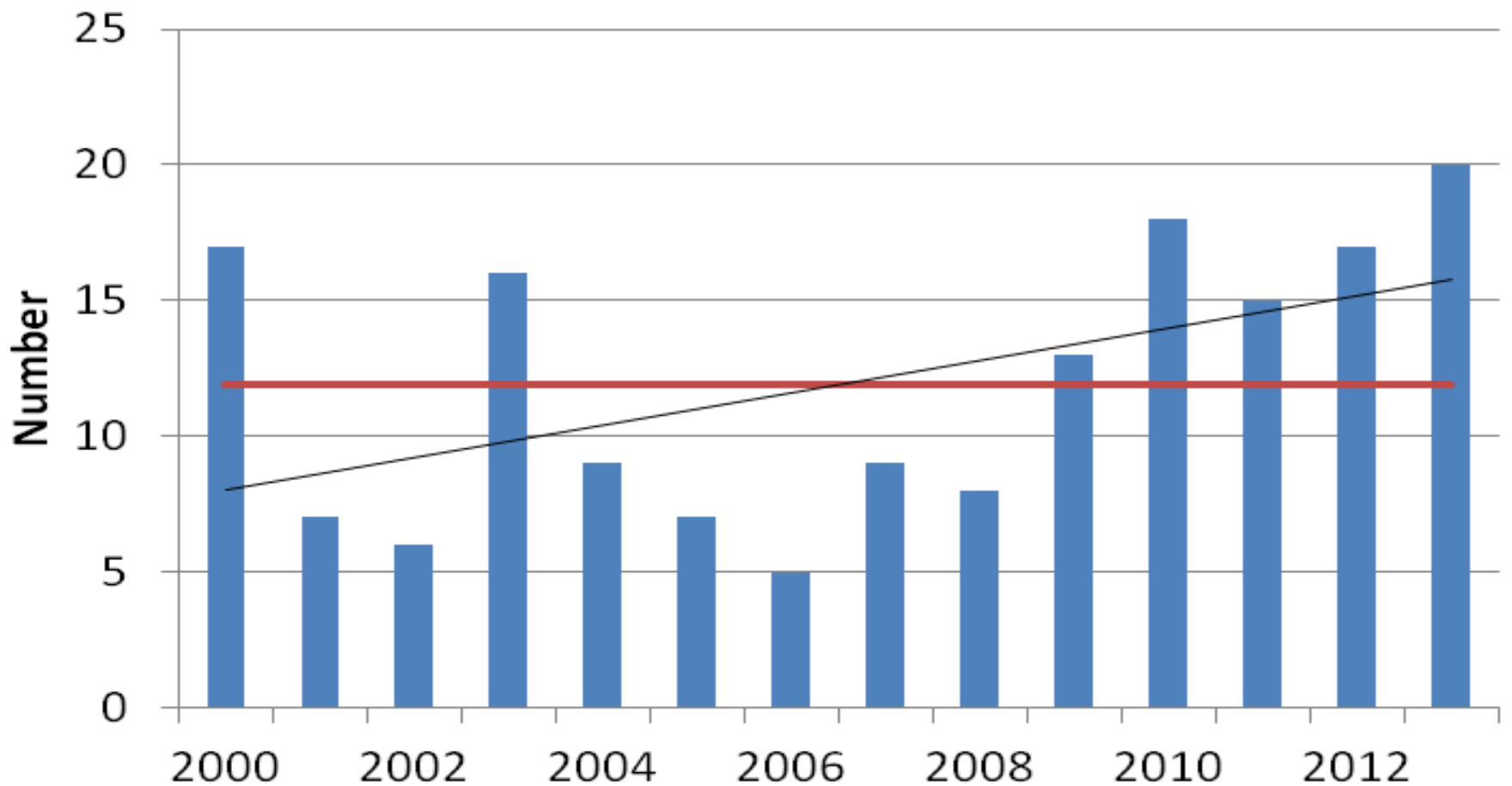
- Okuku River to SH1 (total 18 km)
- Riverbed 200–500 m wide (mostly 300 m)



# Method

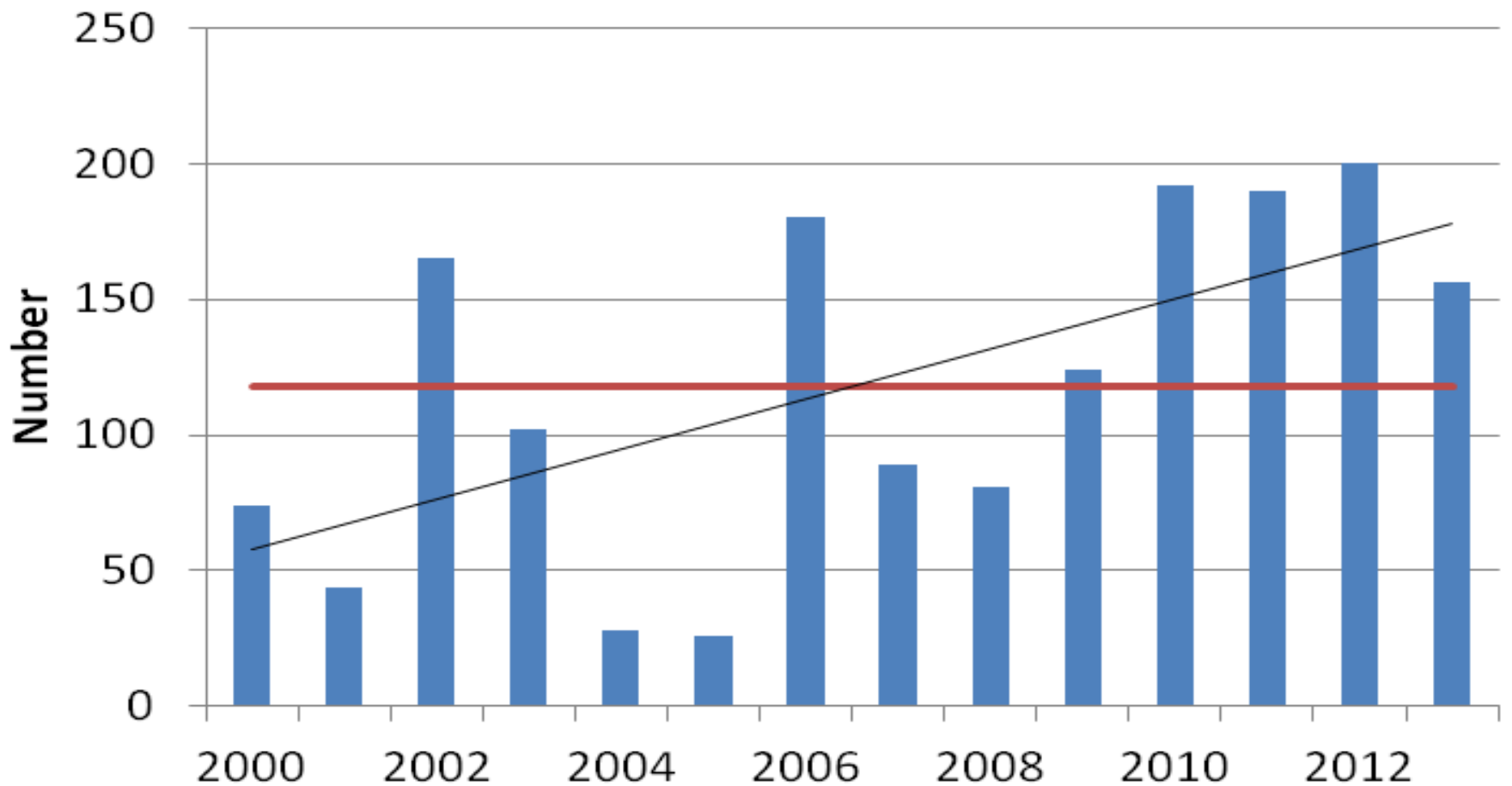
- Surveyed three or four sections concurrently
- Teams of 3–5 observers, spaced evenly across riverbed, 50–100 m apart
- Walked slowly downstream, keeping in line and in communication with each other
- Counted birds as they passed them

# Wrybill – trend (p=0.08)

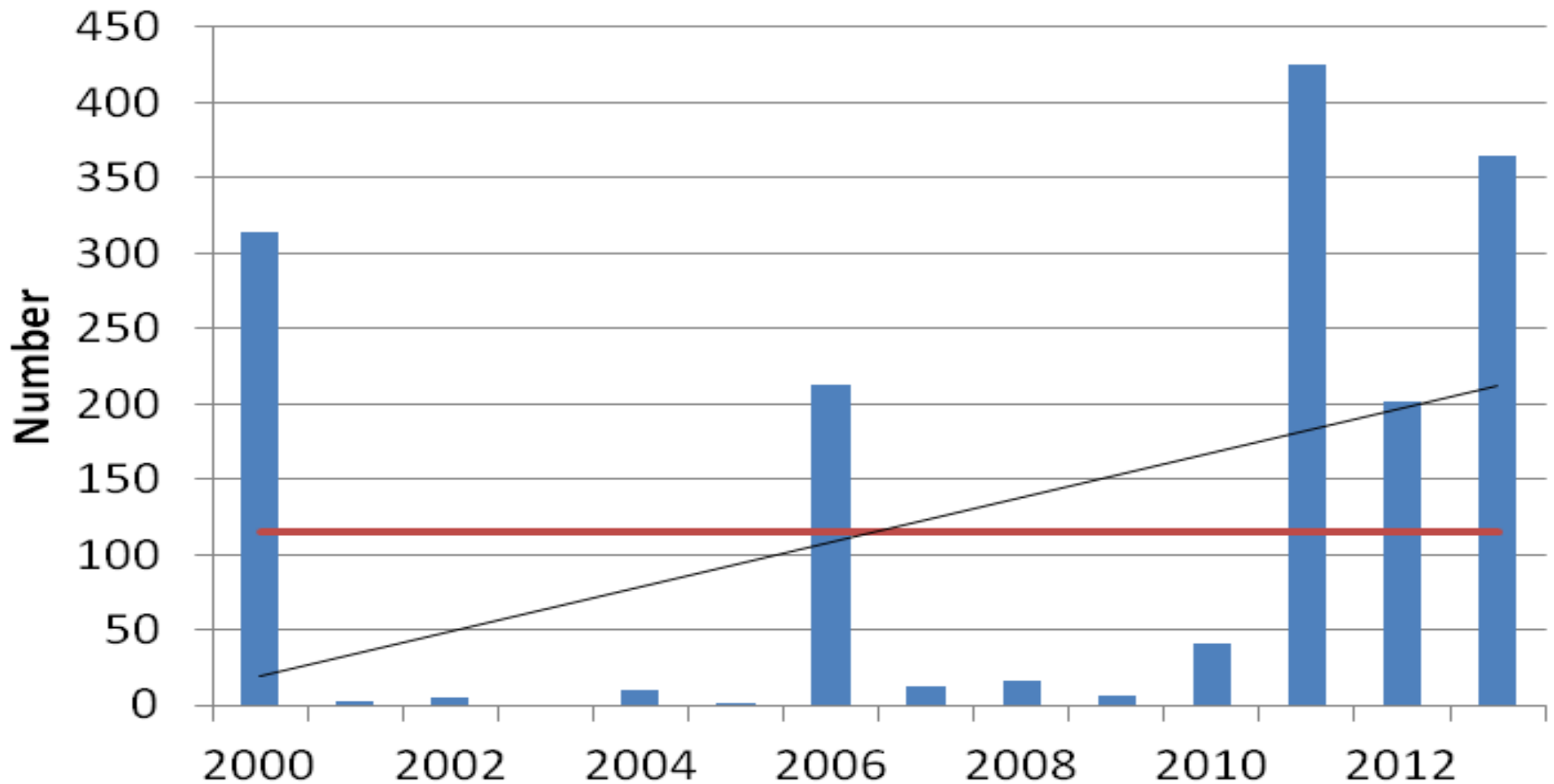




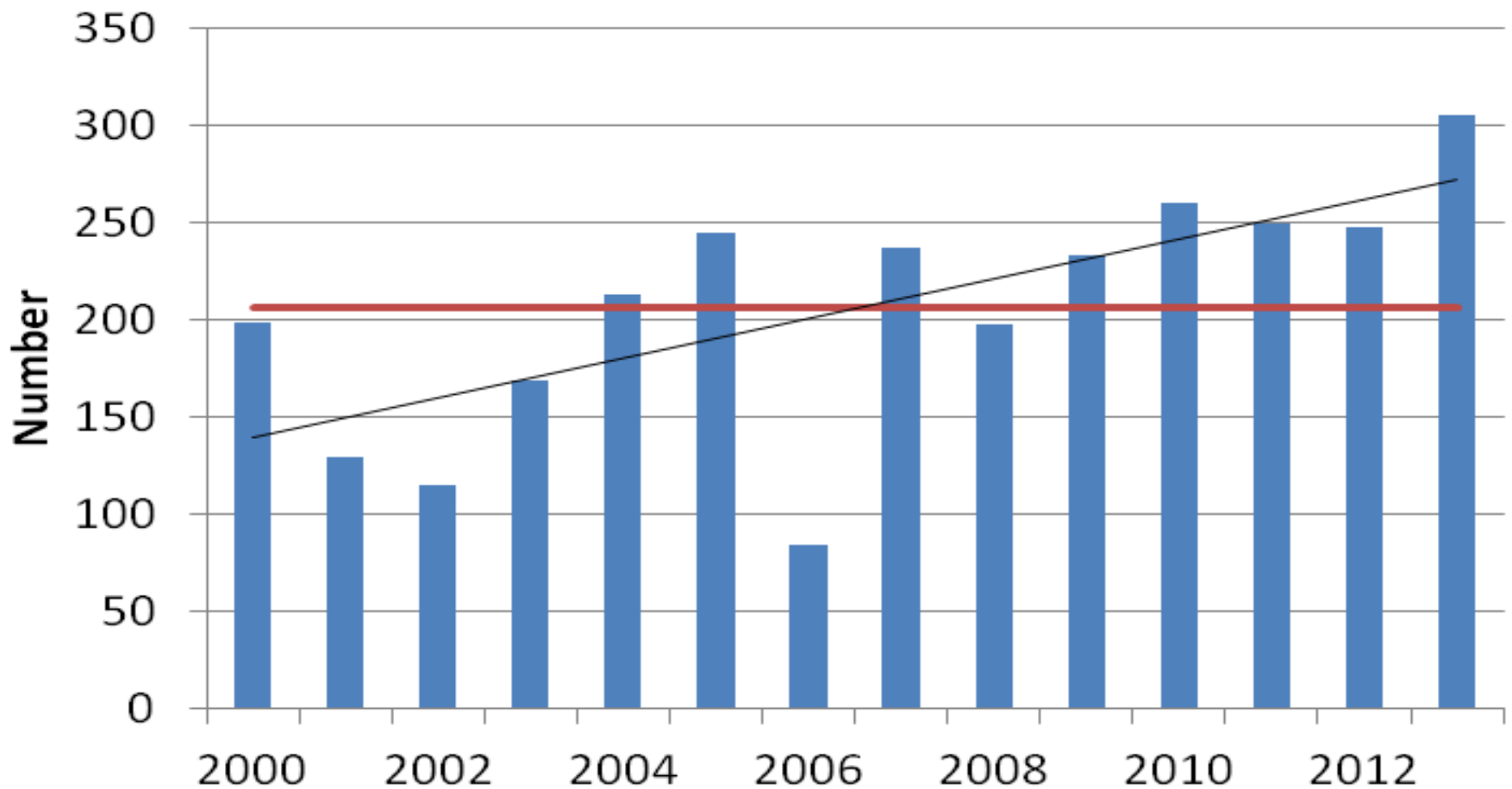
# Black-fronted Tern – trend\* ( $p=0.02$ )



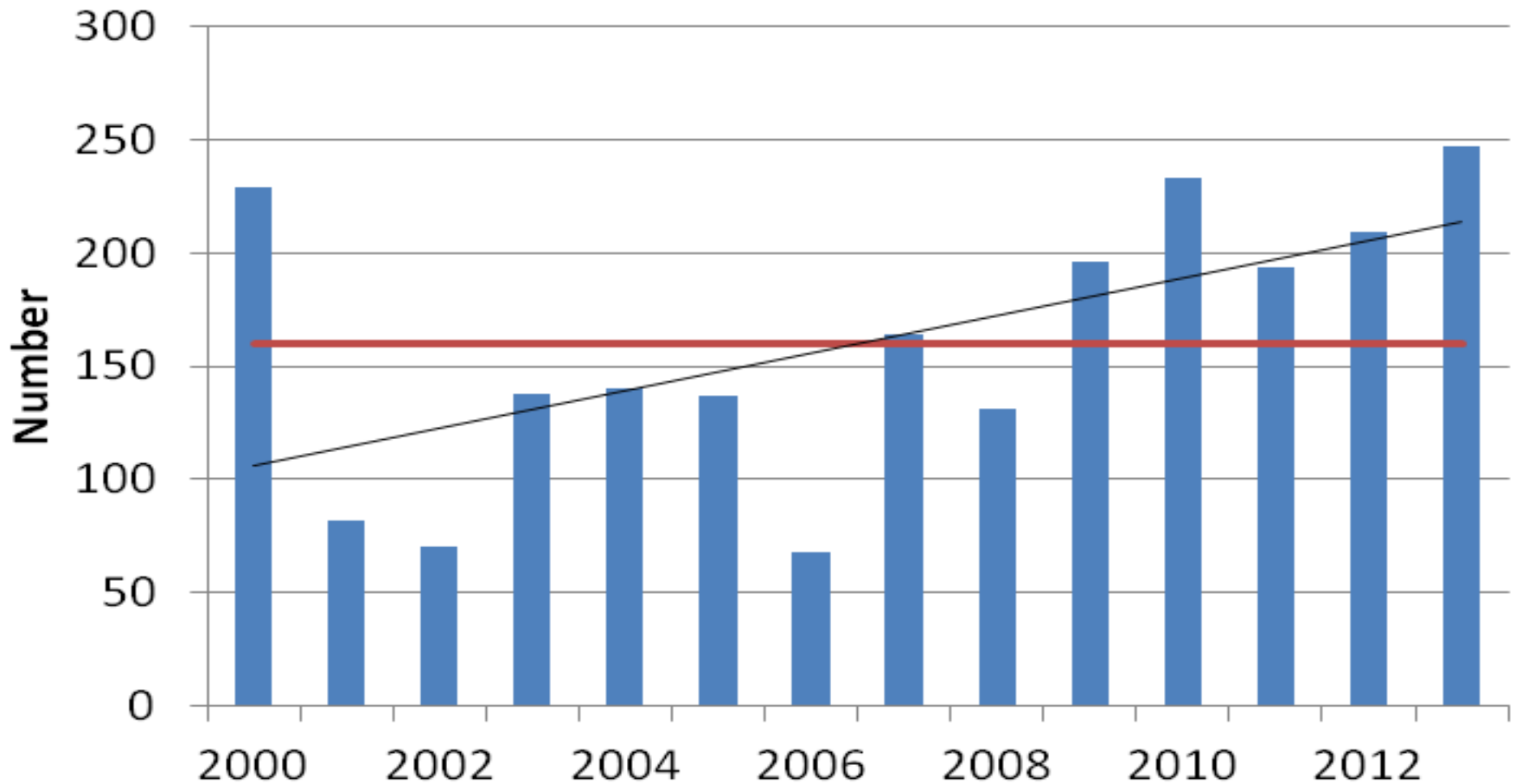
# Black-billed Gull – trend (p=0.16)



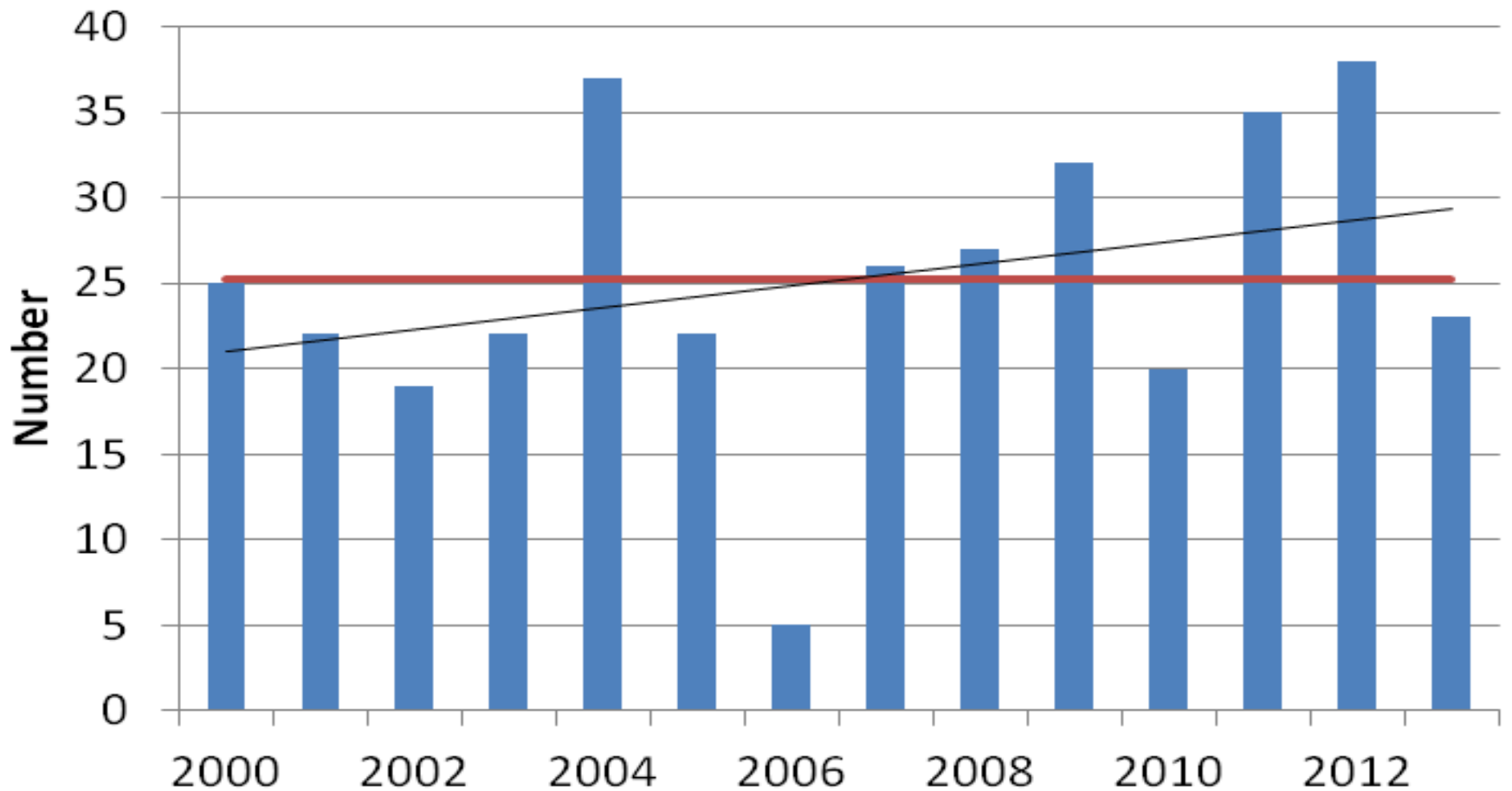
# Banded Dotterel – trend\* ( $p=0.01$ )



# Pied Stilt – trend\* (p=0.03)



# SI Pied Oystercatcher – trend (p=0.28)

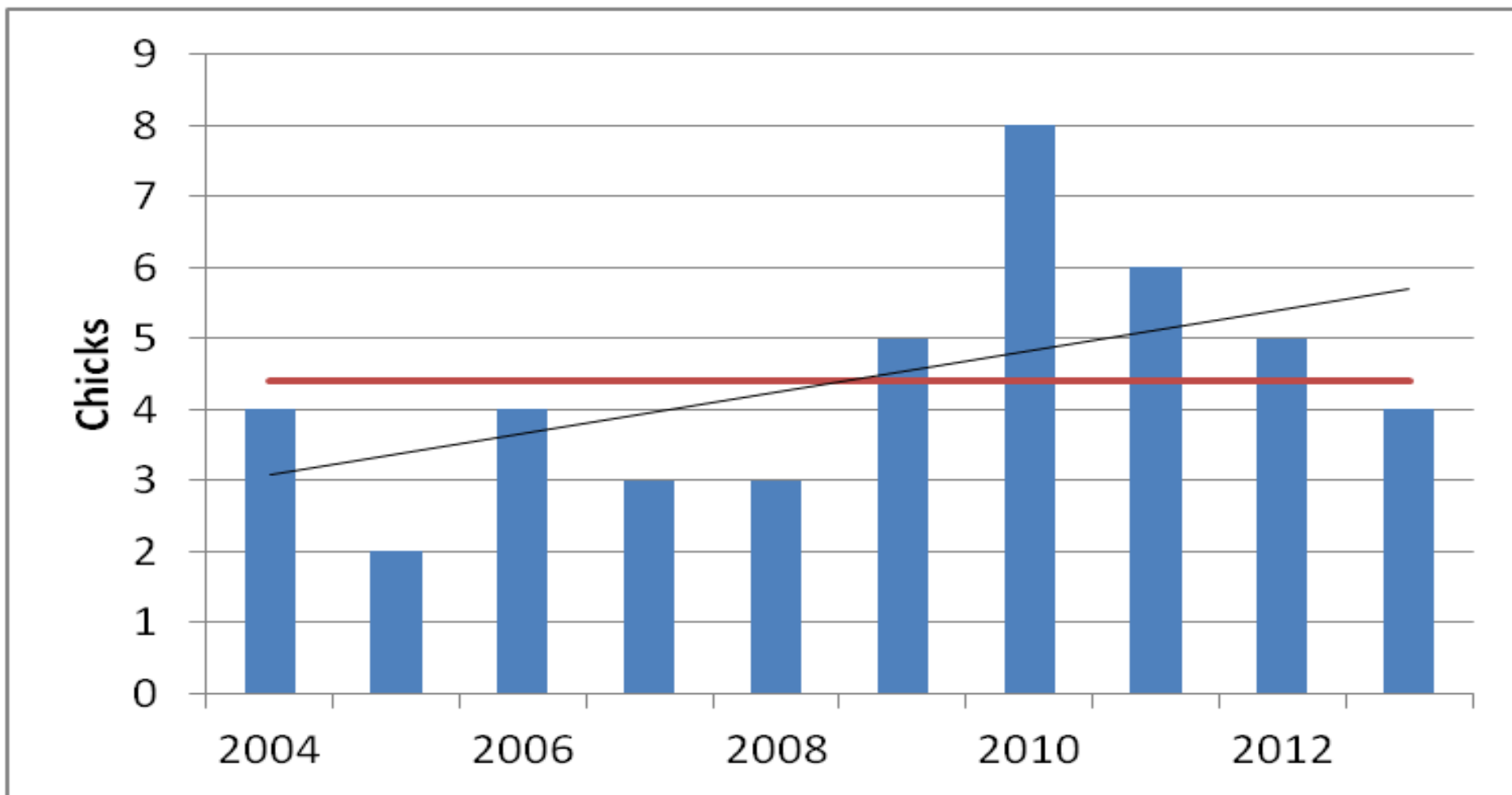


# Population Trends - summary

	<b>In last 50 yrs to 2010 (Spurr, 2010)</b>	<b>In last 13 yrs (2000-2013)</b>
Wrybill	No change	No change
Black-fronted Tern	No change	Increased
Black-billed Gull	<b>Declined</b>	No change
Banded Dotterel	No change	Increased
SIPO Oystercatcher	<b>Declined?</b>	No change
Pied Stilt	Increased?	Increased

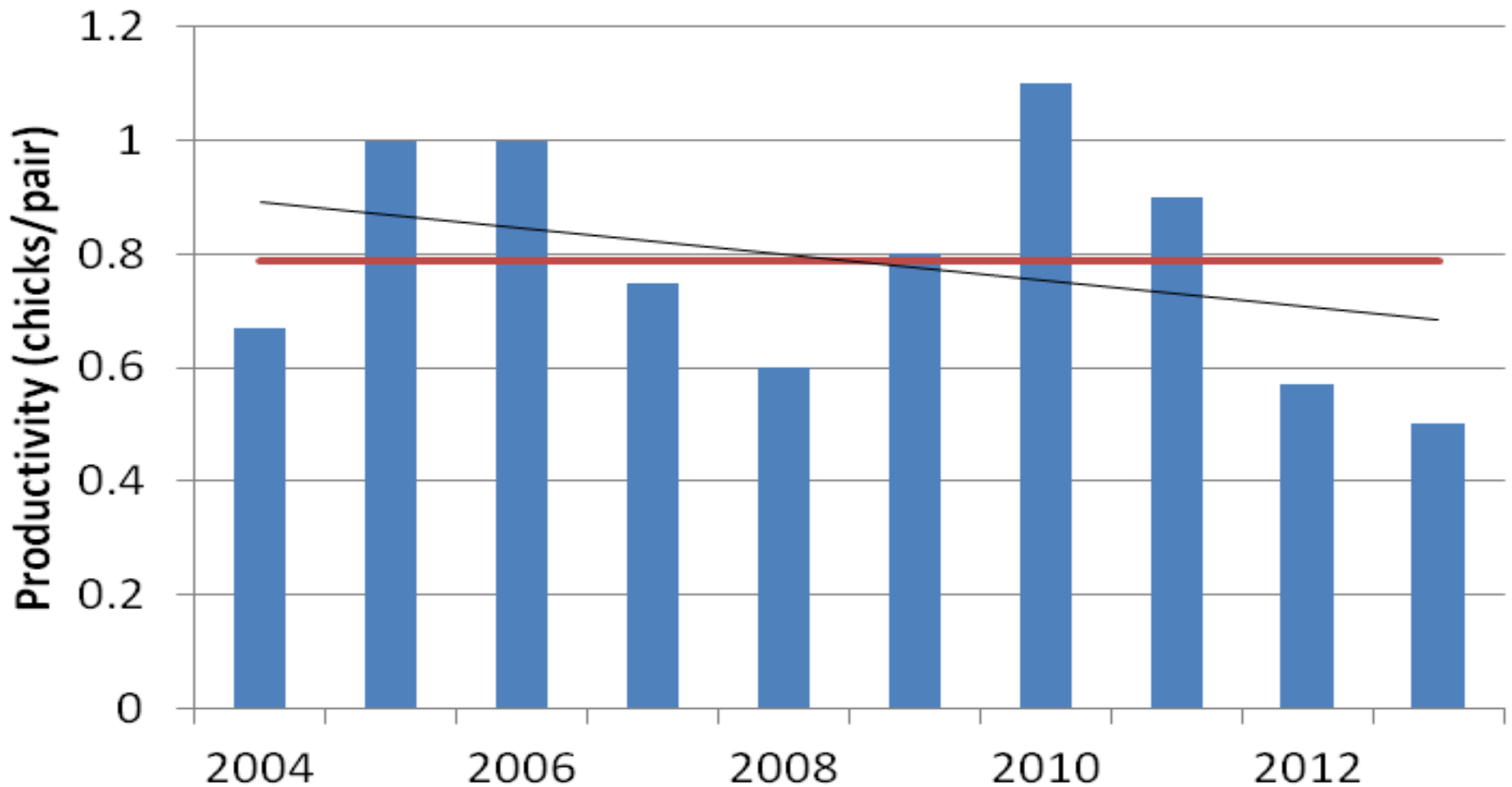
# Wrybill breeding

Chick numbers (trend  $p=0.128$ )



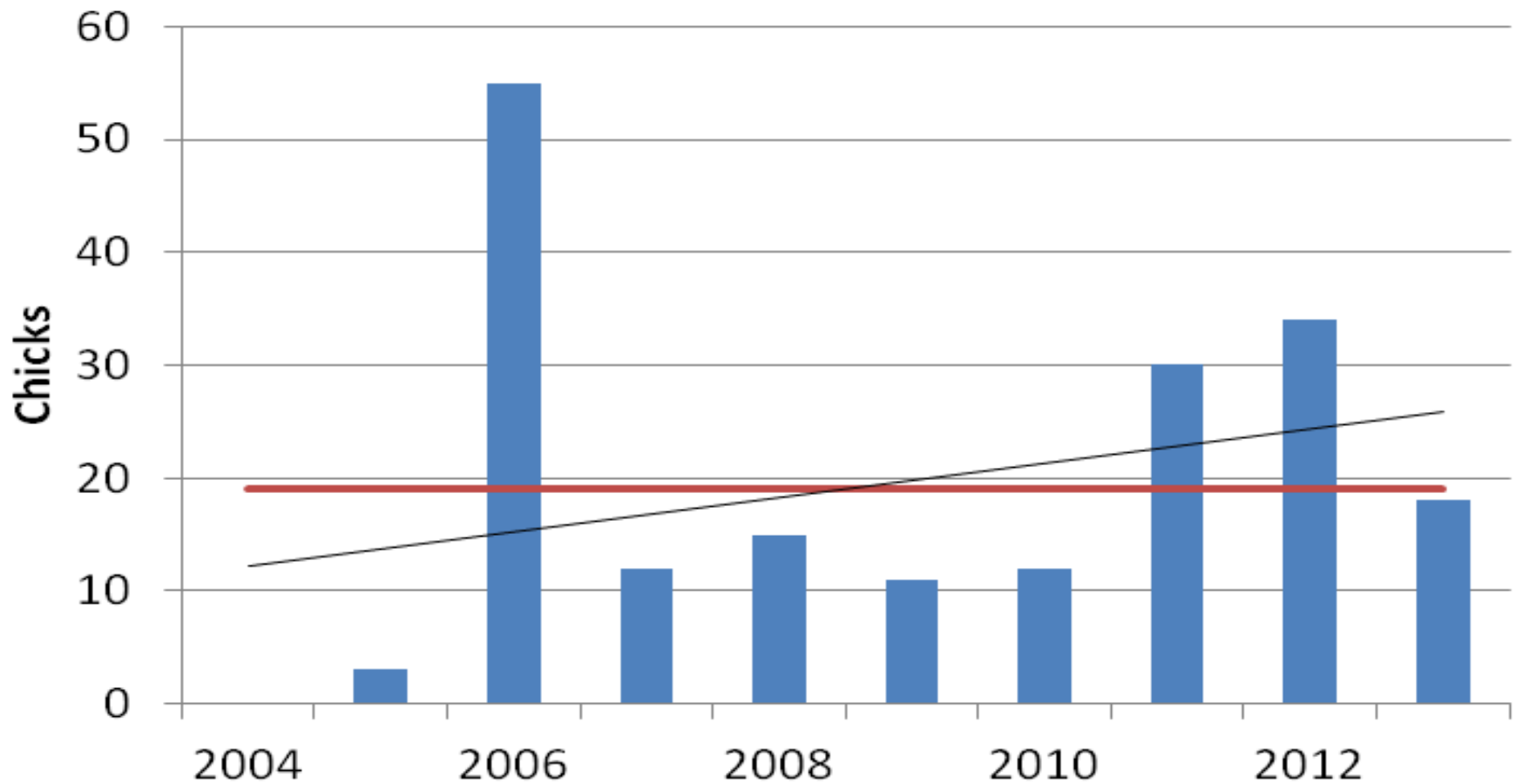
# Wrybill breeding Productivity

Chicks/pair (trend  $p=0.340$ )





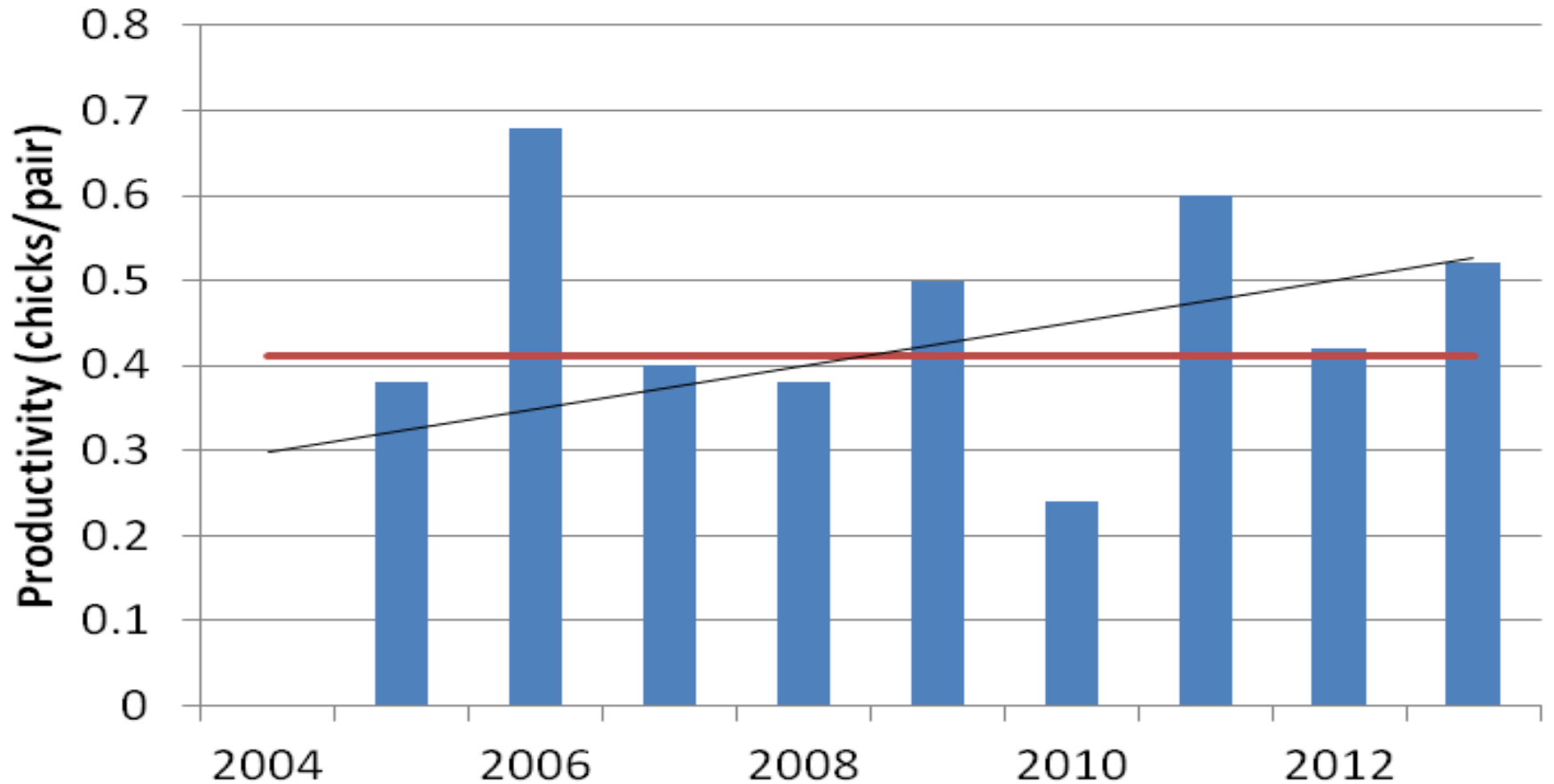
# Black-fronted Tern breeding Chick numbers (trend $p=0.435$ )



# Black-fronted Tern breeding

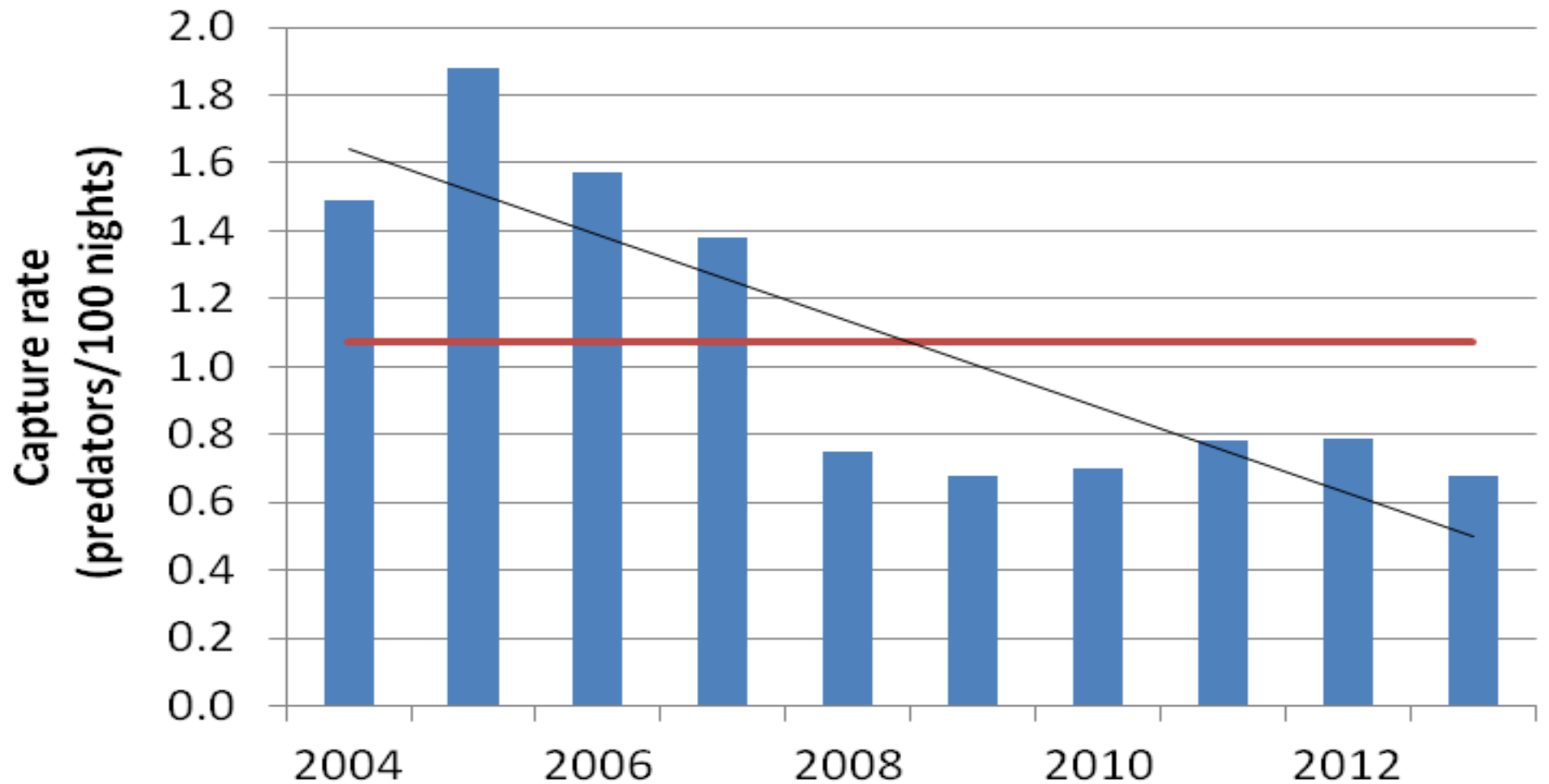
Productivity

Chicks/pair (trend  $p=0.247$ )



# Trapping

Predators/ 100 nights (trend\* $p=0.0022$ )



# What Have We Achieved?

- Our surveys since 2000 show a significant increase in populations of banded dotterel, black-fronted tern and pied stilt (not quite for wrybill) and no change in SIPO and black-billed gull.
- Monitoring of breeding since 2004 shows no significant change in chick numbers or productivity for wrybill and black-fronted tern (black-billed gull data not analysed due to many years with zero breeding colonies).
- Trapping since 2004 shows a significant reduction in predator capture rate (hedgehogs?)
- Adult survival. Very important. Indications that it is suspect - but insufficient adults banded to detect any trends.

# What Have We Achieved?

- The Ashley-Rakahuri Rivercare Group has shown that a small community group, operating with volunteer time and a few thousand dollars annually can make a difference.
- This in itself, will not change the national situation for our threatened riverbed birds, but if other rivers (or parts of them) can receive similar attention, then the tide of decline might turn.
- There is truth in the saying “Think nationally – act locally”

# Acknowledgements

- Surveys. Volunteers from the Ashley-Rakahuri Rivercare Group, OSNZ, Forest & Bird, Environment Canterbury, DOC, and the general public.
- Data analysis. Eric Spurr (all surveys to 2010); Bruce Manley (2000-2014)
- Past funding. WWF Habitat and Protection Fund, Lotteries Environment and Heritage Fund, NZ National Parks and Development Foundation, Pacific Development and Conservation Trust
- Present funding. Local Rangiora community.