



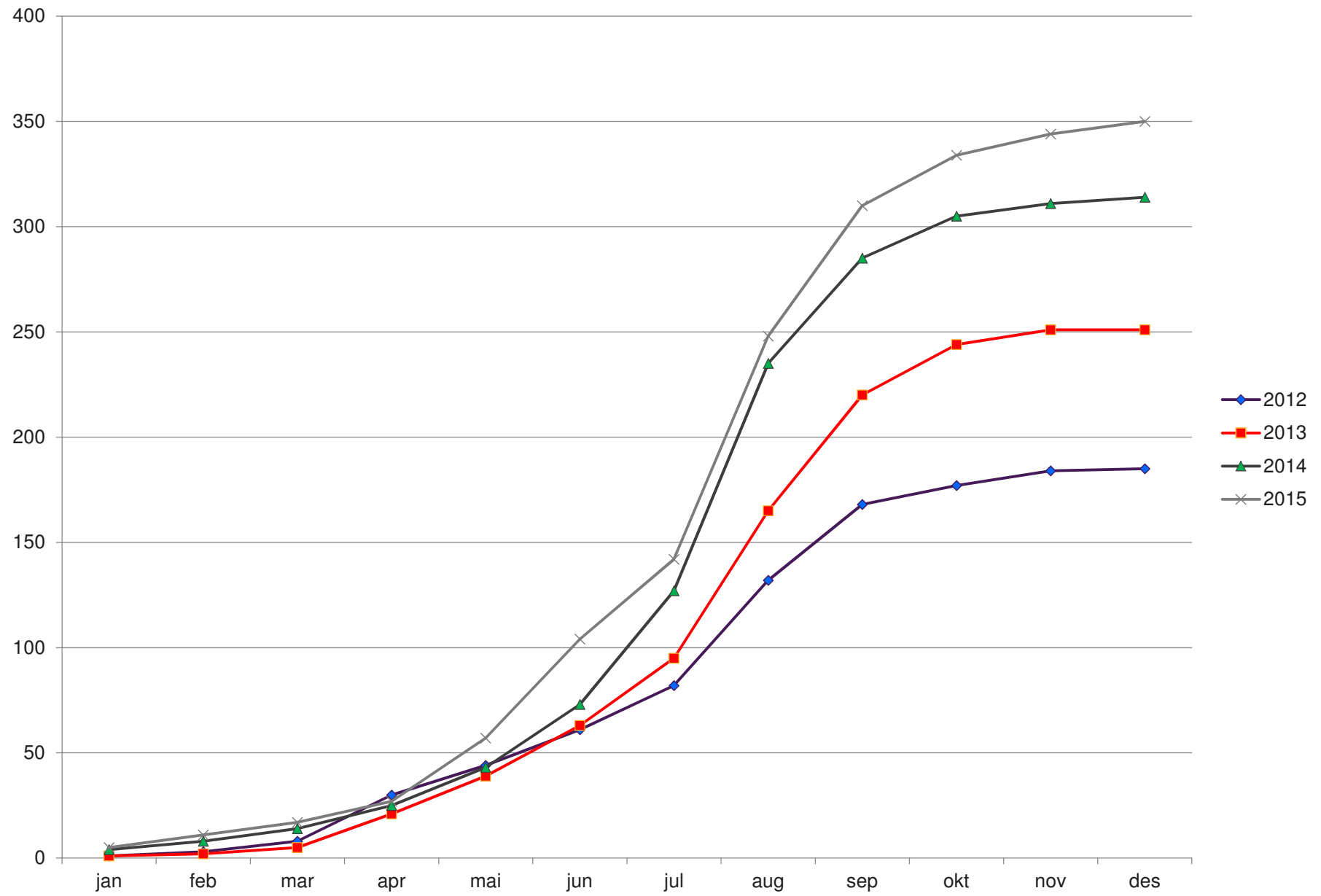
# Birdstrike statistics Avinor 2012-2015

## Reporting of birdstrikes in Avinor

- Confirmed birdstrikes
- Birdstrike reported by aircraft, no remains found
- Dead bird or part of bird found on or close to RWY or TWY

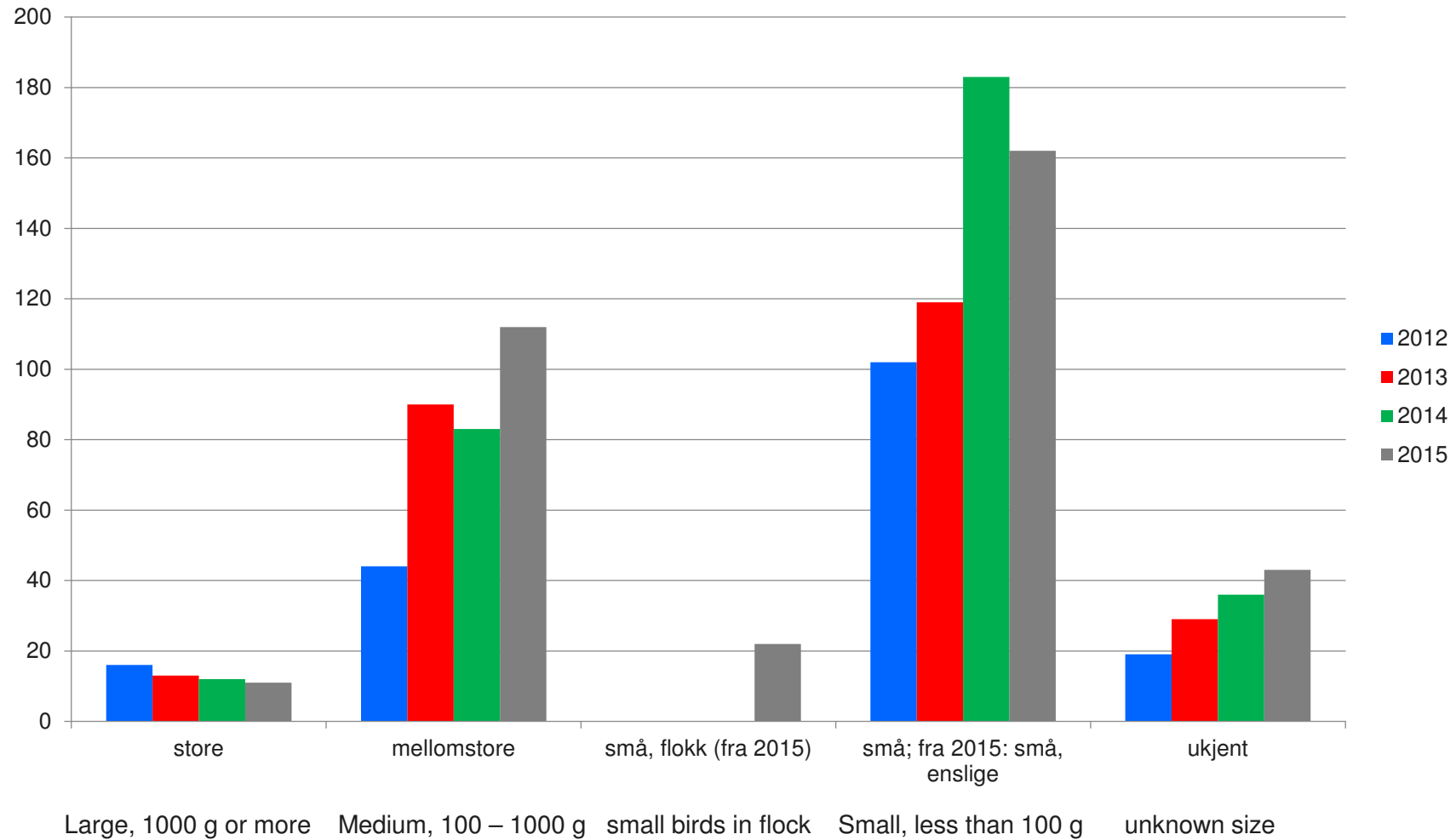
## Reported birdstrikes to Avinor 2012-2015

- 2012: 181
- 2013: 251, increased with 70 from 2012
- 2014: 314, increased with 63 from 2013, and 133 from 2012
- 2015: 350, Increased with 36 from 2014, 99 from 2013 and 169 from 2012.



# Where and why?

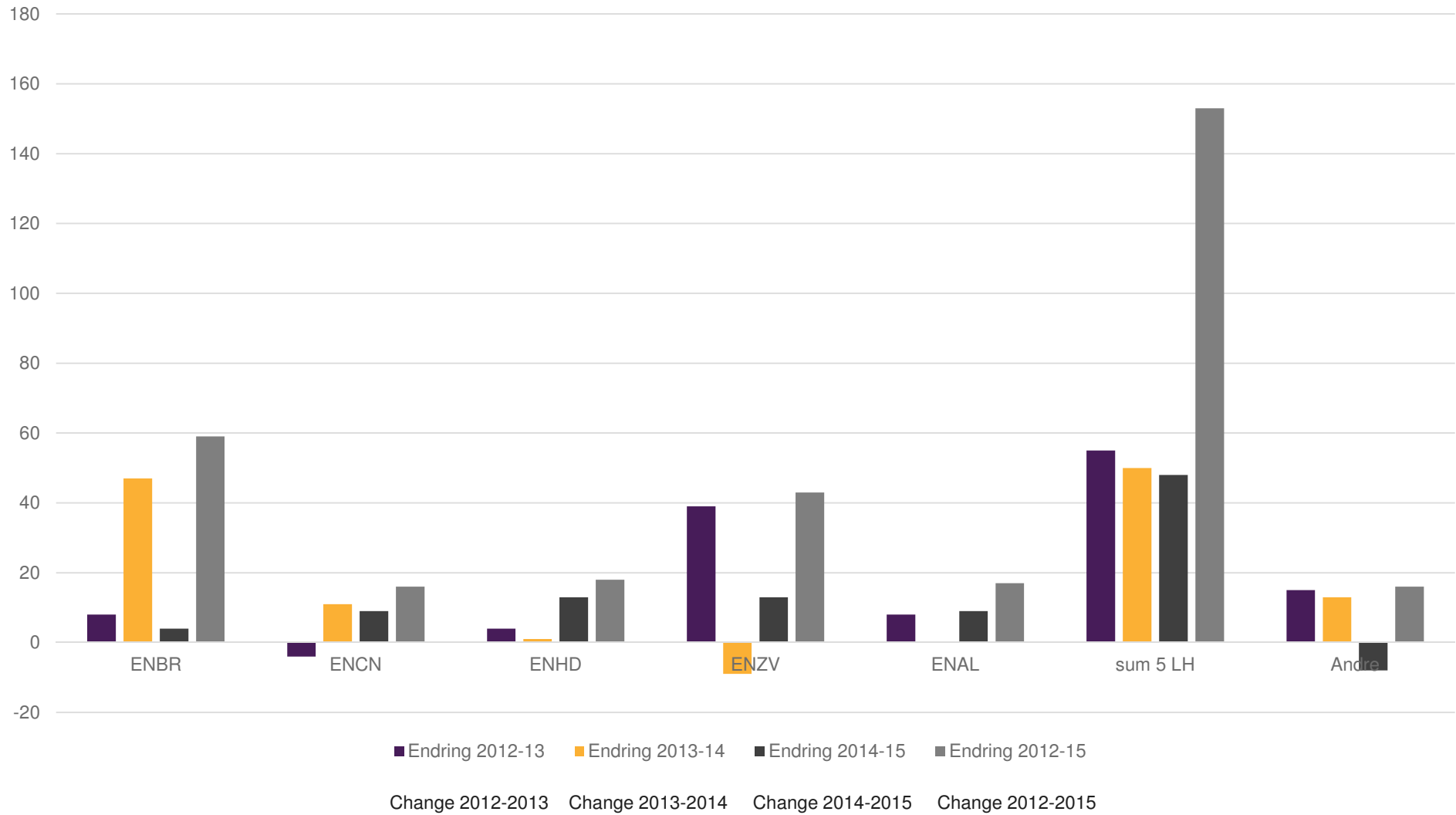
## Development birdstrikes vs size of bird



## Where do we experience the change in numbers of birdstrikes

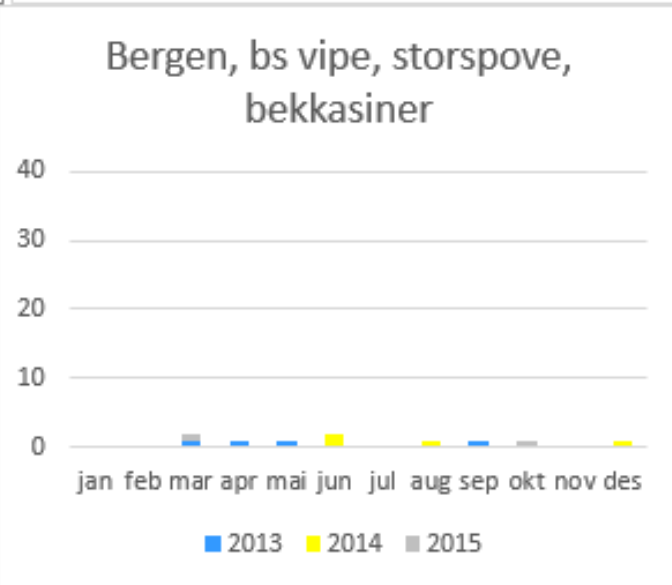
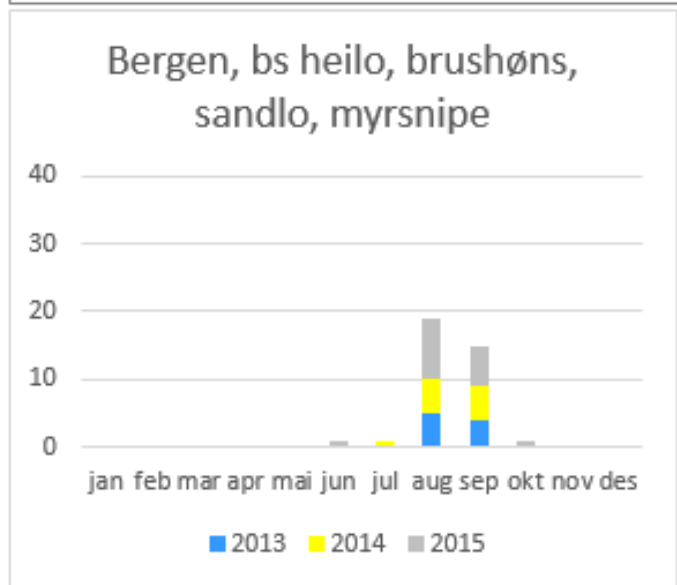
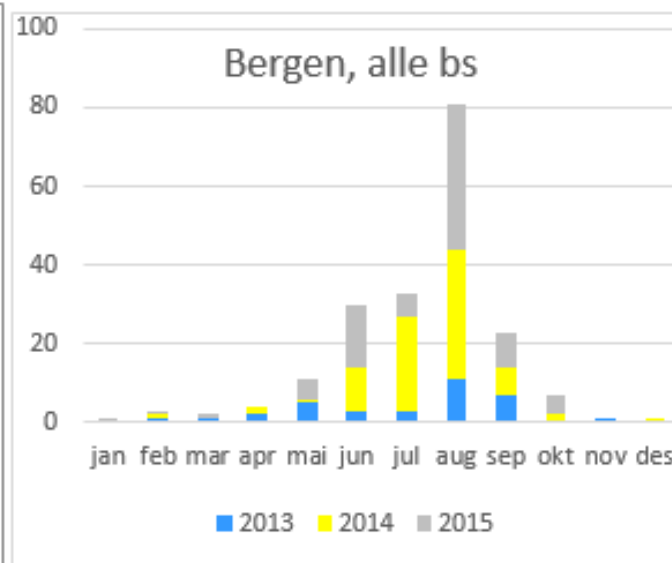
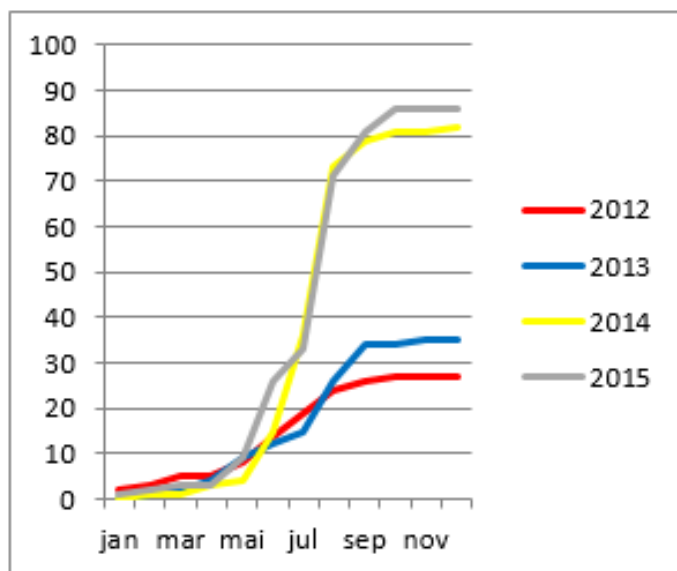
- Statistics are based upon the 42 airports that reports all birdstrikes into Avinors reporting system (both AD OPS and ATM)
- 90 % of the increase is related to 5 airports on the westcoast of Norway.
  - Bergen ENBR
  - Kristiansand ENCN
  - Haugesund ENHD
  - Stavanger ENZV
  - Ålesund ENAL

# Diagrammtitlel

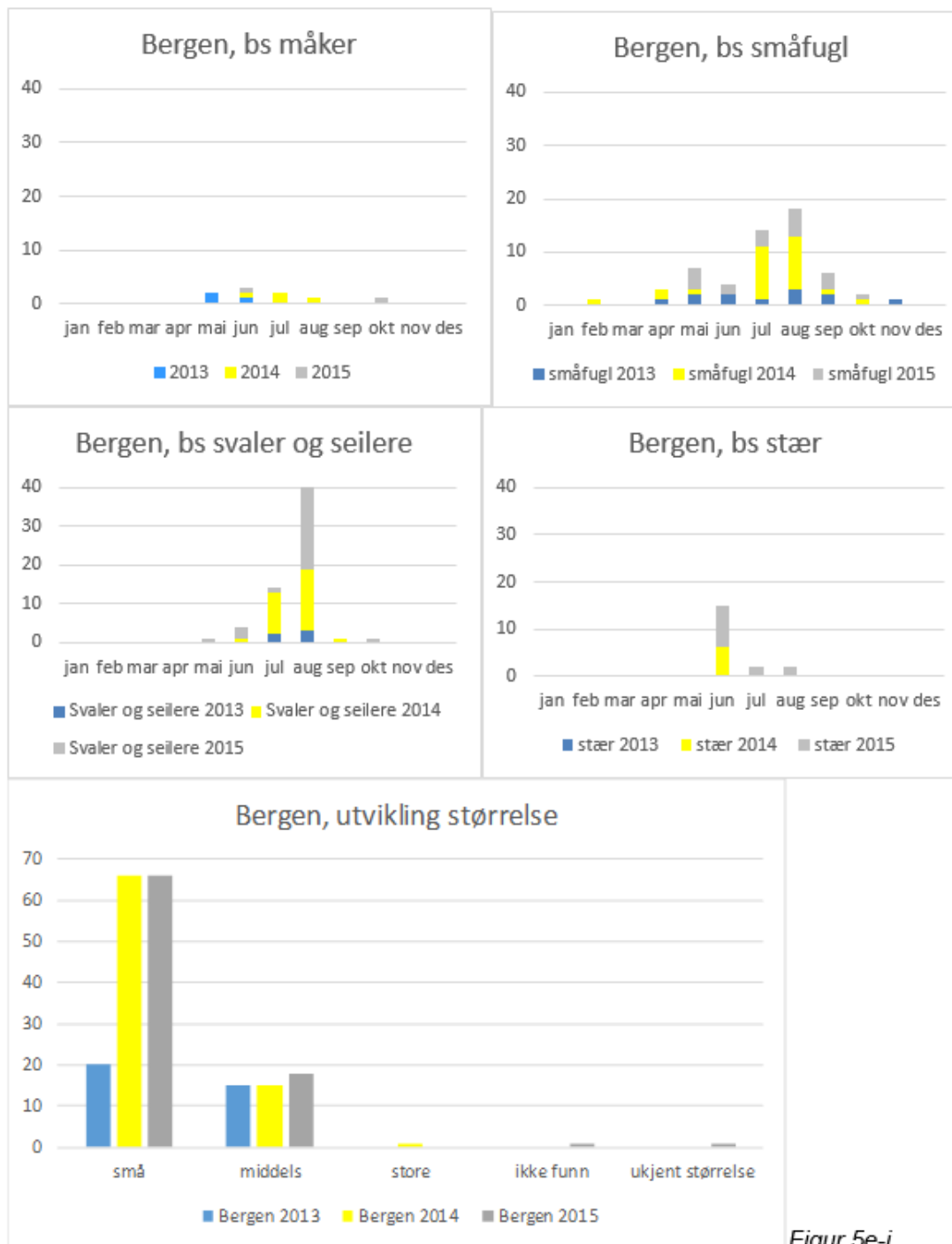




## Bergen, over all (1 and 2), migrating shorebirds (3), breeding shorebirds (4)

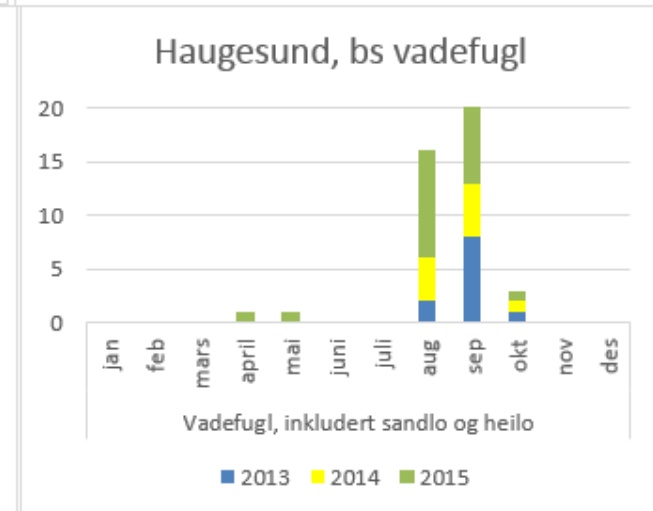
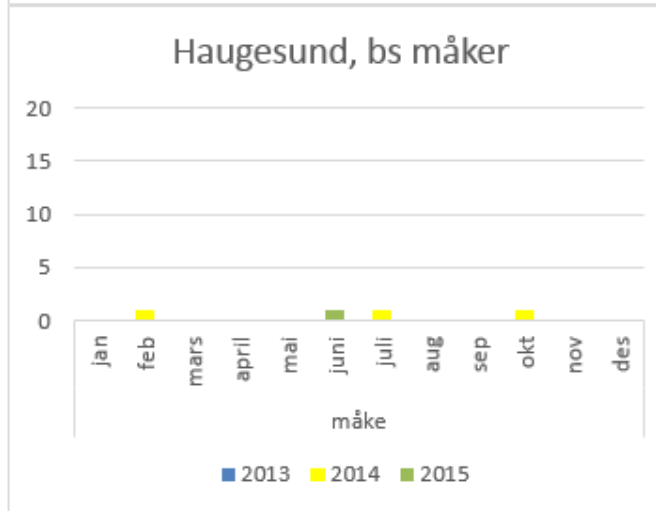
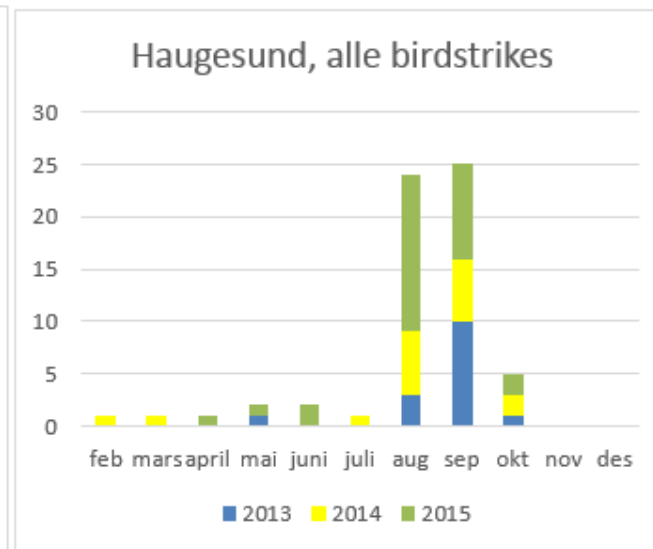
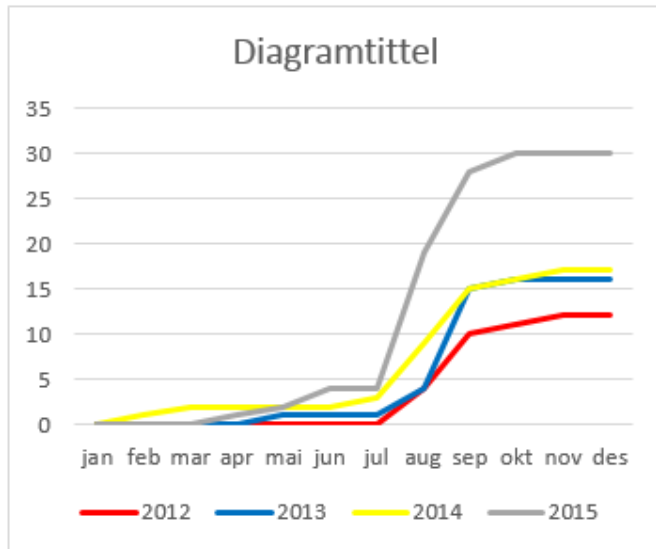


**Bergen,  
gulls (1),  
smaller  
birds (2),  
swallows/s  
wifts (3),  
starlings  
(4), bird  
size (5)**

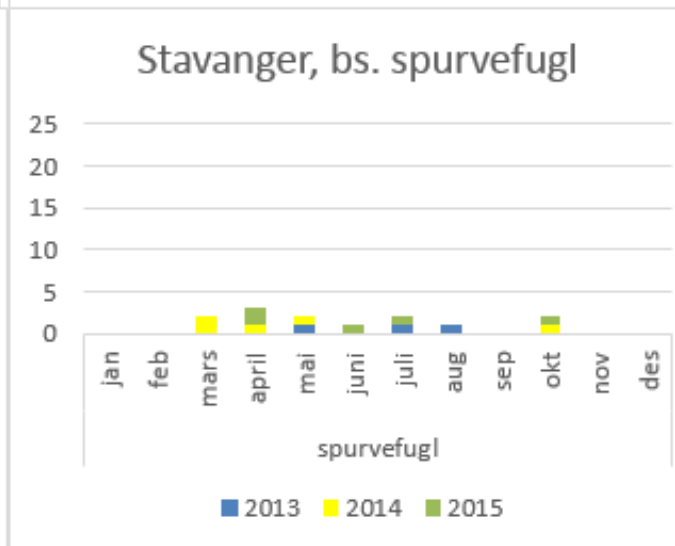
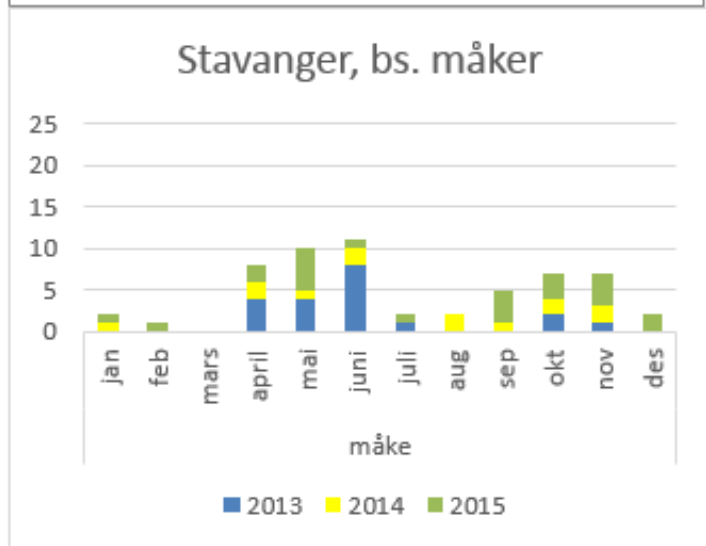
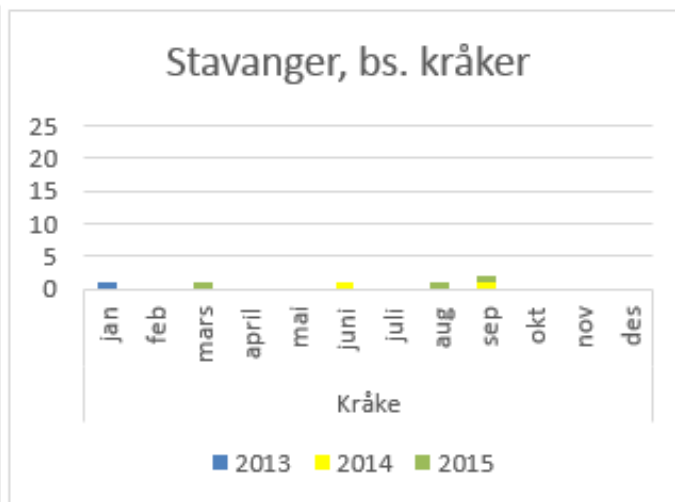
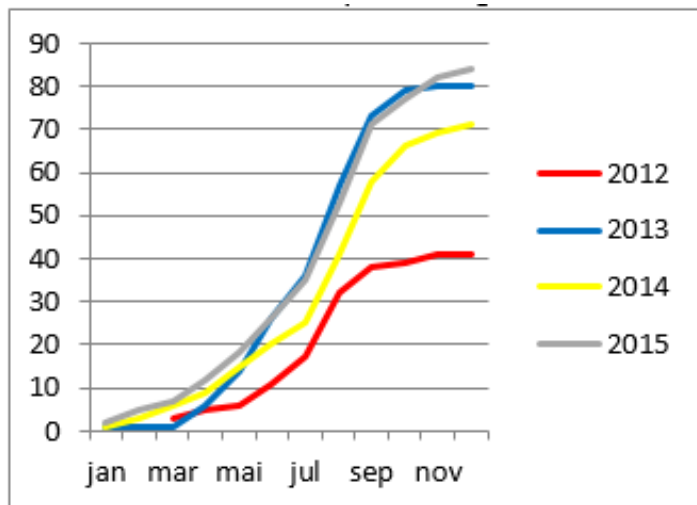


Figur 5e-i.

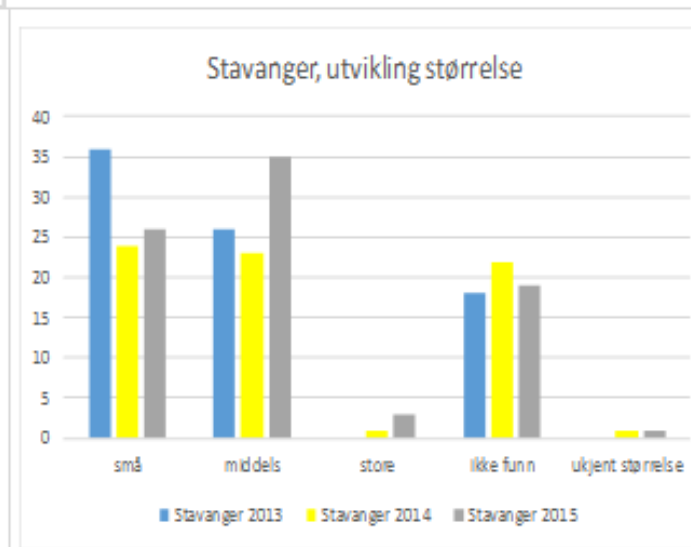
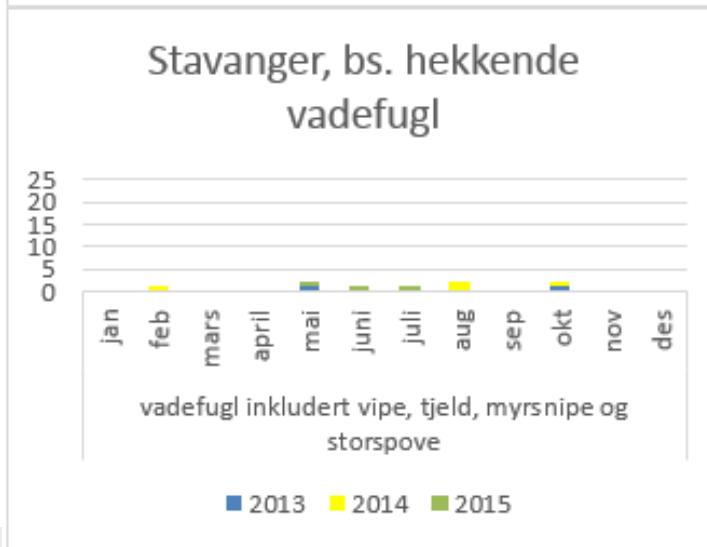
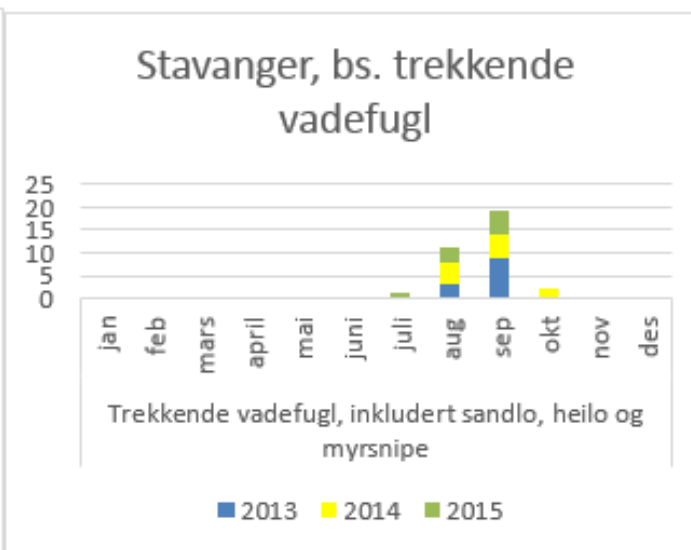
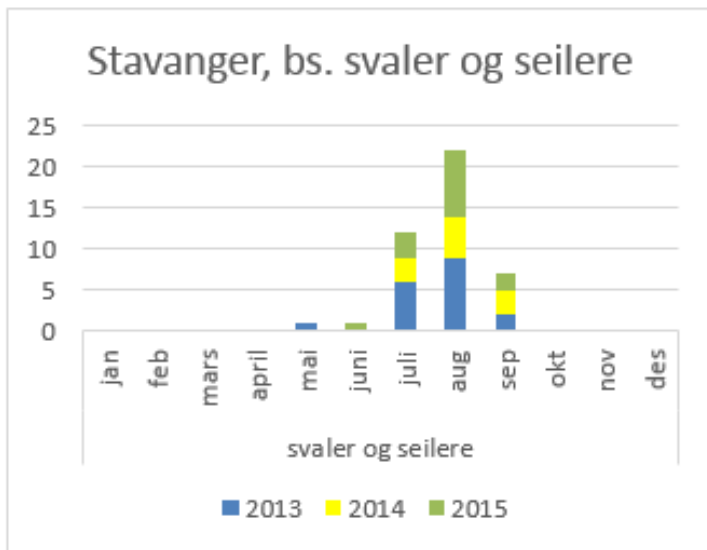
## Haugesund, overall (1 and 2), gulls (3) and shorebirds (4)



# Stavanger, Birdstrike overall (1), crows (2), gulls (3) and smaller birds (4)



# Stavanger, Swallows/swifts (1), migrating Shorebirds (2), breeding shorebirds (3) and bird size (4)



# Birdstrike rate (pr 10 000 ACFT movements)

Jeff Mc Kee (Avisure 2016): BS rate 4/10 000 is regarded as an «acceptable level»

- «Top 5 airports»

Haugesund	12,79	16,3	16,56	29,36	18,75
Kristiansand	12,69	10,79	15,97	20,6	15,01
Ålesund	4,77	9,96	9,48	14,63	8,96
Stavanger	4,64	9,16	7,95	9,85	7,9
Bergen	2,22	3,3	8,08	8,7	5,58

- Airports with more than 15 BS 2013-2015

Molde	3,25	8,59	8,5	14,29	8,66
Alta	7,01	4,96	6,83	4,93	6,68
Florø	7,57	7,72	6,01	2,81	6,03
Evenes	8,34	2,02	2,82	9,07	5,56
Tromsø	2,97	2,62	2,78	2,12	2,69
Trondheim	1,8	1,8	2,3	1,98	1,97

- Some airports with more than 4 BS a single year

Røst	7,43	44,12	7,45	7,43	16,6
Svolvær	6,61	7,79	13,93	2,28	7,65
Rørvik	3,35	6,39	9,35	9,34	7,11
Hasvik	0	15,94	0	7,83	5,94
Mehamn	3,63	4,2	7,17	3,64	4,66

## Why?

- Warmer autumns – longer seasons?
- Change in maintenance of grass areas in Bergen – less gulls, more smaller birds
- Worms feed on grass remains in Stavanger, result in change in maintenance routines

## What is not revealed in the statistics?

- Increased number of white tailed eagles, geese and swans close to the airports
- So far, no increase in birdstrike-numbers with these birds, although the risk is increased.



Questions?