

Mengderapportering vinteren 2015/2016

STATENS VEGVESENS RAPPORTER

Nr. 419



Tittel

Mengderapportering vinteren 2015/2016

Undertittel**Forfatter**

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Avdeling

Trafikksikkerhet, miljø- og teknologiavdelingen

Seksjon

Vegteknologi

Prosjektnummer**Rapportnummer**

Nr. 419

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Emneord

Vinterdrift, mengderapportering, salting, sanding, brøyting

Sammendrag

Denne rapporten er utarbeidet for å få en oversikt over ressursbruken i vinterdriften, samt for å få et bilde av utviklingen fra 2010 til 2016. Rapporten inneholder tall for salting, sanding og brøyting

Title

Quantity report winter 2015/2016

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Project number**Report number**

No. 419

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Øystein Larsen

Key words**Summary**

This report was created in order to get an overview of the quantity of resources used in the winter operation, and get a view on the development from 2010 to 2016. This report contains data for usage of salt, sand and the amount of snow-clearing.

Forord

Denne rapporten er utarbeidet for å få en oversikt over ressursbruken i vinterdriften. For å se utviklingen fra år til år viser rapporten noen historiske hovedtall. Detaljer per kontrakt er basert på de vegkategorier som ble innført 1/1-2010.

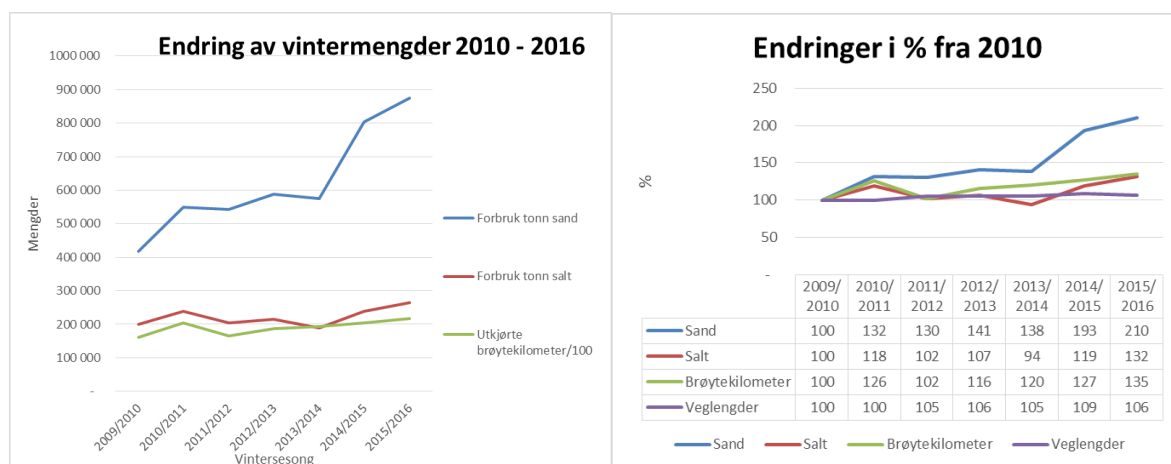
Mengdetallene er hentet fra entreprenørenes rapportering for hver kontrakt ut fra skjema R12, definert i driftskontraktene. Det kan være feil og mangler i datagrunnlaget.

De årlige mengdene omfatter vintersesongen fra høst til vår. Det oppgitte årstallet i diagrammene viser til siste del av sesongen.

I totalforbruket på side 1 og 4, tabellen på side 6 og diagram på side 7 inngår også salt i strøsand. For alle andre tabeller/diagrammer som omhandler saltforbruk inngår ikke salt i strøsand.

Utvikling for noen mengder fra sesongen 2009/2010 til sesongen 2015/2016:

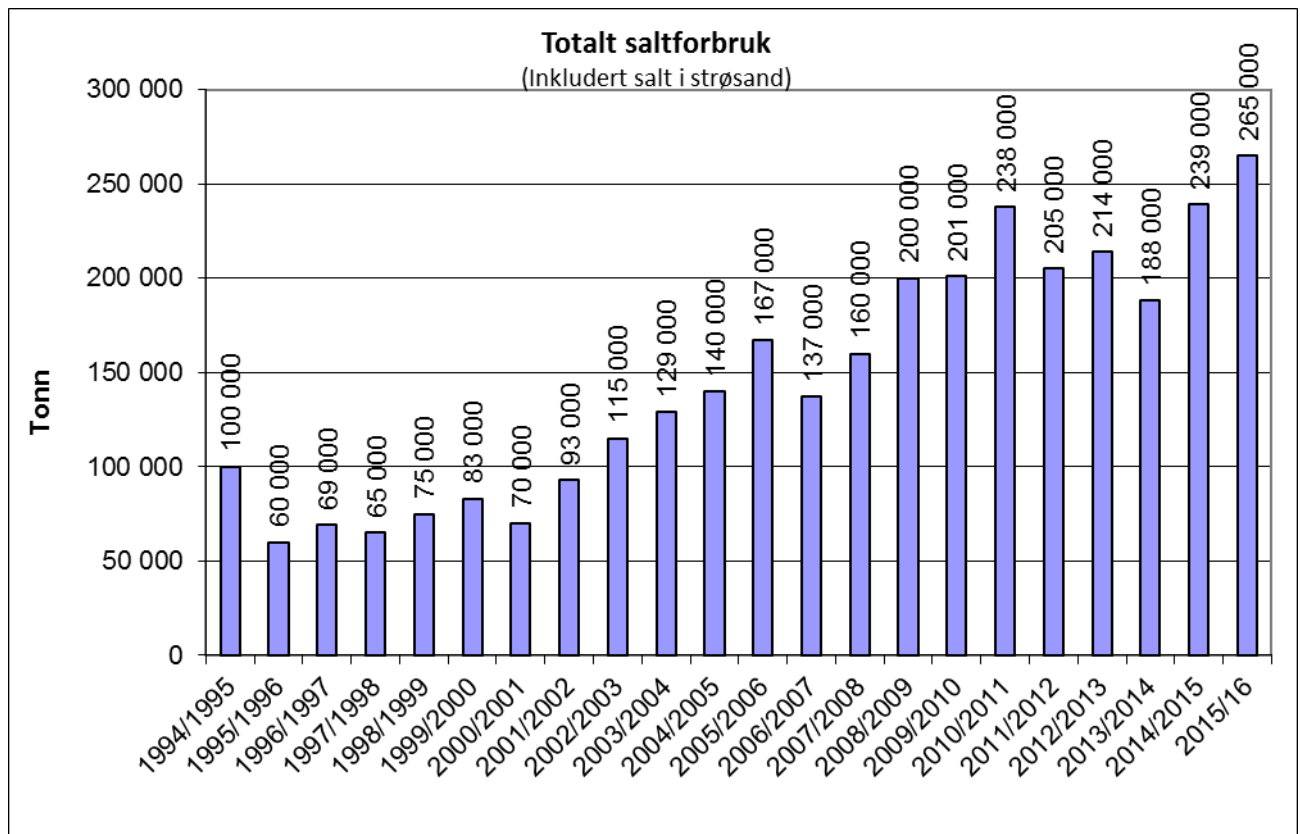
	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016
Forbruk tonn salt, totalt	201 000	238 000	205 000	214 216	188 347	238 992	265 187
Forbruk saltløsning (tonn salt)	12 843	15 886	8 094	12 015	13 366	38 740	62 256
% saltløsning av totalforbruk salt	6,4	6,7	3,9	5,6	7,1	16,2	23,5
Forbruk tonn sand	417 000	549 000	542 000	587 184	575 243	804 449	875 625
Forbruk tonn fastsand		5 565	13 530	34 934	28 673	65 632	113 774
% fastsand av totalforbruk sand	-	1,0	2,5	5,9	5,0	8,2	13,0
Utkjorte brøytekilometer	16 220 000	20 360 000	16 605 000	18 772 102	19 397 188	20 528 241	21 820 852



Innholdsfortegnelse

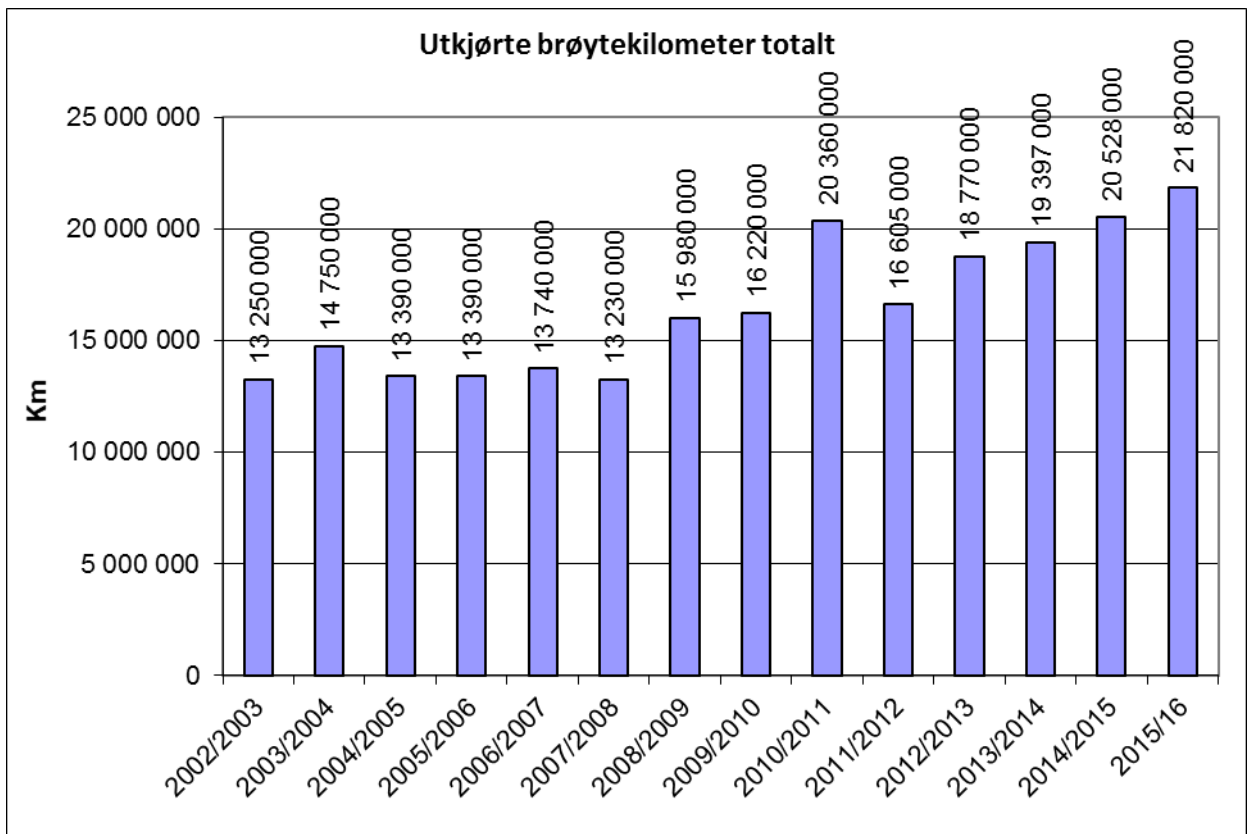
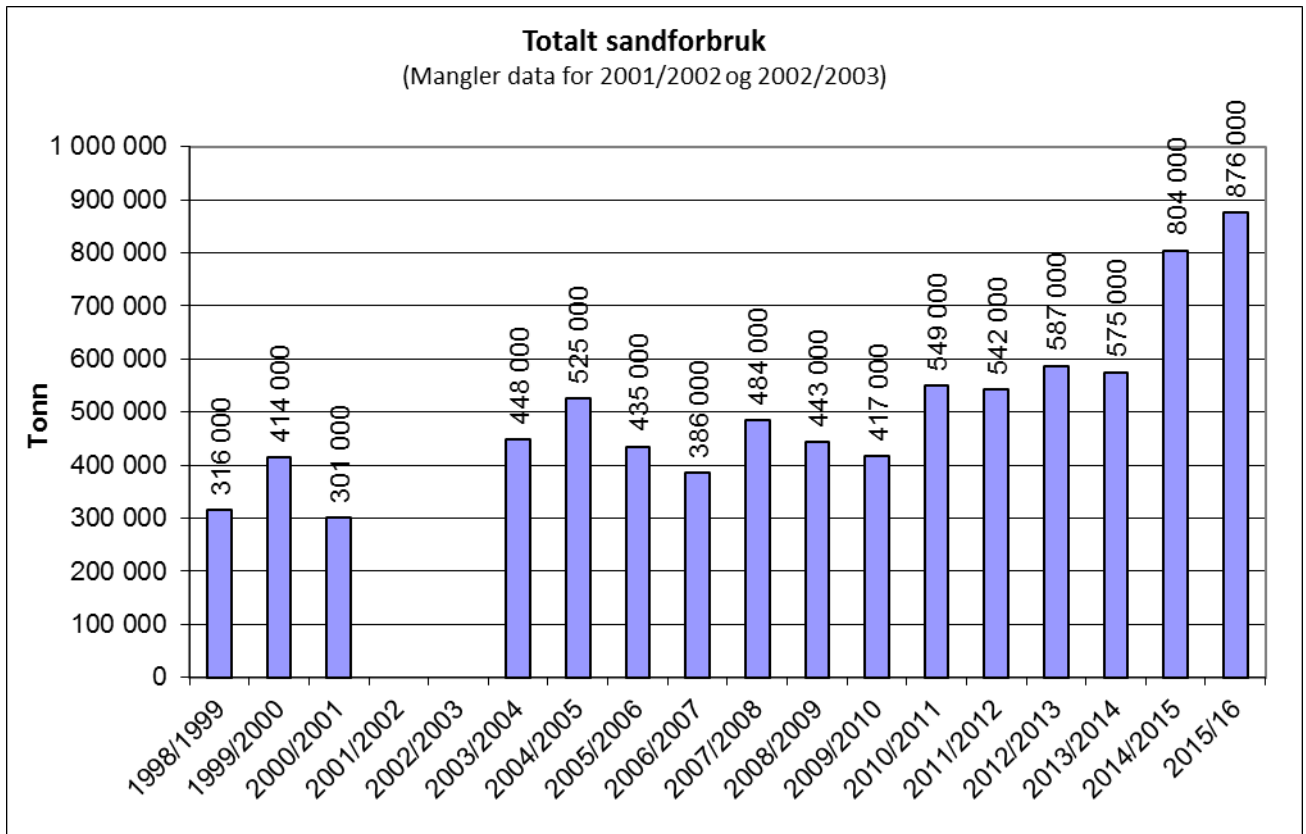
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Utvikling mengde per år



Saltforbruk per region

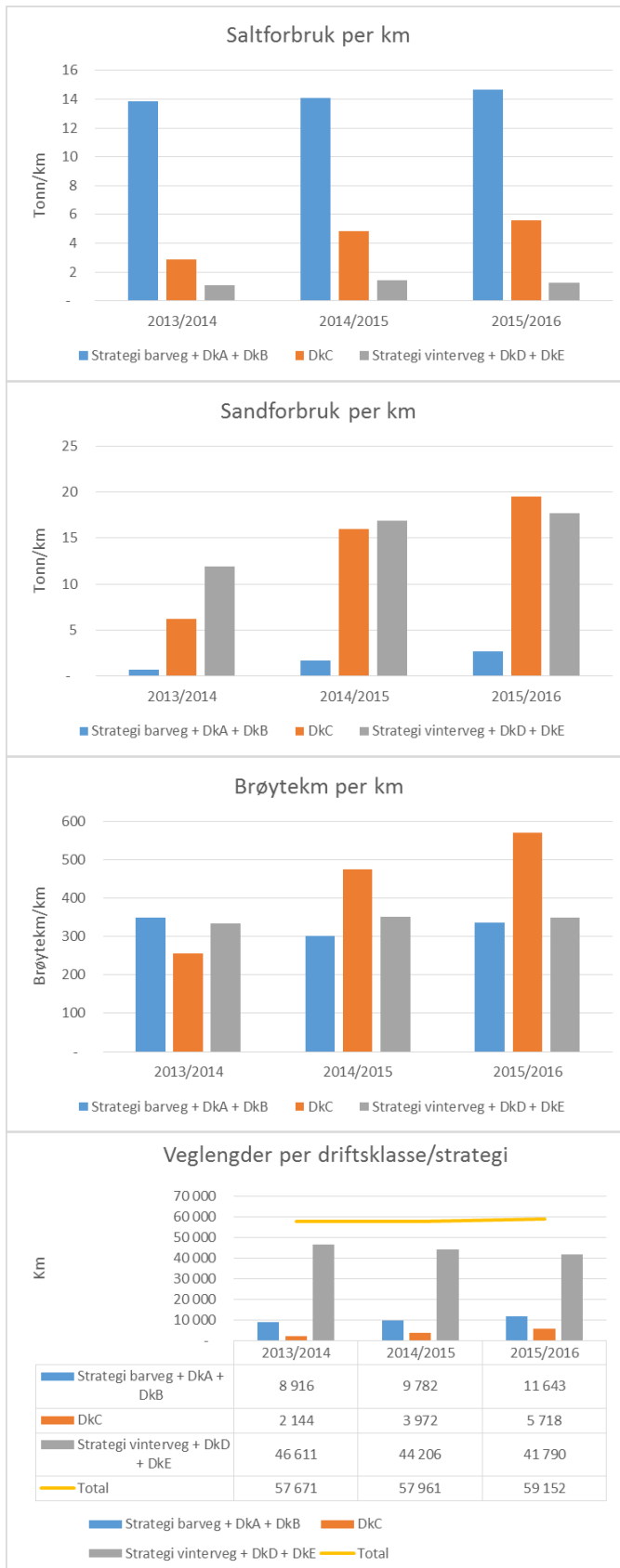
Vintersesong	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016
Øst	60 961	71 387	62 119	68 705	67 149	70 468	77 101
Sør	55 055	47 365	46 436	53 827	61 740	60 464	77 565
Vest	50 566	72 864	56 597	56 244	29 409	60 734	65 512
Midt	22 616	32 051	25 841	22 138	17 860	29 418	30 844
Nord	11 716	10 985	11 476	13 302	12 189	17 909	14 165
Hele landet	200 914	234 652	202 468	214 216	188 347	238 992	265 187



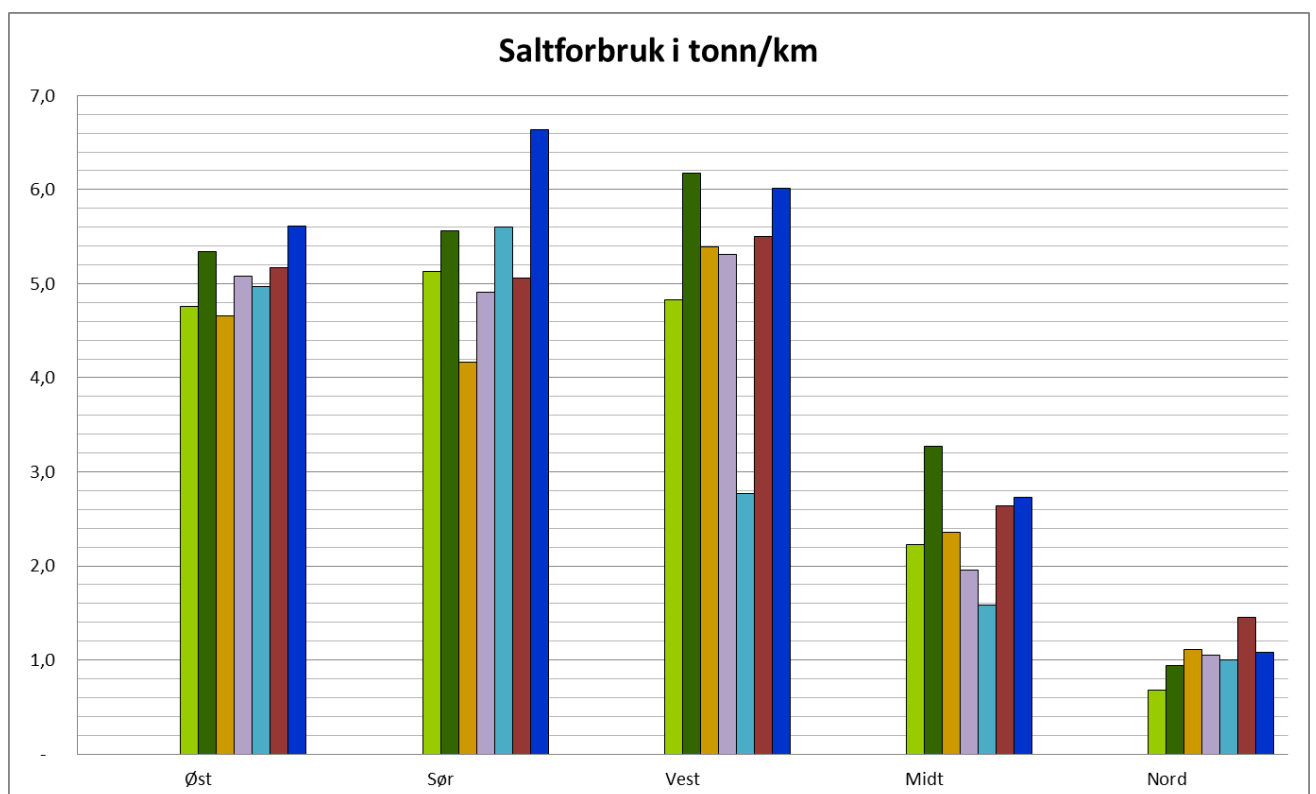
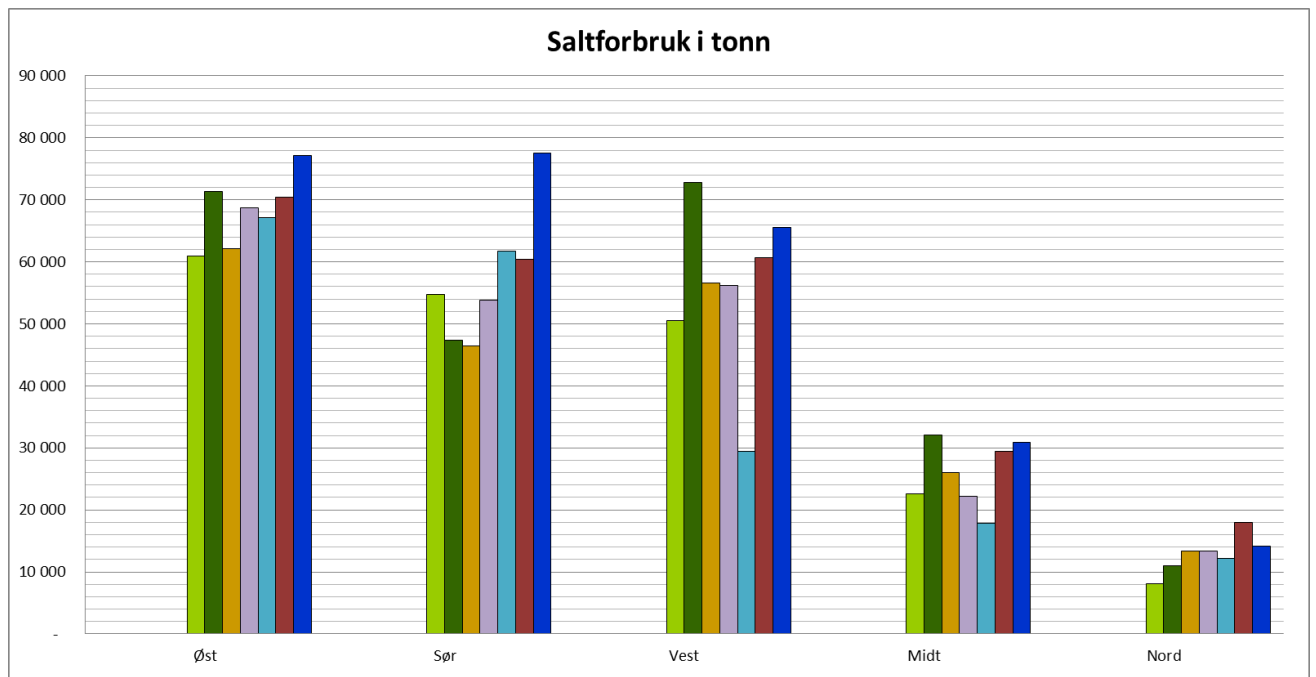
Mengdetabell vinteren 2015/2016

Region		Øst	Sør	Vest	Midt	Nord	Hele Landet
SALTING		Tonn	Tonn	Tonn	Tonn	Tonn	Tonn
Forbruk ved salttiltak	Sum Rv	40 554	37 000	21 901	14 017	5 946	119 418
	G/S-veg	2 095	350	1 253	213	17	3 928
	Sum Fv	32 959	38 569	41 784	12 923	4 342	130 577
	Totalt	75 607	75 919	64 938	27 154	10 305	253 923
Forbruk av salt i strøsand	Totalt:	1 493	1 646	574	3 691	3 861	11 264
Saltforbruk, inkludert salt i strøsand	Totalt:	77 101	77 565	65 512	30 844	14 165	265 187
Fordeling på ulike saltingsmetoder	Tørr salt	10 356	7 843	6 396	4 988	3 110	32 694
	Befuktet salt og slurry	58 860	47 931	38 236	10 262	4 881	160 171
	Saltløsning	7 393	20 145	20 306	12 021	2 392	62 256
	Totalt	76 609	75 919	64 938	27 271	10 383	255 120
Bruk av andre typer kjemikalier	Magnesiumklorid	351	0	118	74	251 422	251 965
	Totalt:	351	0	118	74	251 422	251 965
SANDING		Tonn	Tonn	Tonn	Tonn	Tonn	Tonn
Sanding. Forbruk av sand uten saltinnblanding	Sum Rv	13 167	7 473	13 432	1 936	19 418	55 427
	G/S-veg	1 780	3 163	0	1 367	1 481	7 791
	Sum Fv	107 775	114 283	11 420	52 902	53 593	339 973
	Totalt:	122 722	124 919	24 852	56 205	74 492	403 191
Sanding. Forbruk av saltblandet sand	Sum Rv	7 414	9 413	3 578	11 057	47 512	78 973
	G/S-veg	945	223	664	1 776	1 318	4 926
	Sum Fv	41 415	45 235	14 880	110 186	79 857	291 573
	Totalt:	49 774	54 871	19 122	123 019	128 687	375 472
Sanding. Forbruk av fastsand	Sum Rv	9 012	3 179	725	2 417	20 994	36 328
	G/S-veg	0	0	0	49	0	49
	Sum Fv	29 142	27 941	475	9 257	10 582	77 397
	Totalt:	38 154	31 120	1 201	11 723	31 576	113 774
Sanding. Totalt sandforbruk	Sum Rv	29 592	20 065	17 735	15 410	87 724	170 527
	G/S-veg	2 725	3 386	664	3 193	2 799	12 767
	Sum Fv	178 332	187 459	26 775	172 345	127 420	692 331
	Totalt:	210 650	210 910	45 174	190 948	217 943	875 625
BRØYTEKILOMETER		Km	Km	Km	Km	Km	Km
Brøytetekilometer	Sum Rv	1 133 001	1 296 896	1 490 314	813 226	3 308 855	8 042 292
	G/S-veg	74 824	58 312	18 626	93 593	25 149	270 504
	Sum Fv	1 870 761	2 107 565	1 865 843	2 915 644	4 748 242	13 508 056
	Totalt:	3 078 586	3 462 773	3 374 784	3 822 463	8 082 246	21 820 852
VEGLENGDER		Km	Km	Km	Km	Km	Km
Veglengder	Riksveg	2 377	1 867	2 030	1 348	3 304	10 927
	Fylkesveg	10 356	8 971	8 081	9 103	8 517	45 028
	G/S-veg	1 012	848	778	844	516	3 997
	Total veglengde	13 746	11 685	10 890	11 295	13 127	60 742

Mengder fordelt på driftsklasser/strategier

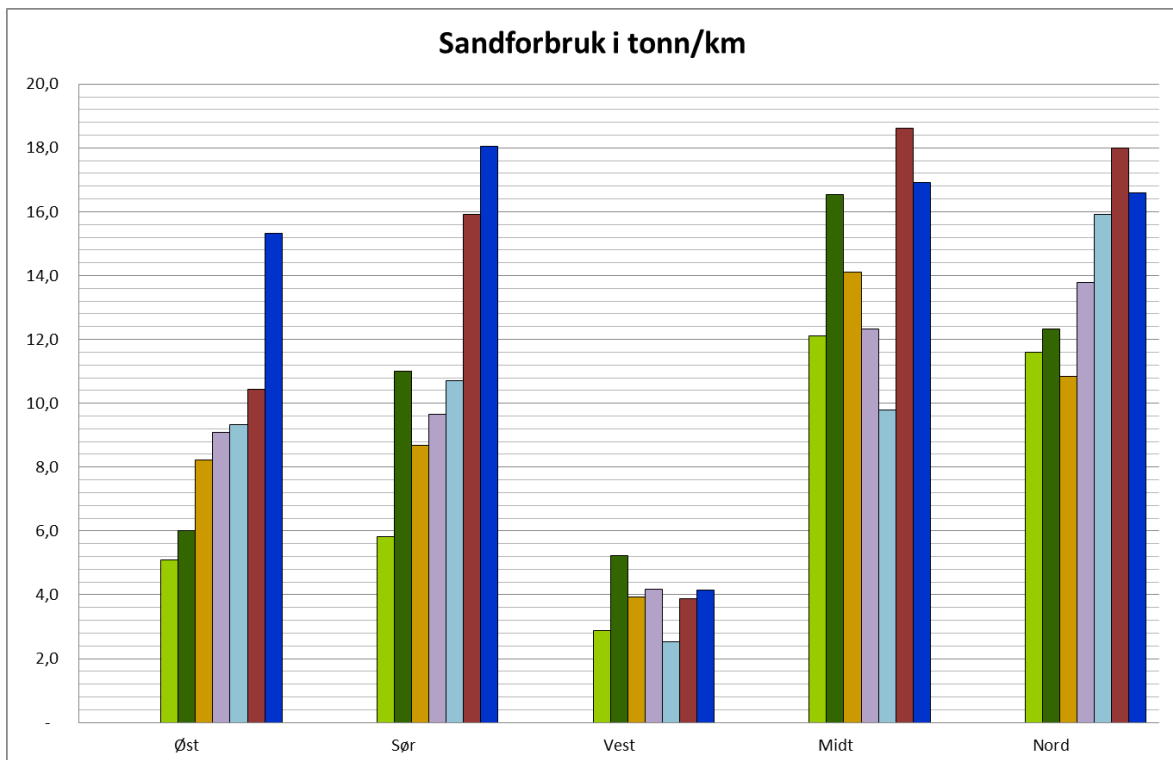
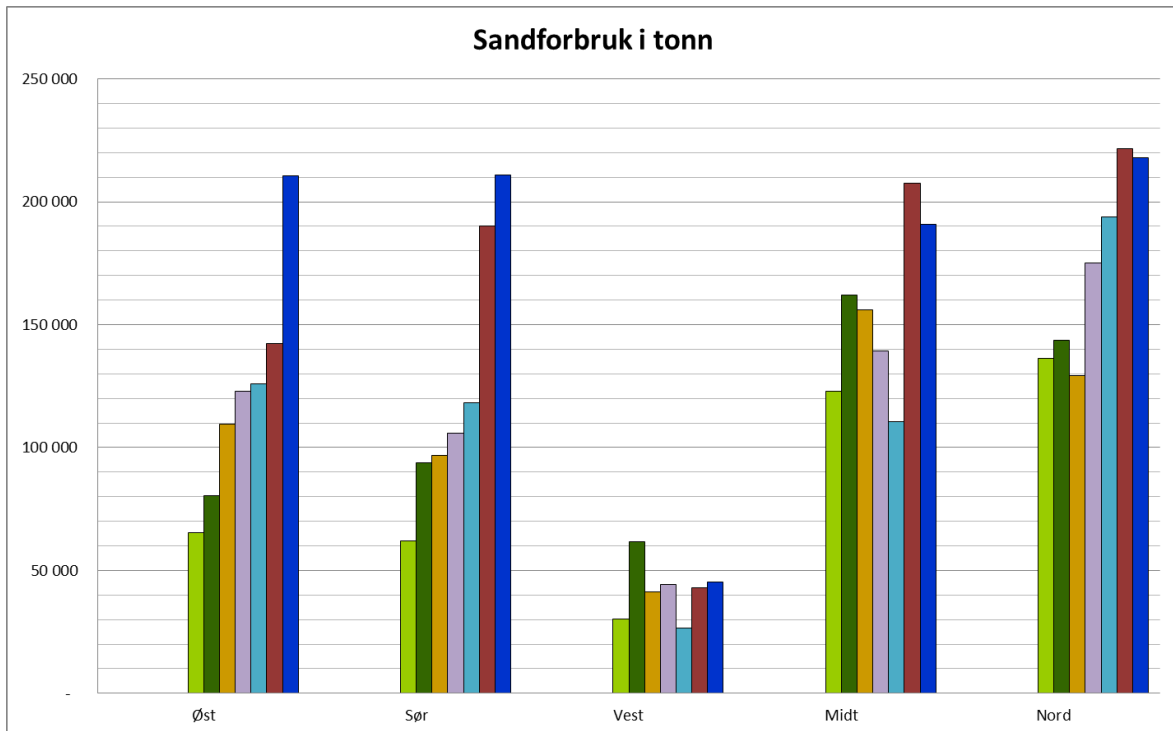


Saltforbruk per region



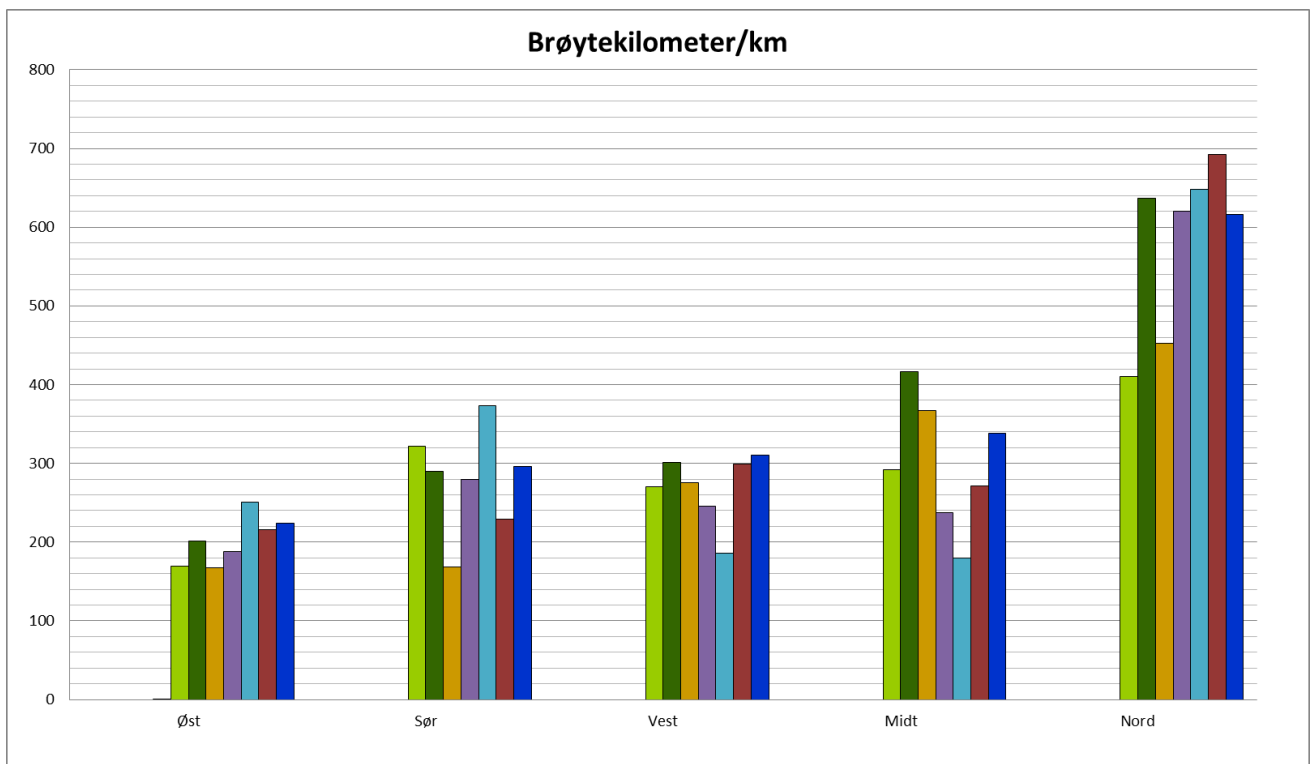
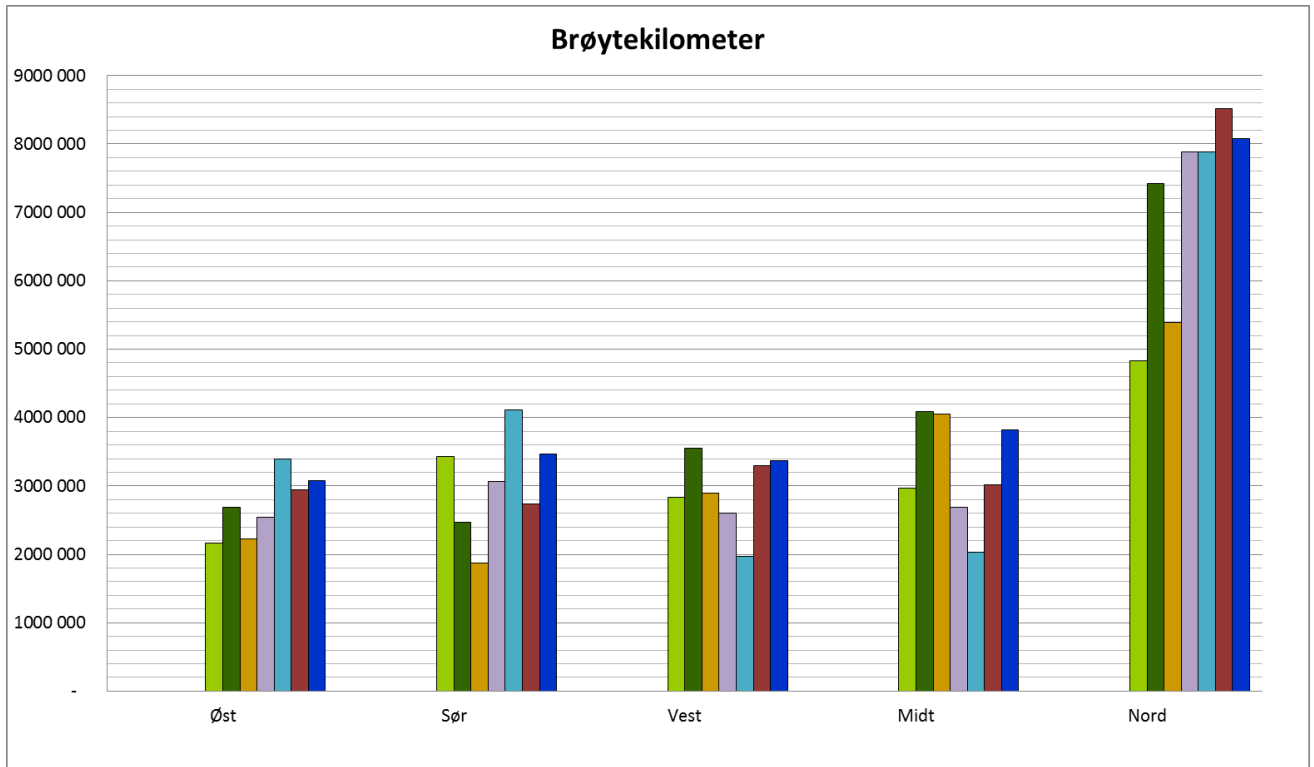
2010	2011	2012	2013	2014	2015	2016
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Sandforbruk per region



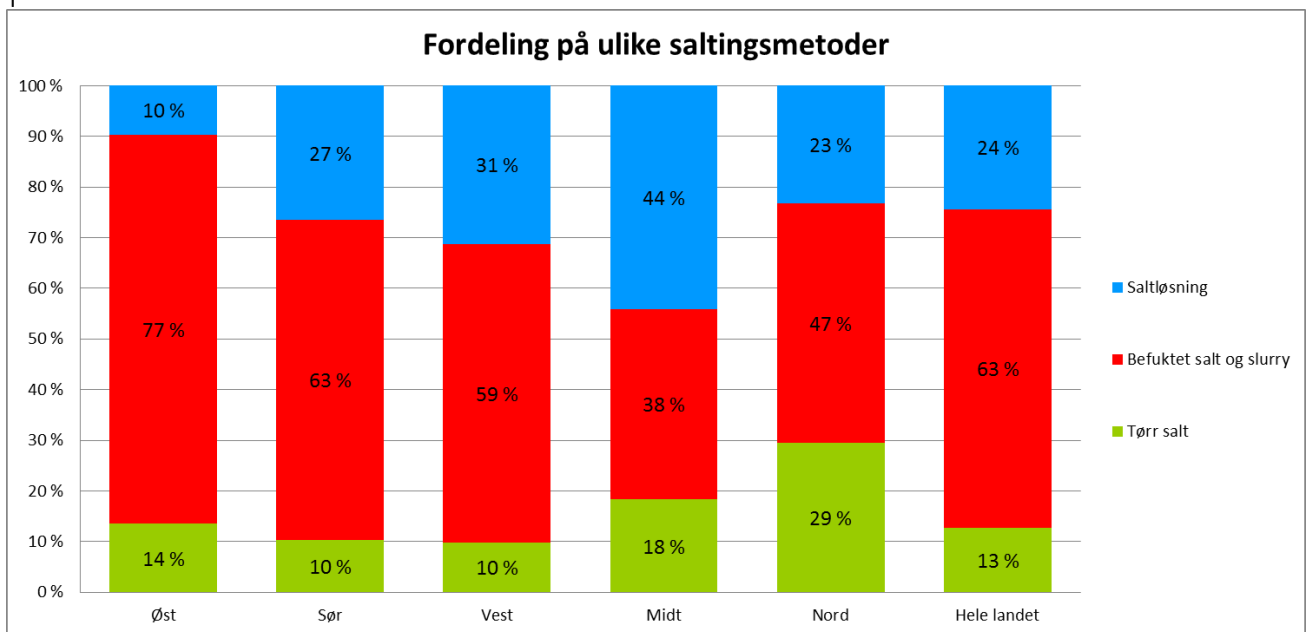
2010	2011	2012	2013	2014	2015	2016
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Brøytakilometer per region



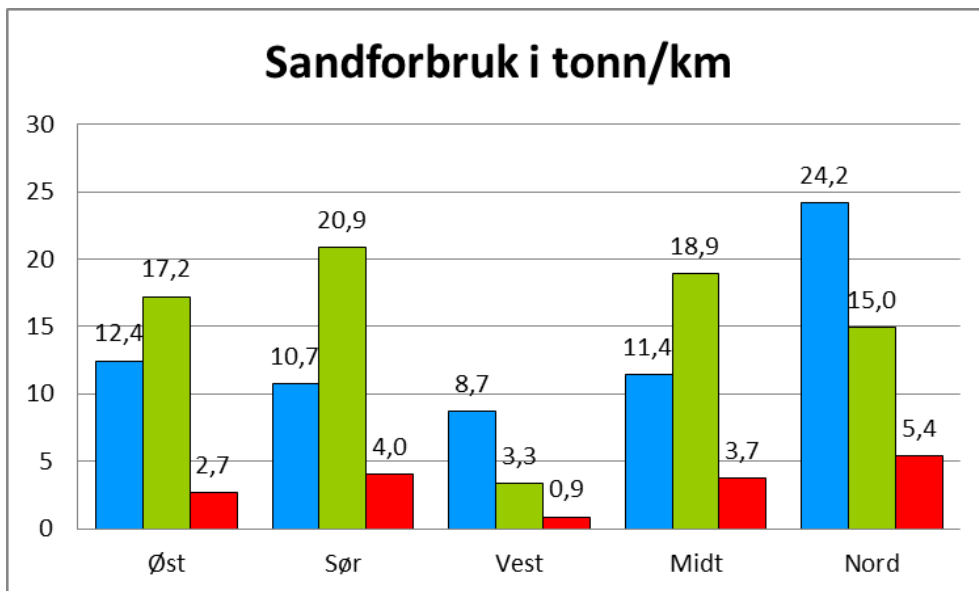
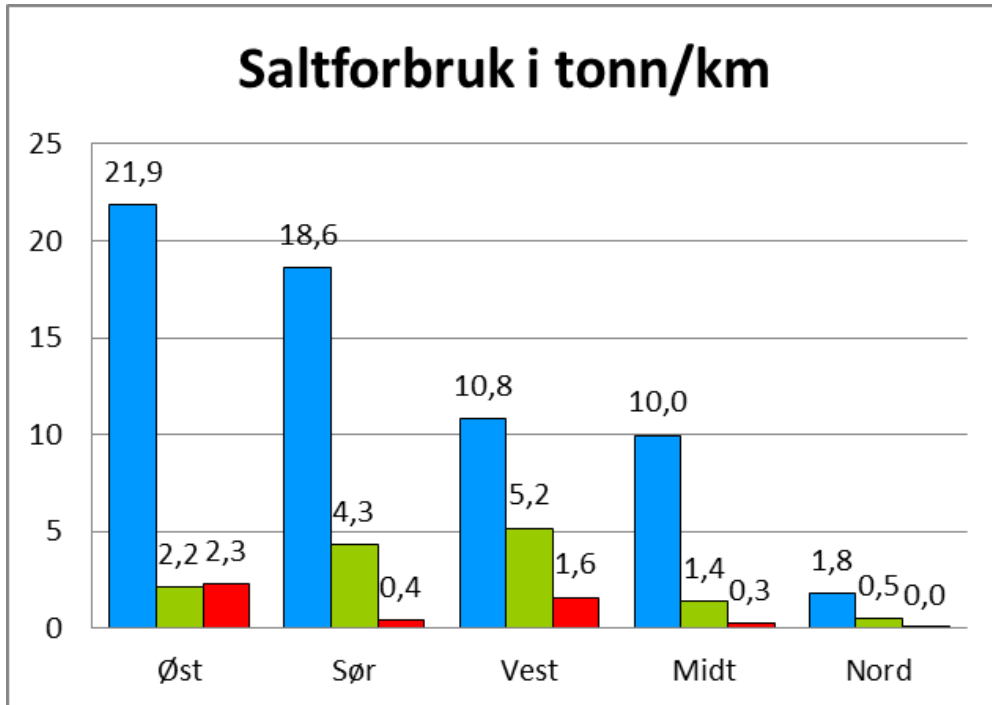
2010	2011	2012	2013	2014	2015	2016
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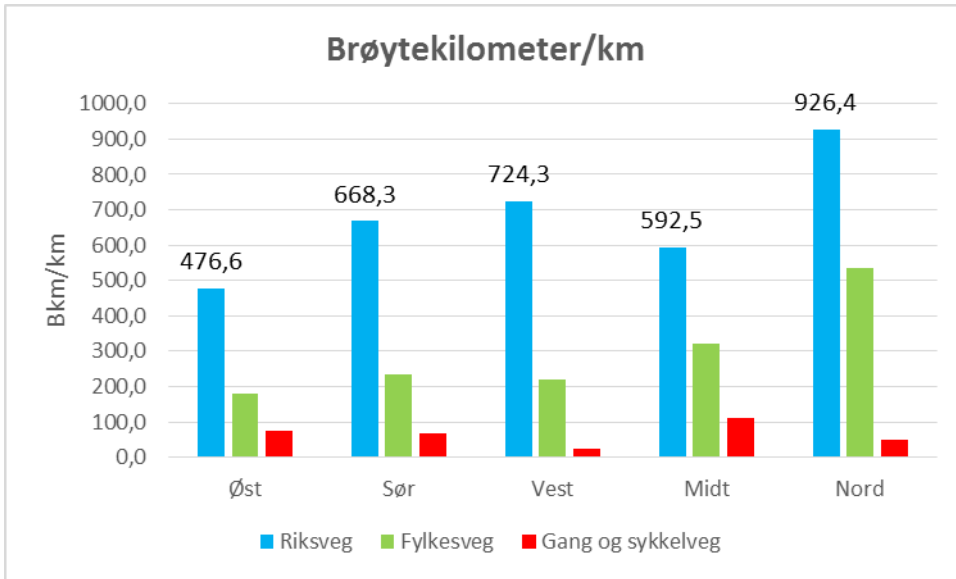
Fordeling på ulike saltingsmetoder



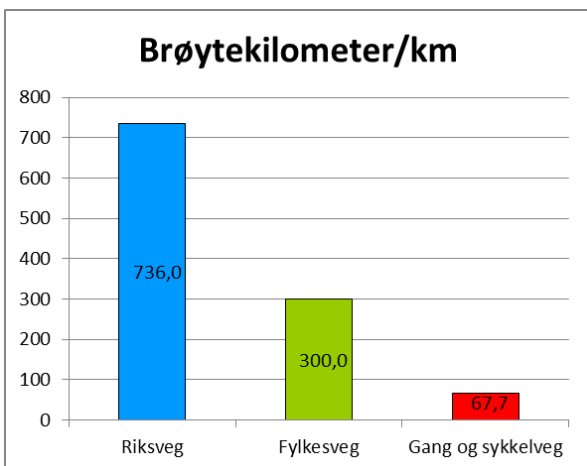
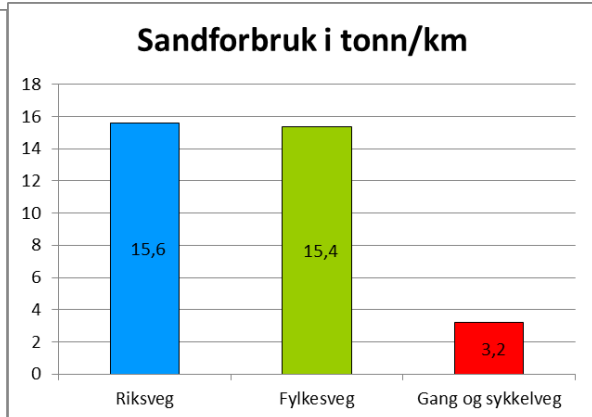
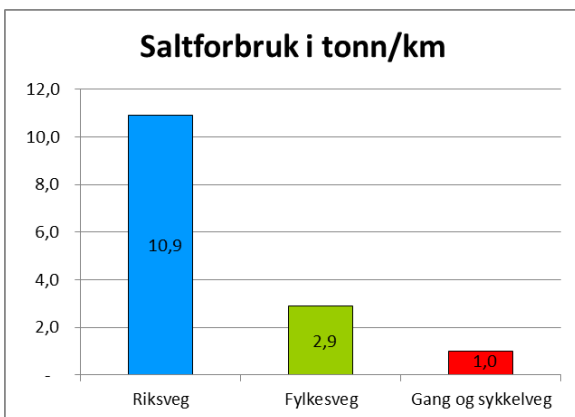
	Øst		Sør		Vest		Midt		Nord		Hele landet	
	Tonn	Prosent	Tonn	Prosent	Tonn	Prosent	Tonn	Prosent	Tonn	Prosent	Tonn	Prosent
Tørr salt	10 356	14 %	7 843	10 %	6 396	10 %	4 988	18 %	3 110	30 %	32 694	13 %
Befuktet salt og slurry	58 860	77 %	47 931	63 %	38 236	59 %	10 262	38 %	4 881	47 %	160 171	63 %
Saltløsning	7 393	10 %	20 145	27 %	20 306	31 %	12 021	44 %	2 392	23 %	62 256	24 %
Sum	76 609	100 %	75 919	100 %	64 938	100 %	27 271	100 %	10 383	100 %	255 120	100 %

Mengder per region per vegkategori

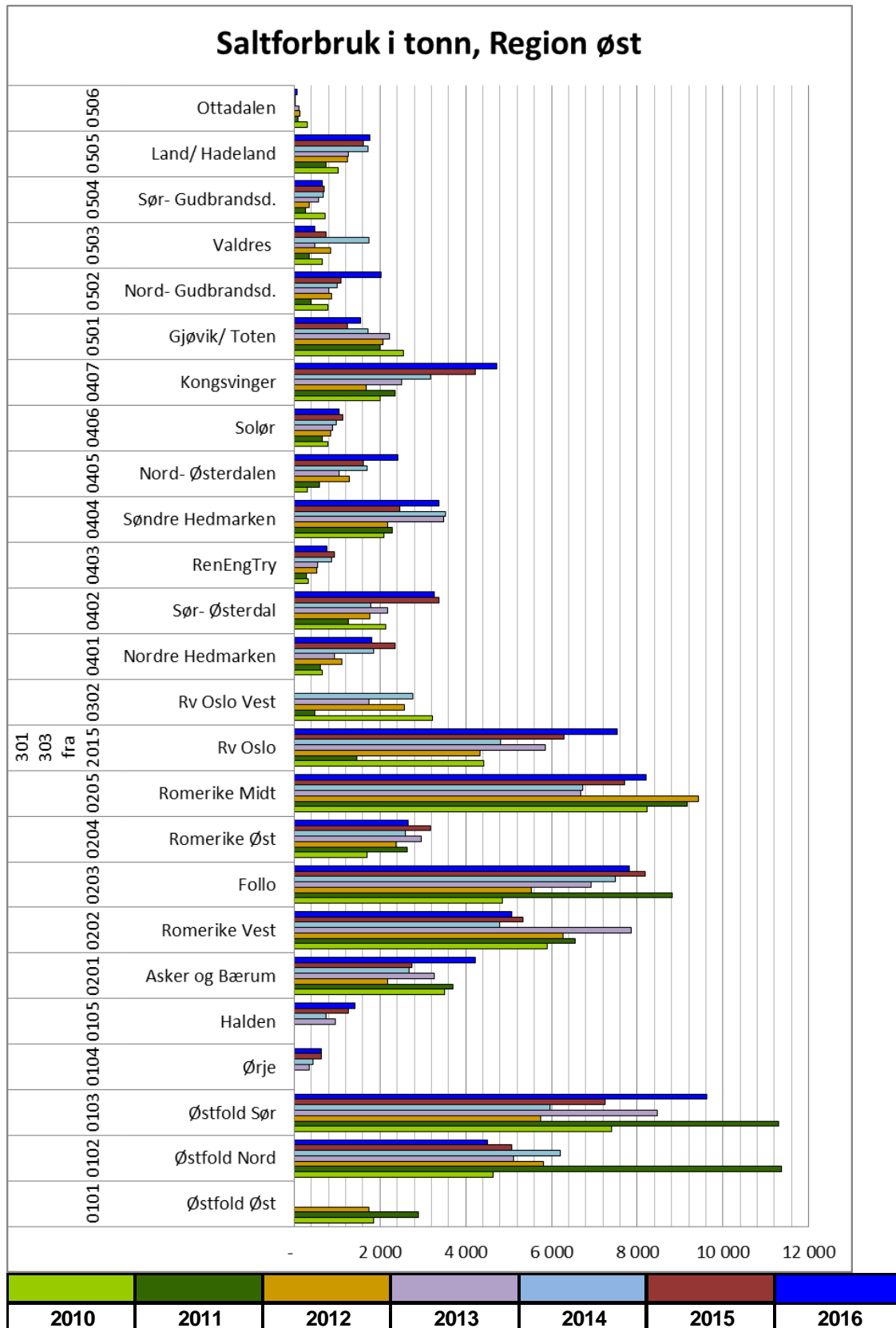




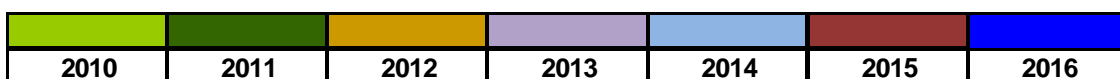
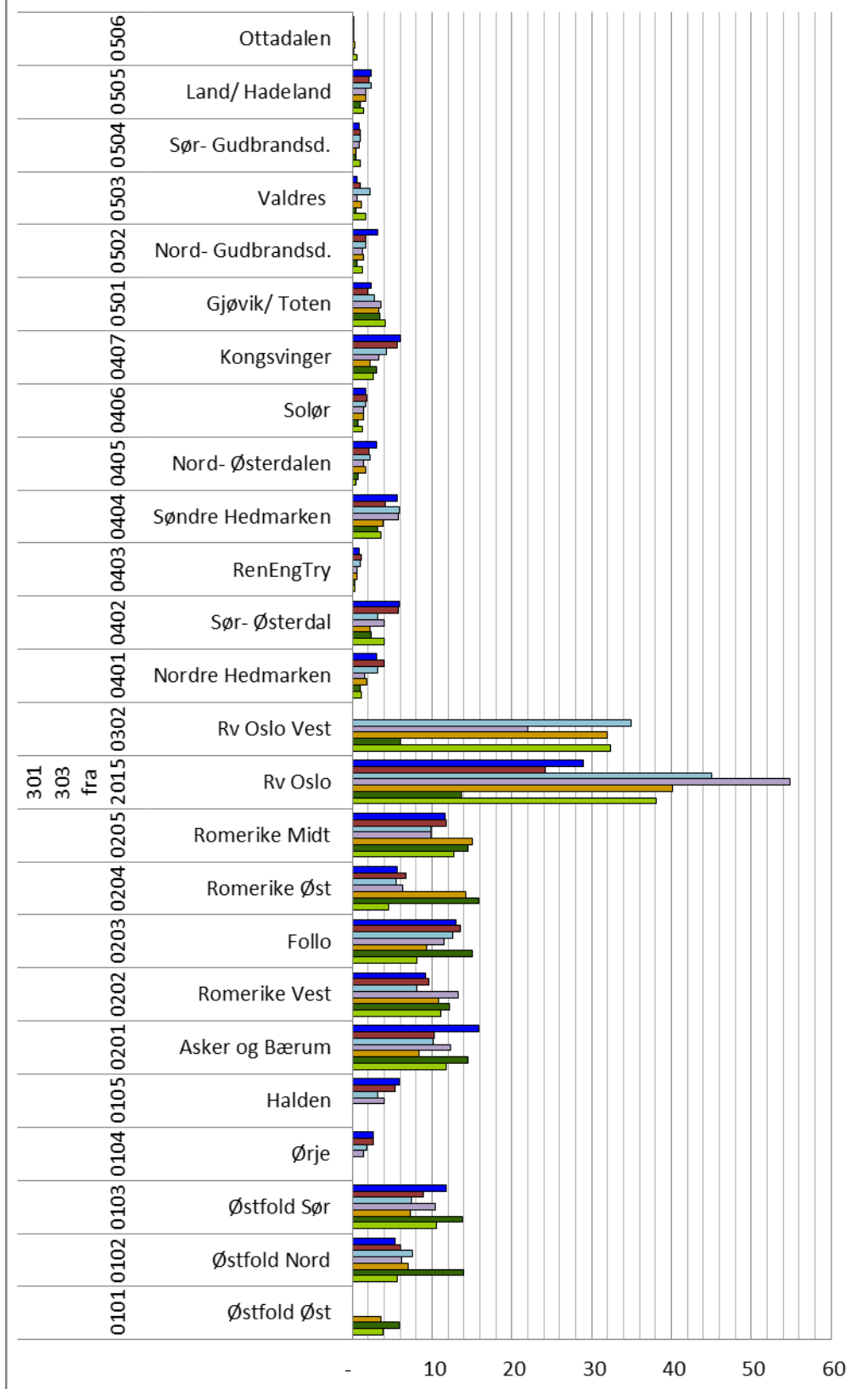
Mengder per vegkategori for hele landet

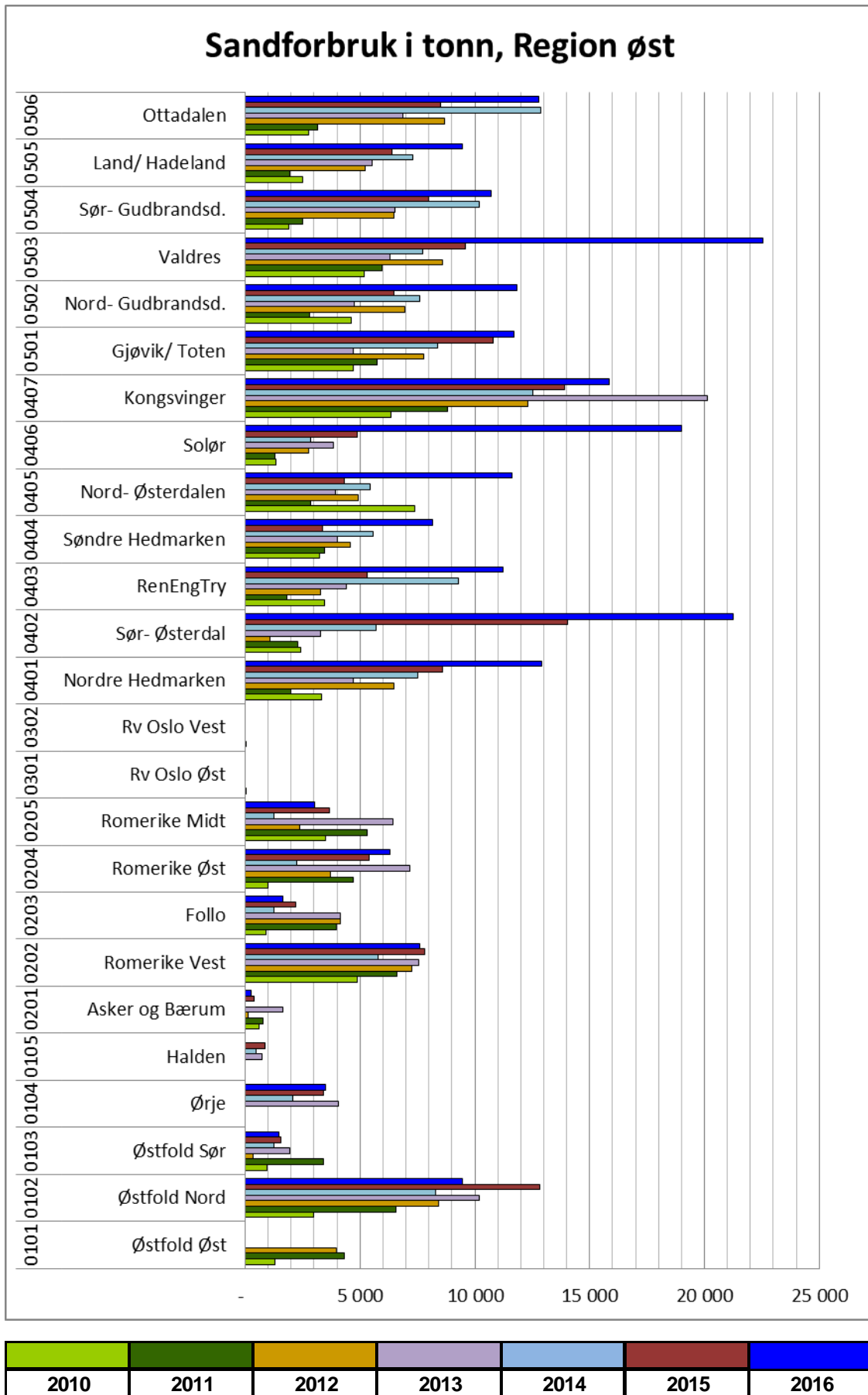


Region øst, mengder per kontrakt

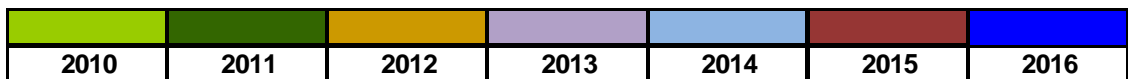
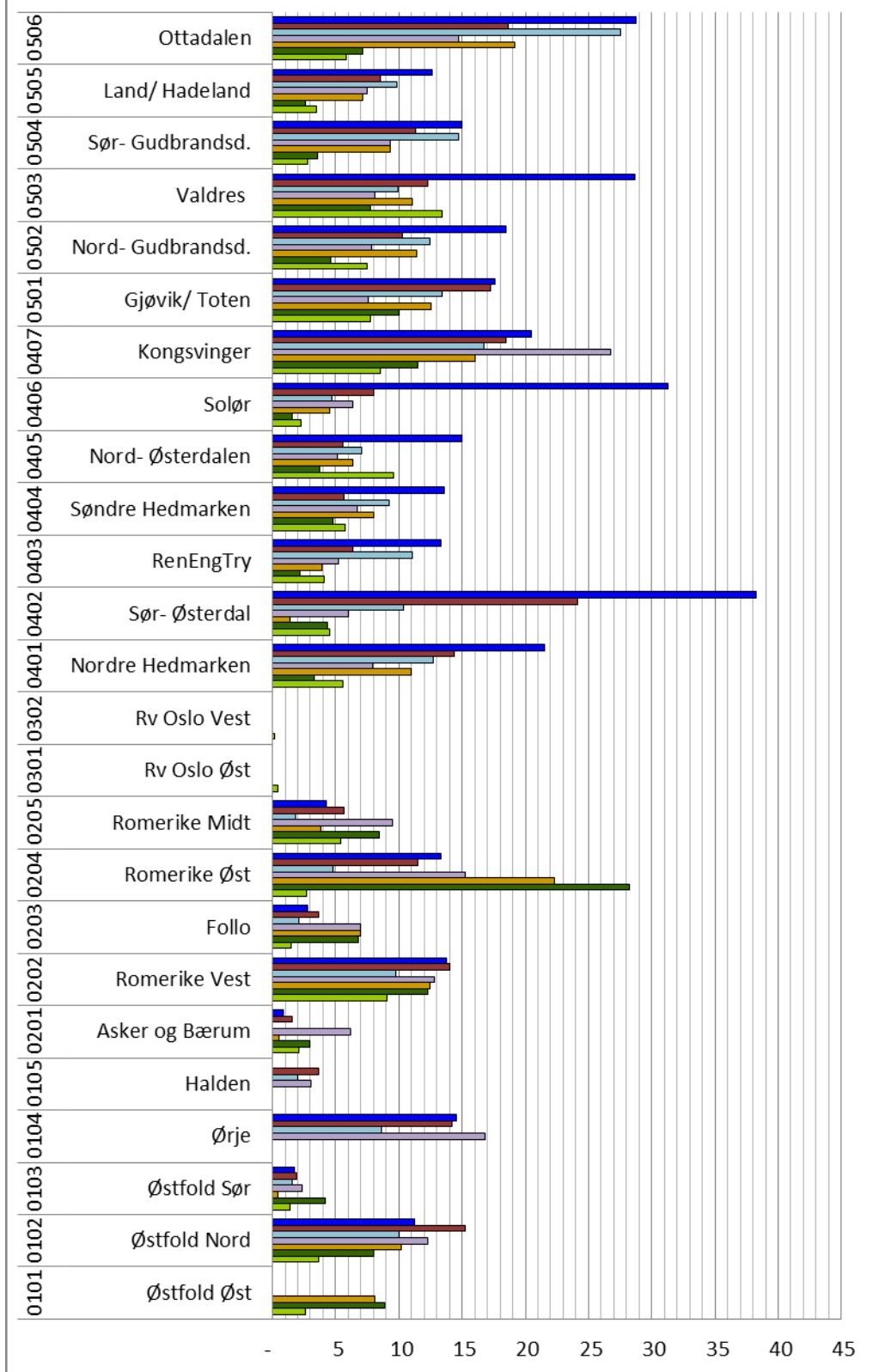


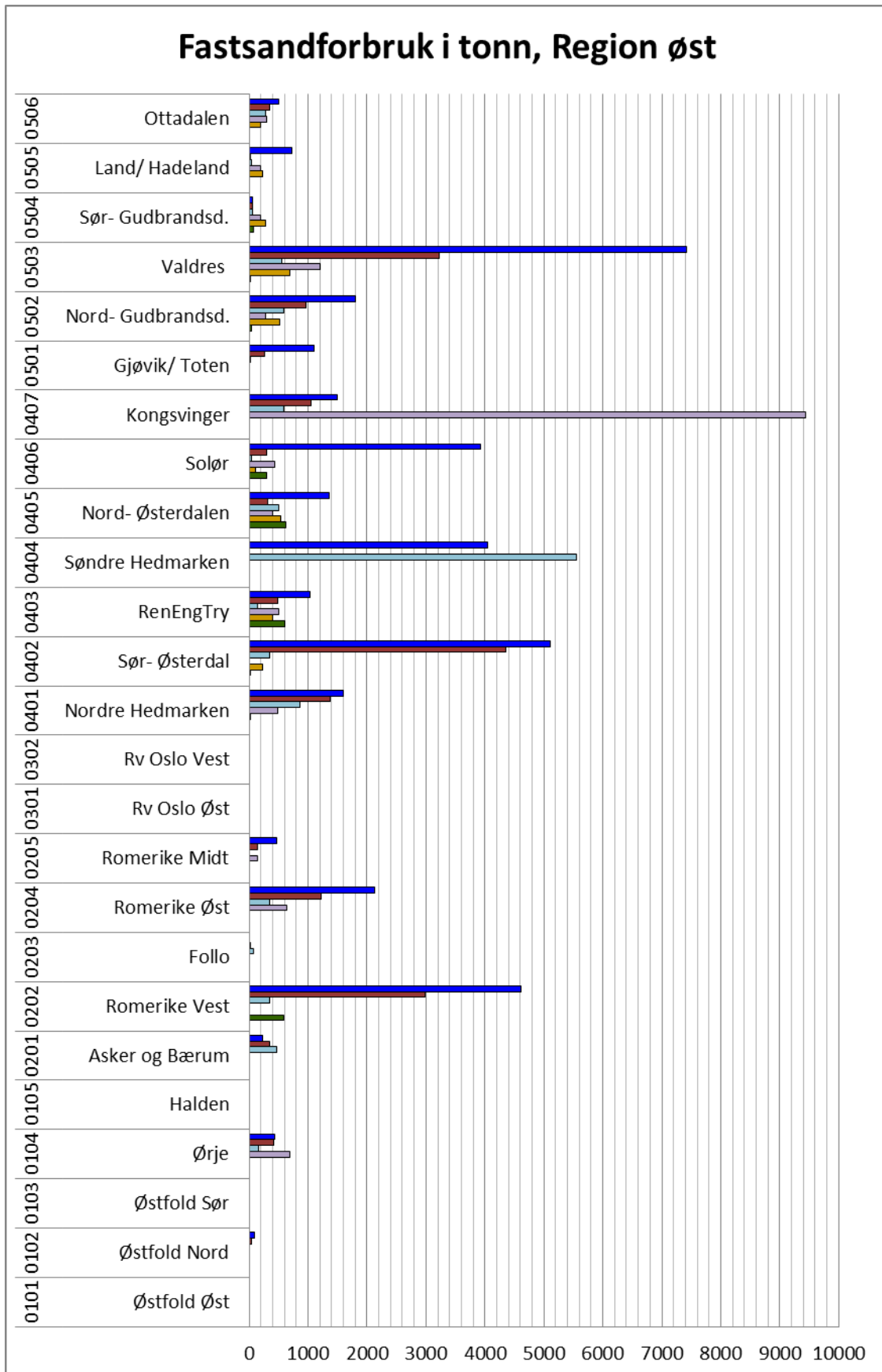
Saltforbruk i tonn/km, Region øst





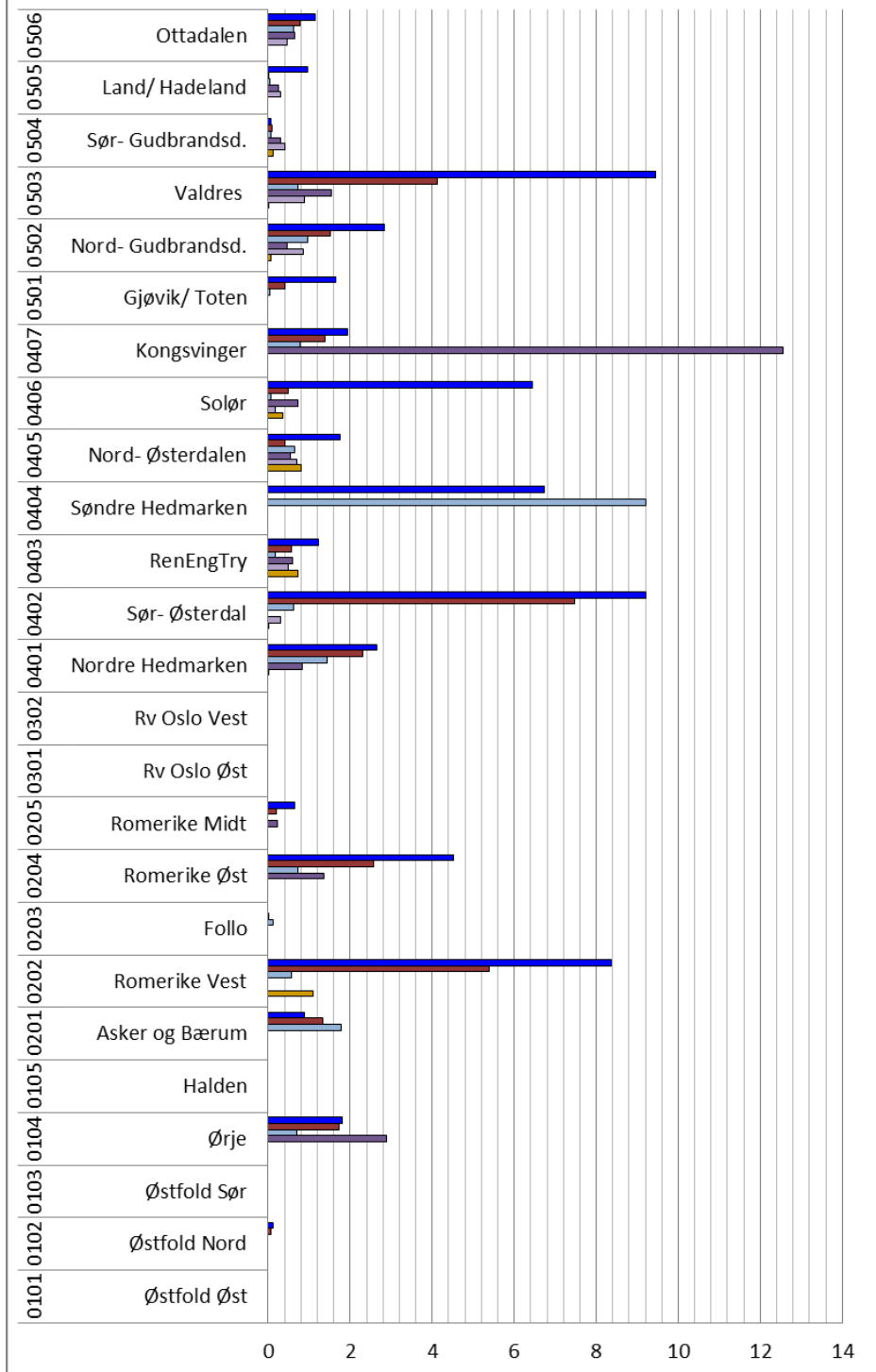
Sandforbruk i tonn/km, Region øst



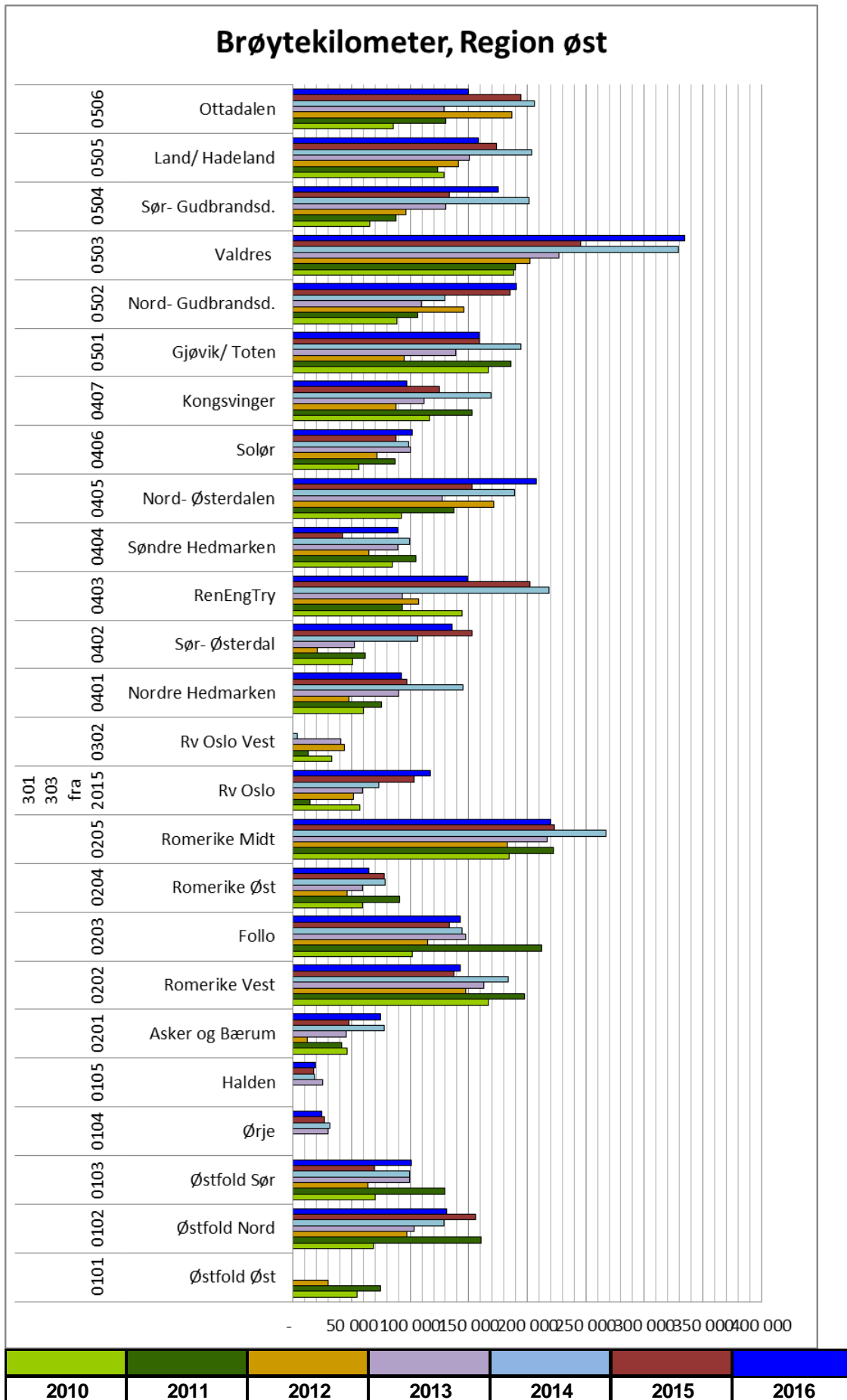


2010	2011	2012	2013	2014	2015	2016
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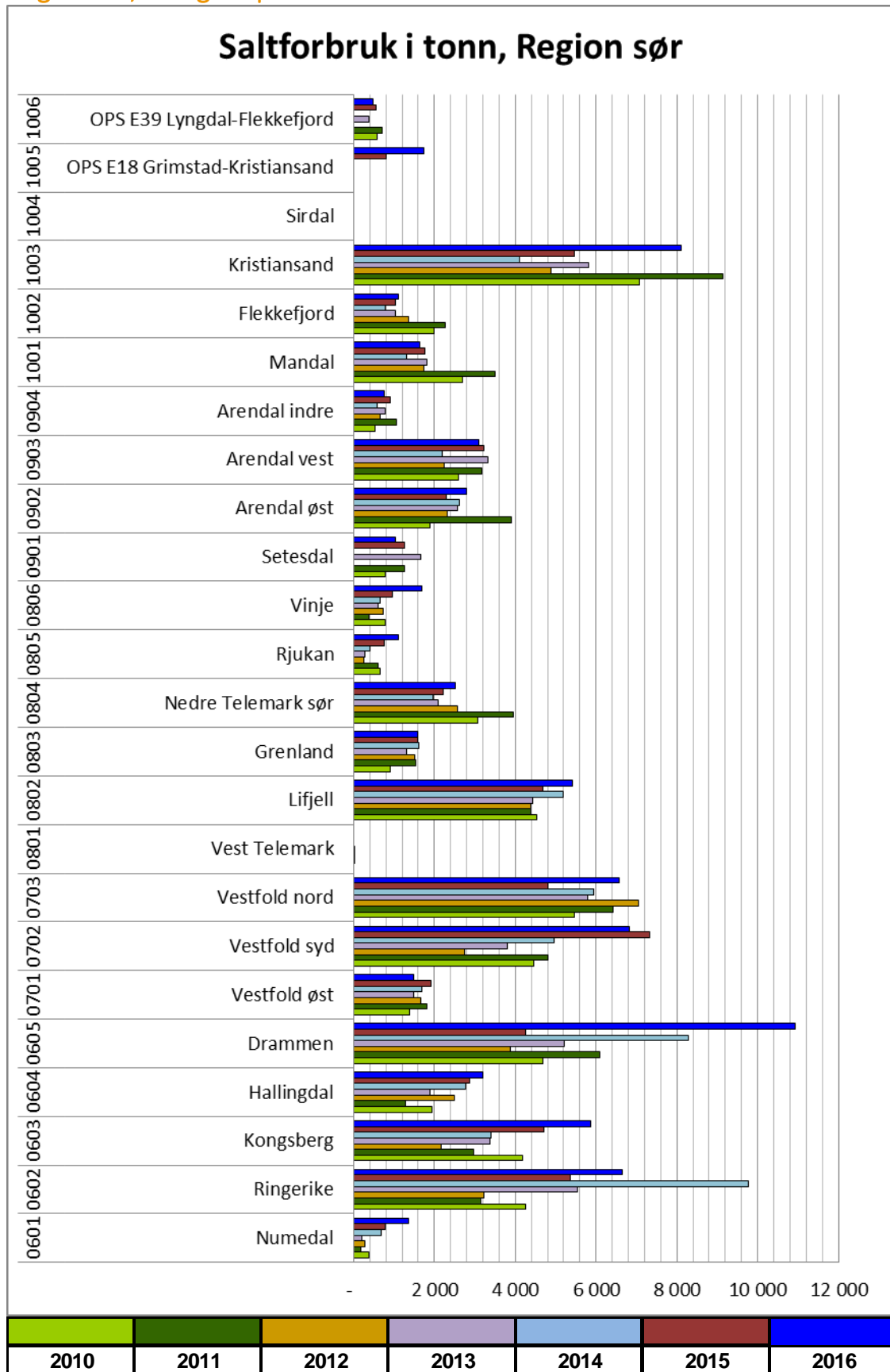
Fastsandforbruk i tonn/km, Region øst

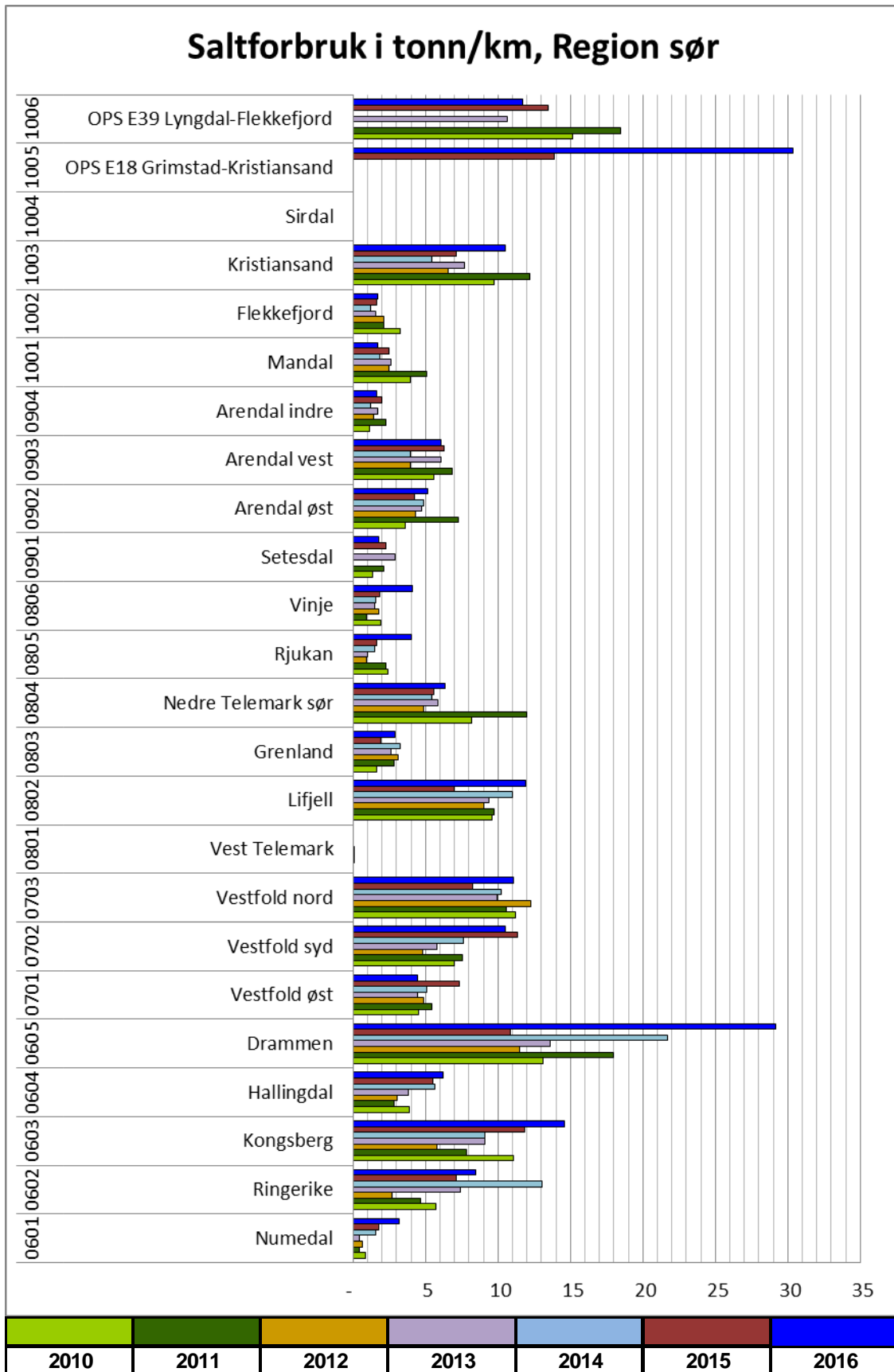


2010	2011	2012	2013	2014	2015	2016
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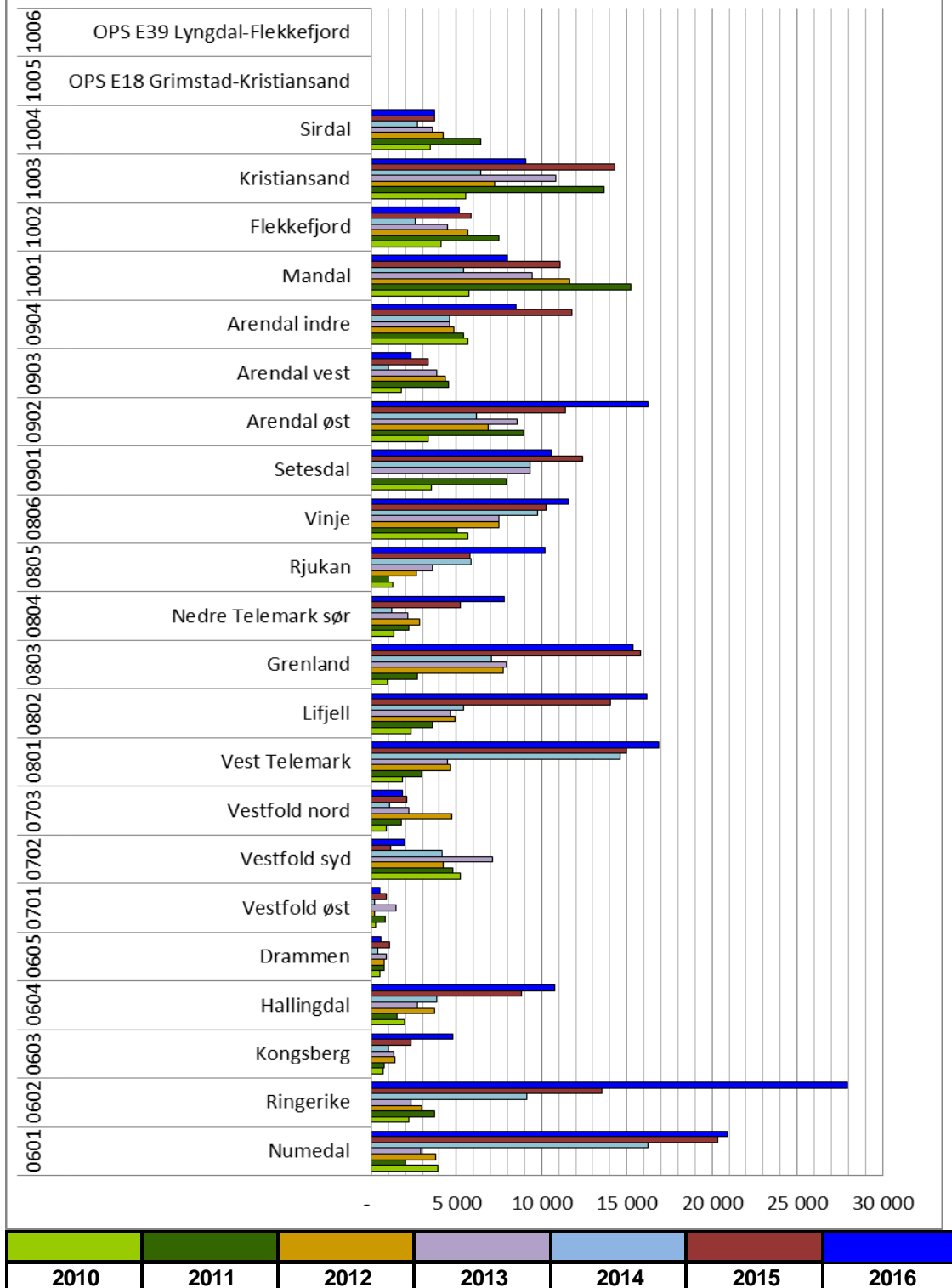


Region sør, mengder per kontrakt

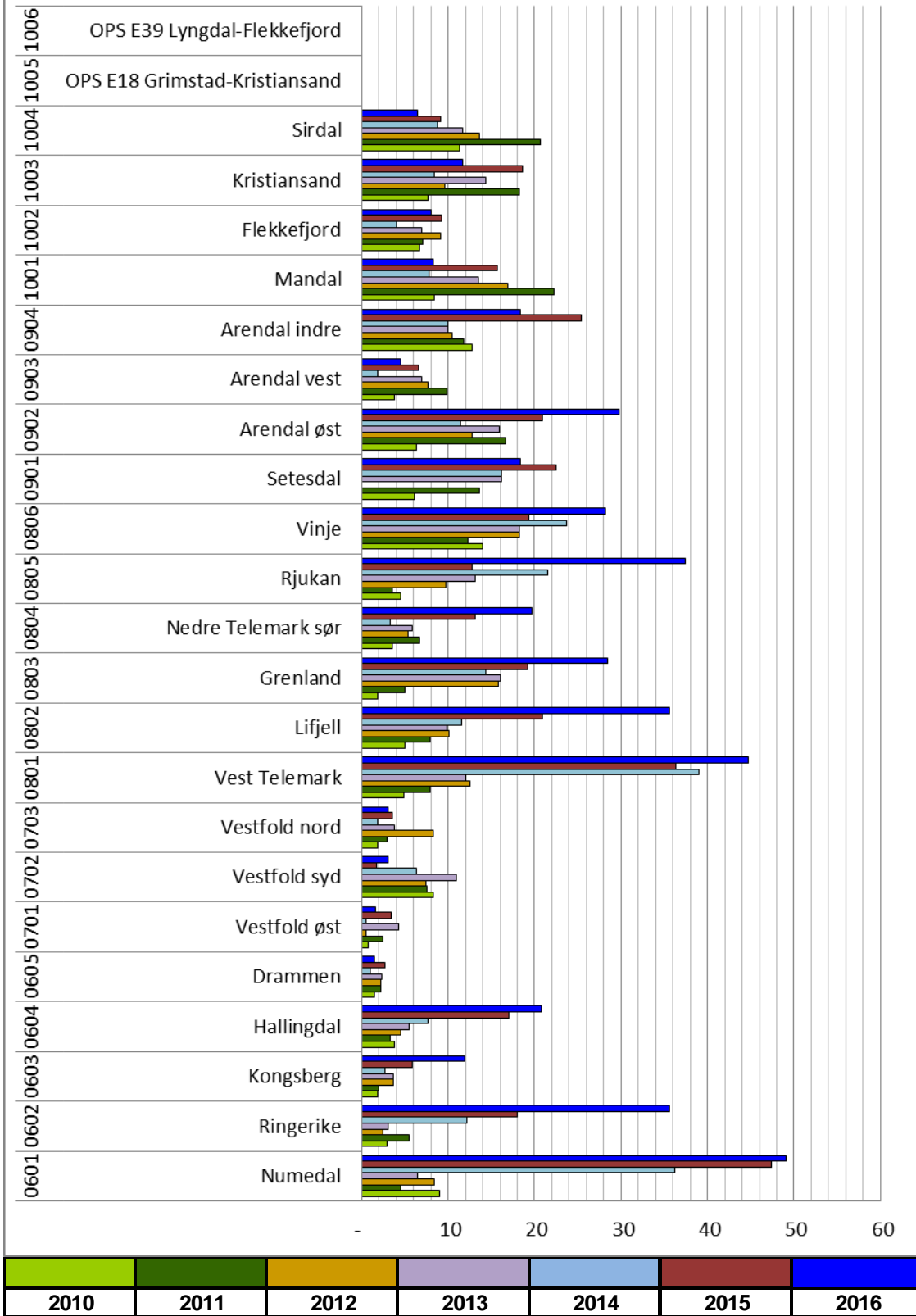




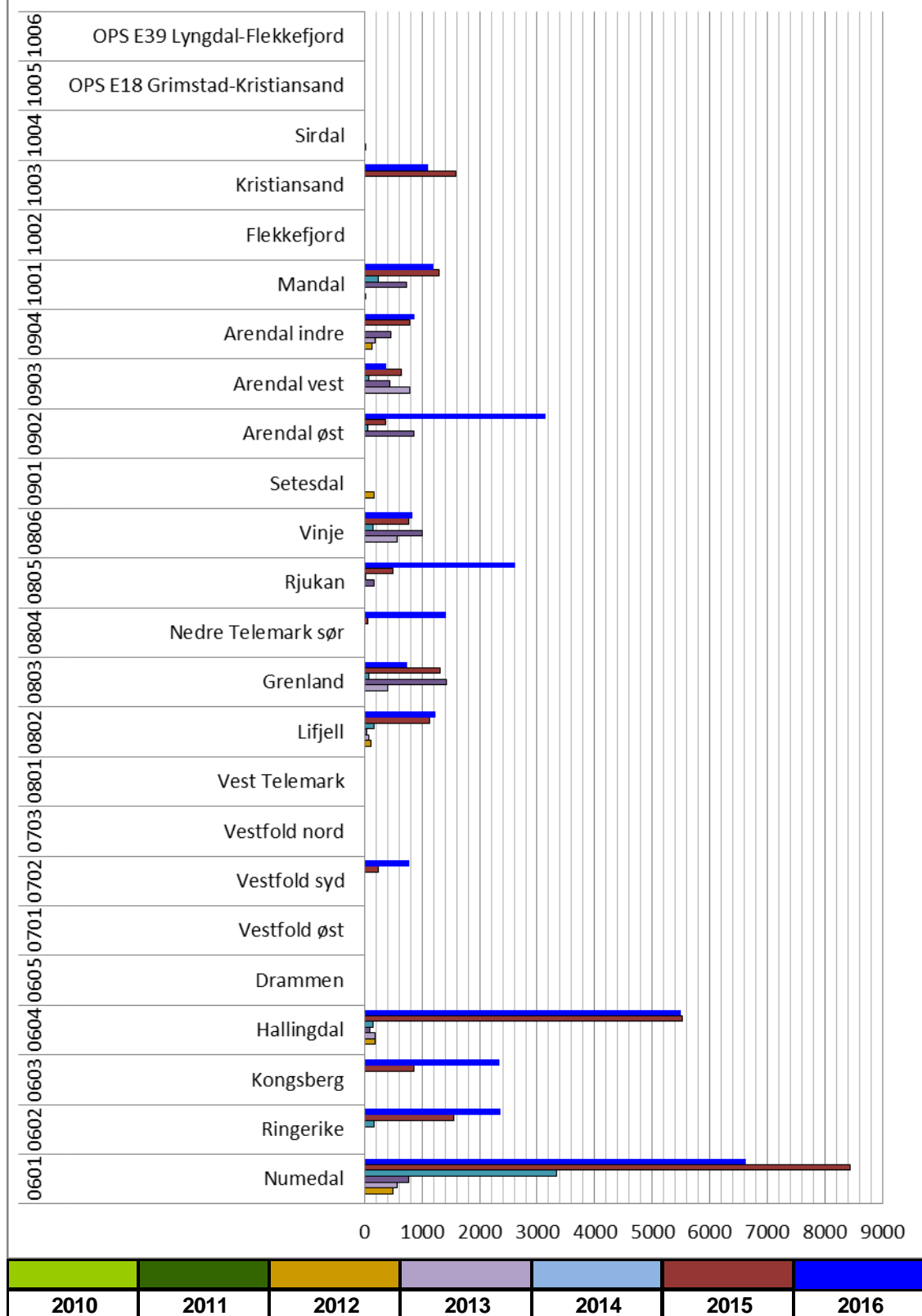
Sandforbruk i tonn, Region sør

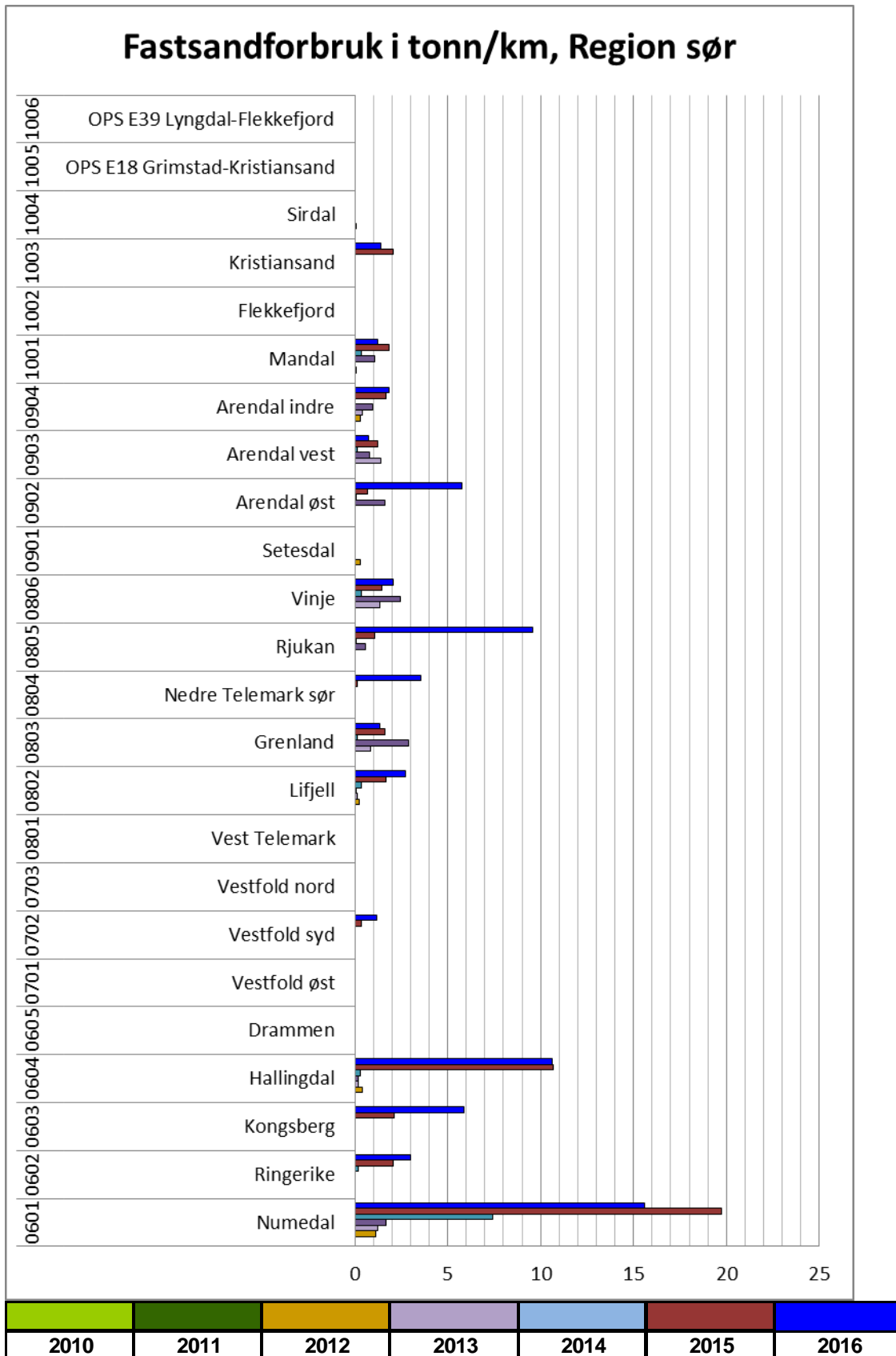


Sandforbruk i tonn/km, Region sør

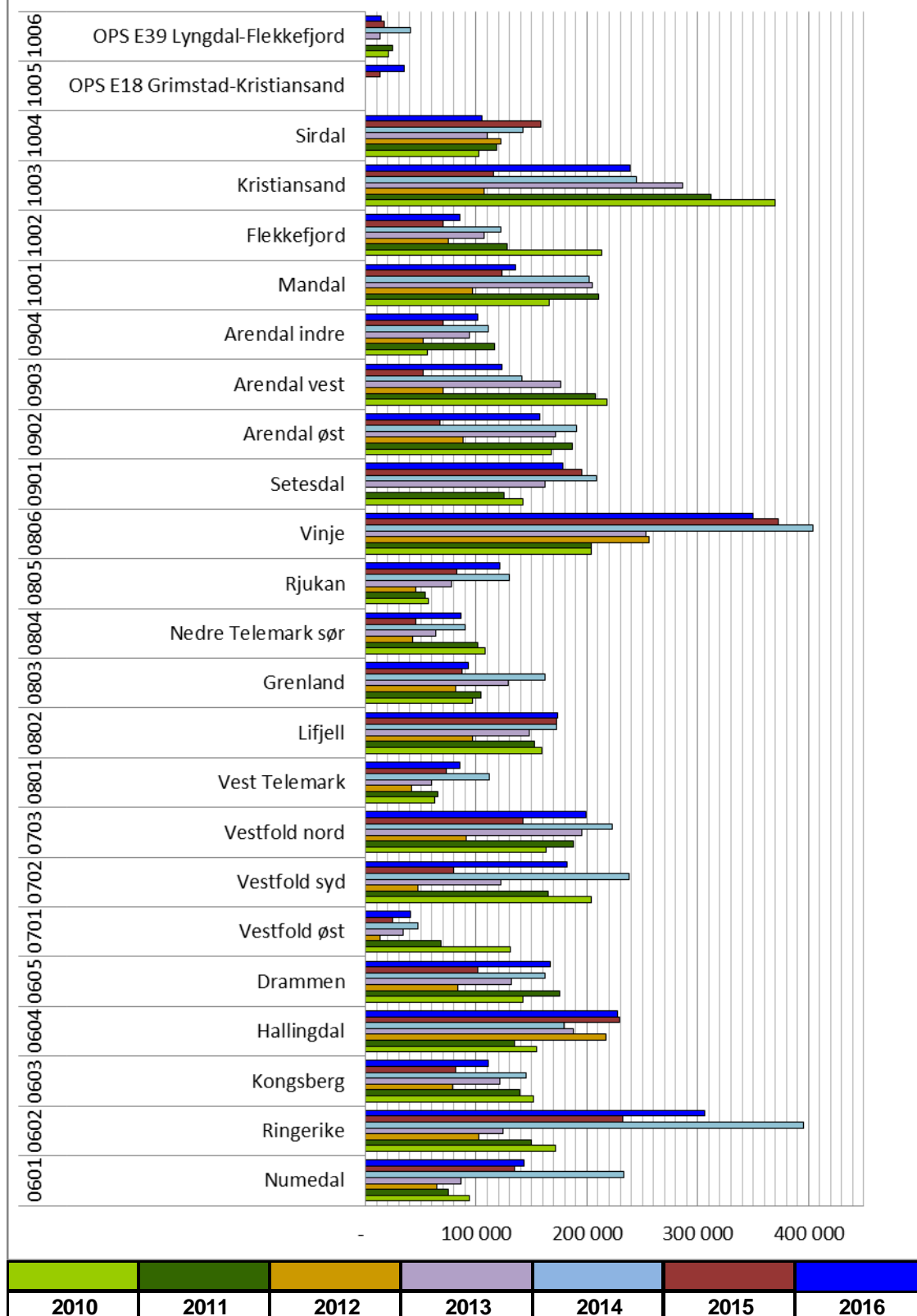


Fastsandforbruk i tonn, Region sør

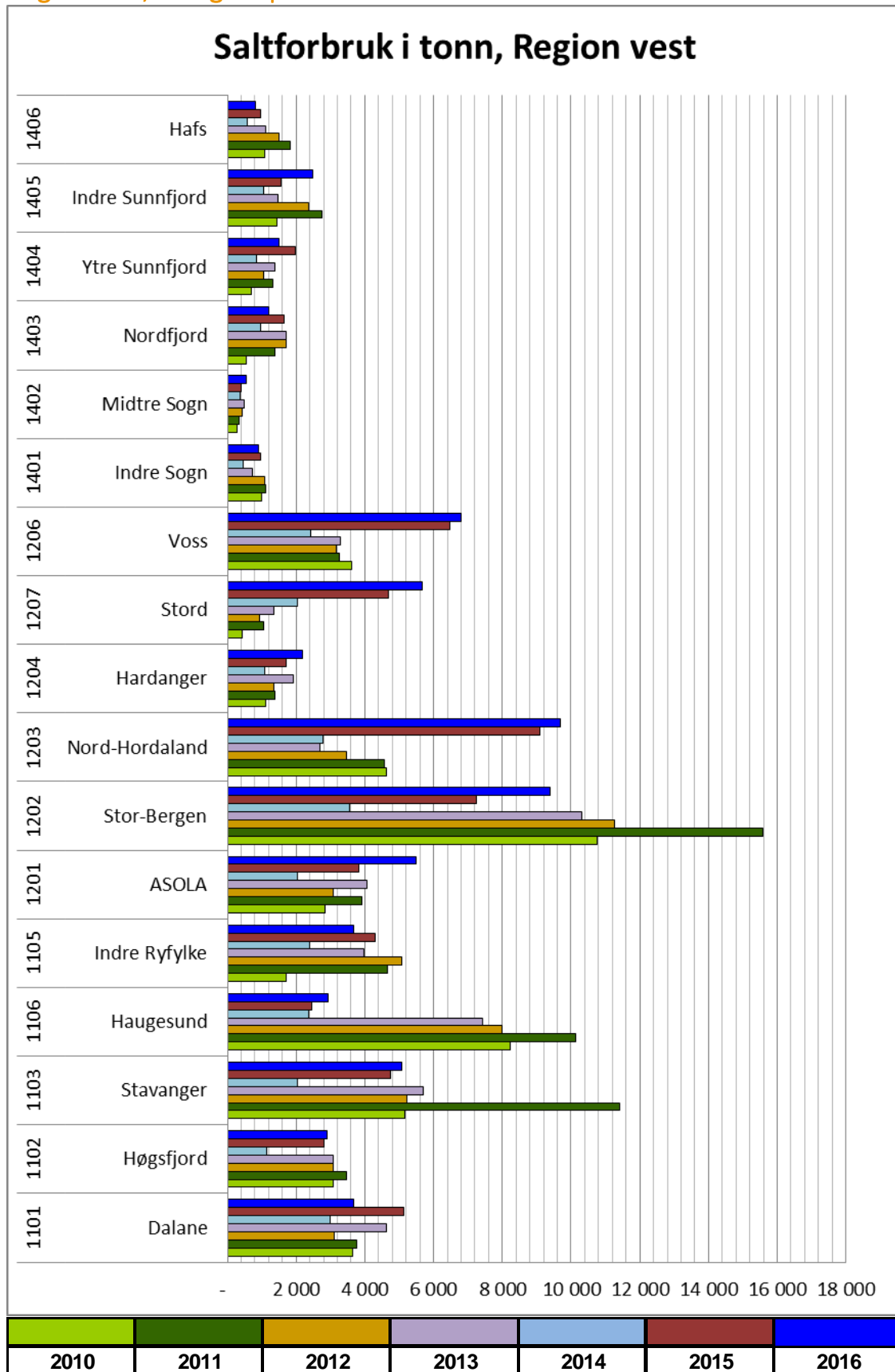




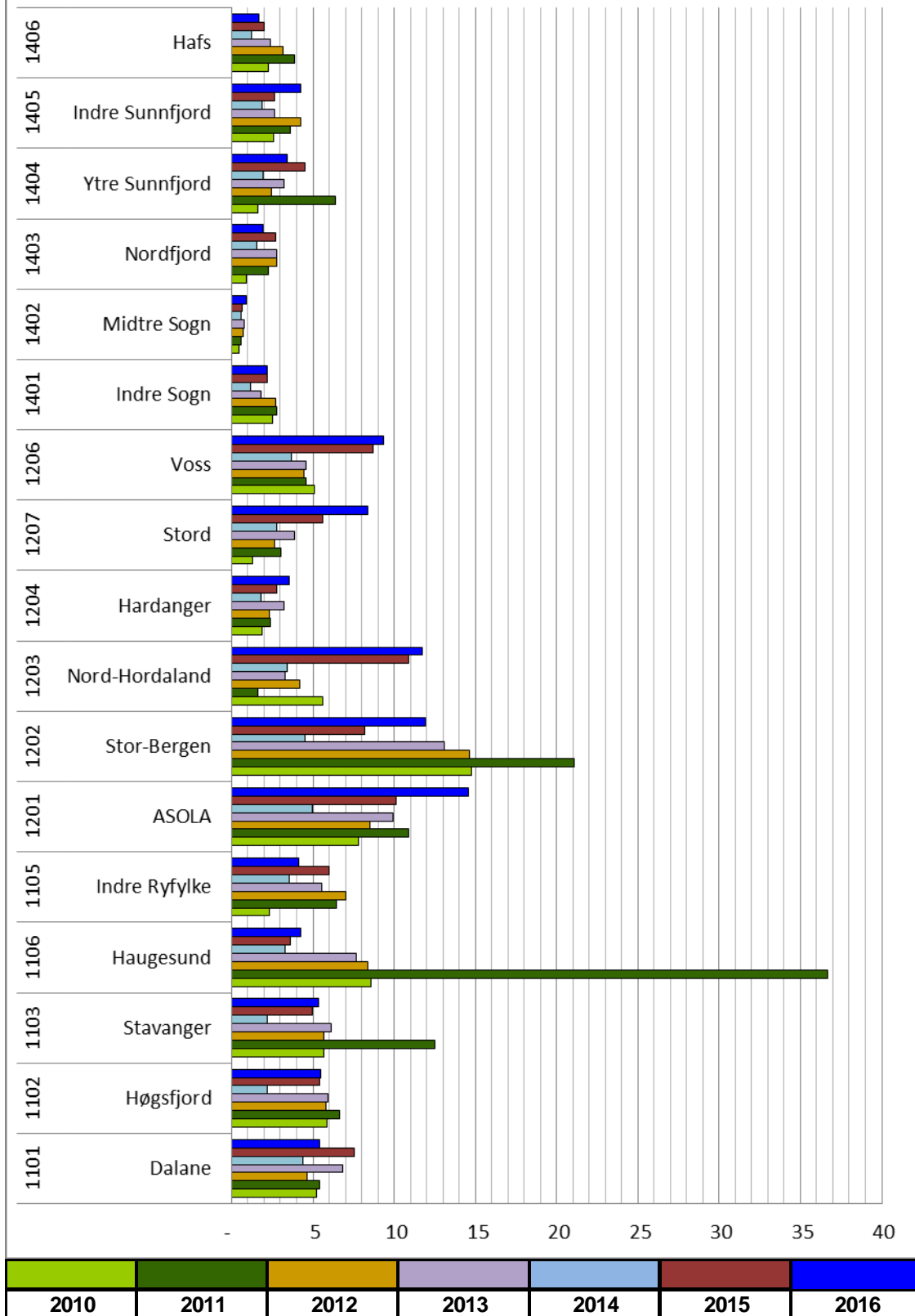
Brøytekilometer, Region sør

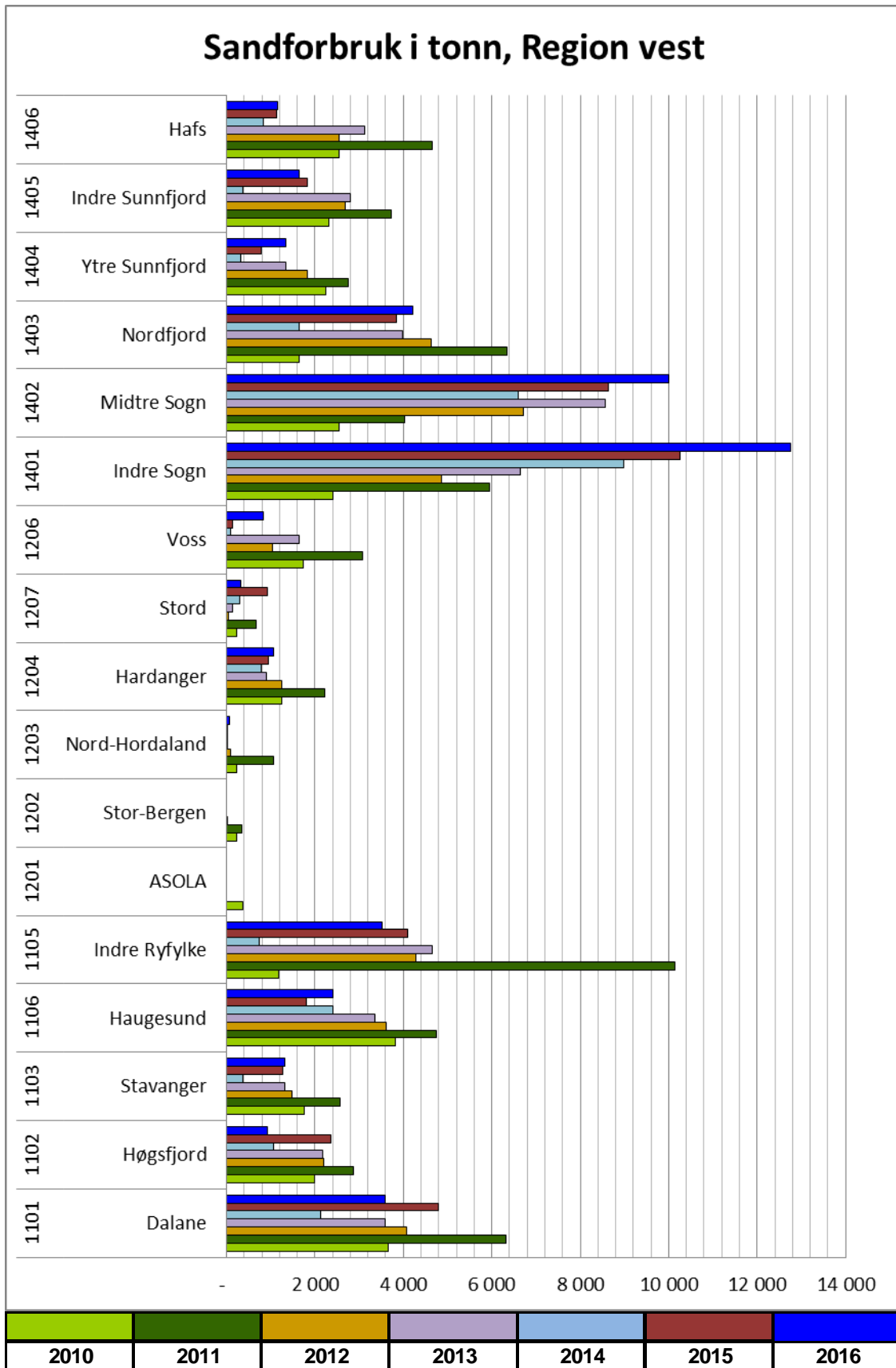


Region vest, mengder per kontrakt

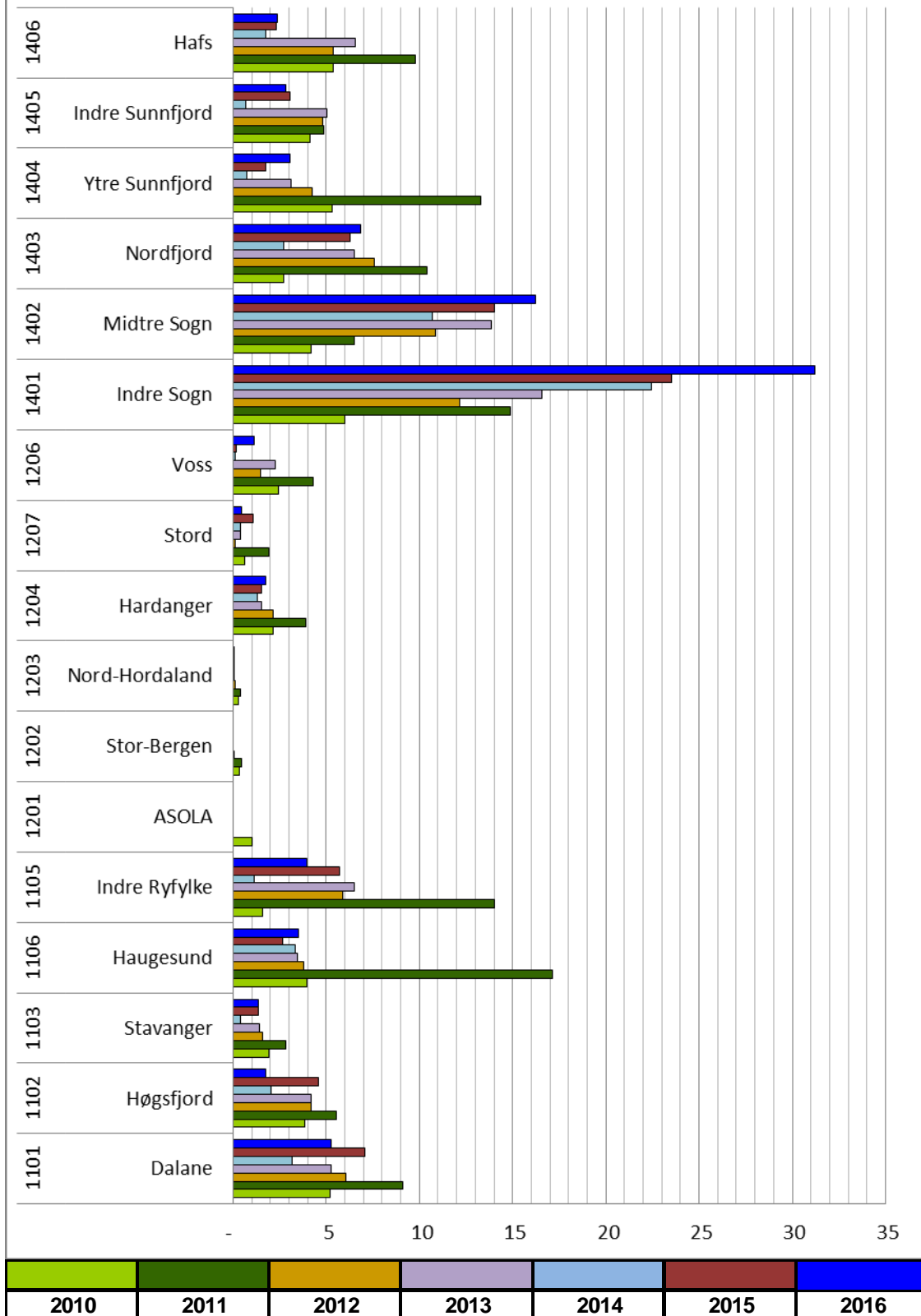


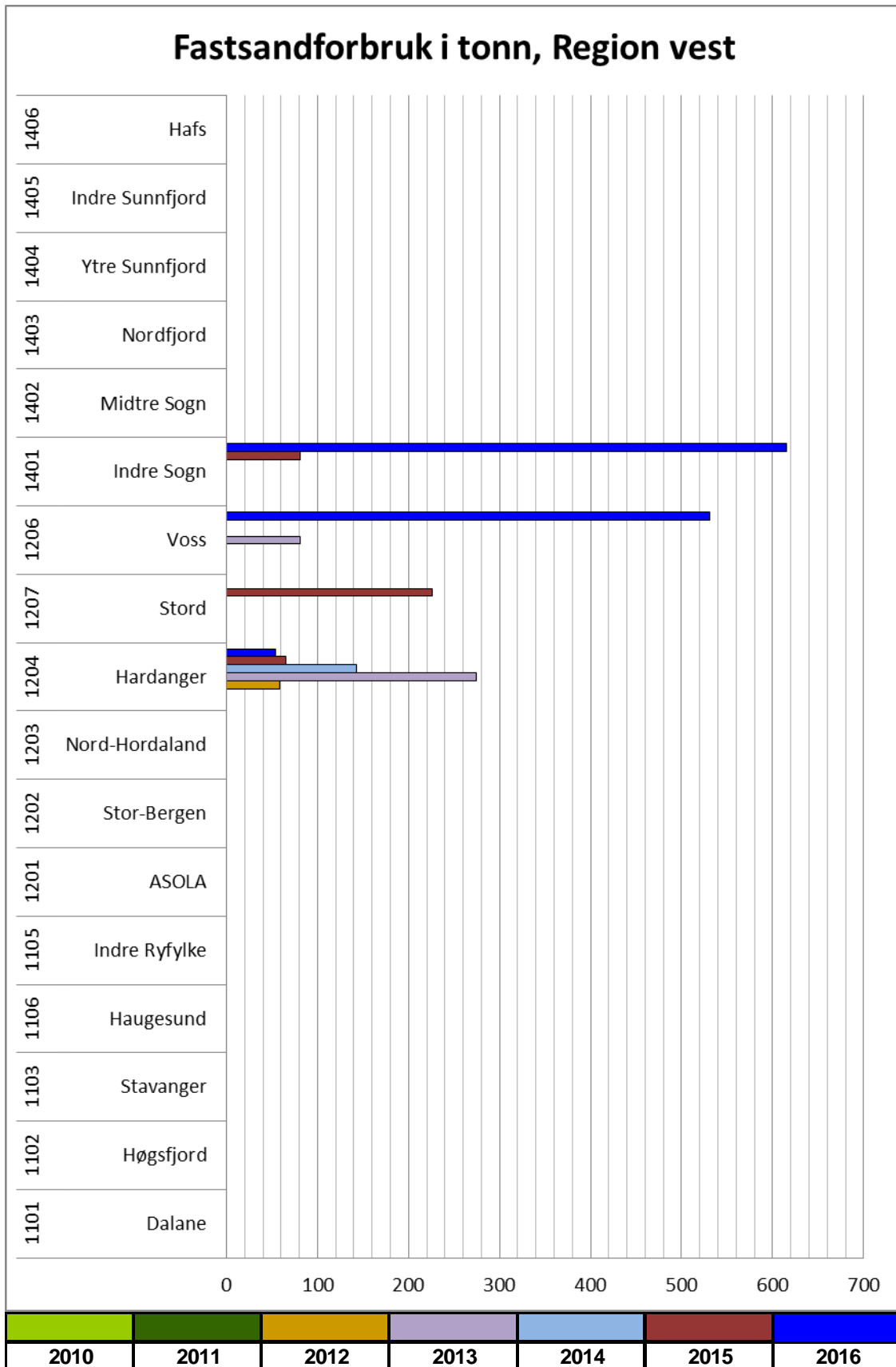
Saltforbruk i tonn/km, Region vest



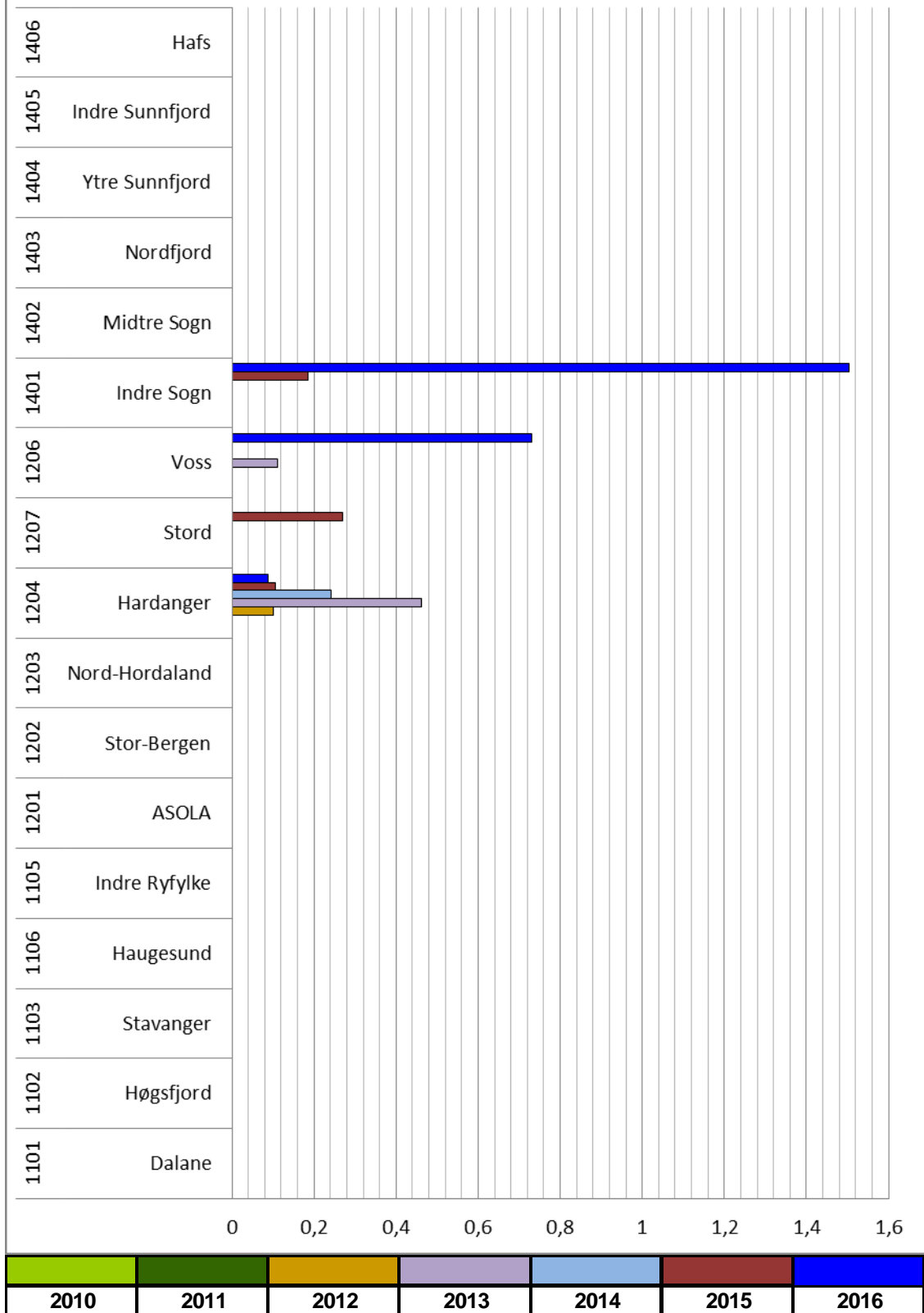


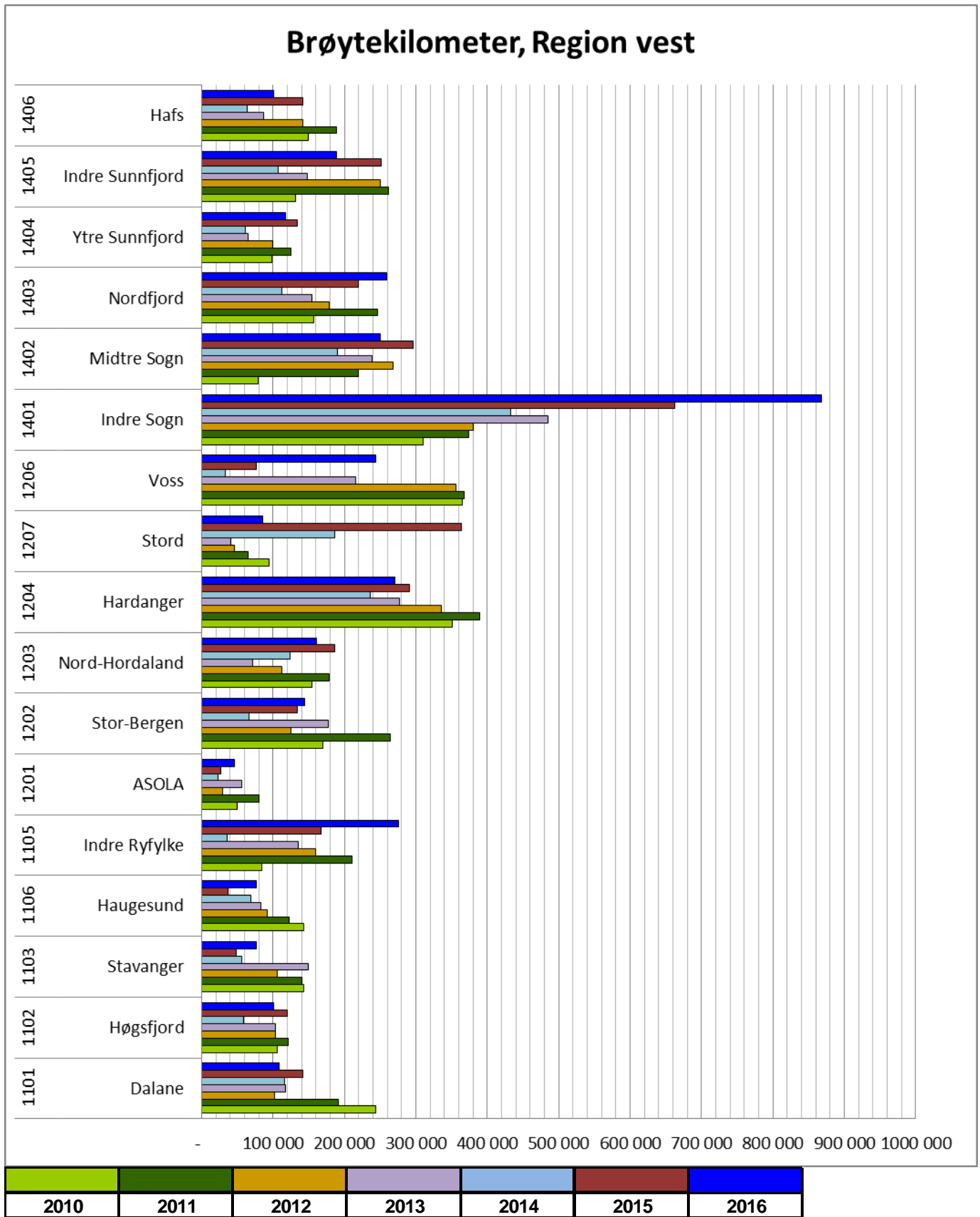
Sandforbruk i tonn/km, Region vest



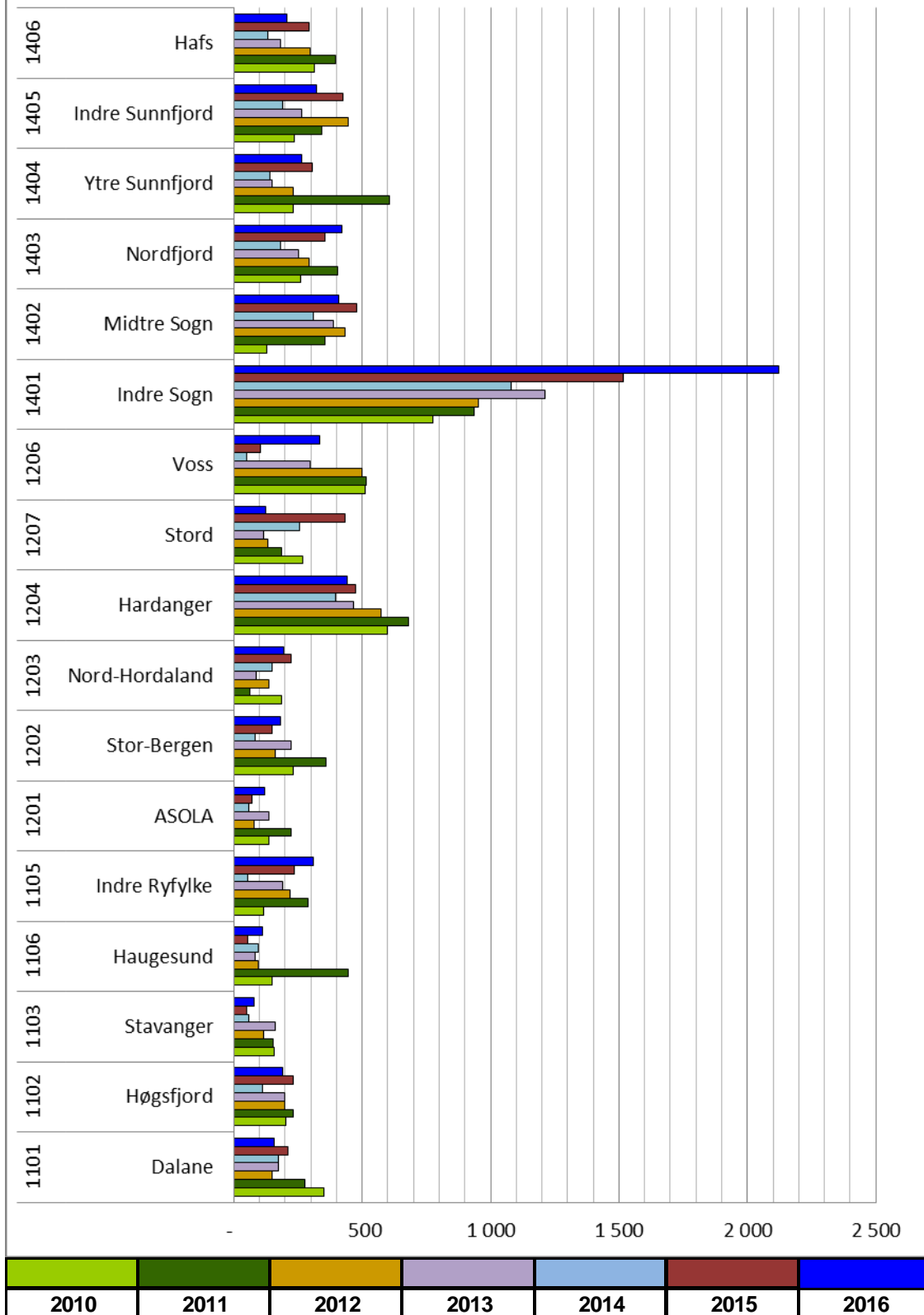


Fastsandforbruk i tonn/km, Region vest

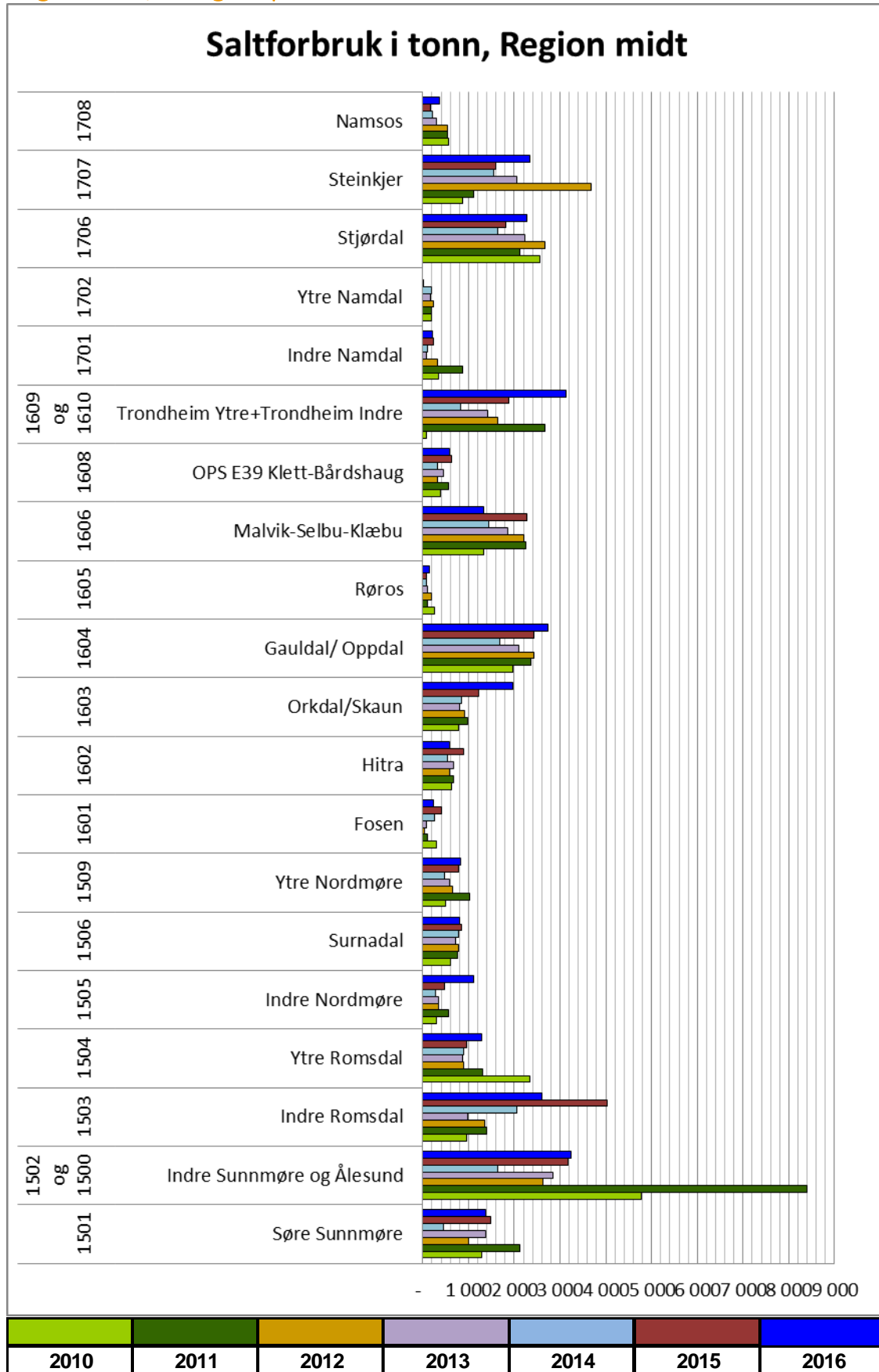




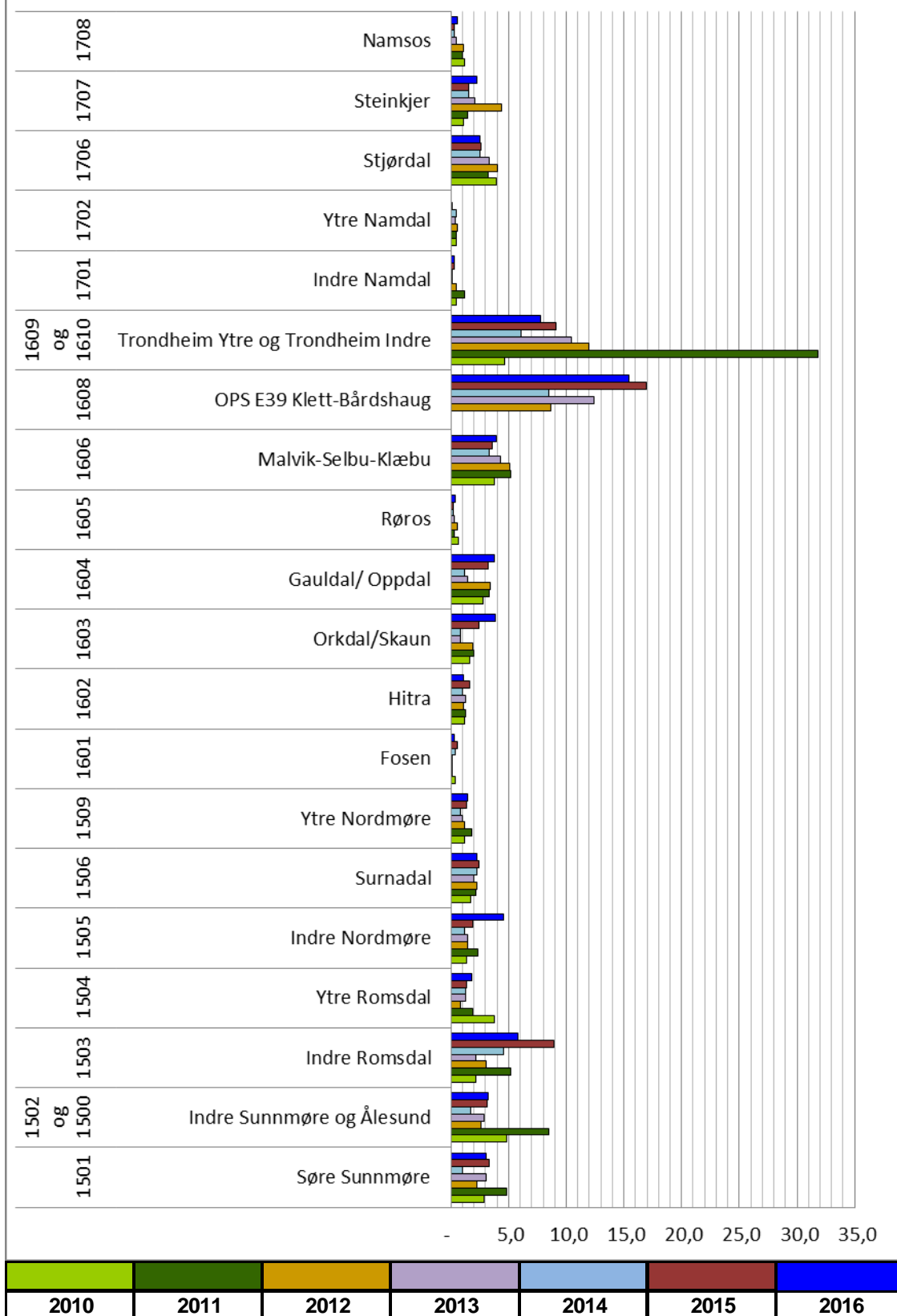
Brøytekilometer/km, Region vest



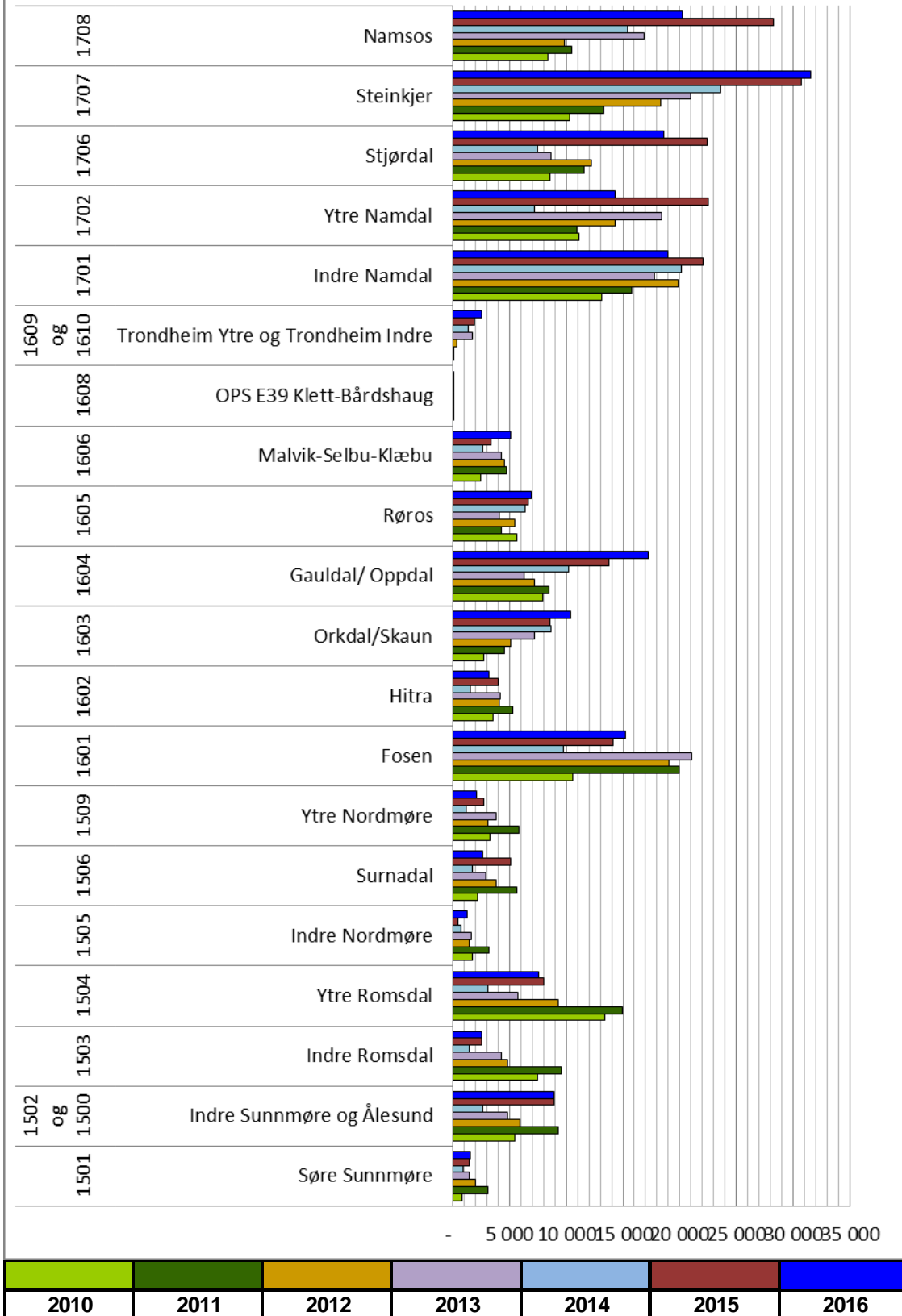
Region midt, mengder per kontrakt



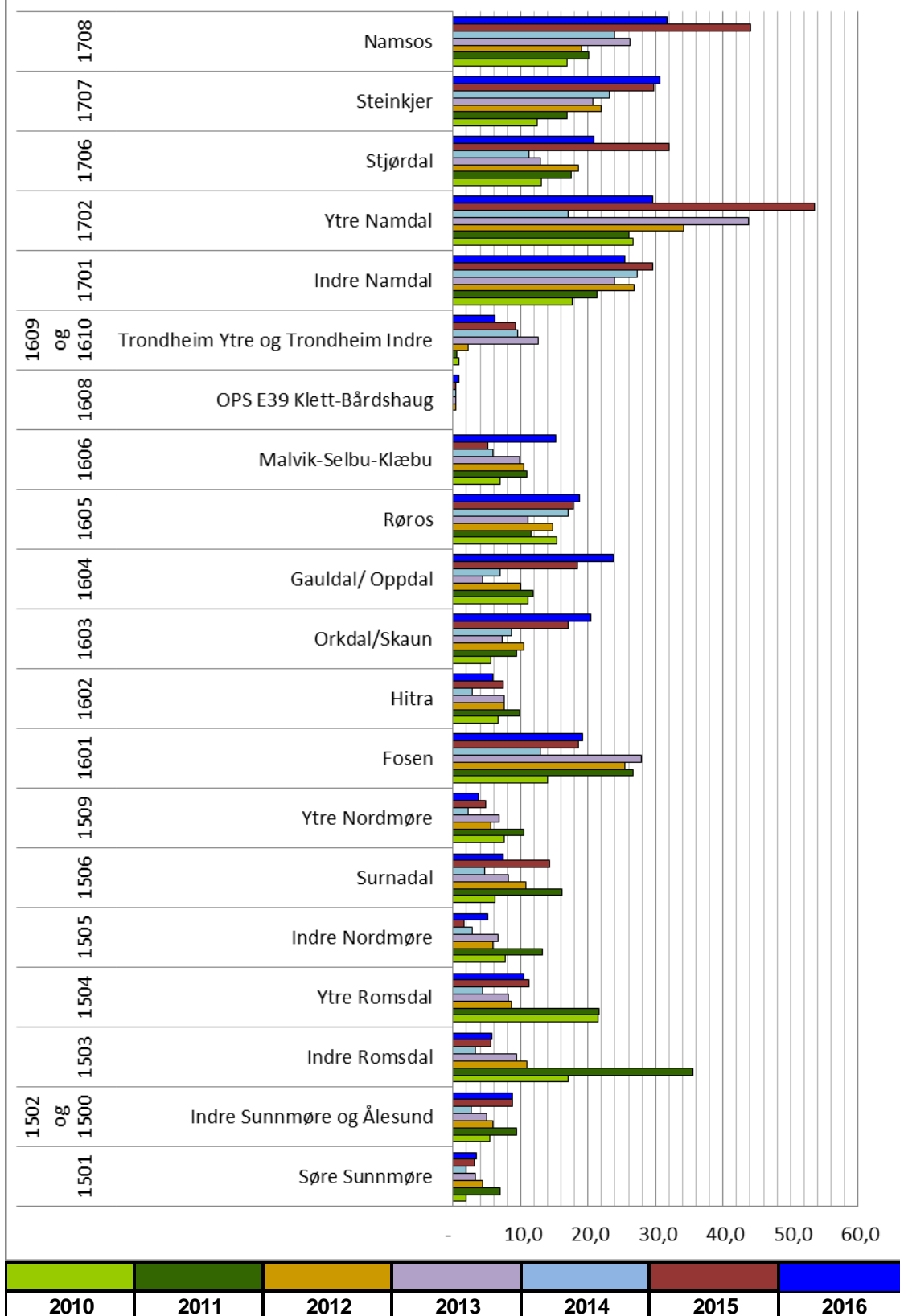
Saltforbruk i tonn/km, Region midt

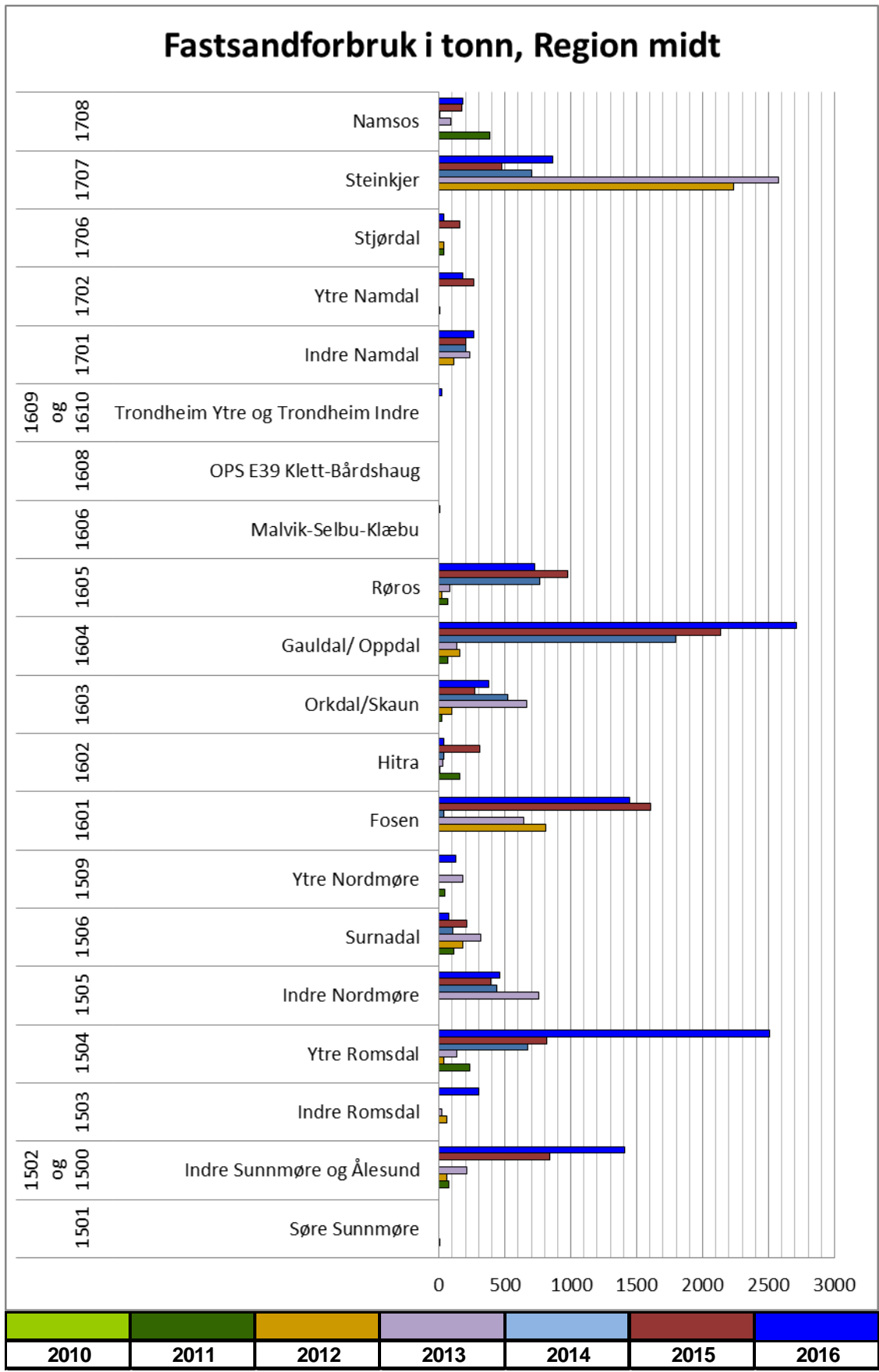


Sandforbruk i tonn, Region midt

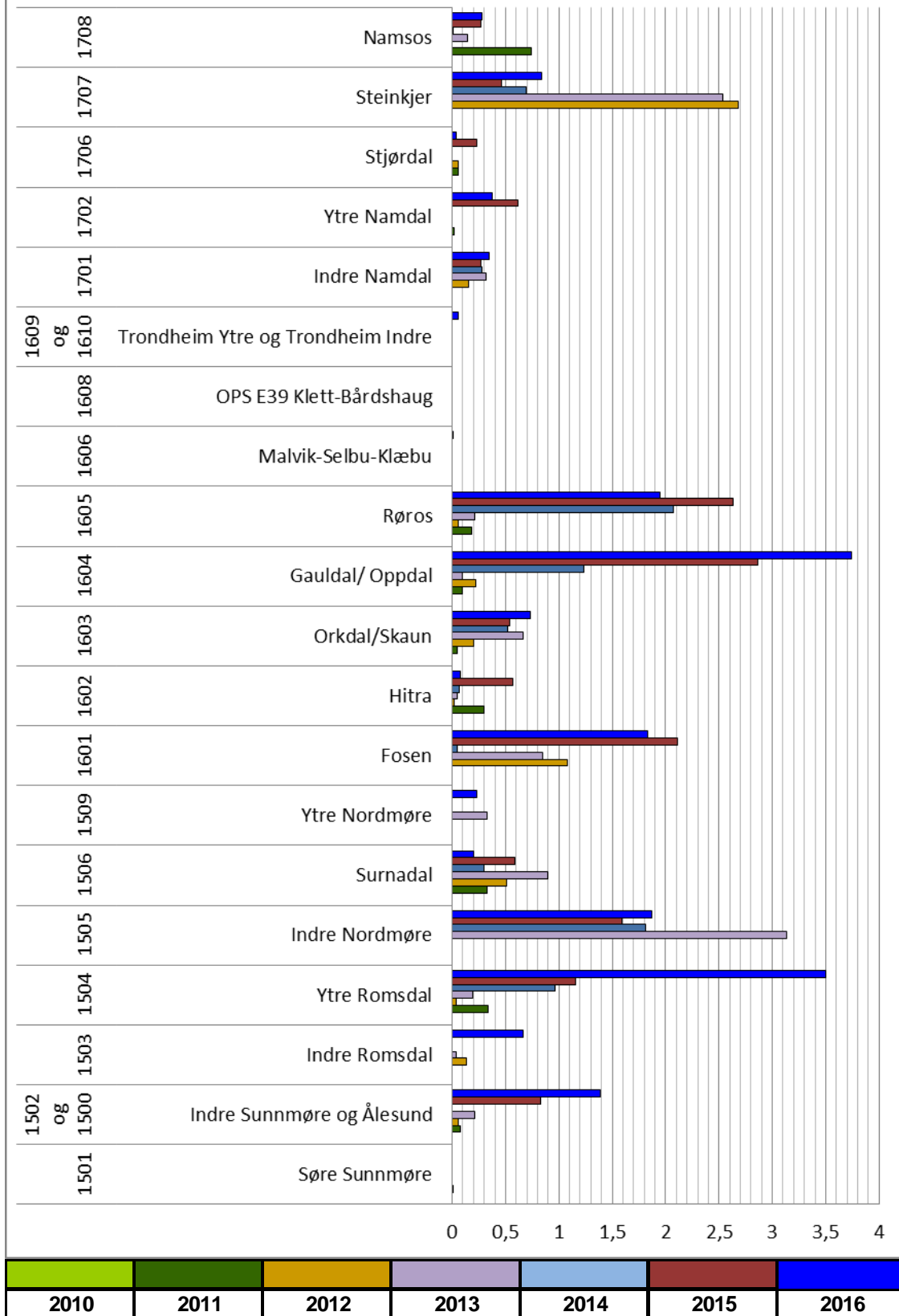


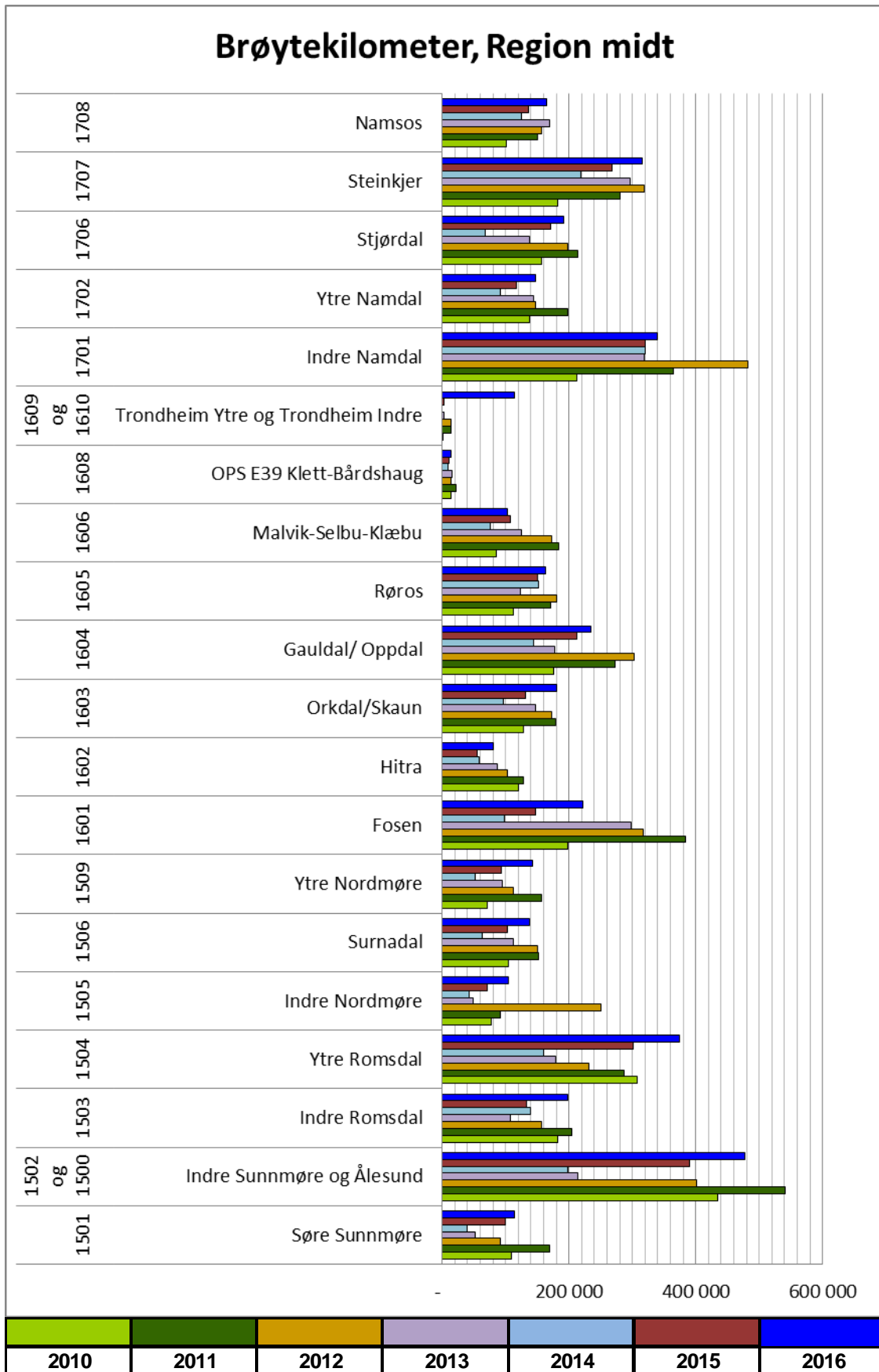
Sandforbruk i tonn/km, Region midt



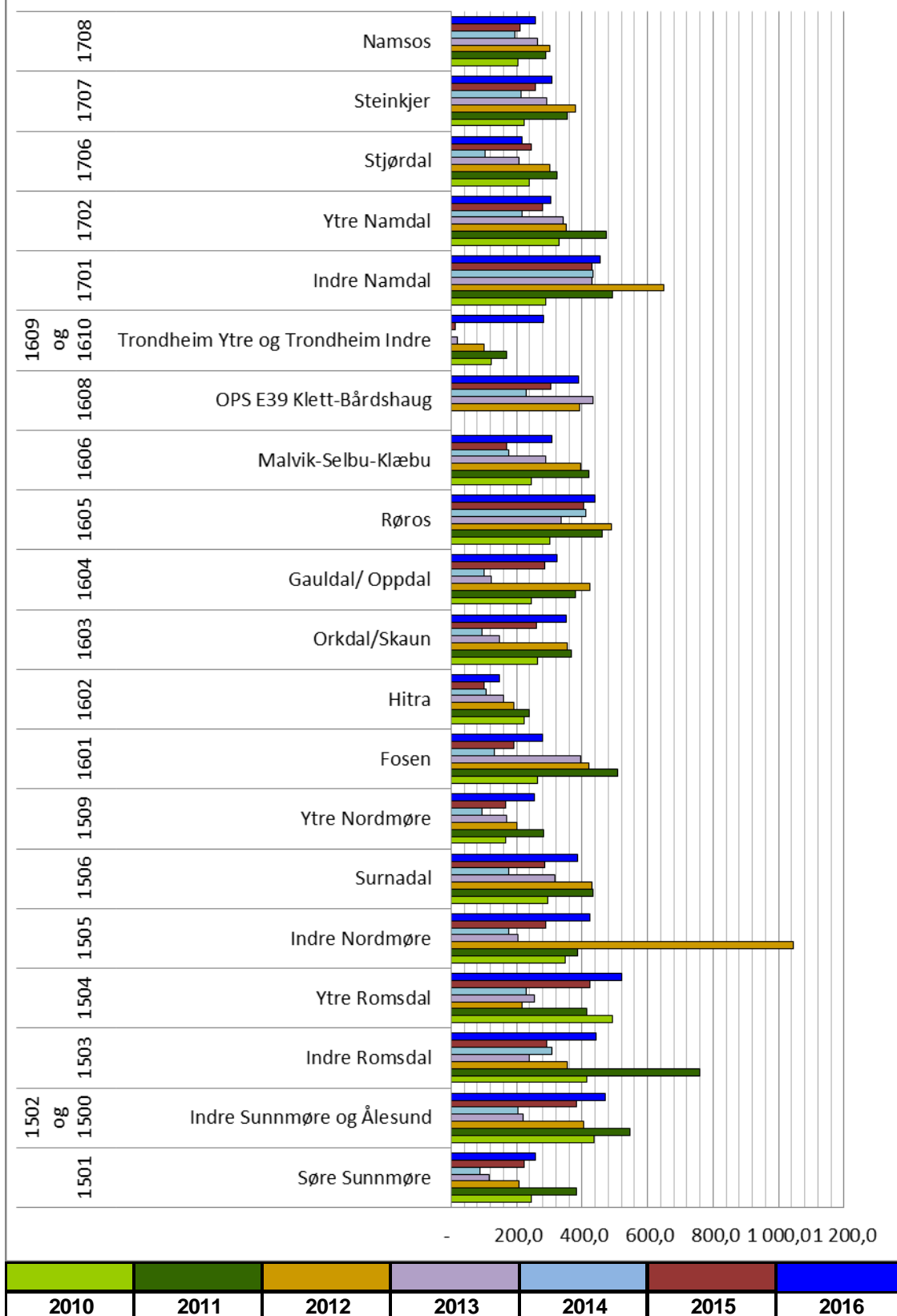


Fastsandforbruk i tonn/km, Region midt

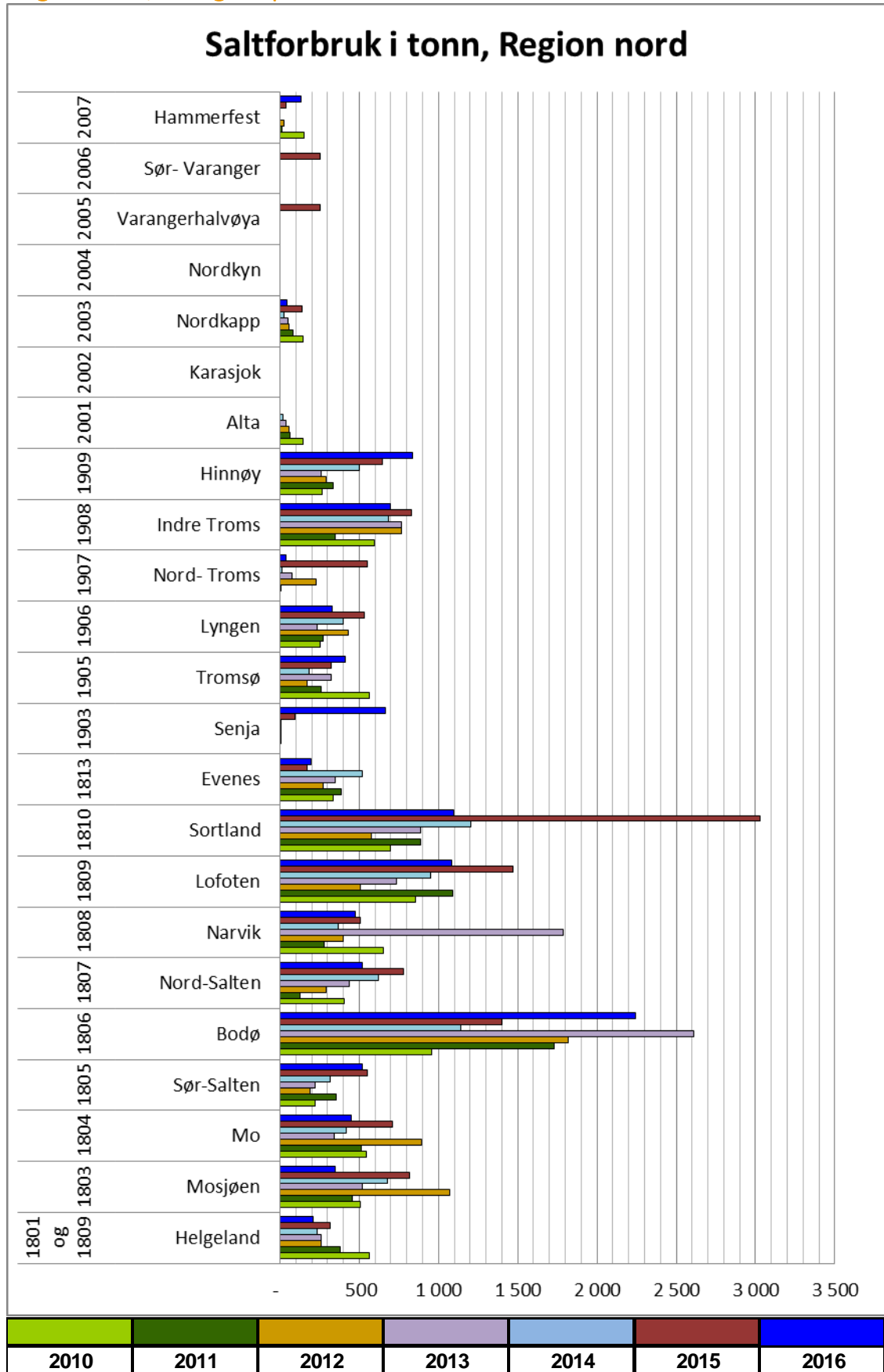




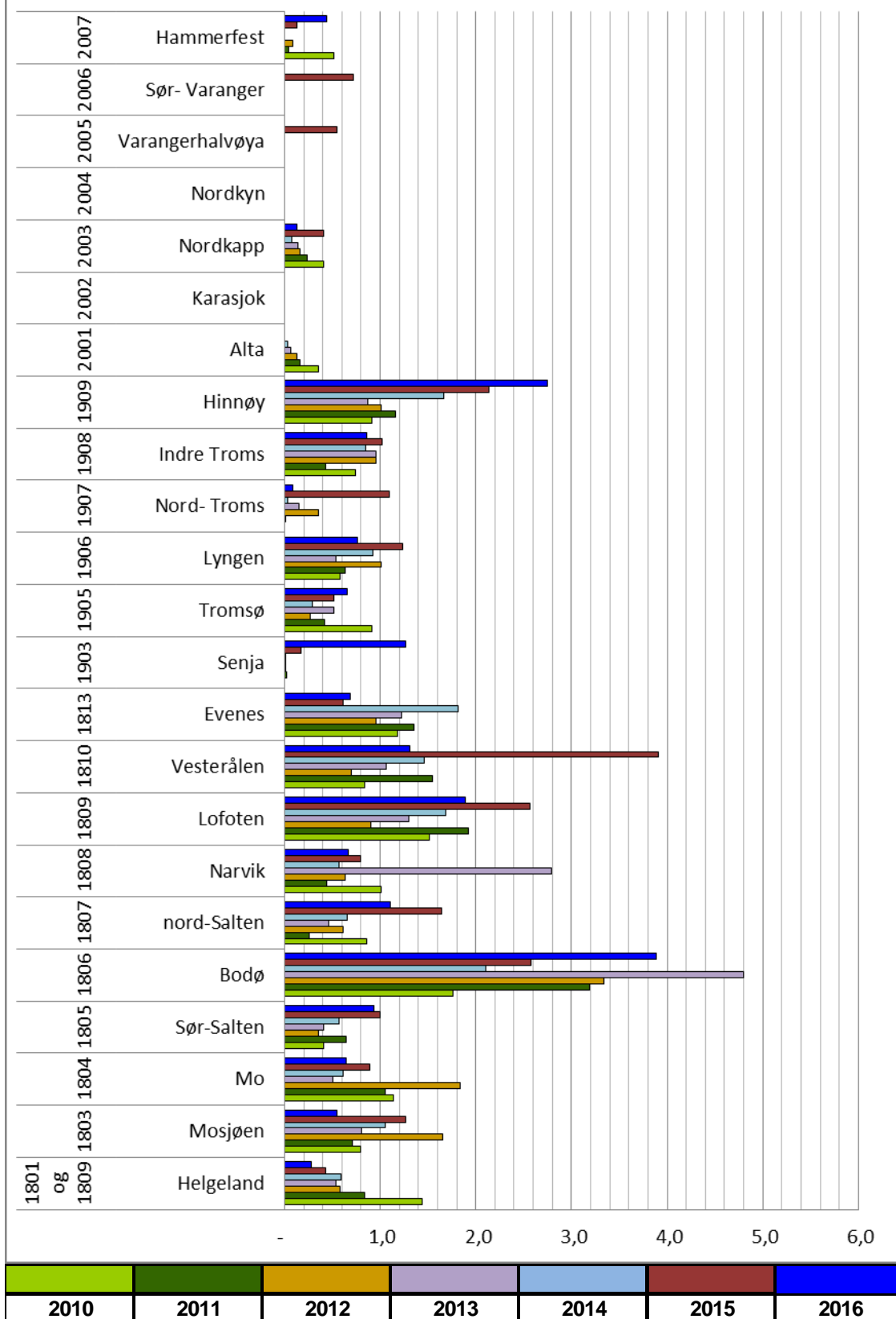
Brøytekilometer/km, Region midt

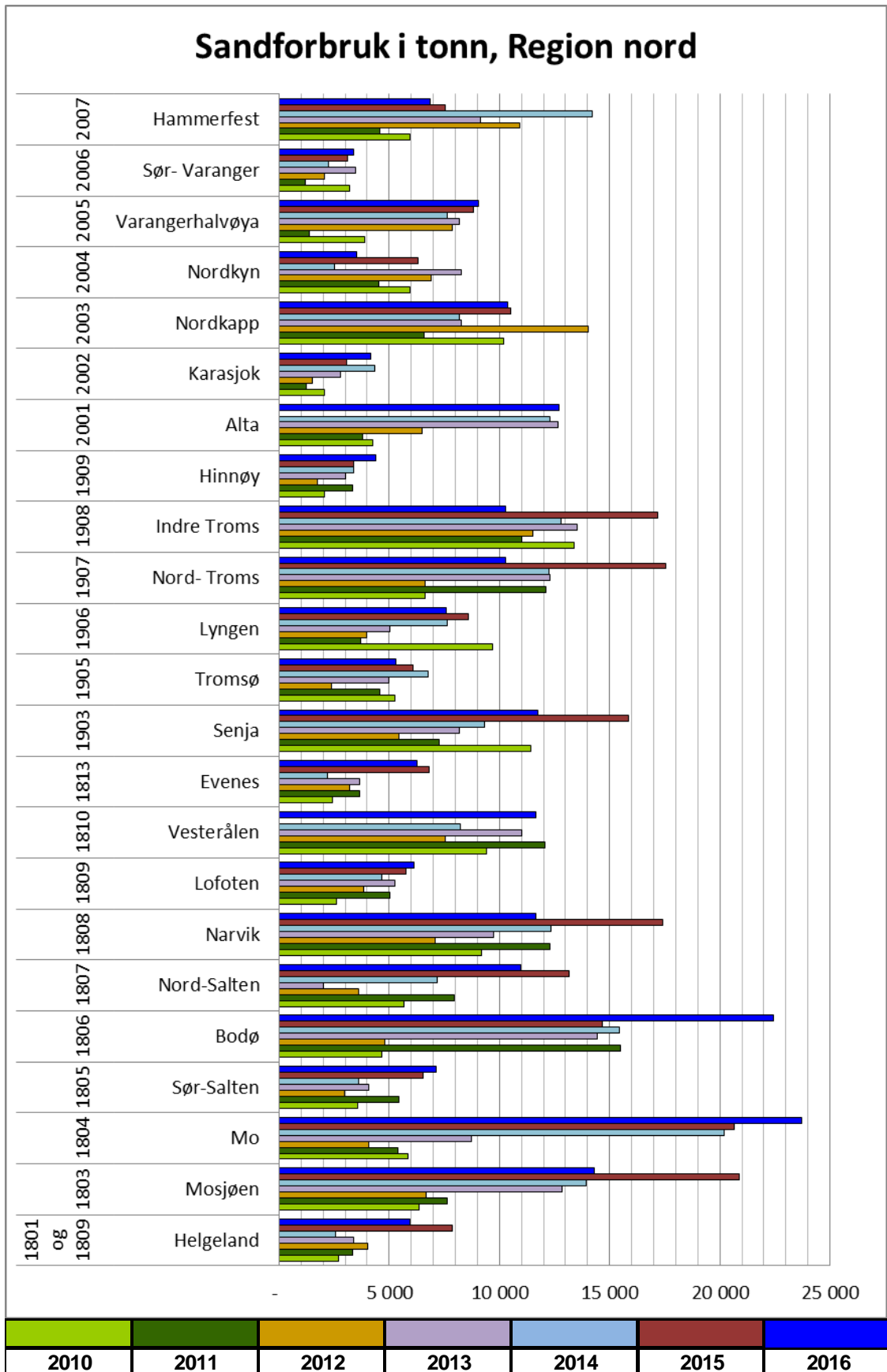


Region nord, mengder per kontrakt

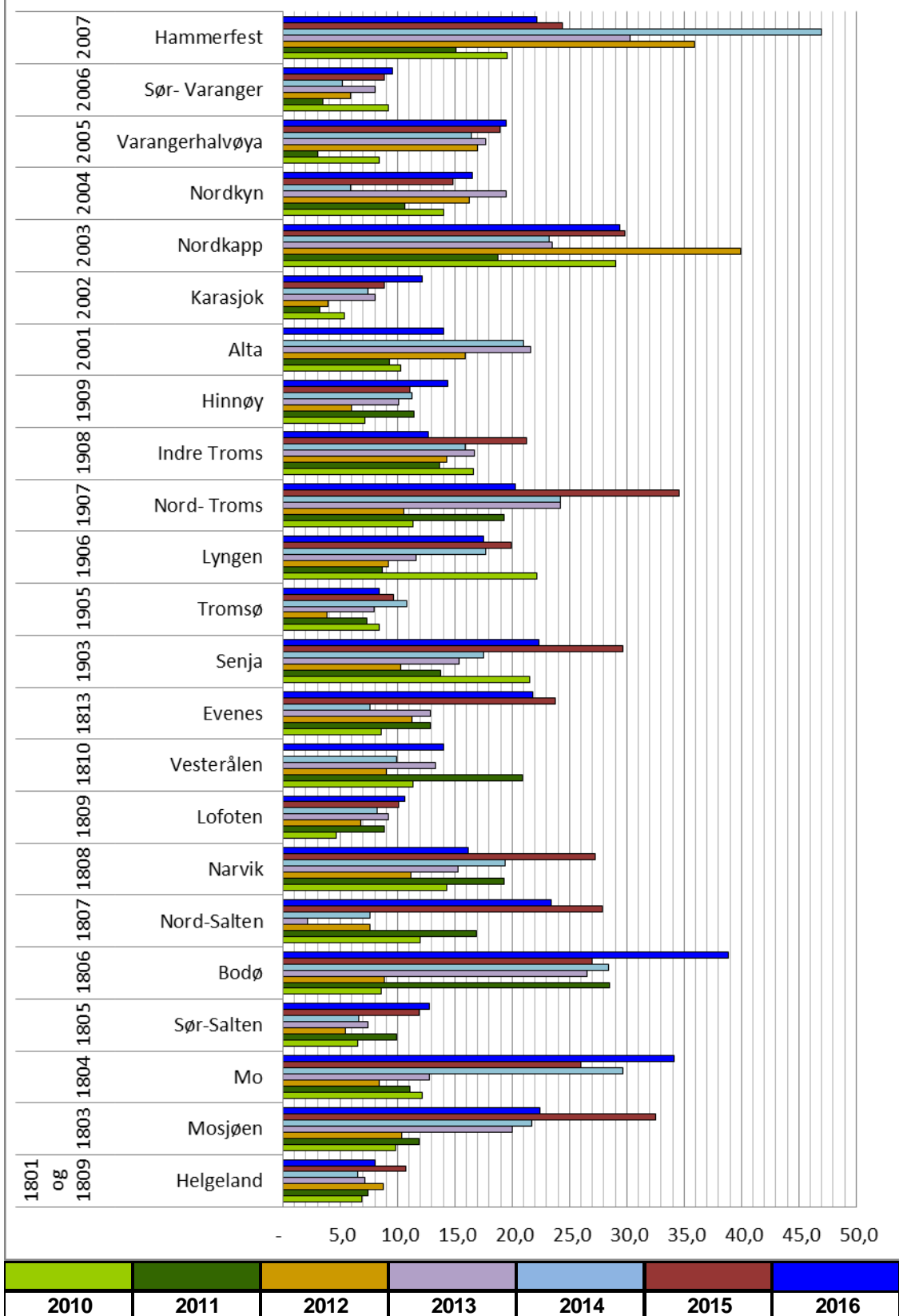


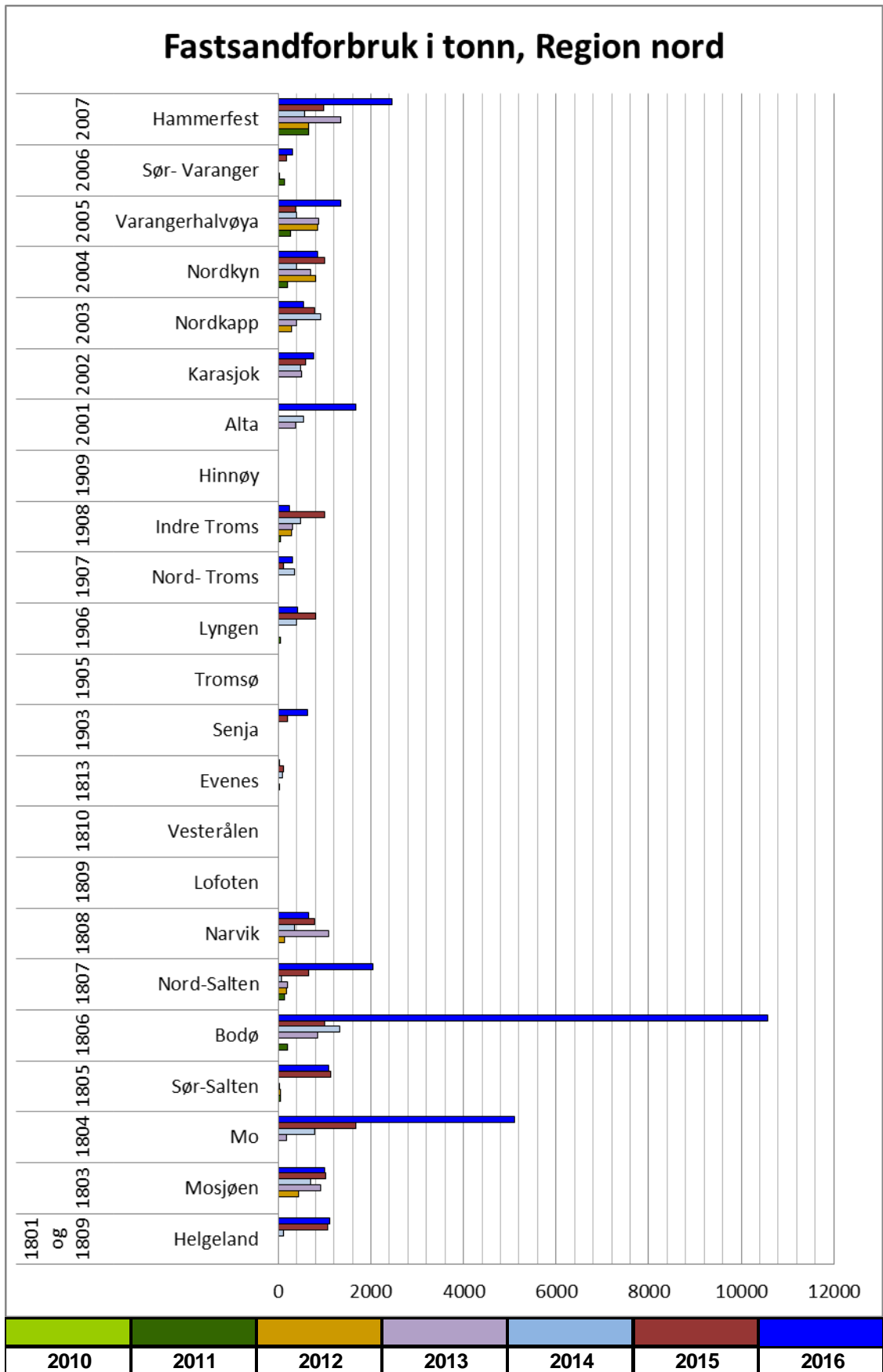
Saltforbruk i tonn/km, Region nord



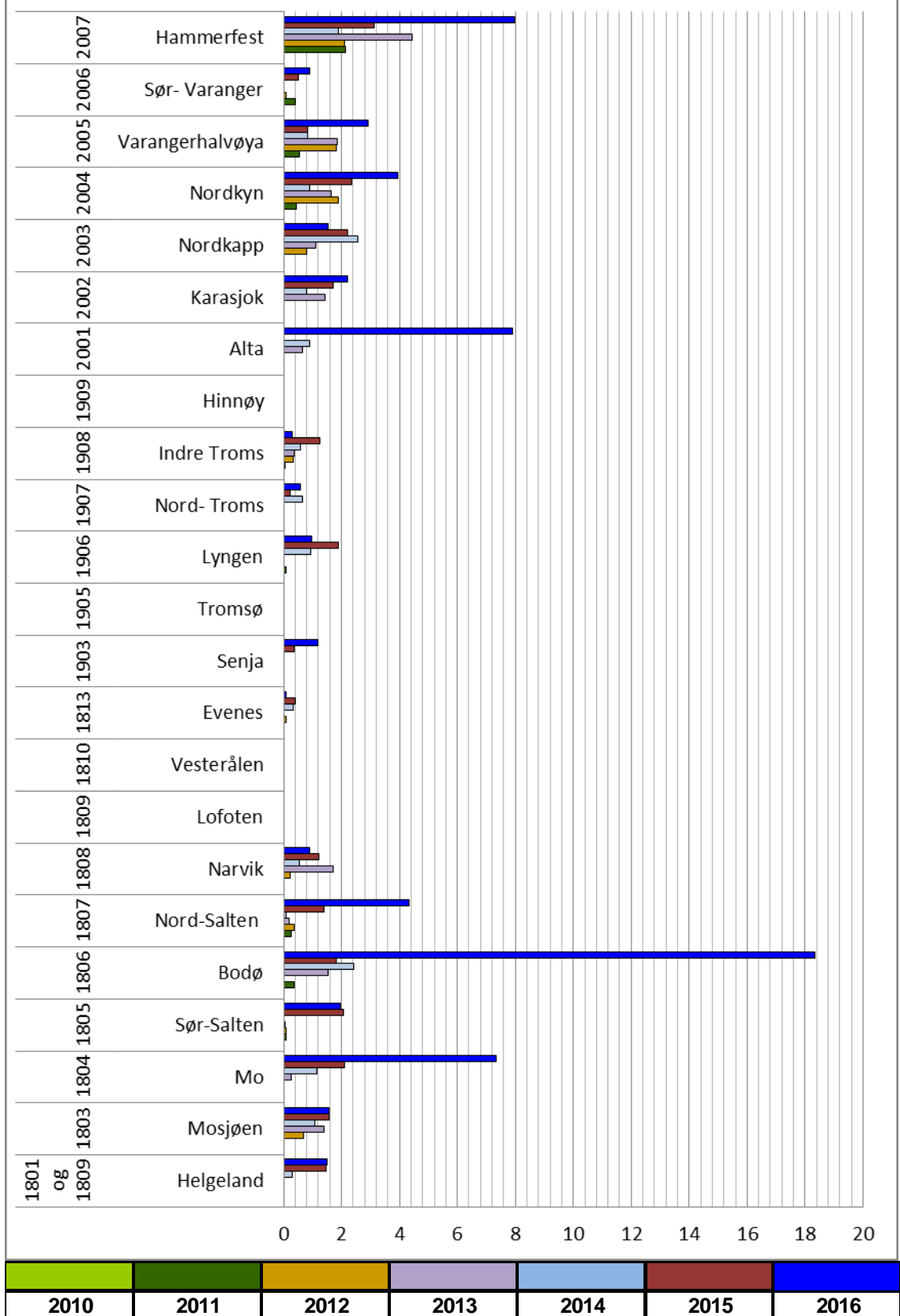


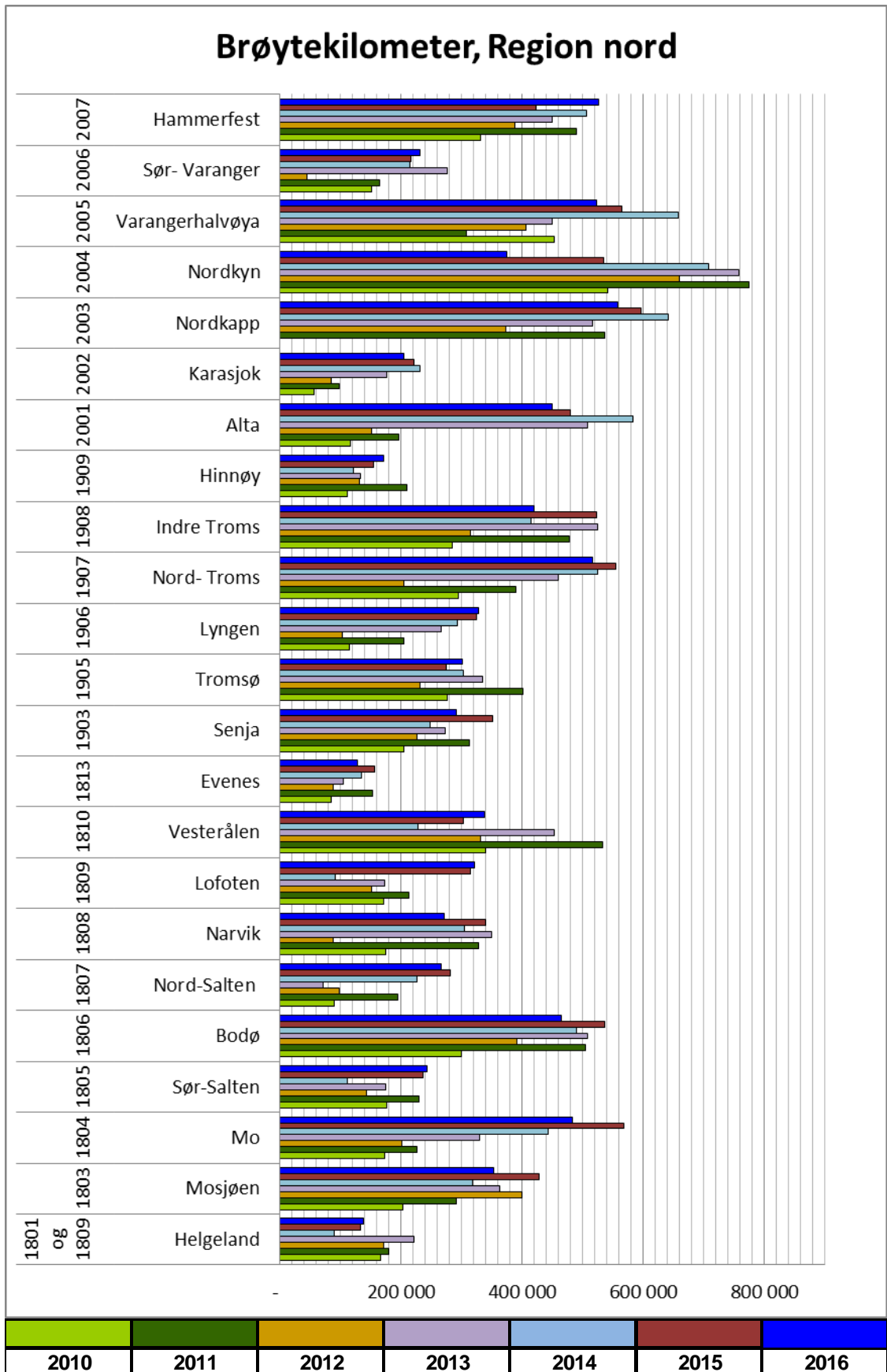
Sandforbruk i tonn/km, Region nord



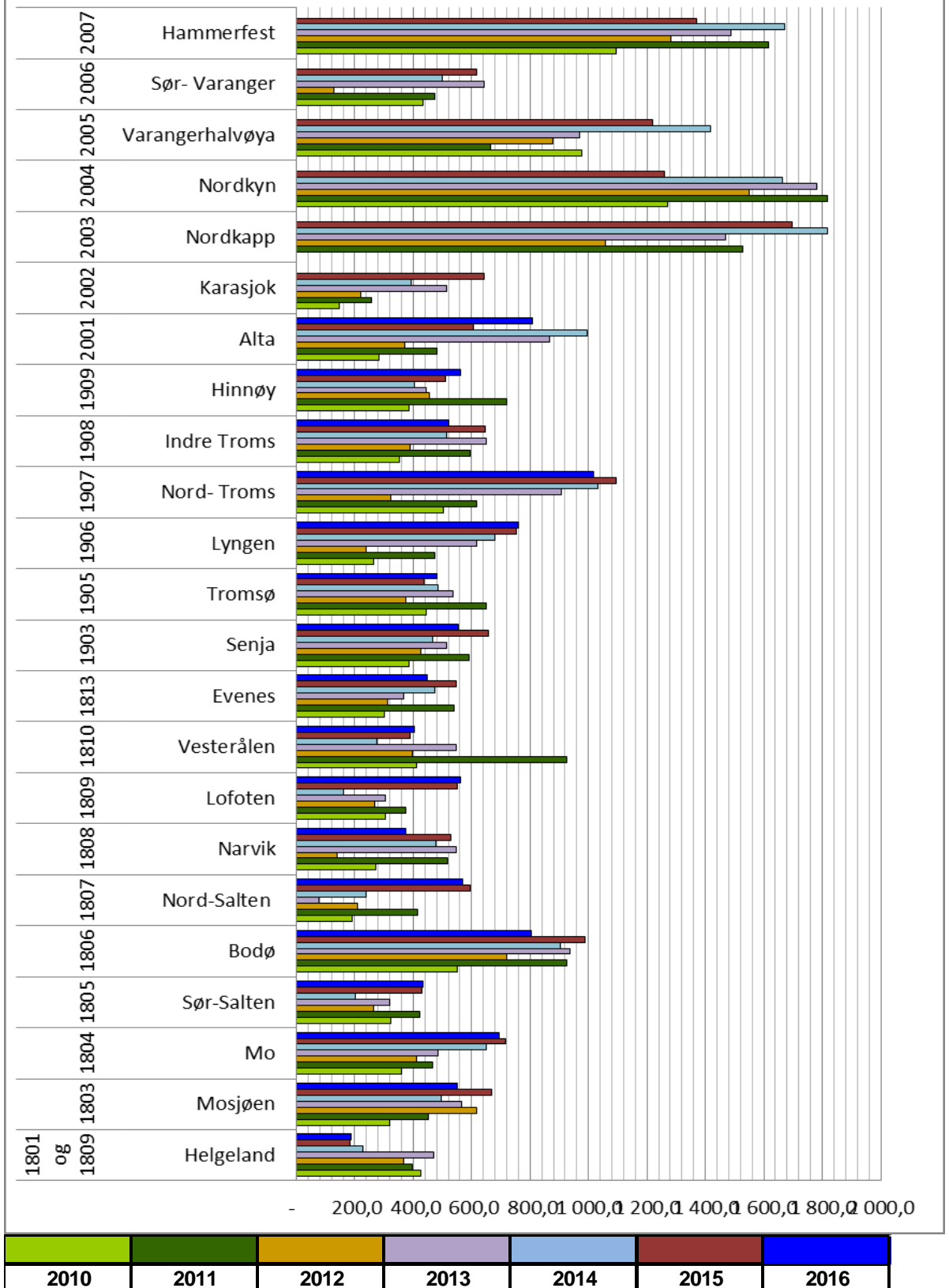


Fastsandforbruk i tonn/km, Region nord





Brøytekilometer/km, Region nord





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