



Statens vegvesen

Mengderapportering, vinteren 2008/2009

RAPPORT

Teknologiavdelingen

Nr. 2564



Vegteknologiseksjonen
Dato: 2009-08-14



Statens vegvesen

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TEKNOLOGIRAPPORT nr. 2564

Tittel

**Mengderapportering,
vinteren 2008/2009**

Utarbeidet av

Ida Einerkjær

Dato:

2009-08-14

Saksbehandler

Åge Sivertsen

Prosjektnr:

Kontrollert av

Øystein Larsen

Antall sider og vedlegg:

22

Sammendrag

Dette er en rapport som er utarbeidet for å få en oversikt over ressursbruken i vinterdriften, samt å se på utviklingen fra 2004 til 2009. Rapporten inneholder tall for salting, sanding og brøyting.

Summary

This report is written to get an overview of the resources used in the winter, and to look at the development from 2004 till 2009. This report contains numbers for salt, sand and snow-clearing.

Emneord:

vinterdrift, salting, sanding, brøyting

Forord

Denne rapporten er utarbeidet for å få en oversikt over ressursbruken i vinterdriften, samt å se på utviklingen fra 2004 til 2009.

Rapporten er basert på skjema R12, definert i funksjonskontraktene der entreprenørene rapporterer inn mengdedata for hver kontrakt. Det kan være mangler i datagrunnlaget.

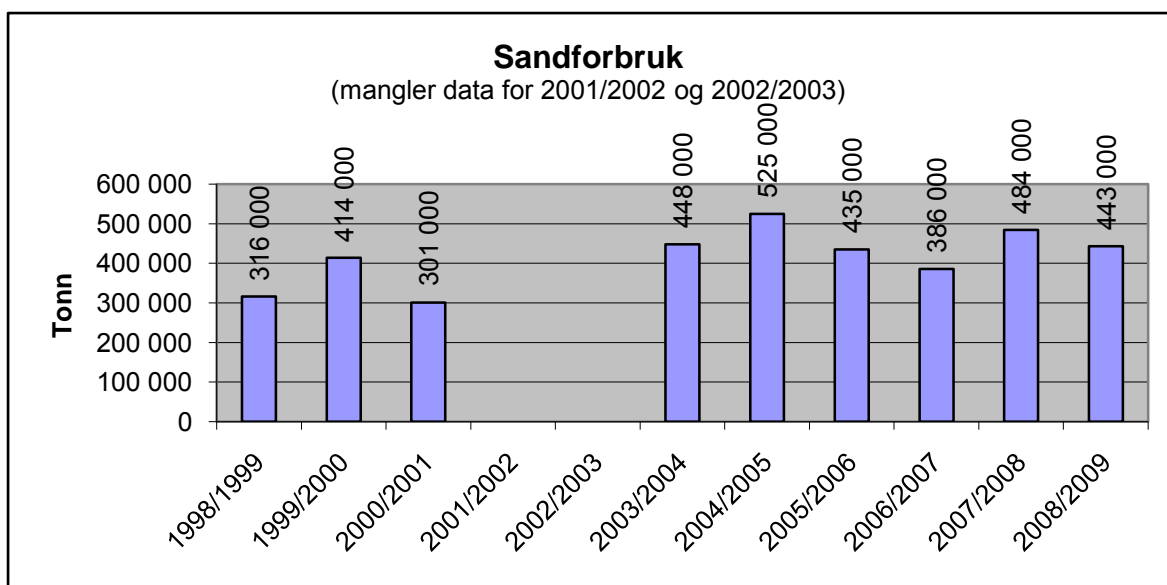
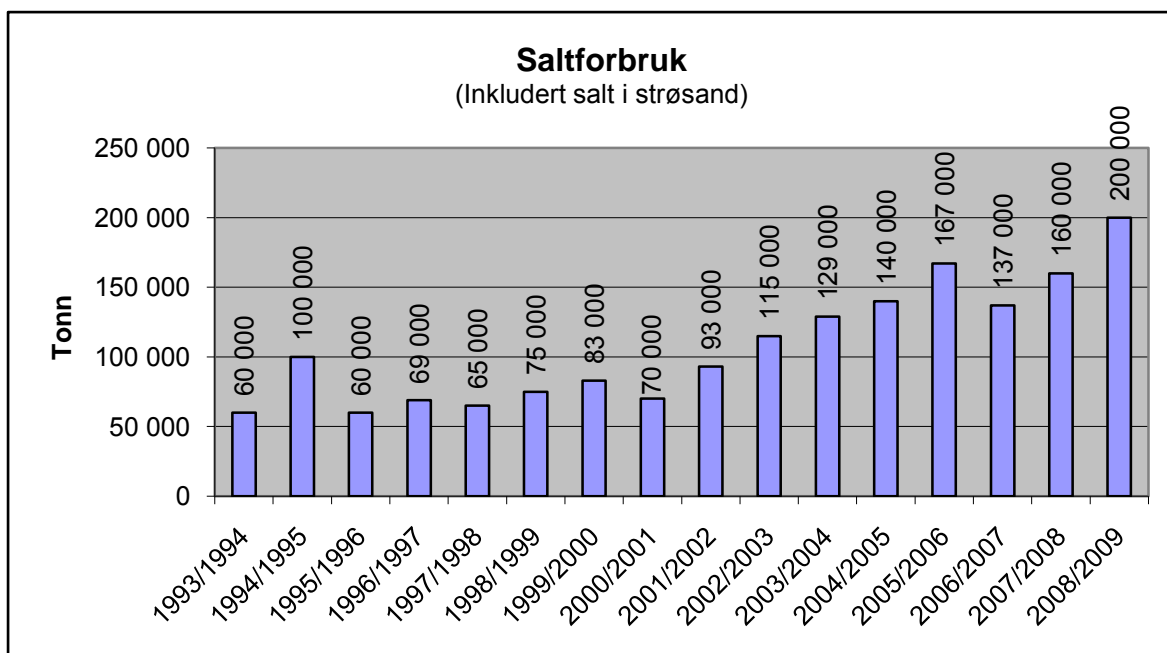
De årlige mengdene omfatter vintersesongen fra oktober til mai. Det oppgitte årstallet i diagrammene viser til siste halvdel av sesongen.

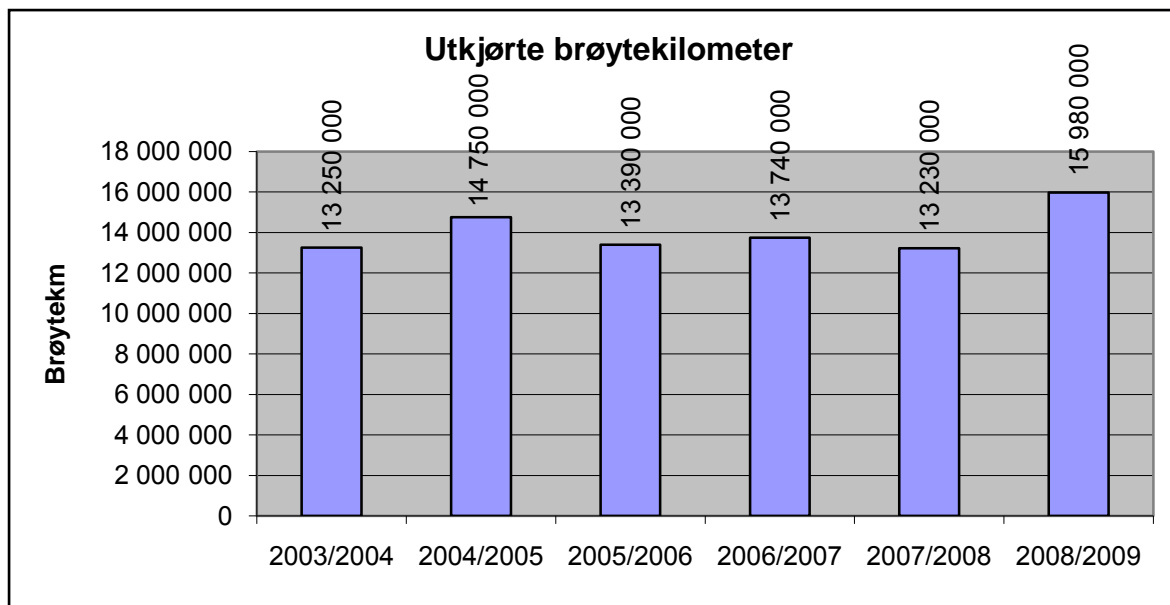
Mengdene har gått betydelig opp for både salting og brøyting i sesongen 2008/2009. Mengden sanding har sunket. Årlige klimavariasjoner kan ha stor betydning for ressursbruken fra år til år.

Innholdsfortegnelse:

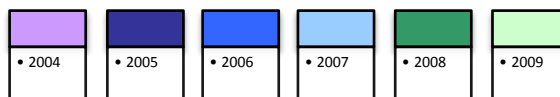
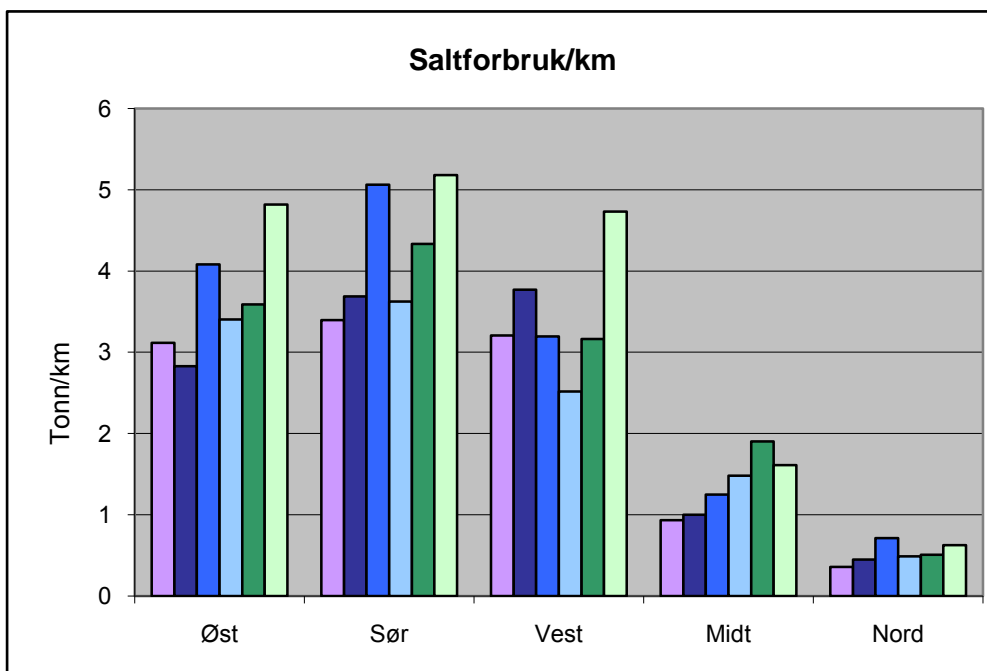
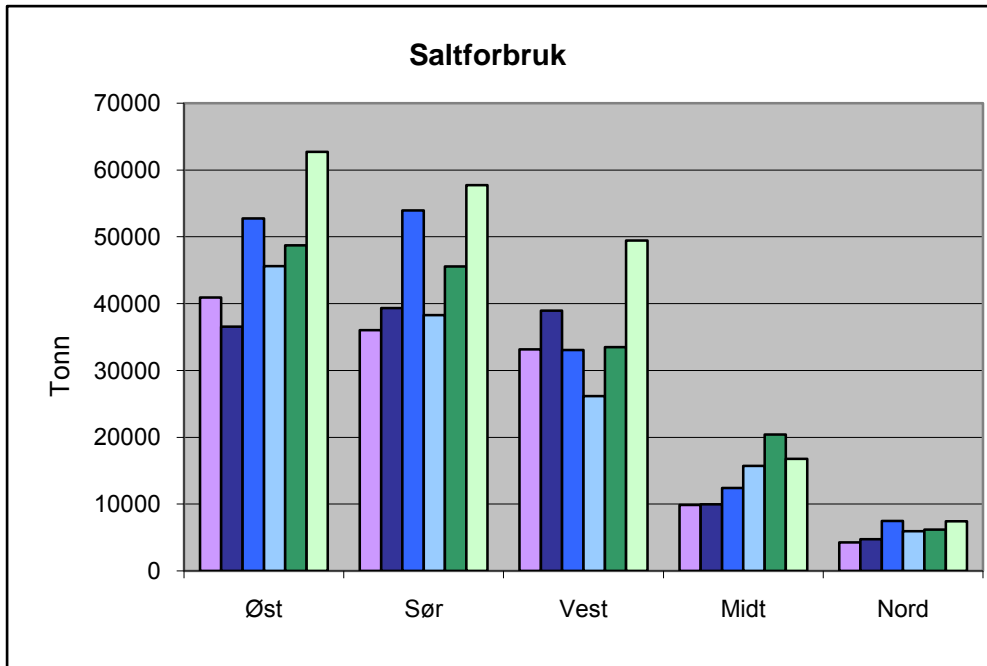
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Utvikling i mengde per år

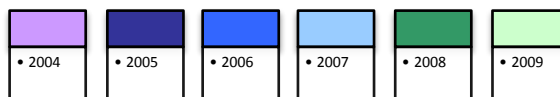
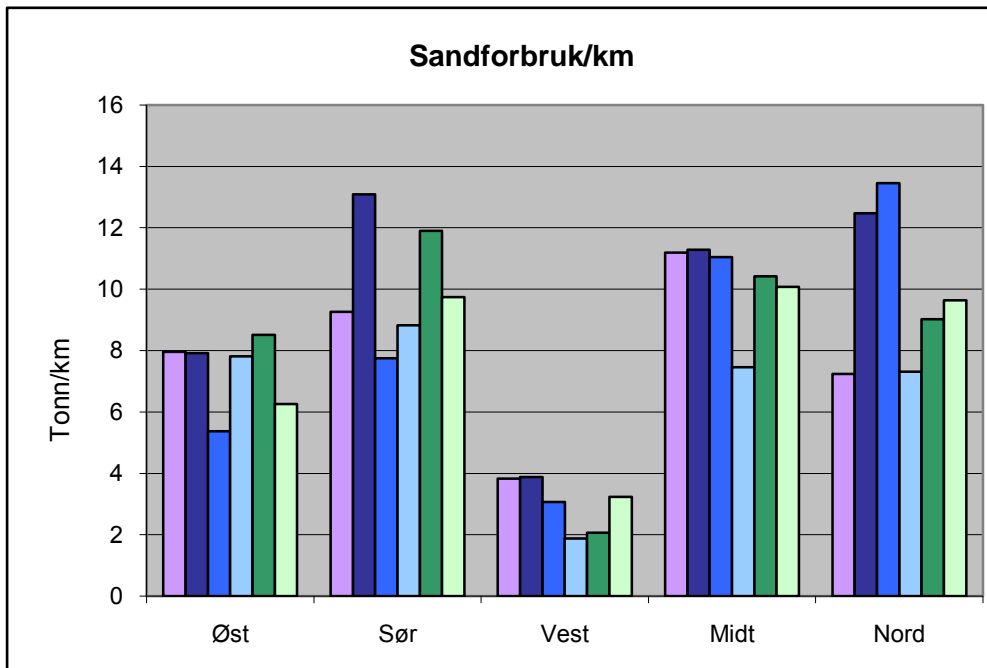
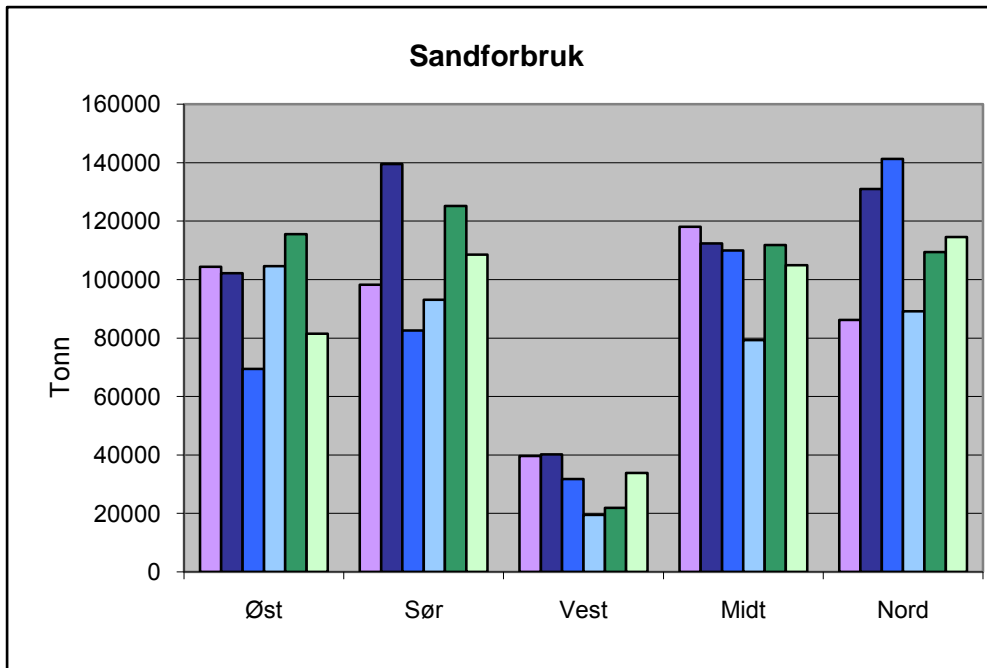




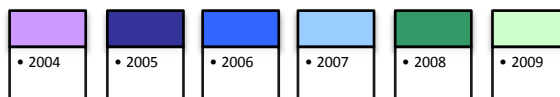
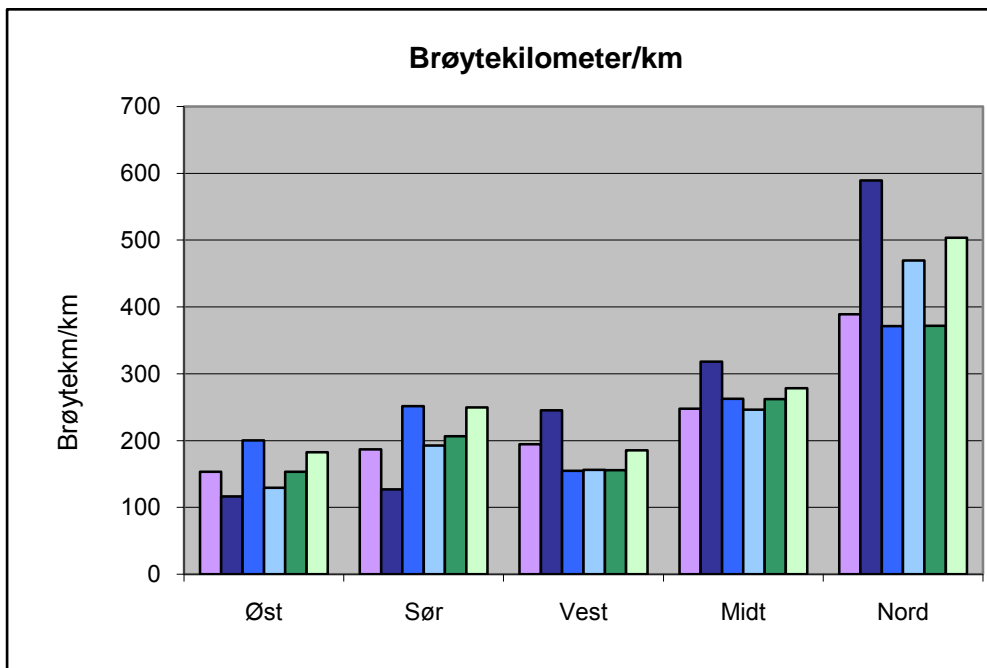
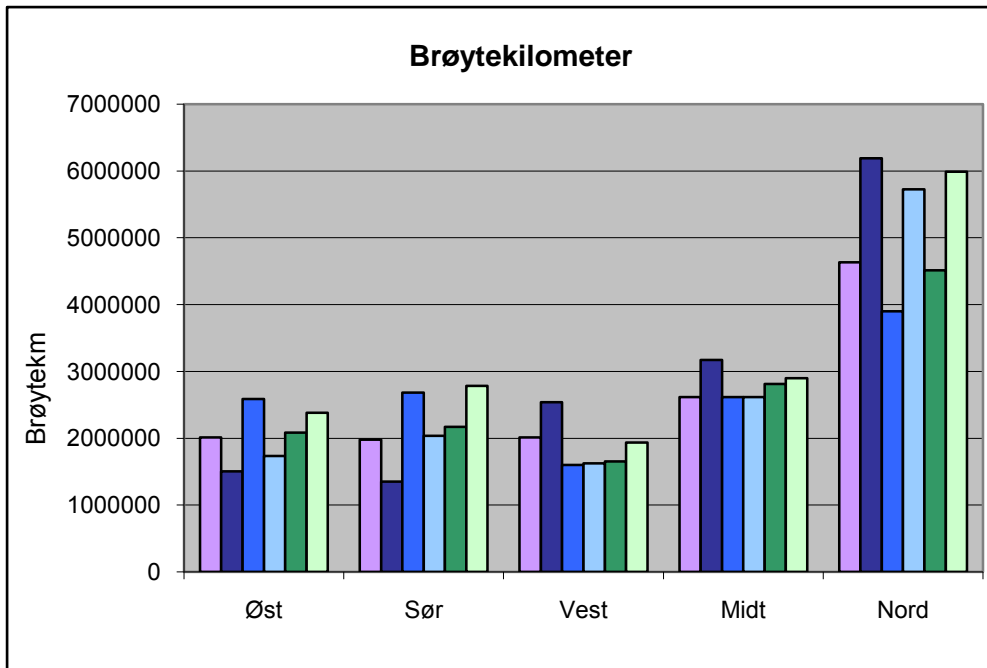
Saltforbruk per Region



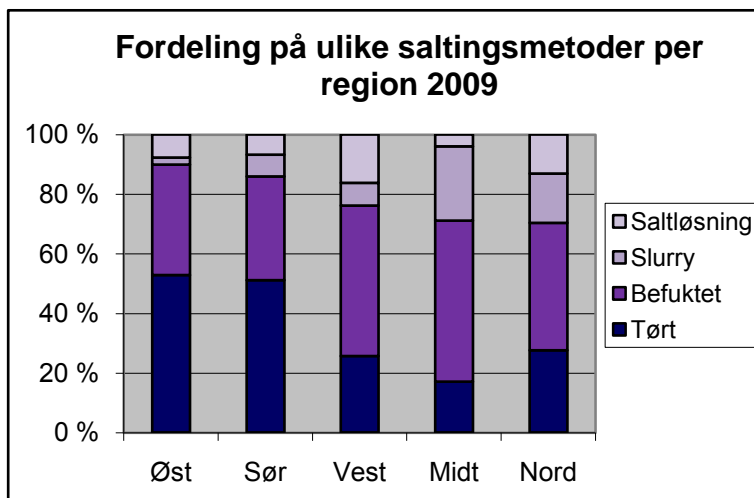
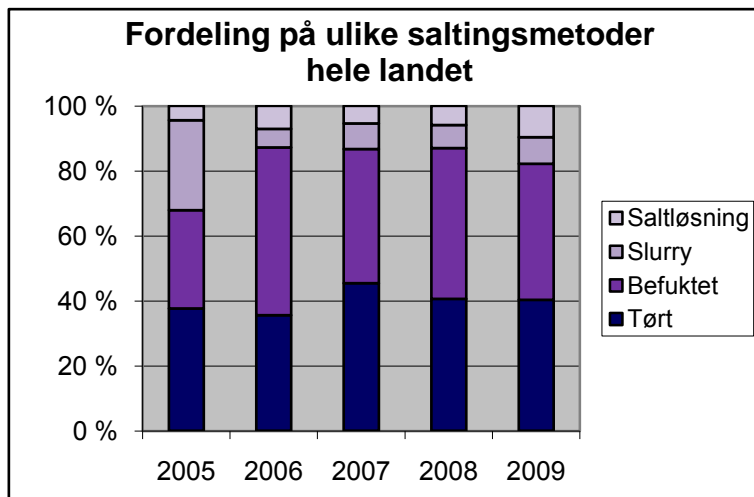
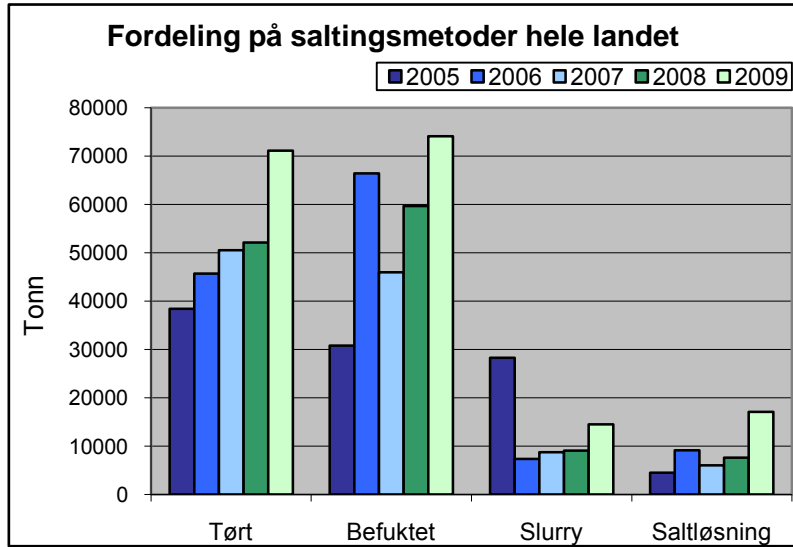
Sandforbruk per Region



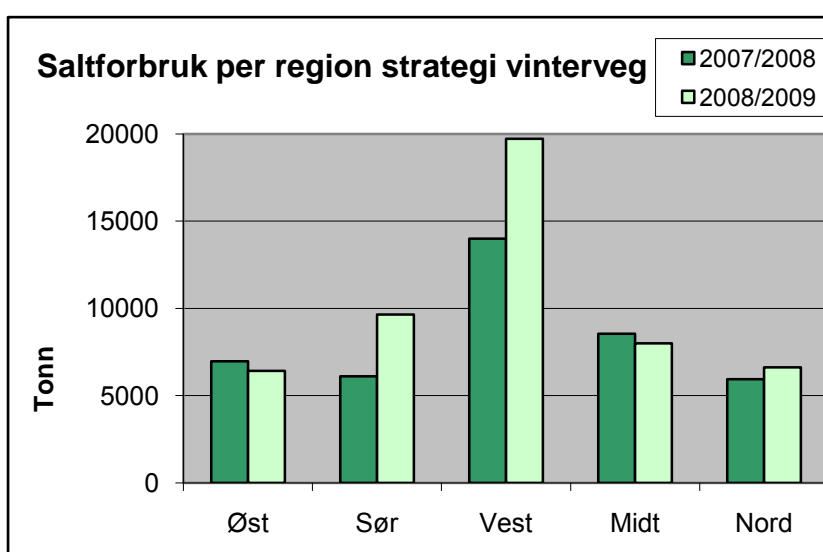
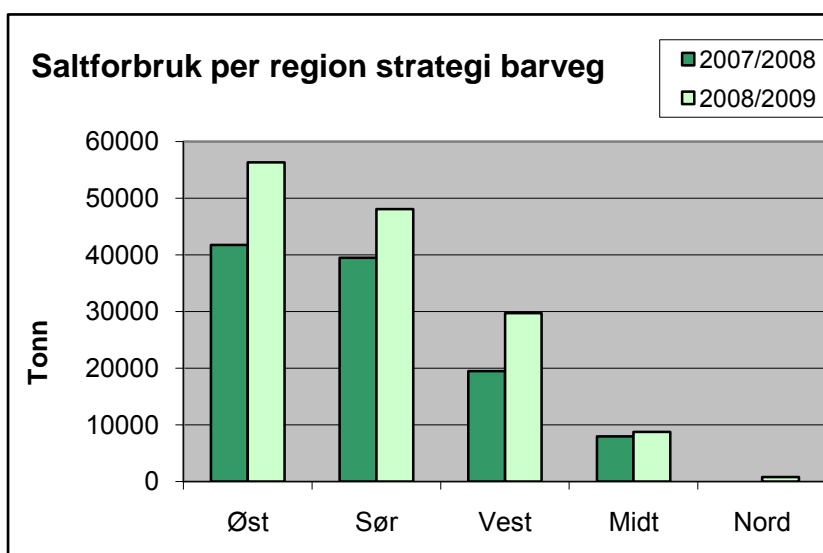
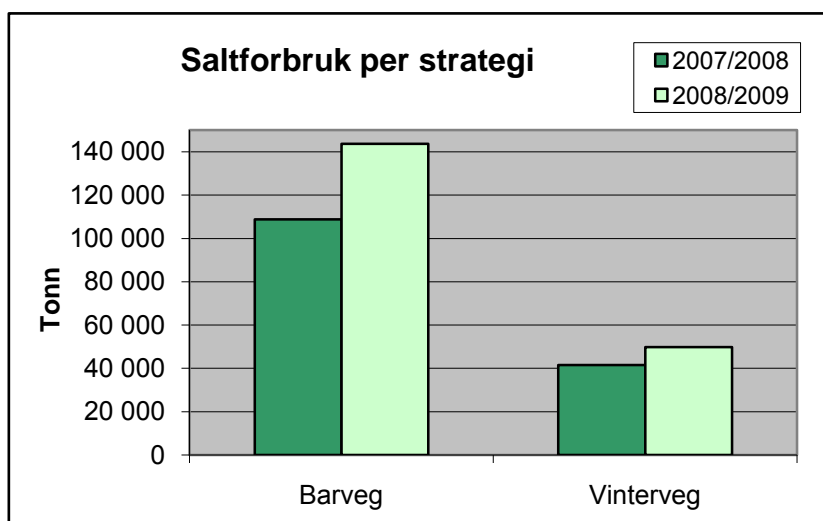
Brøytekilometer per Region

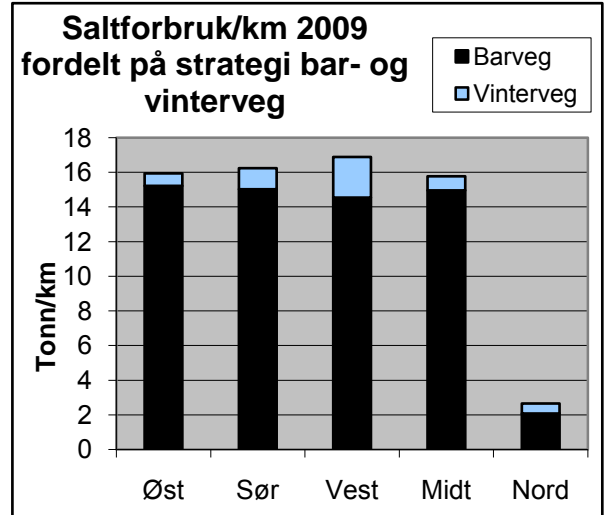
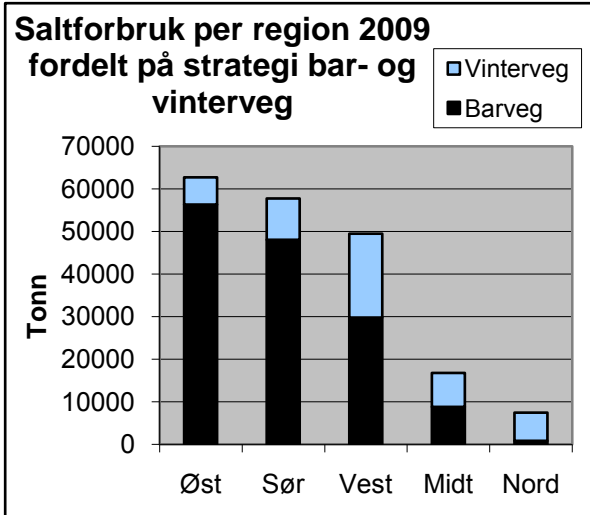


Fordeling på ulike saltingsmetoder

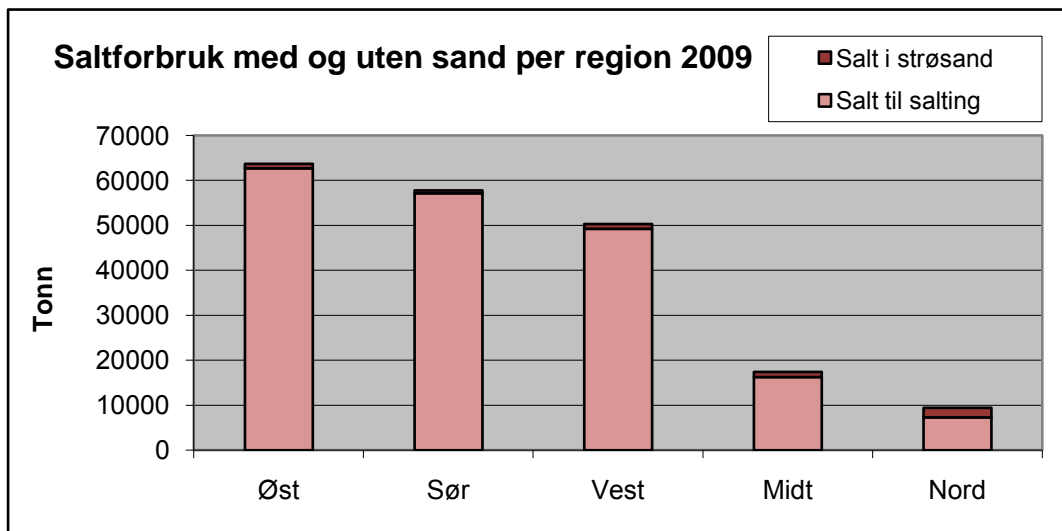
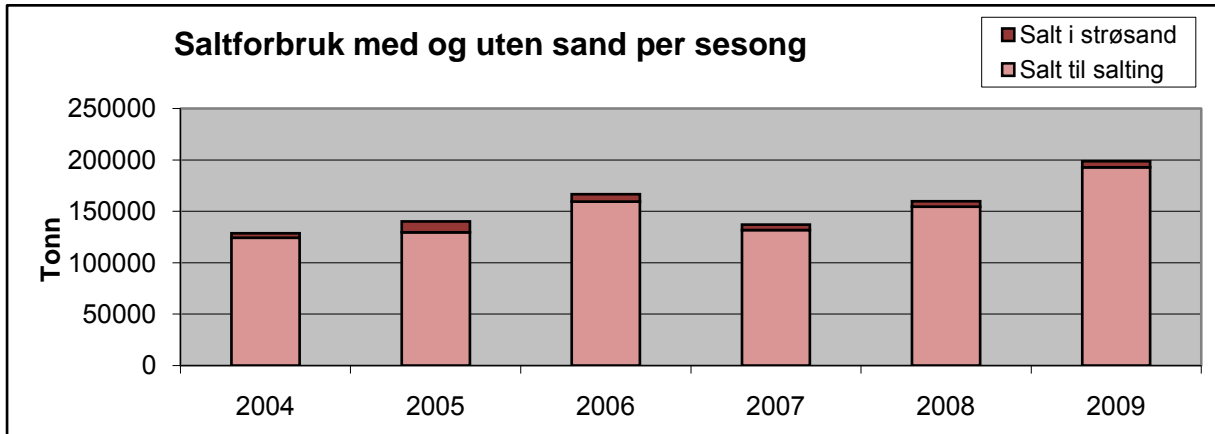


Saltforbruk på strategi barveg og vinterveg



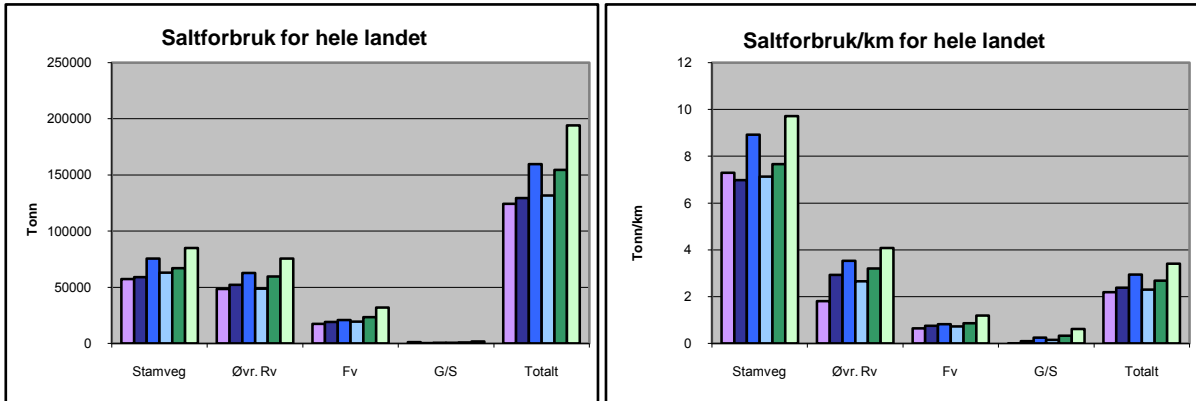


Salt i strøsand

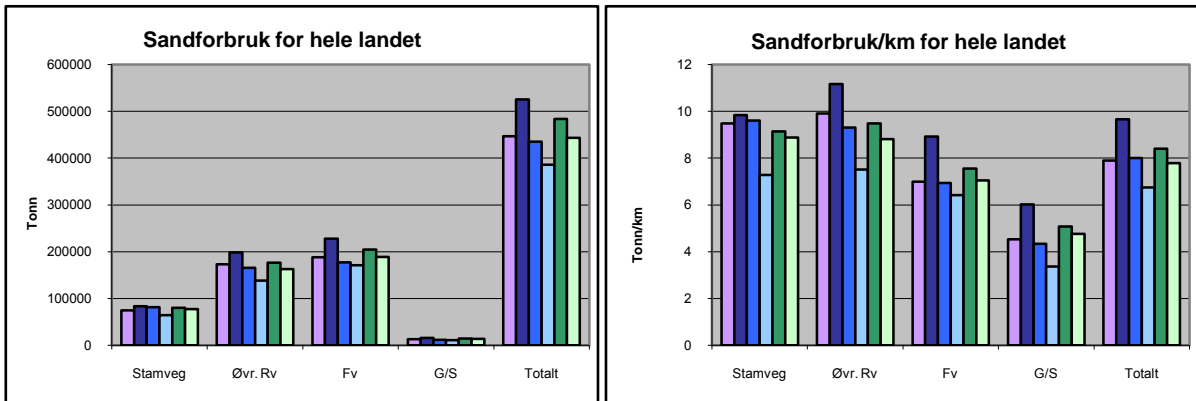


Mengde per vegkatergori for hele landet

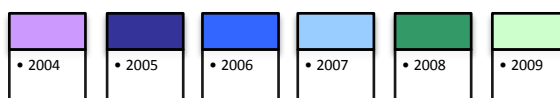
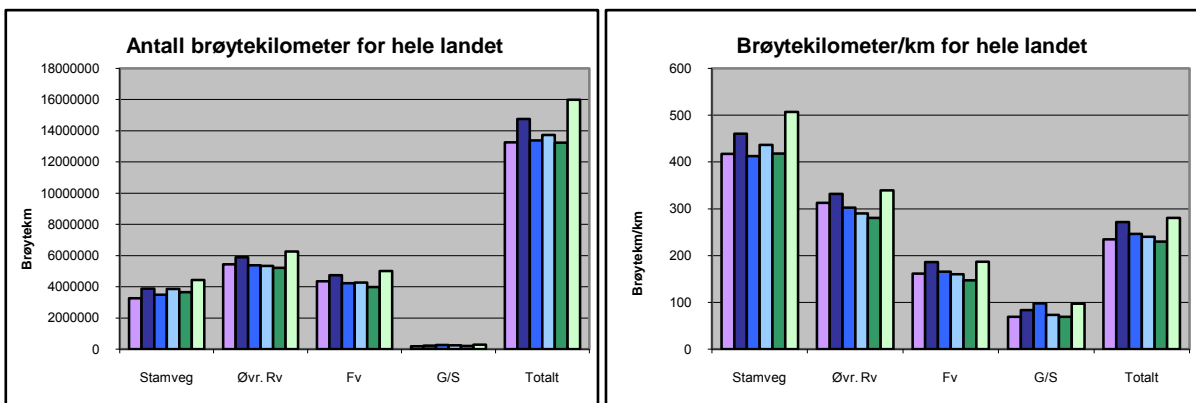
Saltforbruk per vegkategori for hele landet



Sandforbruk per vegkategori for hele landet

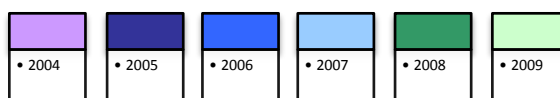
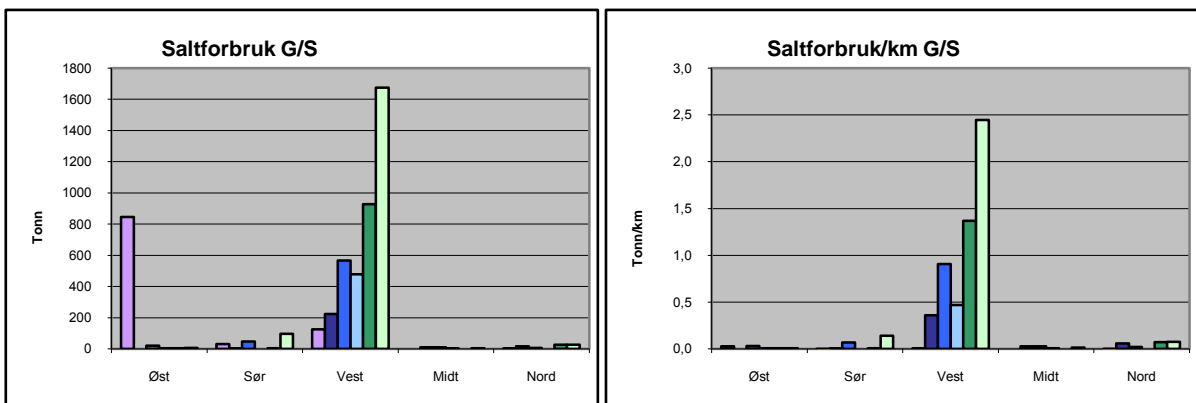
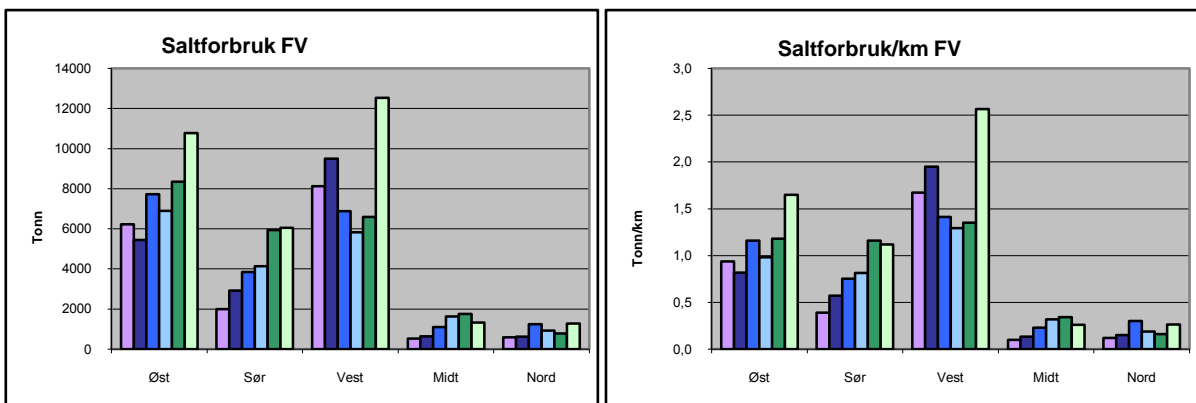
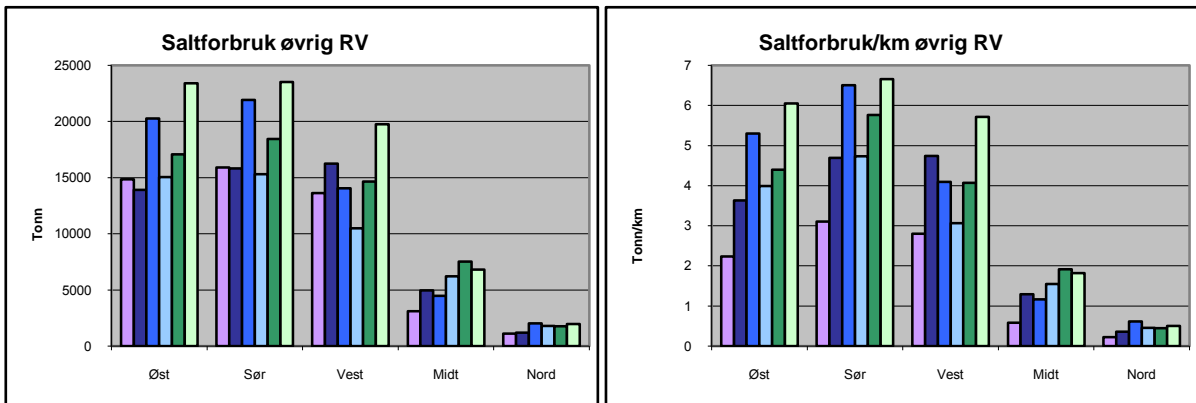
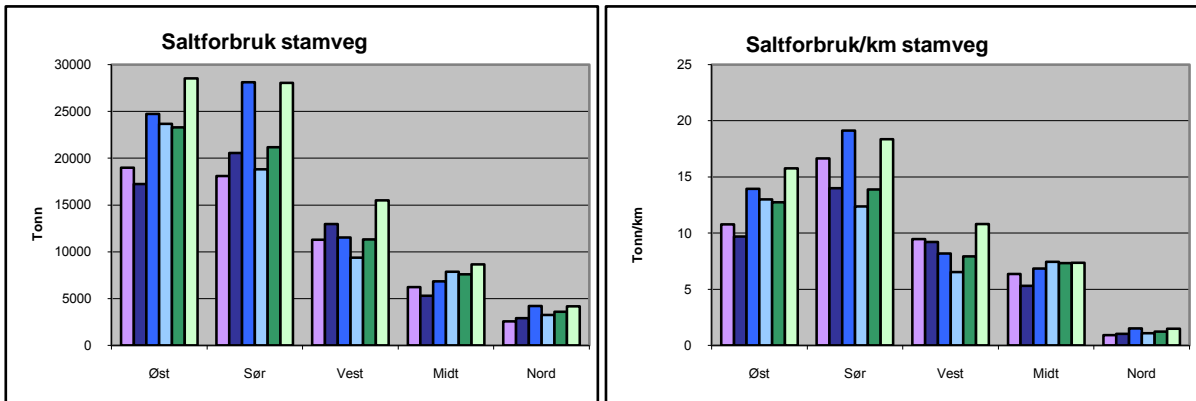


Brøytekilometer per vegkategori for hele landet

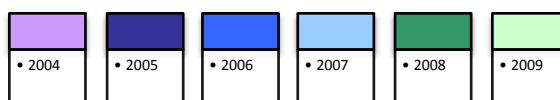
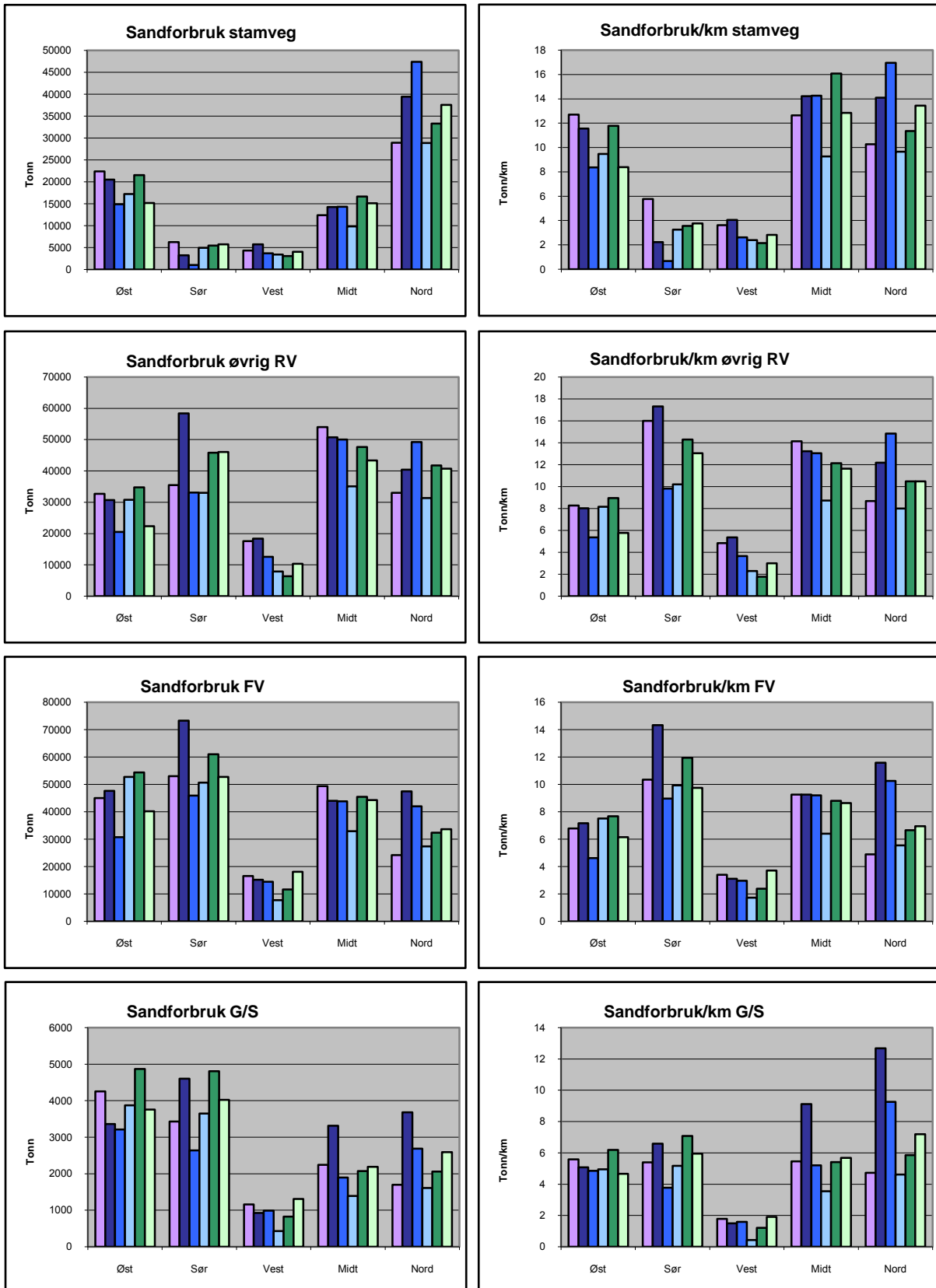


Sammenlikning mellom Regioner

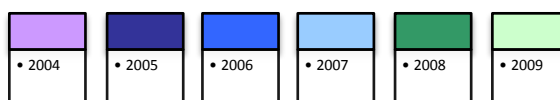
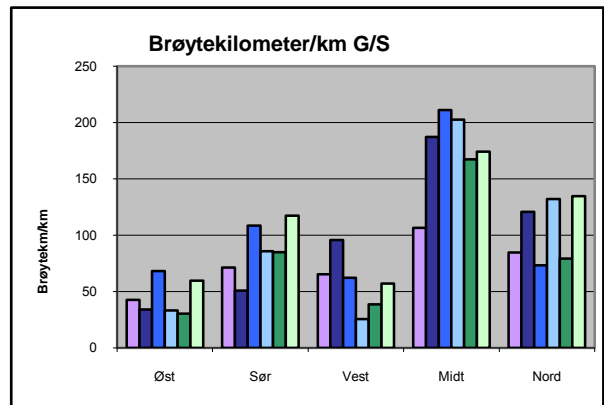
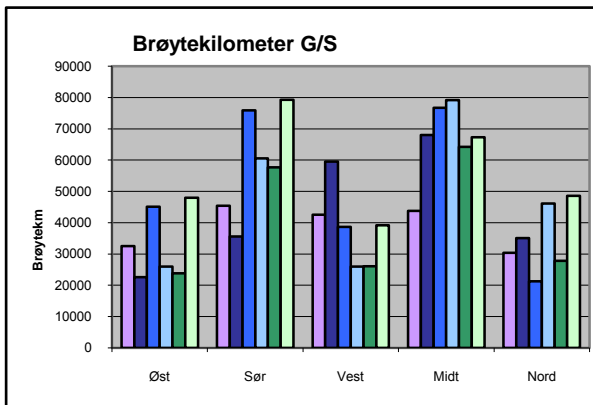
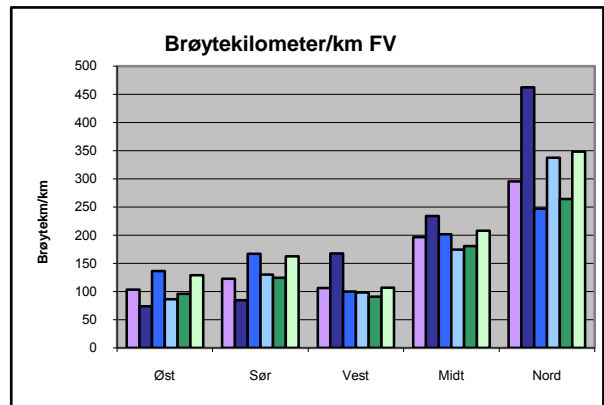
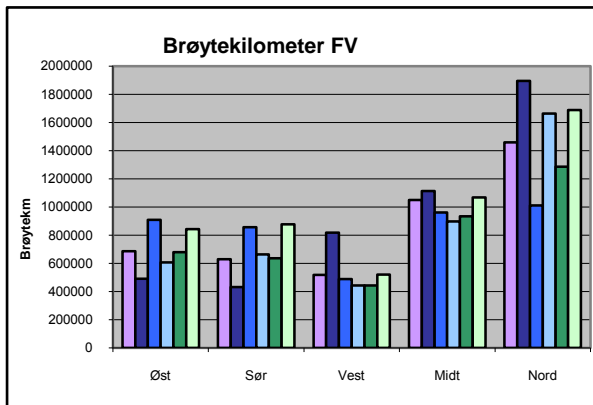
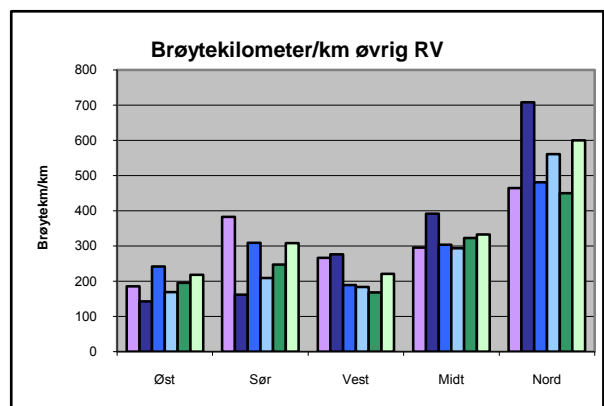
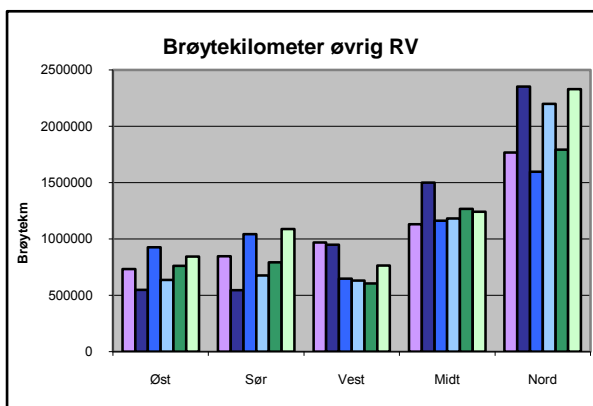
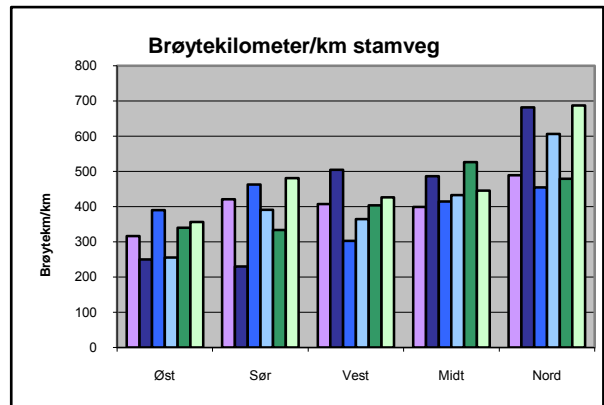
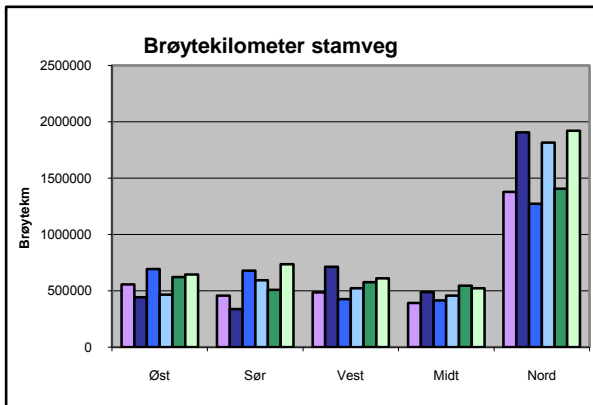
Saltforbruk på ulike vegkategorier per Region



Sandforbruk på ulike vegkategorier per Region

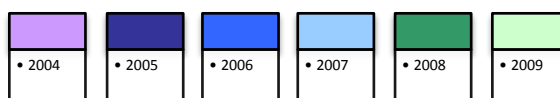
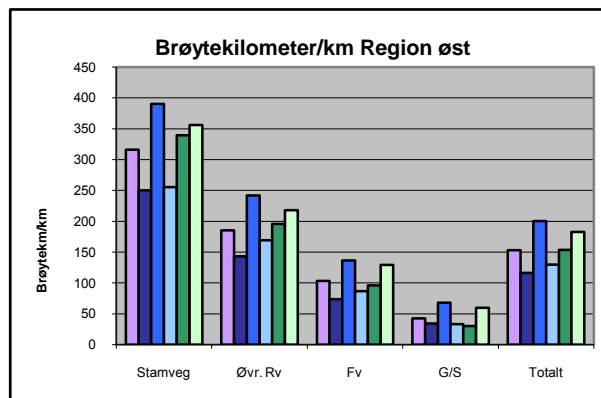
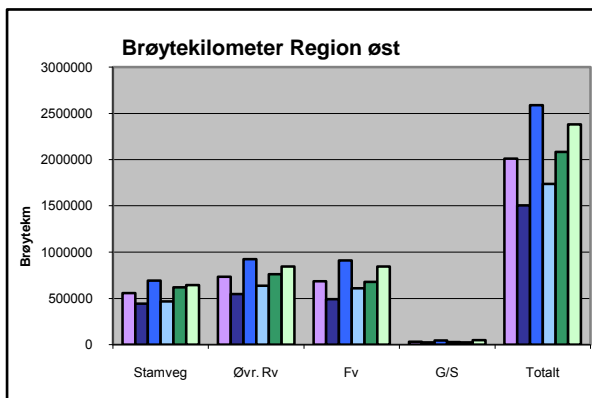
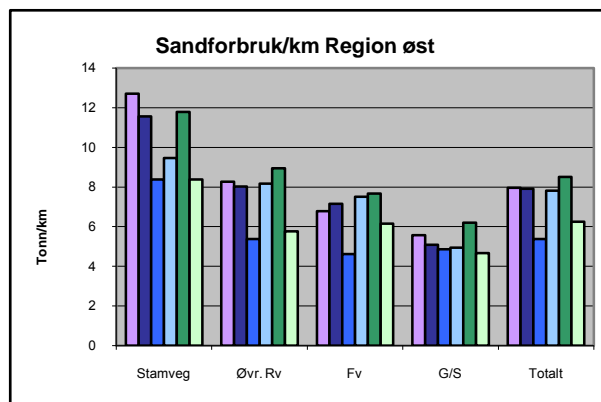
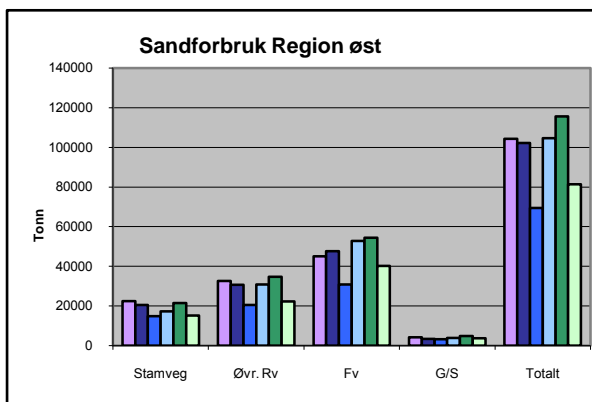
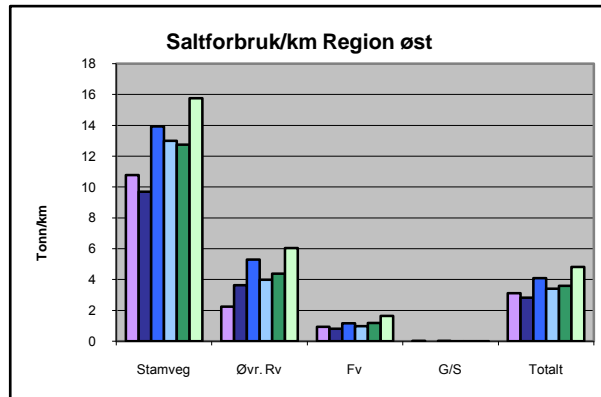
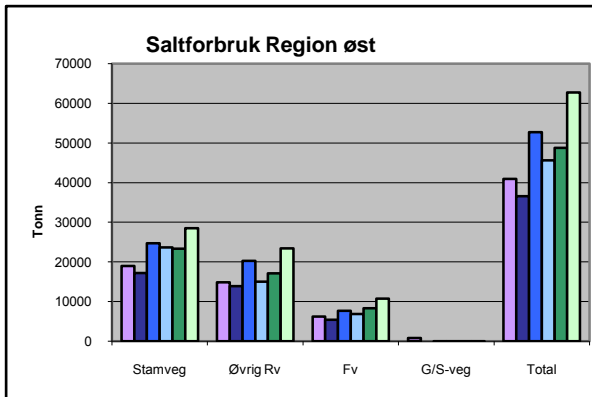


Brøytekilometer på ulike vegkategorier per Region

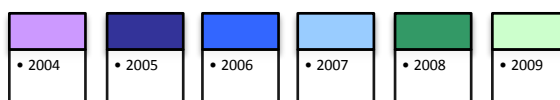
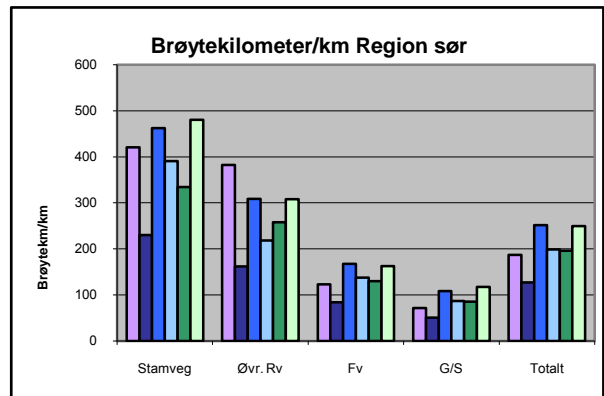
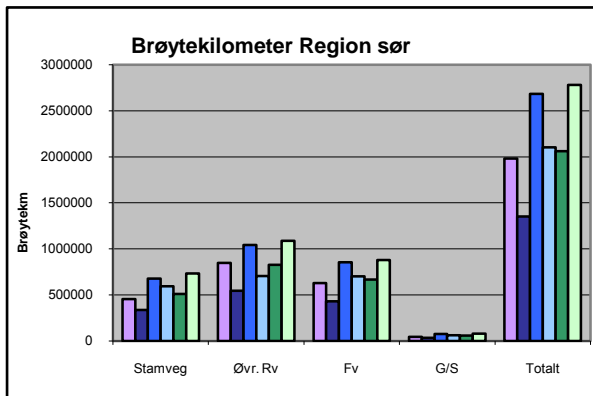
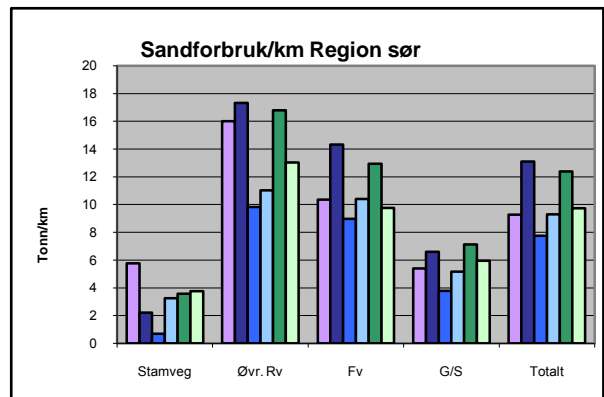
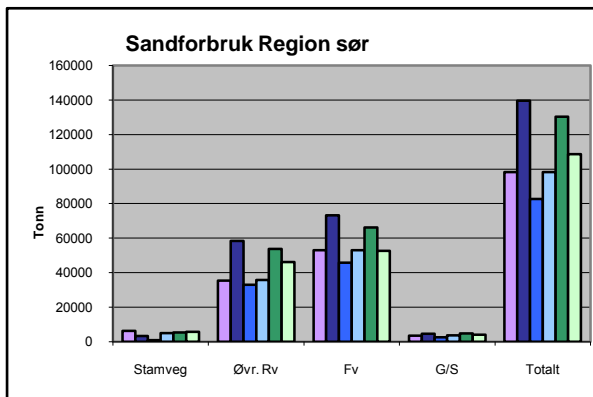
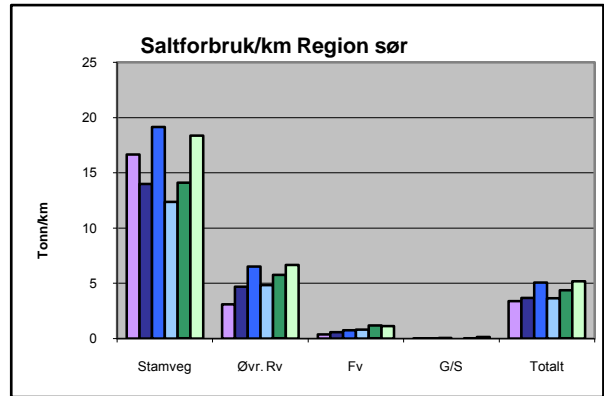
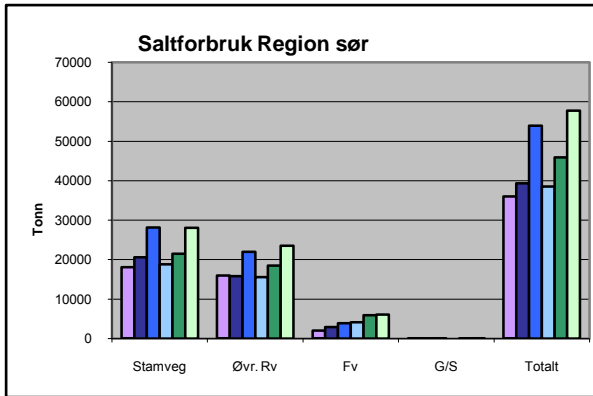


Mengde fordelt på region

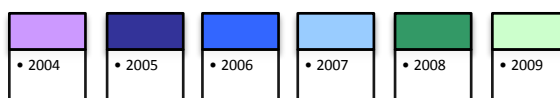
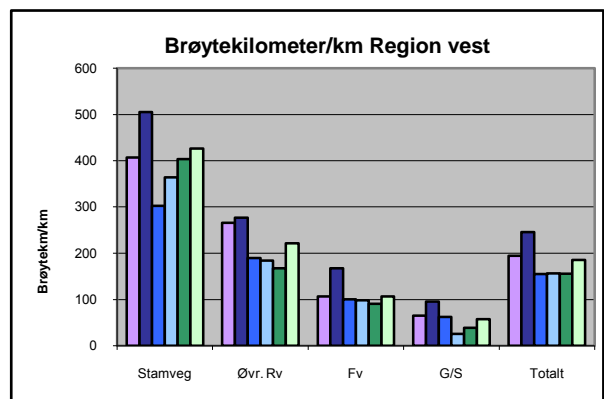
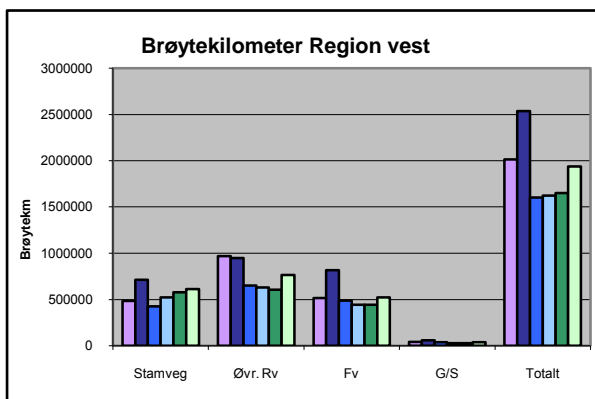
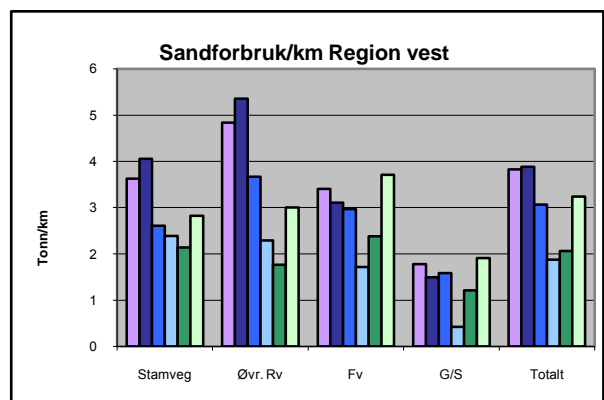
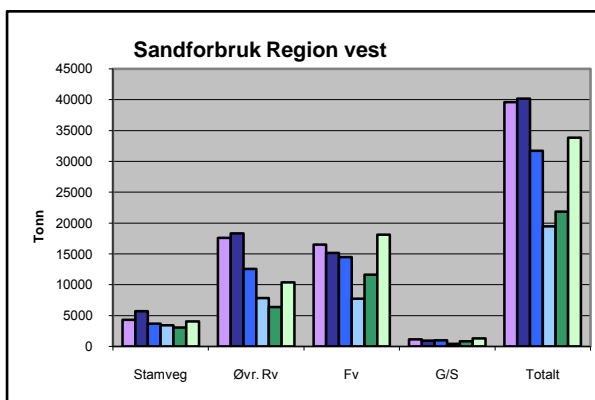
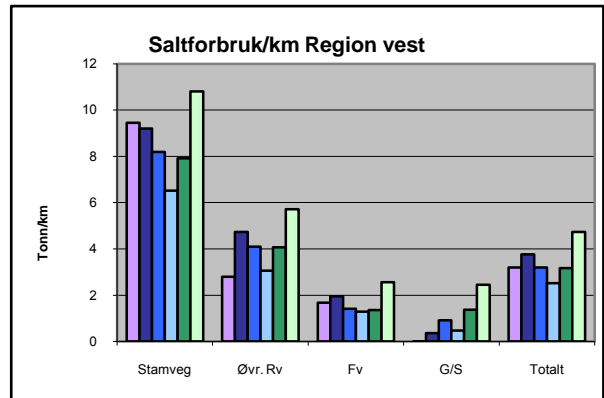
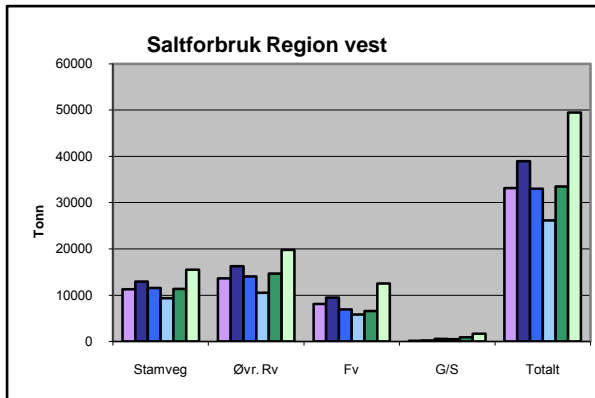
Mengde per vegkategori Region øst



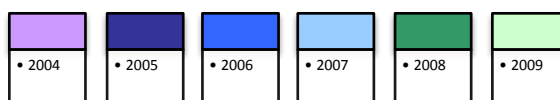
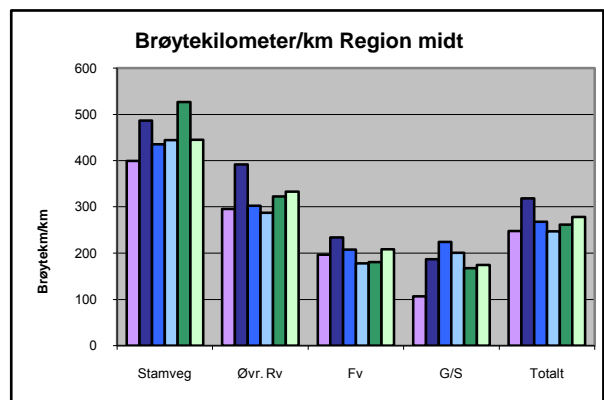
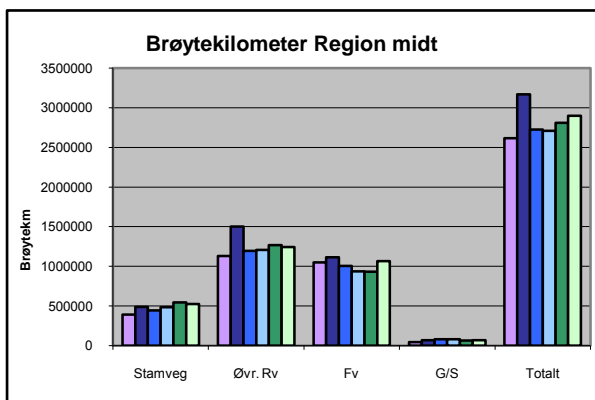
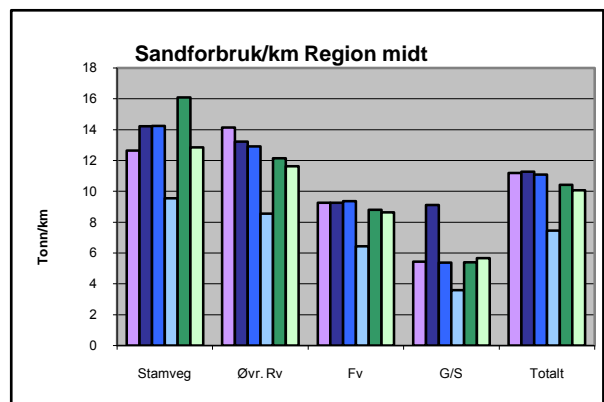
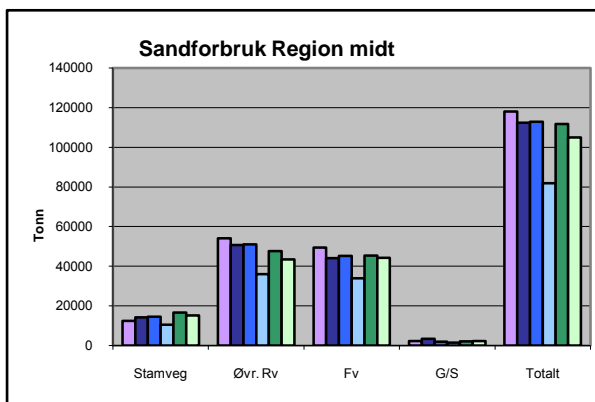
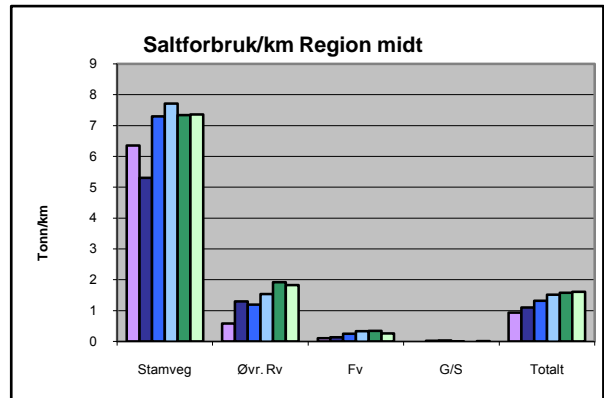
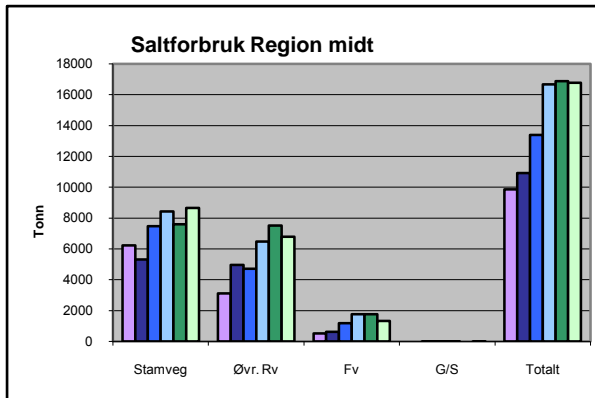
Mengde per vegkategori Region sør



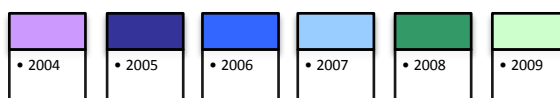
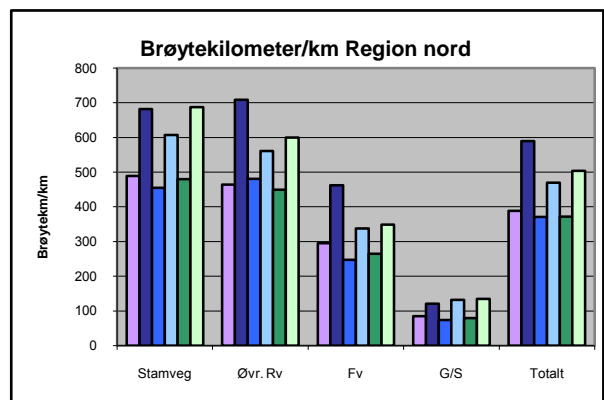
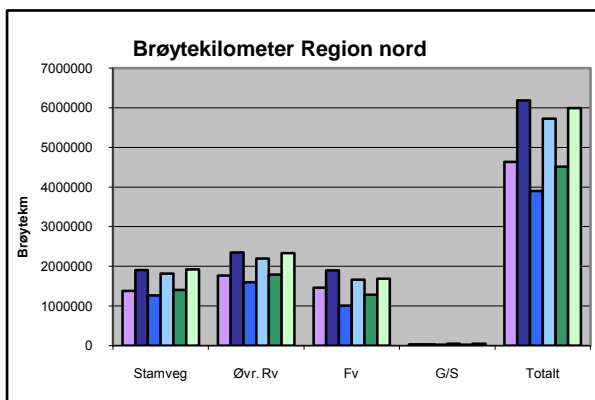
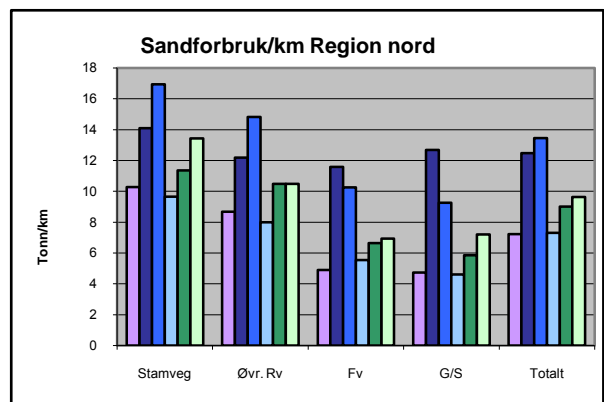
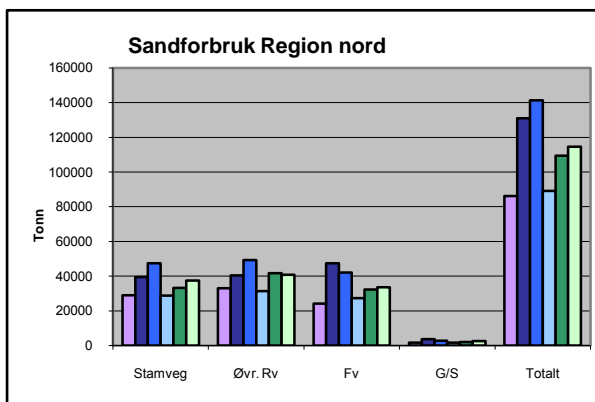
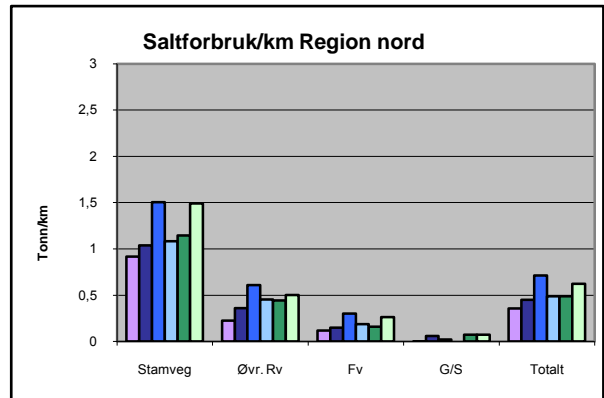
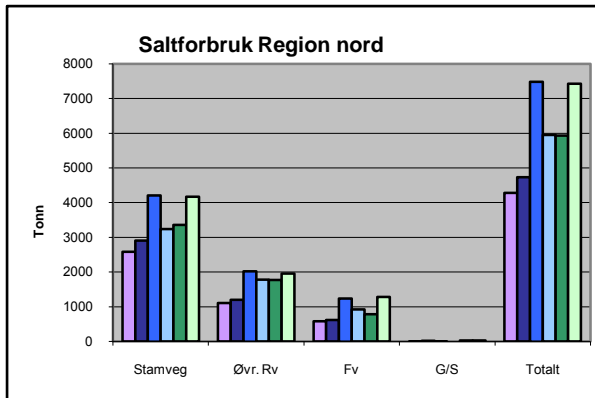
Mengde per vegkategori Region vest



Mengde per vegkategori Region midt



Mengde per vegkategori Region nord



Tabell

| Region | | Øst | Sør | Vest | Midt | Nord | Total |
|--|-------------------------|---------|---------|---------|---------|---------|---------------|
| | | Tonn | Tonn | Tonn | Tonn | Tonn | Tonn |
| Salting. Forbruk av salt på vegger med strategi bar veg | Sum stamveg | 26717 | 26659 | 11974 | 6463 | 800 | 72613 |
| | Sum øvrig Rv | 21406 | 17327 | 10809 | 2201 | 0 | 51742 |
| | G/S-veg | 1 | 11 | 582 | 0 | 0 | 594 |
| | Sum Fv | 8179 | 4065 | 6379 | 121 | 0 | 18744 |
| | Totalt: | 56303 | 48062 | 29744 | 8785 | 800 | 143694 |
| Salting. Forbruk av salt på vegger med strategi vinterveg | Sum stamveg | 1825 | 1403 | 3522 | 2187 | 3367 | 12305 |
| | Sum øvrig Rv | 1993 | 6189 | 8959 | 4599 | 1953 | 23694 |
| | G/S-veg | 4 | 84 | 1092 | 5 | 27 | 1212 |
| | Sum Fv | 2600 | 1982 | 6150 | 1208 | 1281 | 13222 |
| | Totalt: | 6423 | 9657 | 19724 | 7999 | 6629 | 50432 |
| Salting. Totalt saltforbruk | Sum stamveg | 28542 | 28061 | 15497 | 8651 | 4167 | 84918 |
| | Sum øvrig Rv | 23399 | 23516 | 19768 | 6800 | 1953 | 75436 |
| | G/S-veg | 5 | 96 | 1674 | 5 | 27 | 1807 |
| | Sum Fv | 10780 | 6047 | 12529 | 1328 | 1281 | 31966 |
| | Totalt | 62726 | 57719 | 49468 | 16783 | 7429 | 194126 |
| Saltforbruk per km | Barveg | 15 | 15 | 15 | 15 | 2 | 14 |
| | Vinterveg | 0,7 | 1,2 | 2,3 | 0,8 | 0,6 | 1,1 |
| Salt, inkludert salt i strøsand | Totalt: | 63735 | 58394 | 50488 | 17934 | 9619 | 200168 |
| Fordeling på ulike saltingsmetoder | Tørr salt | 24461 | 29120 | 12666 | 2848 | 2051 | 71146 |
| | Befuktet salt | 17100 | 19822 | 24976 | 9023 | 3178 | 74099 |
| | Slurry | 1129 | 4180 | 3803 | 4161 | 1228 | 14500 |
| | Saltløsning | 3562 | 3863 | 8017 | 653 | 974 | 17069 |
| | Totalt | 46252 | 56985 | 49462 | 16684 | 7431 | 176814 |
| Bruk av andre typer kjemikalier for å oppnå friksjon eller støvdemping om vinteren | Magnesiumklorid | 2007 | 67 | 8 | 132 | 2 | 2216 |
| | Annet, beskriv | 60 | 0 | 0 | 0 | 0 | 60 |
| | Annet, beskriv | 0 | 0 | 0 | 0 | 0 | 0 |
| | Totalt: | 2068 | 67 | 8 | 132 | 2 | 2276 |
| Sanding. Forbruk av sand uten saltinnblanding | Sum stamveg | 7387 | 2774 | 2903 | 6623 | 1188 | 20875 |
| | Sum øvrig Rv | 9196 | 38654 | 4883 | 17437 | 3872 | 74041 |
| | G/S-veg | 2690 | 3240 | 741 | 1072 | 201 | 7943 |
| | Sum Fv | 19412 | 40683 | 6110 | 17046 | 4289 | 87540 |
| | Totalt: | 38686 | 85349 | 14637 | 42178 | 9550 | 190400 |
| Sanding. Forbruk av saltblandet sand | Sum stamveg | 7803 | 2978 | 1144 | 8475 | 36364 | 56764 |
| | Sum øvrig Rv | 13120 | 7422 | 5494 | 25926 | 36836 | 88799 |
| | G/S-veg | 1064 | 781 | 567 | 1118 | 2393 | 5922 |
| | Sum Fv | 20774 | 12027 | 11993 | 27220 | 29377 | 101392 |
| | Totalt: | 42761 | 23207 | 19198 | 62739 | 104971 | 252877 |
| Sanding. Forbruk av salt i strøsand | Totalt: | 1009 | 674 | 1019 | 1151 | 2190 | 6043 |
| Sanding. Totalt sandforbruk | Sum stamveg | 15191 | 5751 | 4047 | 15098 | 37552 | 77639 |
| | Sum øvrig Rv | 22316 | 46076 | 10377 | 43363 | 40708 | 162840 |
| | G/S-veg | 3754 | 4020 | 1308 | 2189 | 2594 | 13865 |
| | Sum Fv | 40186 | 52709 | 18104 | 44267 | 33666 | 188932 |
| | Totalt: | 81447 | 108556 | 33835 | 104917 | 114520 | 443276 |
| Brøytekilometer | Sum stamveg | 645247 | 734811 | 611076 | 523176 | 1919438 | 4433748 |
| | Sum øvrig Rv | 843245 | 1089364 | 765445 | 1241360 | 2330106 | 6269519 |
| | G/S-veg | 47962 | 79309 | 39126 | 67254 | 48558 | 282209 |
| | Sum Fv | 842834 | 877887 | 520930 | 1067457 | 1689242 | 4998350 |
| | Totalt: | 2379288 | 2781370 | 1936577 | 2899247 | 5987344 | 15983826 |
| Veglengder | Stamveg total | 1812 | 1529 | 1434 | 1175 | 2794 | 8744 |
| | Stamveg barveg | 1115 | 1258 | 699 | 409 | 273 | 3754 |
| | Stamveg vinterveg | 697 | 271 | 735 | 766 | 2521 | 4989 |
| | Øvrig riksveg total | 3868 | 3535 | 3458 | 3729 | 3883 | 18473 |
| | Øvrig riksveg bar veg | 1747 | 1397 | 743 | 151 | 101 | 4139 |
| | Øvrig riksveg vinterveg | 1732 | 2138 | 2716 | 3577 | 3765 | 13927 |
| | G/S-veg | 806 | 676 | 685 | 386 | 360 | 2913 |
| | Fylkesveg total | 6534 | 5406 | 4881 | 5128 | 4849 | 26798 |
| | Fylkesveg barveg | 837 | 544 | 603 | 26 | 11 | 2021 |
| | Fylkesveg vinterveg | 5698 | 4862 | 4277 | 5101 | 4836 | 24774 |
| | Total veglengde | 13020 | 11145 | 10458 | 10417 | 11886 | 56927 |



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