National Report – EUREF 2005

Denmark

Per Knudsen, DNSC Lola Bahl, KMS



DANISH MINISTRY OF THE ENVIRONMENT

Main Event

On 1-1-2005 the research in Geodesy was moved from the National Survey and Cadastre (KMS) to the Danish National Space Center (DNSC)



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Tasks

Danish National Space Center (DNSC):

- Research in Geodesy
- International collaboration
- Support international infrastructure
- Introduce international references nationally

National Survey and Cadastre (KMS):

- Adopt standards
- National reference systems and networks
 - Densification, development, standardisation
- Implementation in the society
- National Infrastructure



Permanent Reference Stations

Stations in Denmark:	Contributes to:
BUDP	EPN
SULD	EPN, ECGN
SMID	EPN, ECGN
GEDS (new)	ESEAS
ESBH (new)	ESEAS
ESBC (new)	ESEAS
HNST (new)	ESEAS

Stations in Greenland: THU2 THU3 QAQ1 SCOR (Up-graded)

Contributes to:

IGS (Glonass) IGS, EPN IGS, EPN, ECGN



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Status for implementation of ETRS89 and New height system in Denmark



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Recommendation

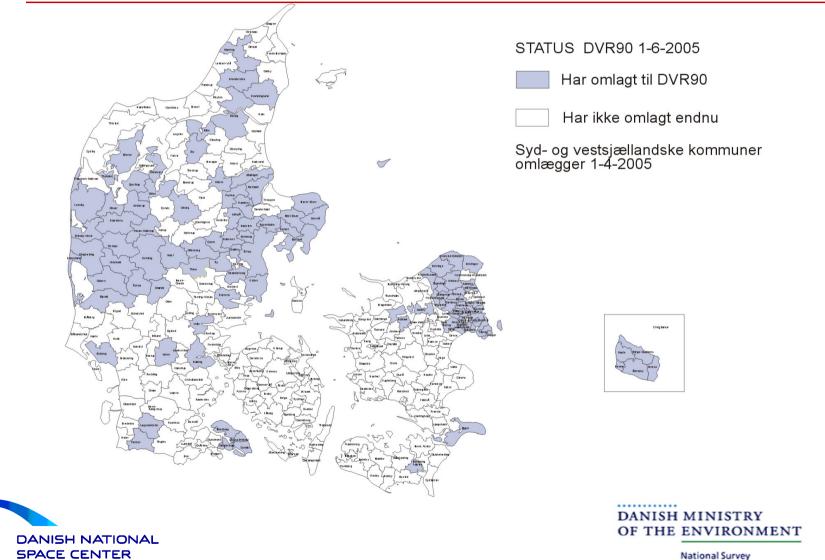
- KMS (NMCA-DK) *recommends* to users to transform geographical data to UTM32/EUREF89 (=ETRS89).
- and to the new height system Danish Vertical Reference 1990 (DVR90)

→ KMS provides transformation soft ware packages – free of charge



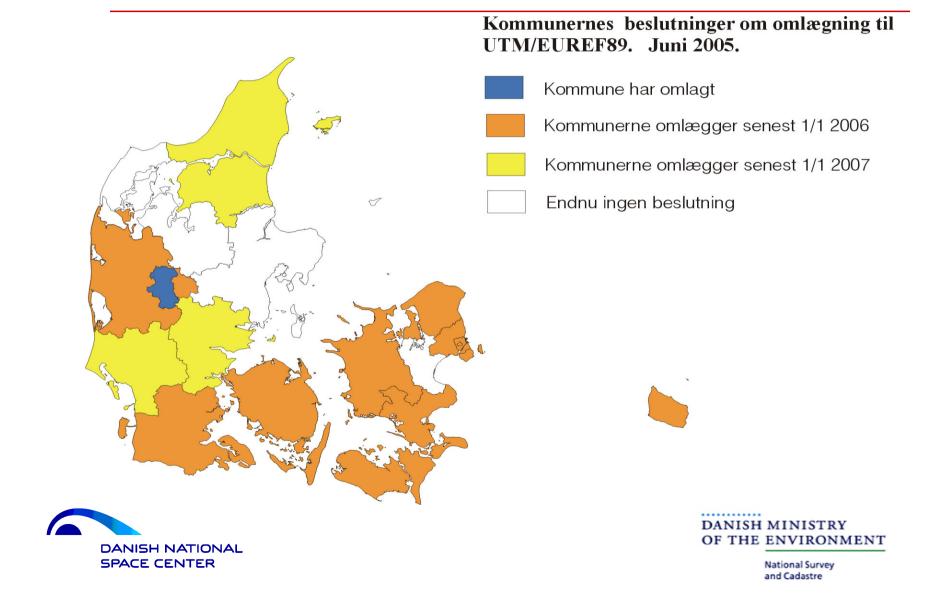
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Status for transformation to DVR90



and Cadastre

Status, transformation to UTM/ETRS89



The aim....

- A guess is that Denmark fully has implemented EUREF89 in almost all geo-related data in 2007/2008.
 - Governmental data
 - Council
 - Municipality
 - Private



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UTM/EUREF89 is already implemented

- Ministry of Environment and all institutions
- The Traffic Company of the Capital City
- The Coast administration
- **KMS** Topographical data base TOP10DK
- The 14 Counties (2004)
- Road Administration
- One municipality other will follow



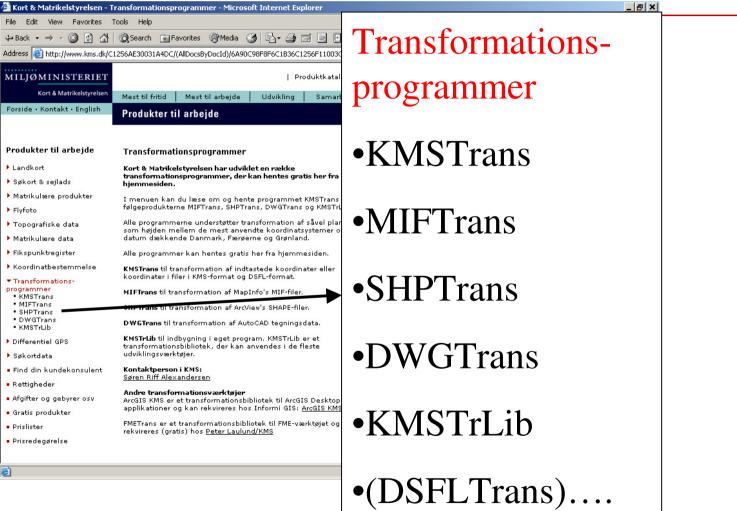
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Transformation soft ware

- In order to make the national implementation "easy" KMS has developed transformation procedures (dll's of 13th degree polynomial)
 - that can transform coordinates between the national reference systems and UTM/EUREF89
 - KMS has encouraged the GI system developers to implement these official transformation procedures
 - And they have done it $\ensuremath{\textcircled{\sc o}}$



Download free soft ware





OF THE ENVIRONMENT

National Survey and Cadastre

DANISH MINISTRY