

Instructions
for loading
the Middelfart image derived from TM data acquired on 3rd June 2004

Steps

- 1 Place the binary file into an appropriate directory. In ILWIS, use the **Navigator** to navigate to this directory. You will not see the name of the binary file, because it is not in a recognised ILWIS format.
- 2 **Import** using **General Raster**. Once the correct file has been located, the General Raster page displays. Header size is zero, 3 bands, 1247 columns, Byte pixel structure, BSQ format and convert to ILWIS data format. Press **Okay**. In the directory will appear a three layered coloured grid. This is a *maplist*.
- 3 Display the image. Double click on the *maplist* symbol and a panel will appear listing three layer images. Above these is a Television screen; click it and another panel will appear. Change Middelfart3 to the blue band and Middelfart1 to the red band and press **Okay**. The false colour image will appear.
- 4 The watercourse in the centre of the image is Lillebaelt, between the island of Fyn to the east and Jutland to the west. The old bridge, containing both rail and roadways, is to the south and the new road bridge is to the north. The old bridge connects directly to Middelfart, the town on Fyn, between the bridges and the roads coming from them. On Jutland, at the northern part of the image, is the city of Fredericia, with its harbour area and the old defensive works still obvious. Between the City of Fredericia and its southern extension is a forest area, just as there are forest areas to the west and north of Middelfart on Fyn. The commercial and industrial areas of Middelfart and Fredericia are intense cyan colour, whilst residential areas contain some red. Most of the remainder of the area is given over to agriculture, with fields of various crops obvious on the image as shades of red and bare soil areas in cyan. The motorway crossing the Lillebaelt on the new bridge connects Copenhagen to the east, with Jutland to the west, Europe to the south and Norway to the north. To the west of the image this motorway divides into two, one route going north and the other going south.
- 5 Create Training areas for the classification. Using the image window **File Menu, Create a Sample Set**. A small panel opens, containing our *maplist*. Give a name for the sample set, and create a domain by pressing the **Create Domain** button. A **Create Domain Panel** opens. Specify a **Domain Name**, set **Type Class** and enter a description. Press **Okay**. A new panel, for the **Domain Editor** appears. In this panel, click the **Add Item** button, a palette with a cross, give a name, code and a description, using the ones given in the table below. After each entry is made, that entry will appear in the panel.

Class Name	Code	Description
Water	A	All water areas
Bare Surfaces	B	All bare surfaces including soil and hard standing
Commercial	C	Commercial/Industrial areas
Forest	D	Areas of predominantly forest cover
Crop(Rape)	H	Fields of Rape
Crop(WW)	J	Winter Wheat fields
Crop(SB)	K	Spring Barley fields

- 6 When this panel is complete with the seven entries, then edit the colours associated with each class by pressing the **Open Representation** button, showing an artists palette. The seven

classes are depicted on the **Representation Class Panel** that appears. Use the slider bars to change the colour of the highlighted class and repeat for the other classes. Close this panel when complete, and the **Domain Class** panel. The domain name appears in the **Create Sample Set** panel. Click Okay on this panel.

- 7 The **Sample Set Editor** will automatically start, With two windows; a **Map Window** showing the image and a **Statistics Window** showing sample set statistics, currently blank.
- 8 **Zoom in** on an area containing a sample area for one class, then press the **Normal** button to stop the zoom. Select the pixels by moving the cursor to a corner of the selected training area, pressing the left mouse button and dragging it to cover the area. When the mouse button is released, the statistics for this window will appear in the Current Selection table of the Statistics Window, and the sample area will be cross hatched. If it is not cross hatched, zoom in again and repeat the process until it does appear this way. Within the cross-hatched area. Click the right mouse button to reveal the context sensitive menu and select edit. A small window will appear; select the appropriate class and exit. The statistics will be merged with those already in the top window for this class. Add further training areas for this class, and then repeat the process for each other class.
- 9 **To classify**, close all of the windows, and from the **Catalog**, click the **Sample Set** symbol created with the right mouse button and select classify. The **Classify Dialog Box** appears. Select Minimum Distance or Maximum Likelihood Classifier as the classification method. Specify an output file name and initiate the classification. After a short period the classification will be displayed.