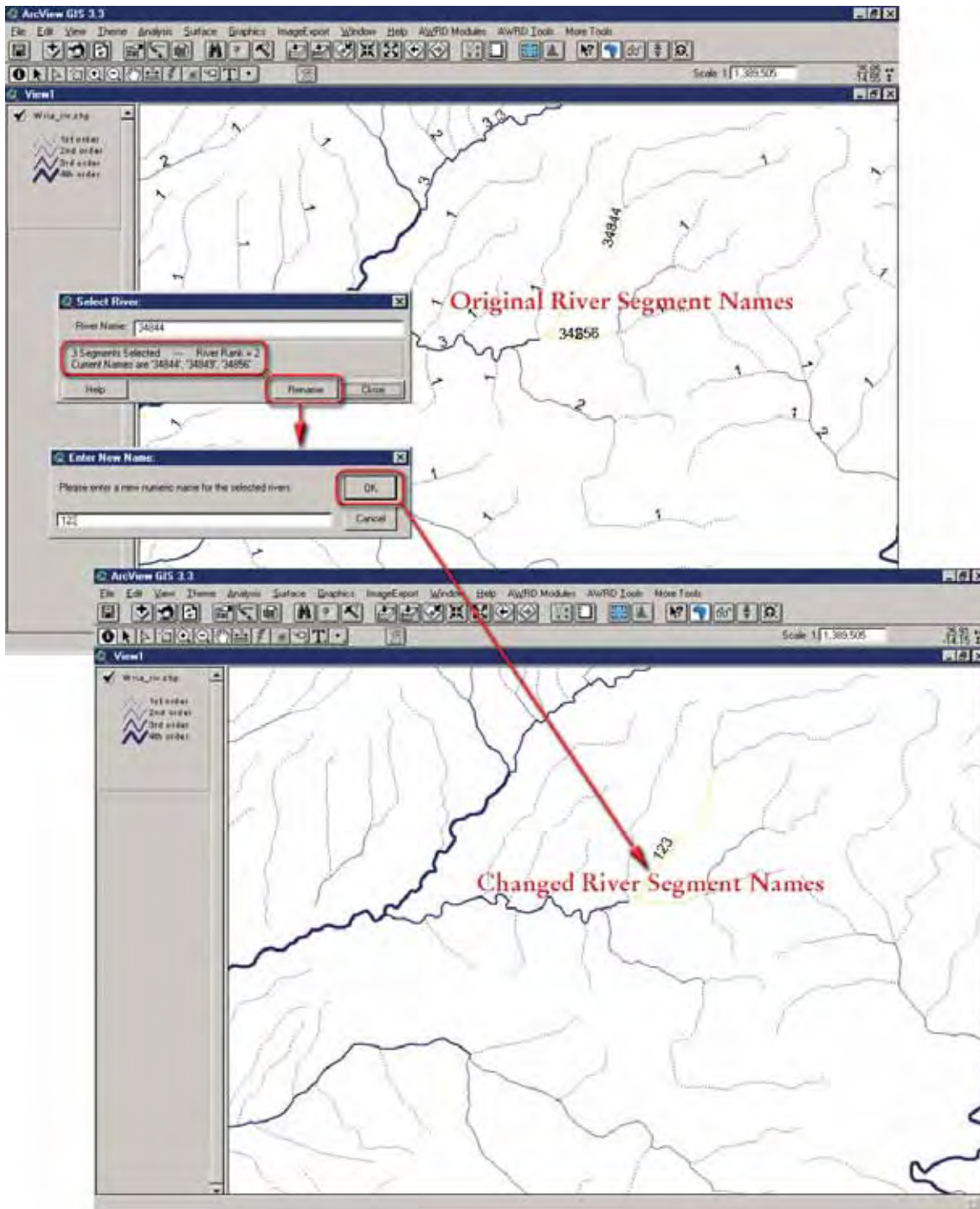


FIGURE 1.118  
Renaming the selected river segments



### Image Export and Base Mapping Extension tool

The Image Export and Base Mapping (IEBM) tool-set of the AWRD is comprised of a complex set of geo-referenced image output, View, and Layout manipulation tools accessible through a menu interface. The base mapping functions of the tool-set are designed around the production of A4/Letter size page outputs, which – as determined by ArcView – are the largest outputs possible for publication quality graphics ranging from 300–600 dots-per-inch (DPI) using the tool.

The extension is centred around an ArcView scripting command named PixMap. The PixMap function provides the only method for producing output graphics which most faithfully reproduce the feature encoding and any complex polygon hatching, including semi-transparencies, designed by users to represent their data on Views and Layouts. Unfortunately, PixMap is not without its quirks and limitations.

The foremost limitations of the command are: the inability to export text/graphics placed on a View, so a layout is required; and, the need to scale the source View/Layout to its full pixel extents on the screen for outputs. In regards to size, PixMap has limitations closely matching the native ArcView export functions.

Outweighing these limitations are the faithful 24-bit reproduction of complex multi-layer polygon shading; the consistent export of geo-referenced images exactly matching the dimensions of views/layouts; and the almost complete control over the process – and therefore the outputs – that a user can achieve.

### Loading and unloading the Image Export and Base Mapping Extension

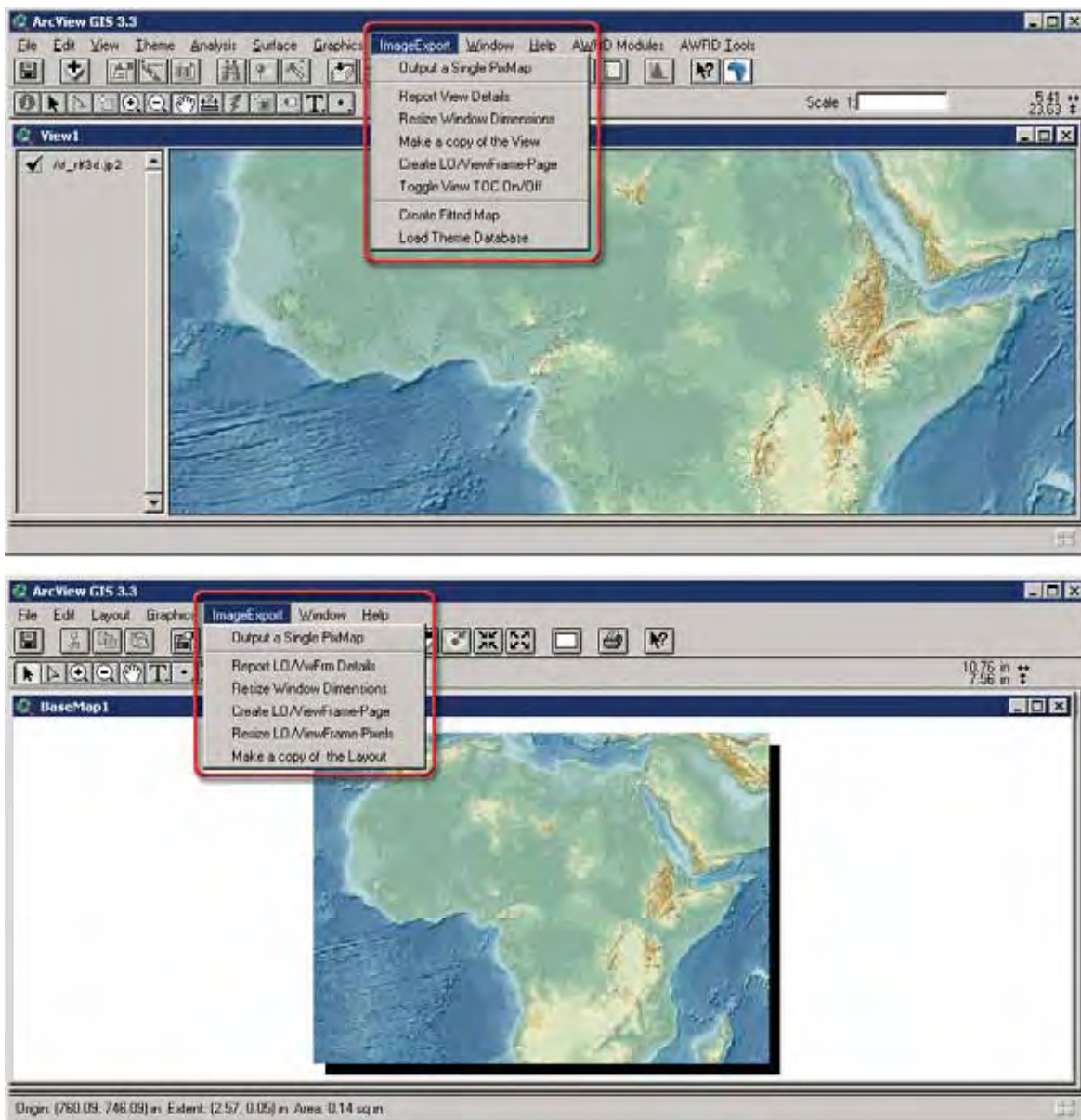
The IEBM extension will load automatically when the AWRD extension is loaded. Thereafter, the extension can be either loaded or unloaded by selecting the Image Export and Base Mapping options “Load Image Export and Base Mapping” or “Unload Image Export Base Mapping” from the AWRD Tools menu on any View.

When the extension is loaded, a new menu item (i.e. ImageExport) will be added to the main toolbar of both Views and Layouts in ArcView. The choices available to users from this new menu are fairly similar but will differ depending on whether a View or Layout is the source document (Table 1.31 and Figure 1.119).

TABLE 1.31  
Image Export and Base Mapping tools

IEBM Tool	View IEBM menu option	Layout IEBM menu option	Function
Outputting a Single PixMap	<i>“Output a Single PixMap”</i>	<i>“Output a Single PixMap”</i>	Output a geo-referenced image at user specified DPI
Reporting View/Layout Details-	<i>“Report View Details”</i>	<i>“Report Lo/VwFrm Details”</i>	Report the View Layout extents and projection parameters
Resizing Window Dimensions	<i>“Resize Window Dimensions”</i>	<i>“Resize Window Dimensions”</i>	Resize the window extent to exact pixel dimensions
Making a Copy of a View/ Layout	<i>“Make a copy of the View”</i>	<i>“Make a copy of the Layout”</i>	Create a copy of the source View or Layout
Creating Layout ViewFrame – Page	<i>“Create LO/ ViewFrame-Page”</i>	<i>“Create LO/ ViewFrame-Page”</i>	Create a Layout containing a ViewFrame fitting the exact dimension of the page size
Resizing Layout/ViewFrame – Pixels	N/A	<i>“Resize LO/ ViewFrame-Pixels”</i>	Resize the Layout extent to exact pixels dimensions
Toggling Table of Contents On/Off	<i>“Toggle TOC On/ Off”</i>	N/A	Set the View Table of Contents “On” or “Off”
Creating Fitted Map	<i>“Create Fitted Map”</i>	N/A	Based on View selection set, create a A4/Letter Layout with a fitted/ scaled ViewFrame
Importing Theme Database	<i>“Load Theme Database”</i>	N/A	Load precompiled theme sets into current/new View

FIGURE 1.119  
The IEBM tools for views (top) and for layouts (bottom)



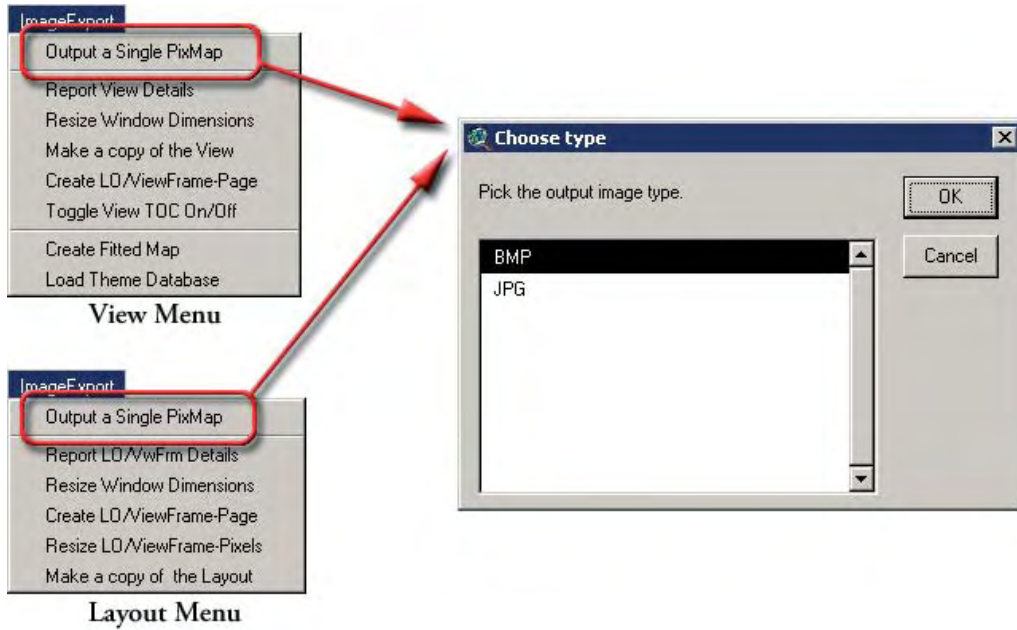
### Tools common between Views and Layouts

As can be seen from both the View and Layout “ImageExport” menu, in common are the ability to: Output an image; Report the View or Layout extents and projection parameters; Resize the window extent to exact pixel dimensions; Create a Copy of the source View or Layout; and Create a Layout containing a ViewFrame fitting the exact dimensions of the page size selected by the user. The operation of each of these tools may vary slightly based on whether the source is a View or Layout, and are detailed in the following sections.

#### Output an image

The “Output a Single PixMap” tool is accessible through the ImageExport menu option “*Output a Single PixMap*” available in both Views and Layouts. The function is fairly straightforward and will open with a prompt concerning whether the user wishes to output their image to either Bitmap or JPEG format (Figure 1.120).

FIGURE 1.120  
Choosing the image type




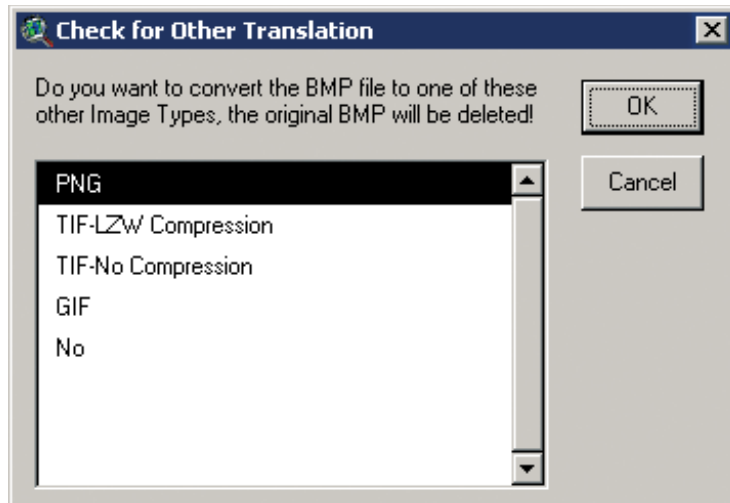
If the user installed the IrfanView  imaging software package contained in the DVD in the present publication, and the Bitmap option is selected, then the user will be prompted about whether they wish their final output to be in PNG, TIF, or GIF format, or left as a BMP (Figure 1.121). Additionally, when this software is installed, the DPI for any image output will be set into the image header for any images except the GIF format.

FIGURE 1.121  
Checking for other image format translation



The PNG format offers the highest loss-less public-domain compression ratio for image storage and exchange, the TIF format the widest pre-press publication quality standard, and GIF the de-facto Internet 8-bit image distribution format. Although BMP and uncompressed TIF formats can result in rather large image sizes, these formats and the JPEG format can be geo-referenced seamlessly back into ArcView using the WorldFile output with each image.

After selecting an image output format, the user is next prompted for a name and directory location to place the output image into. The interface defaults to the user's working directory for placing images and to a file name PxMap\_#, where the # is the next highest number of any existing file. The user will next be asked to specify an optional DPI for their output via a final prompt containing an estimate of the maximum DPI the interface can export the image at given the View or Layout size and the base system DPI. This number can range from a minimum of 50 dpi to a potential maximum of 1 270 dpi (Figure 1.122).-


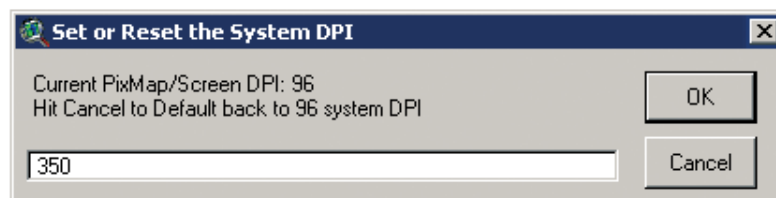
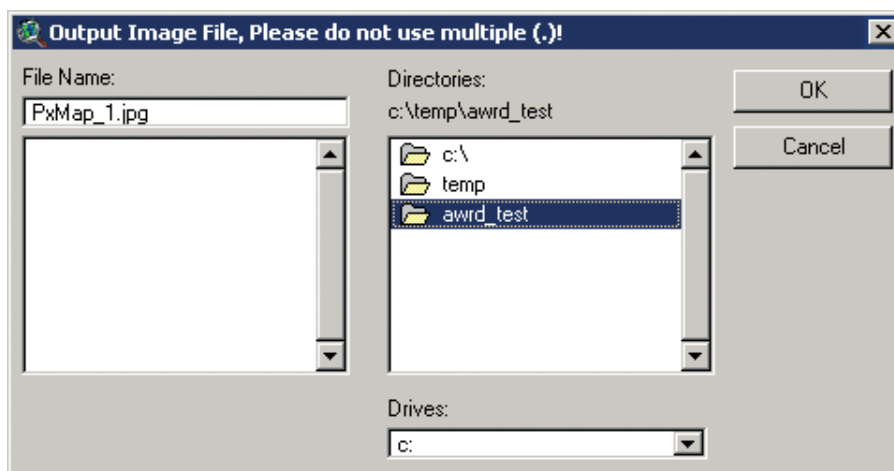
1. Click on the “Add Basemap Image to View” tool  to load one of the image backgrounds (e.g. “africa\_background\_2.tif”) from the “Ancillary Image and Map Graphic” database component folder.
2. From the Top ArcView menu bar Select “Image Export” then “Output a Single PixMap”
3. Pick the output image type (e.g. BMP).
4. Write the file name and save in working directory (e.g. “c:\temp”)
5. Set the System DPI (e.g. 500); see Figure 1.122.

FIGURE 1.122  
Selecting the name and directory location for the image



The true maximum allowable DPI is dependant on the user's system display parameters. The tool is written with error-checking routines that should prevent users from encountering any unexpected crashes during the process. However, if a “BackingStore” error is encountered, users should make note of the DPI and estimated size of the attempted output and exit ArcView immediately WITHOUT saving their project. Testing of the tool may be required to establish the safe maximums for the export of both views and layouts on the user's own systems.

In regards to guidelines for the output of images, users should consider that: the default system DPI, or 150 dpi, will in most cases be suitable for presentation quality outputs; a range from 200–450 dpi will be suitable for most publication quality requirements. It is rarely necessary to use the maximum allowable DPI setting.

Additionally, testing has shown that the size of fonts, and perhaps other desktop settings or the version of the Windows OS, will influence estimates of the number of pixels and the measured extents reported via the tool-set. However, this and other testing do seem to indicate that users will need to establish and possibly adjust for any mis-reporting based on their own systems to achieve the exact results expected. Users should consider the output of test images first with only a minimum number of themes visible in the source view(s) to establish a range of DPIs which can be successfully output and any pixel adjustments need for the tool before proceeding with final outputs.

The chief difference between the View and Layout versions of this tool is that while Views are singular objects with a defined extent, scale, list of themes, etc., layouts can be quite complex containing multiple ViewFrames, i.e. depictions of maps based on different Views, and other map or poster elements such as: text, pictures, scale bars, and so forth.

**View version**


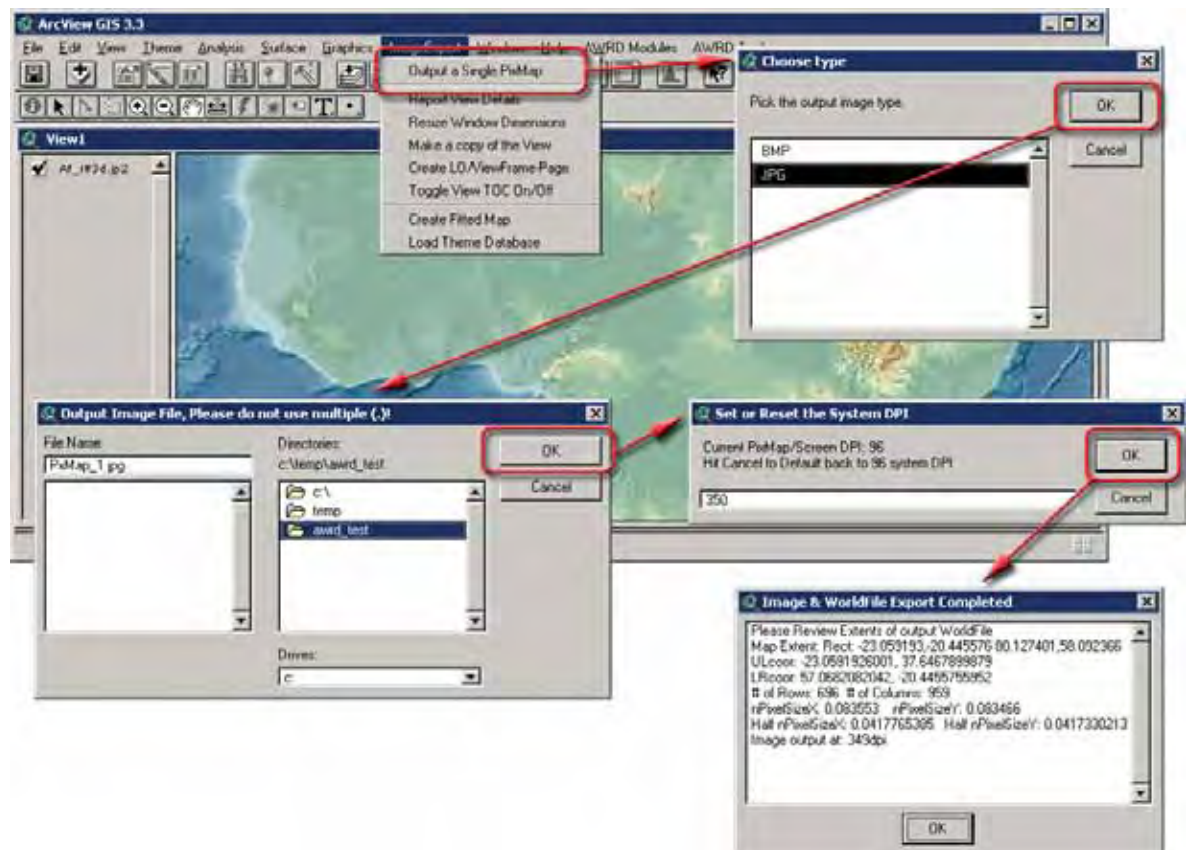
1. Click on the “Add Basemap Image to View” tool  to load one of the image backgrounds (e.g. “af\_rlf3d.jp2”) from the image database component folder.
2. From the ArcView menu bar, select “Image Export” and then “Output a Single PixMap”.
3. Pick the output image type (e.g. BMP).
4. Write the file name and save in working directory (e.g. “c:\temp”).
5. Upon completion the tool will generate a report notifying the user that a valid WorldFile (Figure 1.123).

FIGURE 1.123  
Output reports from the export of Views



### Layout version

1. Click on the “Data Inventory” button Data Inventory to load a background image; a SWB dataset; and a watersheds dataset (e.g. vrtl\_map.sid; vmap\_pt.shp and Alcomwwf.shp) from the relevant database component folders installed in your hard-drive: “c:\wrd\data\”.
2. Select “Layouts” from the ArcView menu bar at the left.
3. From the Top ArcView menu bar Select “Image Export” then “Output a Single PixMap”.
4. Pick the output image type (e.g. BMP).
5. Write the file name and save in working directory (e.g. “c:\temp”).
6. Select ViewFrame1.
7. Select “Page Size as the Baseline to use for export (Figure 1.124).

FIGURE 1.124  
Prompts and output reports from the Image Export tool in Layout mode

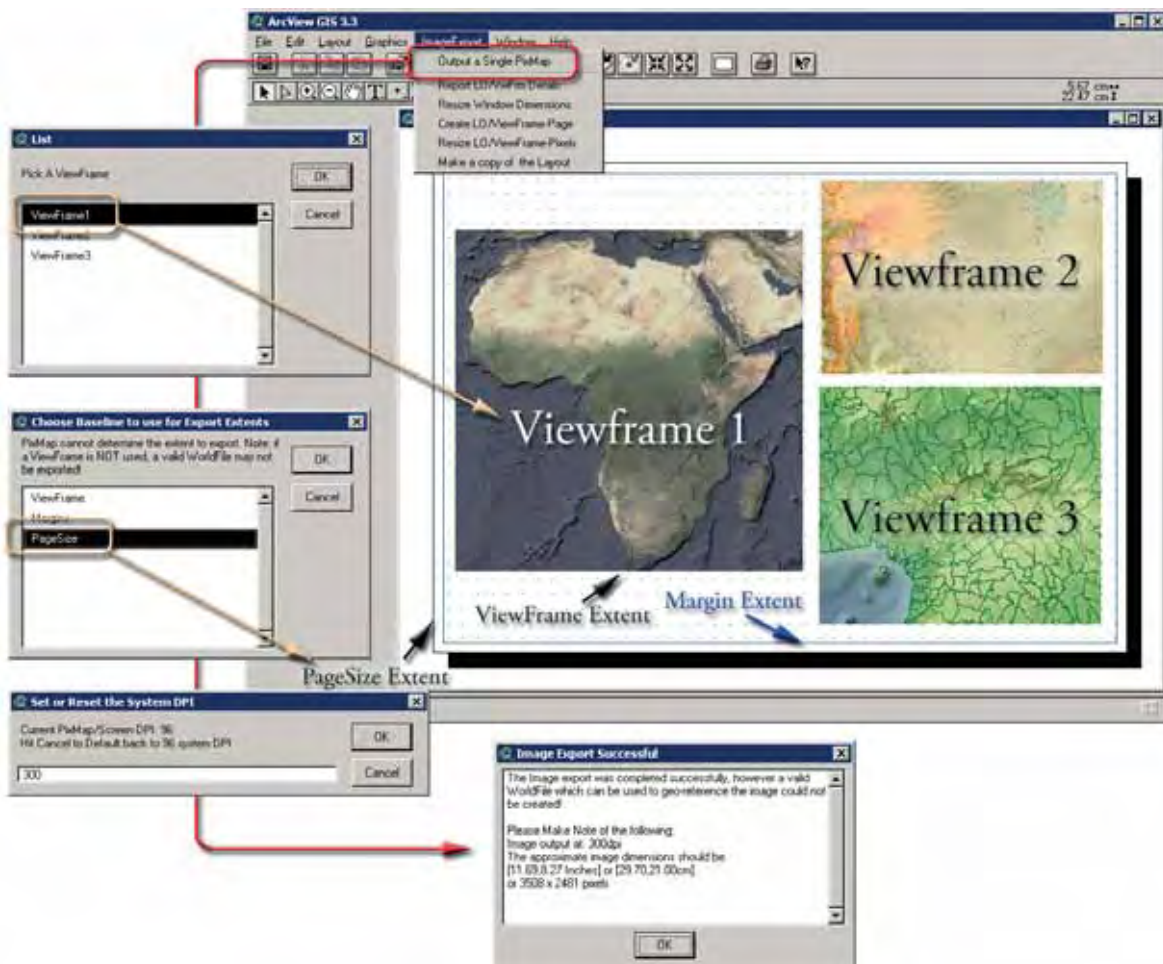


Figure 1.124 demonstrates how to export an image of a complex layout containing three ViewFrames. Since the PageSize is used as the export extent, rather than one of the ViewFrames, the tool will export the image without attempting to georeference it. Upon completion, the tool will generate a report with the DPI resolution of the output image, an estimate of the extent of the image in inches and centimetres, and a note that a valid WorldFile could not be created and that therefore the image was not georeferenced,

If the output was not created successfully, this will also be reported to the user. In these cases, particularly if a DPI other than the system default was attempted, the user should set the DPI well below the maximum listed in the prompt and try again.

In cases where the image output will be based on a ViewFrame from a Layout or a View, then the user be advised at the end of the process whether the output was successful and if a valid WorldFile could be created (Figure 1.125).

FIGURE 1.125  
Sample Report for a successful output with accompanying WorldFile





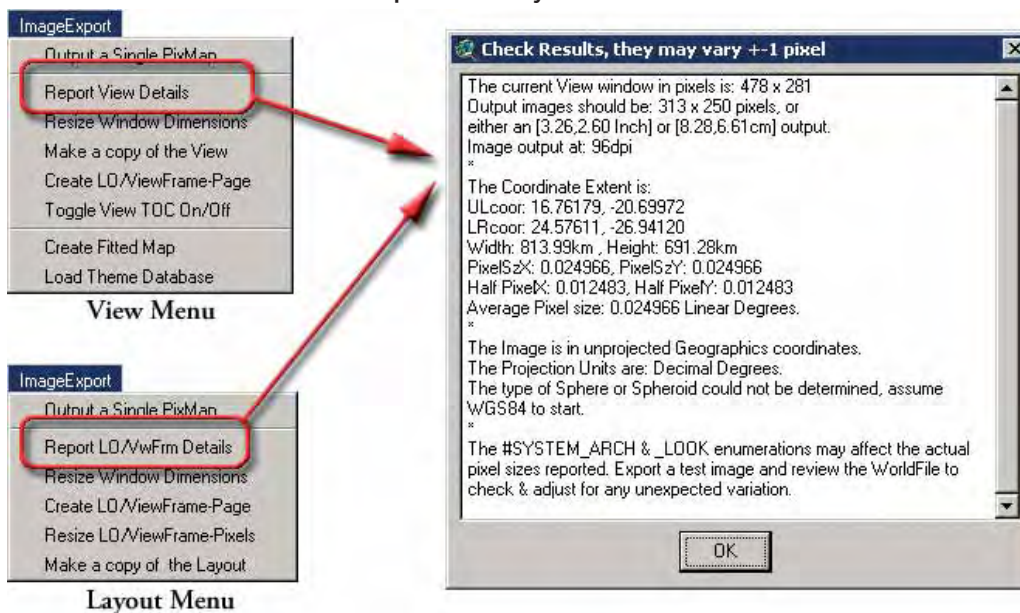
A number of checks are built into the tool-set to inform users of potential problems which might arise during the output of an image.

**Note** If the WinXP “smooth fonts effect” is turned on, then text exported as integral to a View or LO will also be “smoothed”. The unfortunate effect of this is that the text on the graphics will be degraded somewhat similar to what generally happens to text and linear features under Jpeg. Unfortunately, with this effect turned on in WinXP, this will also now happen to BMP’s, TIFFs, PNGs and GIFs. To solve this problem, use a Right Mouse-Click on an open area of your screen, select “Properties” from the resulting Menu Pop-Up, then use a Left Mouse-Click on the “Effects” Tab of the Display Properties dialog and in the resulting window make sure the Check-Box for “Smooth edges of screen fonts:” is NOT checked. Any graphics exported will now have the text clean and clear subject to the DPI chosen for the export. Use the same method to reset WinXP’s display parameters after completing your exports.

### Report the View or Layout extents and projection parameters

The “Report View and/or Layout Details” tools are simple tools providing a wealth of information to users about the current source document and any potential outputs based on this source. They can be accessed via the menu options “*Report View Details*” and “*Report LO/VwFrm Details*” on Views and Layouts respectively (Figure 1.126).

FIGURE 1.126  
The Report View/Layout Details tools



Because the View is an effective container for the “map”, the estimates reported – including any adjustments required based on the user’s desktop settings – should be valid within  $\pm$  one pixel when the default system DPI is used for an export. Table 1.32 presents a cross-tabulation table to assist users in estimating output pixel sizes based on pre-set DPIs. For Views, the “Resize Window Dimensions” tool can also be used in conjunction with this tool to adjust any outputs to a fixed pixel size and DPI recursively.

The “Resize LO/ViewFrame-Pixels” tool provides the same functionality for layouts. The main difference between the reporting of parameters for Views and

Layouts is that multiple ViewFrames can exist in a Layout. In regards to the reporting for a Layout, this will influence the report in two ways. First, the page size and margin extents can differ widely from those of any individual ViewFrame(s). Second, the tool needs to look behind the ViewFrame at the source View in order to report any geo-referencing parameters.

Additionally, the source Layout must contain at least one ViewFrame linked to a view to enable the export and reporting functions. In cases where a single ViewFrame has been fit exactly to the PageSize/Margins using the other IEBM tools, the reporting will closely match that reported for views.

**Estimating output pixel sizes**

Table 1.32 provides a quick reference that can be used to determine either potential window or output image sizes before users employ selected tools of the Image Export and Base Mapping extension. The table uses a simple formula based on dividing the Output DPI values in the left most column by those for the current system DPI across the top.

Based on this table, if the user’s default system DPI is 96, and they have a layout with the dimensions of 500 x 700, and wanted to output this image at 300 dpi, the user needs only to find the intersection of the column labelled 96 and the row labelled 300 to identify a multiplier of 1.125. Then, using this multiplier, determine an expected output of 500\*3.125 and 700\*3.125 to determine an approximate output pixel extent of 1563 x 2188. Again, testing will likely be required to account for specific Windows OS desktop settings.

TABLE 1.32  
Estimating the output pixel sizes based on pre-set DPIs

		Downward multiplier to use for adjusting relative pixel dimensions									
		72	96	120	144	150	300	450	600	750	1270
72	1	0.75	0.6	0.5	0.48	0.24	0.16	0.12	0.096	0.057	
96	1.333	1	0.8	0.667	0.64	0.32	0.213	0.16	0.128	0.076	
120	1.667	1.25	1	0.833	0.8	0.4	0.267	0.2	0.16	0.094	
144	2	1.5	1.2	1	0.96	0.48	0.32	0.24	0.192	0.113	
150	2.083	1.563	1.25	1.042	1	0.5	0.333	0.25	0.2	0.118	
300	4.167	3.125	2.5	2.083	2	1	0.667	0.5	0.4	0.236	
450	6.25	4.688	3.75	3.125	3	1.5	1	0.75	0.6	0.354	
600	8.333	6.25	5	4.167	4	2	1.333	1	0.8	0.472	
750	10.417	7.813	6.25	5.208	5	2.5	1.667	1.25	1	0.591	
1270	17.639	13.229	10.583	8.819	8.467	4.233	2.822	2.117	1.693	1	

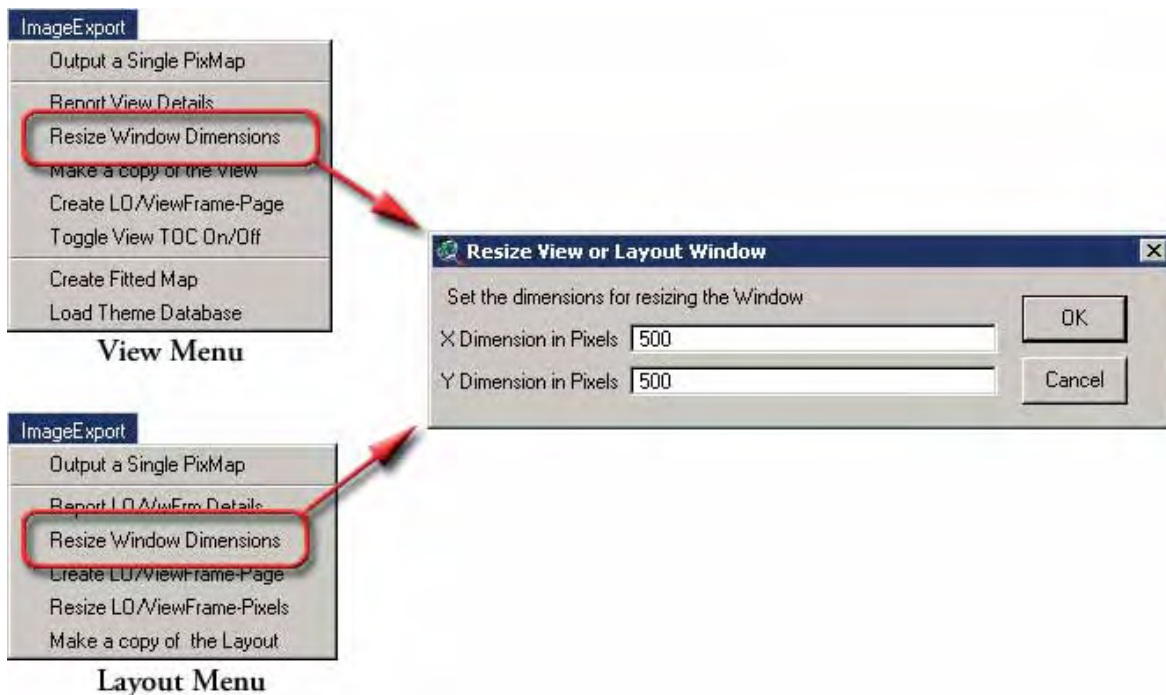
**Resizing View or Layout windows exact pixel extents**

The “Resize Window Dimensions” tool is accessible through the ImageExport menu option “*Resize Window Dimensions*” available both in Views and Layouts.

This tool allows users to set the size of windows containing either Views or Layouts to specific window dimensions. For Views, the tool is particularly useful for setting the source document to a size matching any anticipated image outputs via either the standard ArcView export commands or the Image Export and Base Mapping tool-set; assuming that the default system DPI is chosen for any export.

When opened, the tool reports the current size of the window in pixels (minus the window frame and the current TOC, if the source document is a view). If a user wanted to output a source View with current dimensions of 313 x 250 pixels at a fixed image size of 500 x 500 pixels, then this tool could be used to reset the dimensions to 500 x 500 (Figure 1.127).

FIGURE 1.127  
The Resize Window Dimensions tool



For layouts, the tool is slightly less useful as it only influences the dimensions of the screen display for Layout window container and not the actual page size.

Checks are built into the tool in order to prevent a user from setting too large of window extent, but users should employ common sense concerning the dimensions attempted as this can cause ArcView to crash. On the base system used for the development of this and the other tools in the Image Export and Base Mapping extension, the maximum safe dimensions which could be consistently obtained were 4 300 x 4 300 pixels for views and 3 850 x 3 850 for layouts.

#### *Make a copy of the source View or Layout*

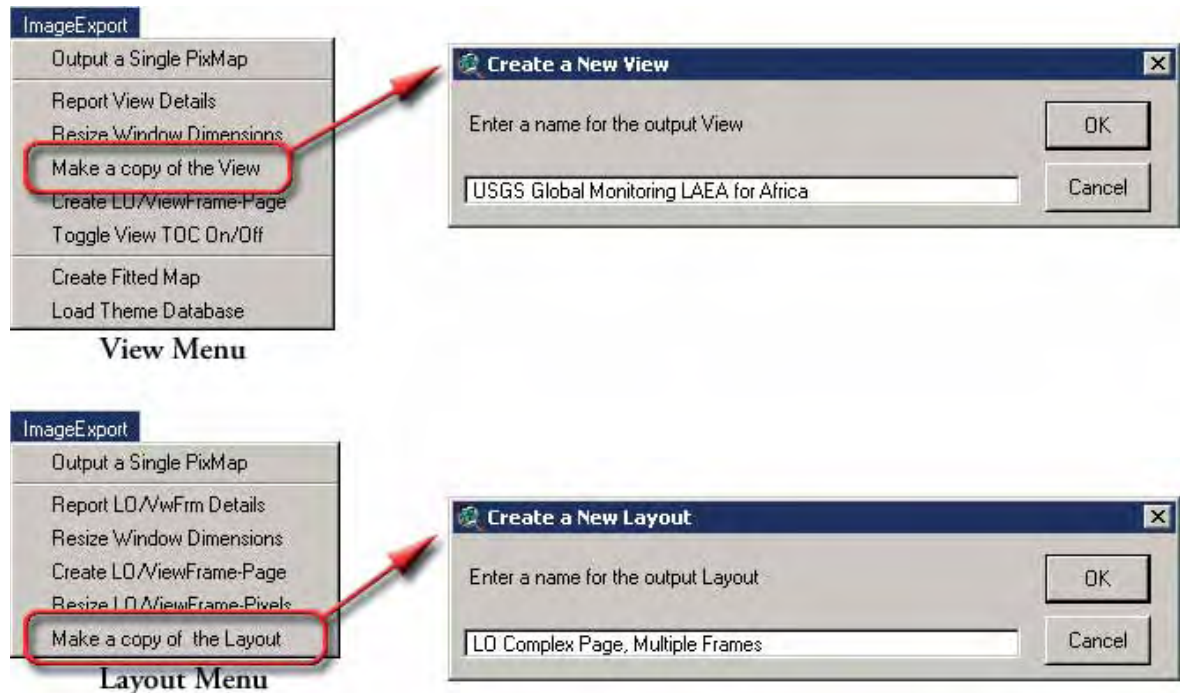
The function of the Make a Copy of a View or Layout tools is exactly the same between both Views (“*Make a Copy of the View*”) and Layouts (“*Make a Copy of the Layout*”). The tool provides a simple mechanism for creating an exact duplicate of the source View or Layout, based on adding an iterative number to the end of the name derived from the source. If the user chooses to input an already existing name, they will be prompted to select another, otherwise the new View/Layout will have a duplicate name (Figure 1.128).

#### *Create Layout with ViewFrame fitted to exact PageSize dimensions*

The “Create LO/ViewFrame-Page” tool is accessible through the ImageExport menu option “*Create LO/ViewFrame-Page*” available both in Views and Layouts.

This tool provides a simple and rapid way for users to create a Layout of any size, in whatever units. At the end of the process a ViewFrame containing the source View is added into the Layout created with its extent fit exactly to the resulting page extent. The margins will be set to zero in the resulting Layout. The only difference between the View and Layout versions of the tool is that if the tool is run from a Layout, the user will be prompted to select a View from a list of views contained in the current project.

FIGURE 1.128  
The Make a copy of a View/Layout tools



For example, if a user was required to produce “overview” graphics at a size of 21 by 29.7 cm (size A4) they would use the following steps (Figure 1.129).

If the “*Report Layout/VwFrm Details*” tool is used after creating the new Layout, it would report that based on the users default system DPI, e.g. 96 dpi, the dimensions of any images output from the Layout would be 1123 x 794 pixels and match a standard A4 output size.

Users should note that if any images were output at DPIs greater than 96, then even though the number of pixels would increase, the relative “measured size” of the images in inches or centimetres would not change.

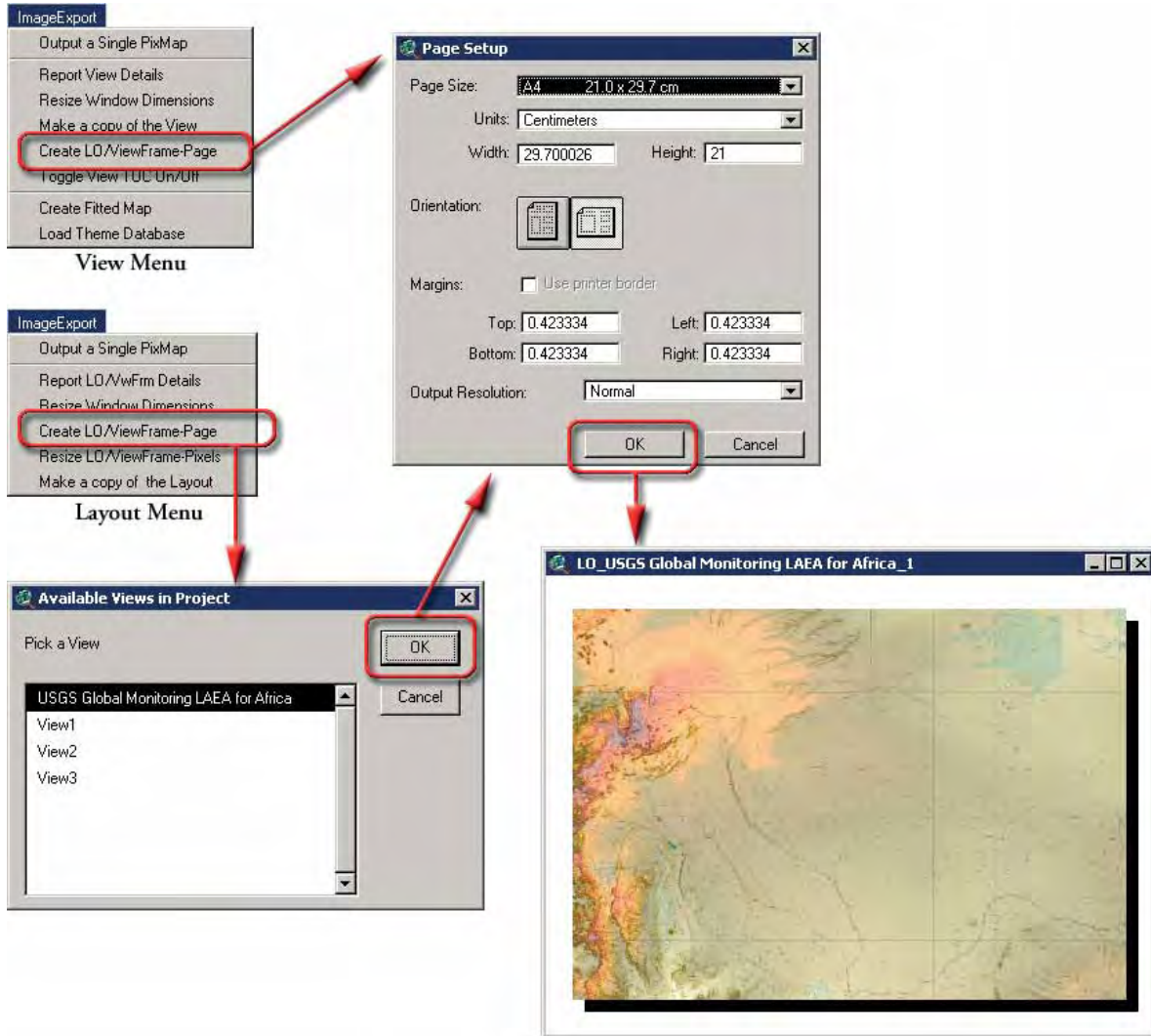
**Tools only available while working with layouts**

*Resize Layouts containing a single ViewFrame to exact pixel dimensions*

The “Resize LO/ViewFrame-Pixels” tool (available as ImageExport menu option: “*Resize LO/ViewFrame-Pixels*” only in Layouts) is substantively different from the “Resize Window Dimension” tool, in that the tool will resize the actual page extents/size for any existing Layout containing a single ViewFrame to almost exact pixel dimensions. The resulting page size, margins and ViewFrame of the layout will be set based on the dimensions input by the user.

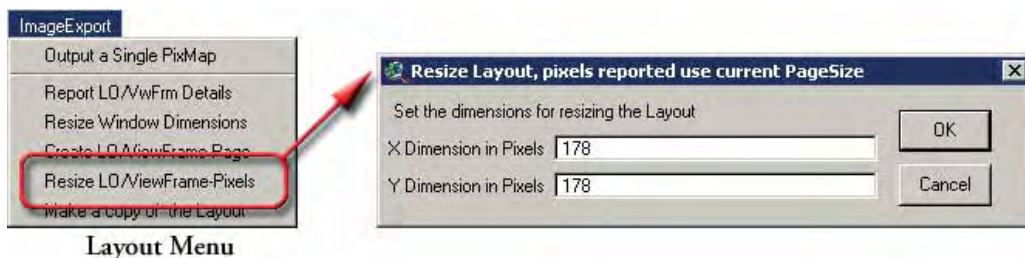
If a user wishes to employ the tool on a Layout not containing a ViewFrame, they must first add a ViewFrame with a valid View reference, run the tool and then delete or resize the ViewFrame to their requirements.

FIGURE 1.129  
The Create LO/ViewFrame-Page tool



Like the “Resize Window Dimensions” tool, this tool will report the current size of the layout in pixels based on the default system DPI (Figure 1.130). When used in conjunction with the “Report LO/VwFrm Details” tool to establish the default system DPI, e.g. 96, then if the user again required a 4.7 cm output size, they would need to: divide 4.7 by 2.54 to arrive at 1.85 inches; then multiple 1.85 by 96 to determine a pixel size of 177.6; and lastly enter 178 for the X and Y pixel dimensions in the “Resize Window Dimensions” tool dialog to achieve the required baseline Layout of 4.7 cm.

FIGURE 1.130  
The Resize LO/ViewFrame-Pixels tool



**Tools only available while working with views**

The View-specific base mapping tools of the AWRD are: “Toggle View TOC On/Off”, “Create Fitted Map” and “Load Theme Database”. The last two allow users to: create a theme-based mask of any relevant polygonal reference theme; create a Layout with a fitted ViewFrame “zoomed” to the extent of this mask; and import precompiled sets of themes into their reference project. The latter of these tools allows users to seamlessly integrate the baseline DBCs of the AWRD archive for reporting and analysis.

**Set the TOC of the current View “On” or “Off”**

The IEBM extension contains a tool named “Toggle View TOC On/Off”, which sets the Table of Contents (TOC) of the current source View to be visible (On) or invisible (Off) (Figure 1.131).

FIGURE 1.131  
The Toggle View TOC On/Off tool



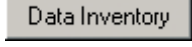

**Note** Users should be advised that this tool does not “remember” the width of the current TOC; when turned back “On”, the tool resets the TOC to a standard 150 pixels.

**Create a layout and a fitted ViewFrame**

The “Create Fitted Map” tool employs a two step process starting with the potential creation of a polygonal masking theme, followed by on-the-fly creation of a layout and fitted ViewFrame with an extent matching either any non-masked area created or the current extent of the source View. The page orientation of the layout created will be set automatically to either portrait or landscape based on the relative dimensions of the page. The tool is optimized to produce a generic A4/Letter size Layout.

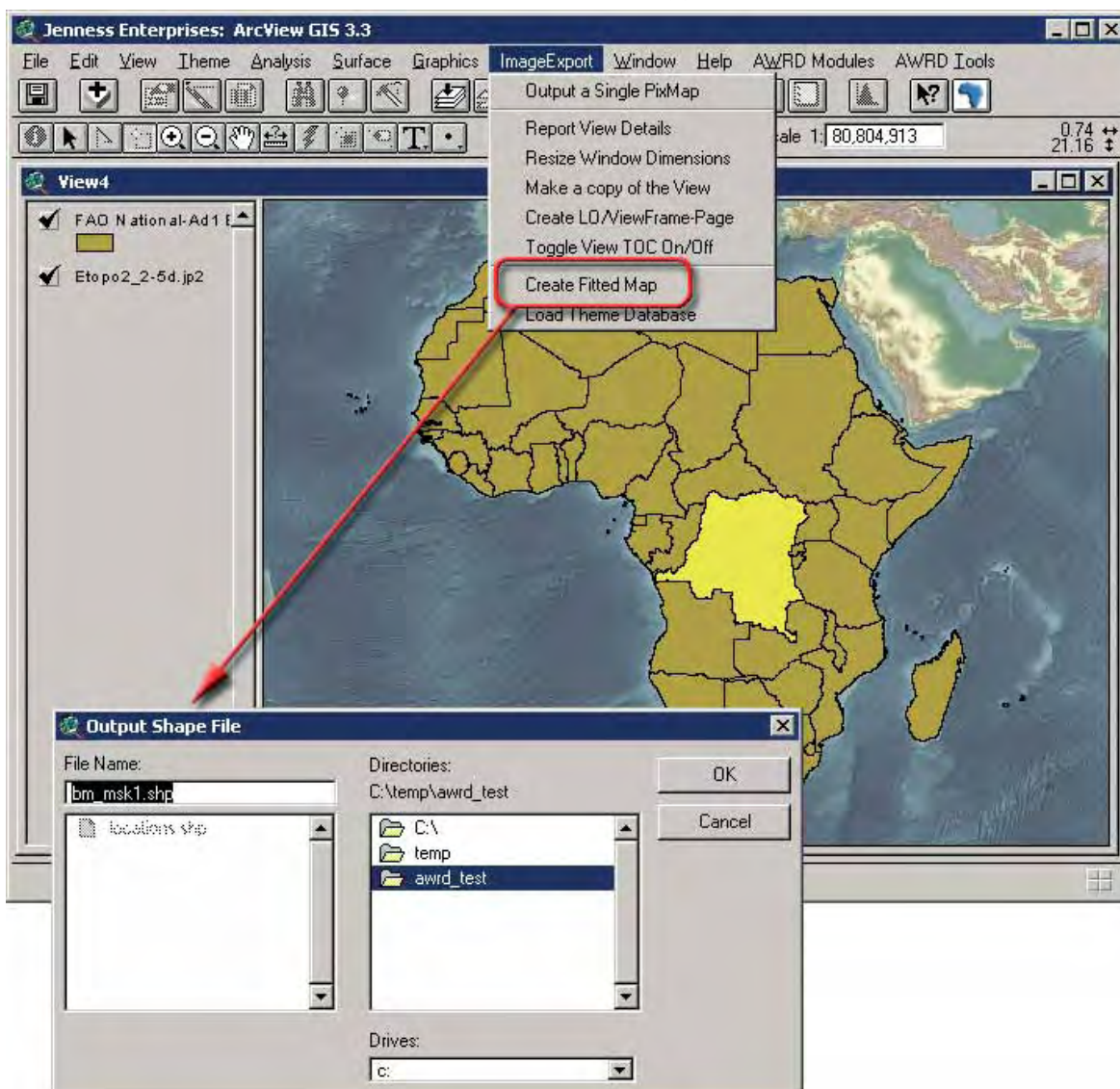
This tool is designed to use the current selection set from the active theme, if that theme is a polygon theme, to create a polygonal mask. For this reason, if a mask is to be created, only one theme can be active in the TOC for the source View. In other cases,

since no mask can be created and used as a basis for determining a “fitted” extent and scale, the current extent of the source view is used to determine the fitted extent of the combined Layout/ViewFrame created.

1. Click on the “Data Inventory” button  to load one of the administrative boundary themes (e.g. “FAO National-Ad1 Boundaries”, or “Ad1\_Py.shp”) from the Additional Vector database component.
2. Click on the “Select Feature” icon  from the ArcView top menu bar and click on “the Republic of the Congo”. This selection will automatically highlight this country in yellow.
3. Select “Image Export” and then “Create Fitted Map” from the list.
4. Provide an Output shapefile name. By default, these are named bm\_msk#.shp and BaseMap#, where the # represents a number one greater than any existing name with the same root. Then click “OK” (Figure 1.132a)

**Note** Users are advised that, because the creation of the mask theme is dependant on dissolving all of the polygons in both the selected and then unselected feature sets, the process can be lengthy for complex or large datasets such as the H1k\_Lev6 watershed data layer.

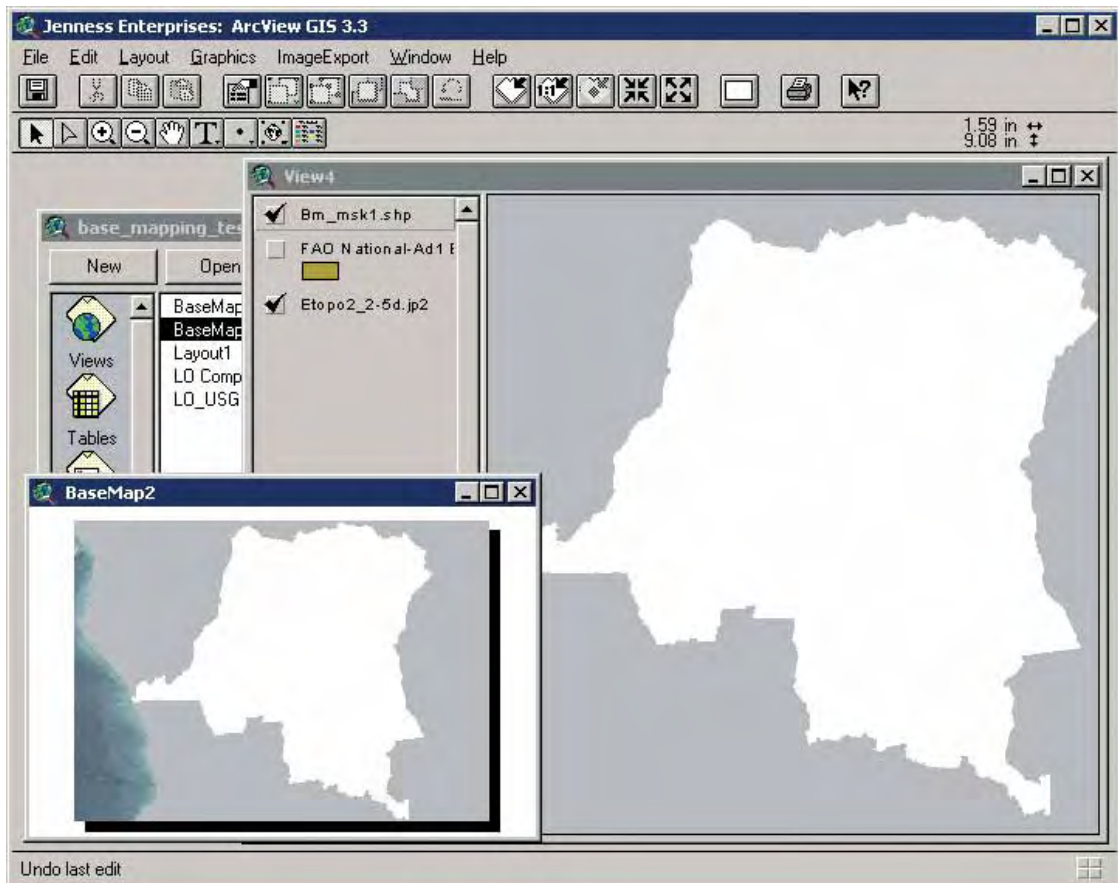
FIGURE 1.132A  
The Create Fitted Map and Polygonal Mask Theme tool



In the output mask theme, a polygon representing the selected set will be encoded with a 0 and a polygon representing the unselected features will be encoded with a 1.

After the processing of the masking theme is completed, a fitted layout will be created based on the extent of the 0-value non-mask polygon. The layout scale will also be maximized to one where this extent can be mapped onto a generic A4/Letter size page. The “Resize LO/ViewFrame-Pixels” tool can be used afterwards to set the resulting Layout to any dimensions required. The basic results of the masking and layout creation process are shown in Figure 1.132b.

FIGURE 1.132B  
Basic layout resulting from the Create Fitted Map tool



After potentially creating a polygonal mask and then a fitted Layout/ViewFrame, the user may want to use the “Load Theme Database” tool to import one of the base mapping theme databases.

### Load Theme Database

The “Load Theme Database” tool allows users to import pre-compiled sets of themes based on the data contained within the AWRD archive into their projects. In addition to the import of base mapping specific sets of themes, this tool provides a means for users to import theme sets seamlessly into their projects by DBC.

The use of the tool is very straight forward, and it opens with a prompt requesting the user to specify whether the themes contained within the source Object Database<sup>1</sup> (ODB) should be added into the current view or if a new view should be created.

<sup>1</sup> An Object Database is a special type of file used by ArcView 3.x. It stores Avenue “objects” in a text file on the hard drive. In regards to the Load Theme Database tool, the “objects” stored are theme references, graphics, legends and scales at which themes are viewable. Loading the ODB causes all these objects to be loaded simultaneously. For additional information on Object Databases or Avenue Objects in general, please refer to the ArcView help items “Obj”, “Script” and “ODB”.

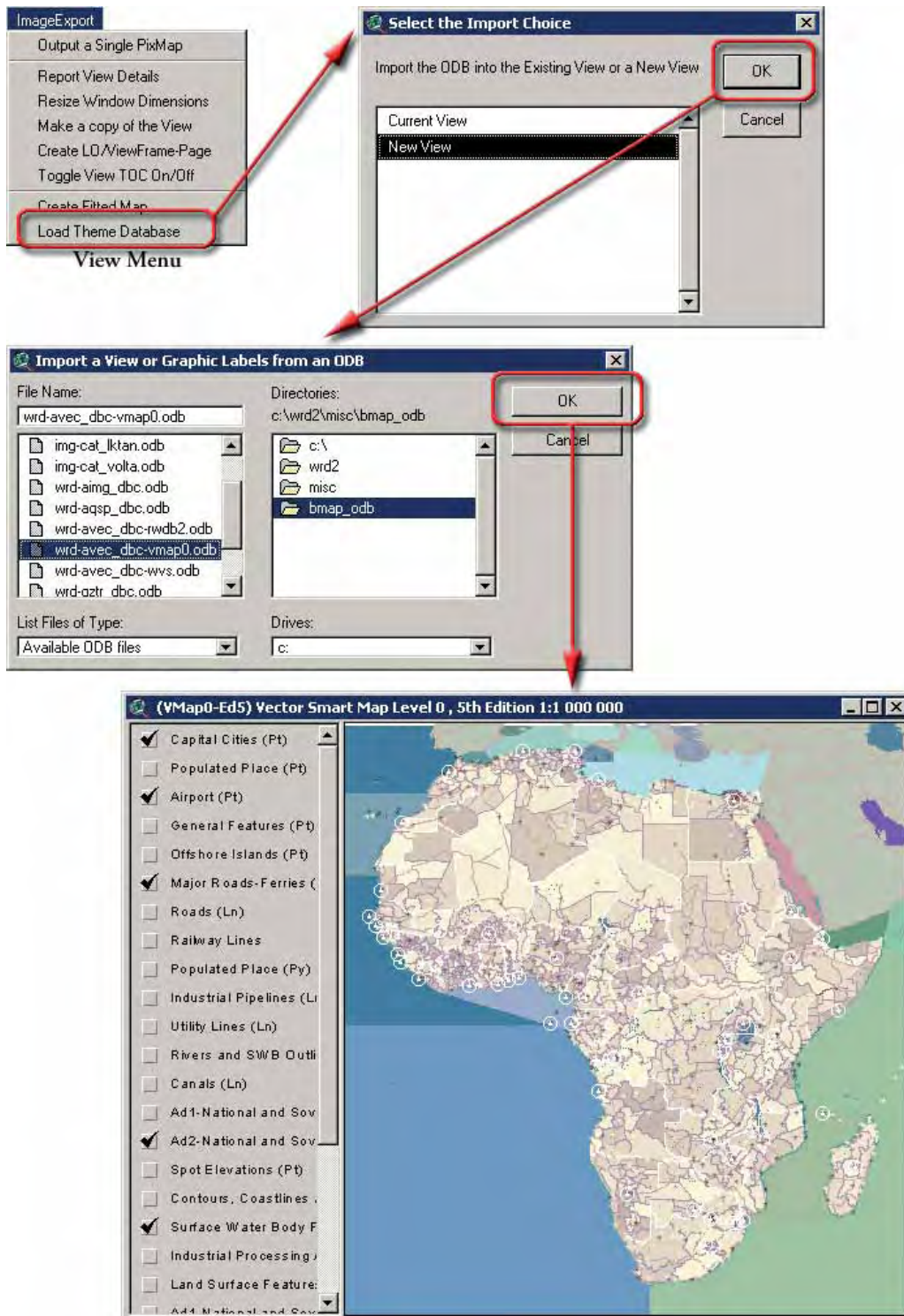


This prompt is followed by another requesting the user to select a database to load. Example:

1. Click on the “Image Export” tool in view menu and select “Load Theme Database”.
2. Select “New View” as the import choice.
3. Select “avec\_bdc.odb” from the Import a View or Graphic Labels from an ODB dialog, then click “OK” (Figure 1.133a).

FIGURE 1.133A

#### Importing a precompiled theme database by database component or for base mapping



If a new view is to be created, the default name of the view contained within the ODB will be used as a baseline for the new view's name. If a view already exists with that name, the new view will have a number added to its end one greater than any existing view of the same name.

Some themes and images in these ODB files require certain additional extensions to be loaded in ArcView (i.e. Grid data requires Spatial Analyst, MrSID Image files require the MrSID extension), and therefore the ODB cannot be opened if these extensions are not loaded. This tool will automatically load any necessary extensions if they are available, and otherwise will alert the user about any missing extensions before terminating. (Figure 1.133b).

FIGURE 1.133B  
Object Database Import failure due to missing dependency



When importing themes from an ODB into an existing view, all active themes will be shifted to the top of the TOC and all imported themes will be placed directly below them. Otherwise all imported themes will be placed at the top of the TOC. Also, if the ODB themes are added to an existing view, the projection and measuring parameters of that view are maintained. Otherwise, the new view created will be set to the same projection and any other parameters set for the view at the time the ODB was created.

### Adjusting polygon borders and patterns

When ArcView adds new polygon themes to a view, they are typically added with a simple symbology where each polygon is represented by a random color and a solid black background. If you wish to change the symbology, such as making the symbol hollow or semi-transparent, or to change the border color, then it is simple to edit the symbol using the Legend Editor.

However, if you change the legend such that you have multiple classifications, where different polygons might be represented differently, then ArcView will automatically reset the outlines to black, and set all the colors to solid. This may be a problem if the polygon outlines if you do not want outlines (Figure 1.134a), or if you want all polygons to have a particular transparency (Figure 1.134b). It can be a tedious process to modify each symbol separately. In some cases you might have hundreds of classifications, and it can be very time-consuming to modify all the separate symbols to set their transparency or border color.

FIGURE 1.134A  
Comparison of a polygon theme with and without polygon borders

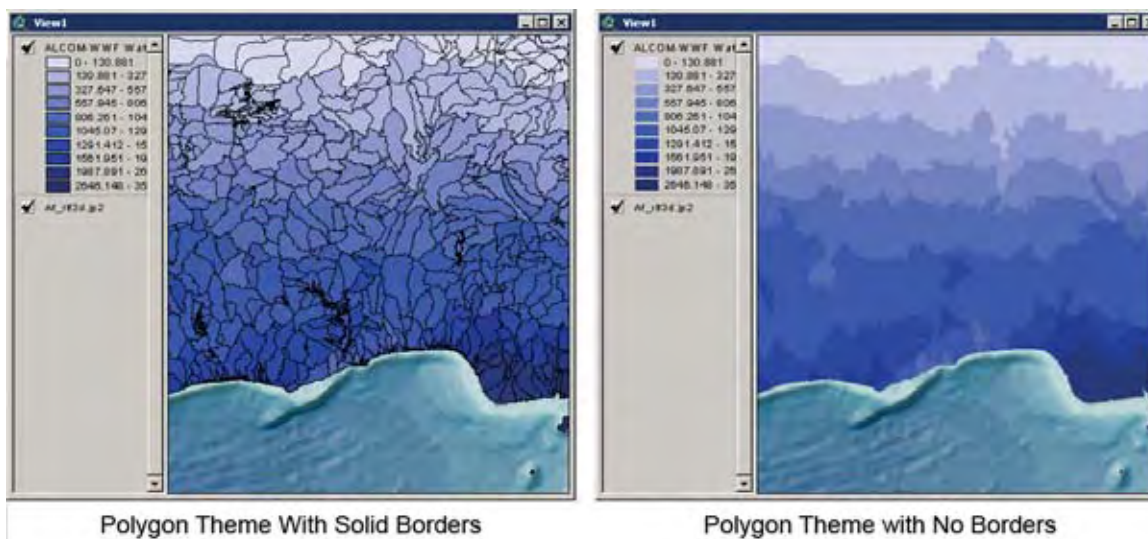
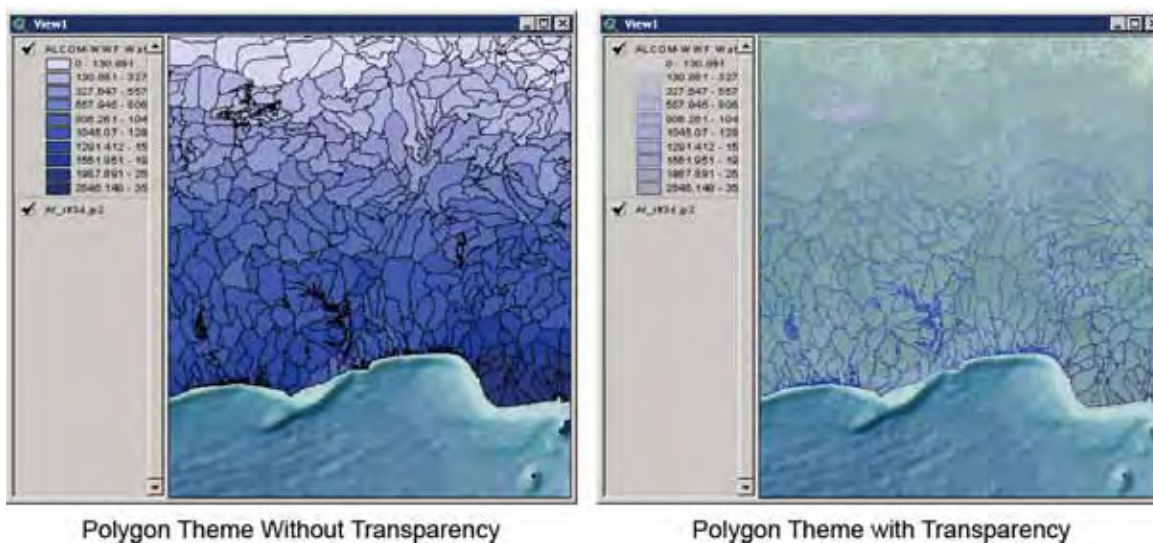
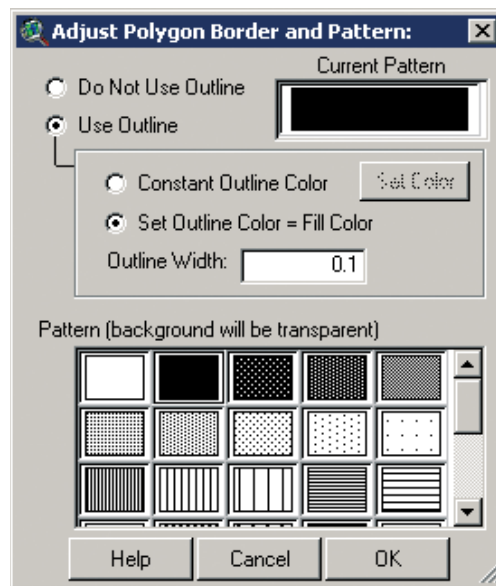


FIGURE 1.134B  
Comparison of a polygon theme with and without polygon transparency



Therefore the AWRD provides a tool to automatically set the border color or transparency pattern of all classifications in a particular theme legend. Click the View “Theme” menu, and then “Adjust Polygon Border and Pattern” to open the tool (Figure 1.134c):

FIGURE 1.134C  
Adjust polygon border and pattern tool



If you wish to eliminate all polygon borders from all classification polygon symbols, simply select the “Do Not Use Outline” option. If you wish to have borders, you have the option to set the border color equal to the internal polygon color, or to set it as a constant color.

You may also choose from a number of patterns. In all cases, the background color of the pattern will be transparent so you will be able to see other features underneath the polygons.