GETTING STARTED

This example provides general introduction into **SpreadCommander**. For more detailed samples on using specific features please check other examples.

**Spread Commander** is an application for office-style data analysis that uses *PowerShell* script for data manipulation.

**SpreadCommander** contains advanced *PowerShell console* with output into *Book* (rich text editor), *Spreadsheet*, powerfull *DataGrid* and ability to generate *Charts* and *Pivot tables*. Combination with standalone *Book*, *Spreadsheet*, *SQL*, *Chart*, *Pivot*, *Dashboard* controls makes **SpreadCommander** a powerfull *data analysis* application for work with various kind of data.

Combination of *PowerShell* script and advanced *data visualization* controls makes work with data very comfortable.

One of main features of **SpreadCommander** is executing *PowerShell* scripts. Output of a script can be sent into **Book**, **Spreadsheet** and **Data** controls. This allows to generate formatted output and send tabular data into **Spreadsheet** or **Data** grids, with conditional formatting, for further processing.

**Console** is set of controls where *Script* can send output. **Console** contains controls:

* **Book** gets output of the *Script*, including *text*, *images*, *HTML*, *Markdown*, *LaTeX* (for formulas). *Images* can be loaded from disk or generated in *Script*, for example **SpreadCommander** contains cmdlets to load *tables*, *charts*, *pivot tables* from *spreadsheets* and to generate *charts* and *maps*.
* **Spreadsheet** allows to show tabular data sent from the *Script*. *Data Source* can be *ADO.Net DataTable* or list of objects. **Spreadsheet** allows to add *conditional formatting*, *charts* and *pivot tables*.
* **Data** tab contains multiple **Grid** controls. It accepts same data as **Spreadsheet** - *ADO.Net DataTable or DataSet* and list of objects.
* **Heap** is a file browser and viewer for common files - *images*, *text files (including Word files)*, *spreadsheets* etc.

Main script language in **SpreadCommander** is *PowerShell*. **SpreadCommander** includes multiple *Cmdlets* for rich text output, generating **Charts** and **Maps**, output formatted table data etc.

**SpreadCommander** also allows to execute *Python* and *R* script, if corresponding script engine is installed. At this moment these script engine support only basic functionality; their output is redirected into **Book** console.

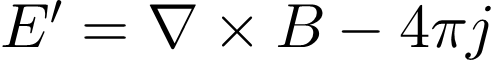
Sample use of **Book**

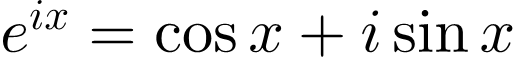
**Image**



**Write-Latex**



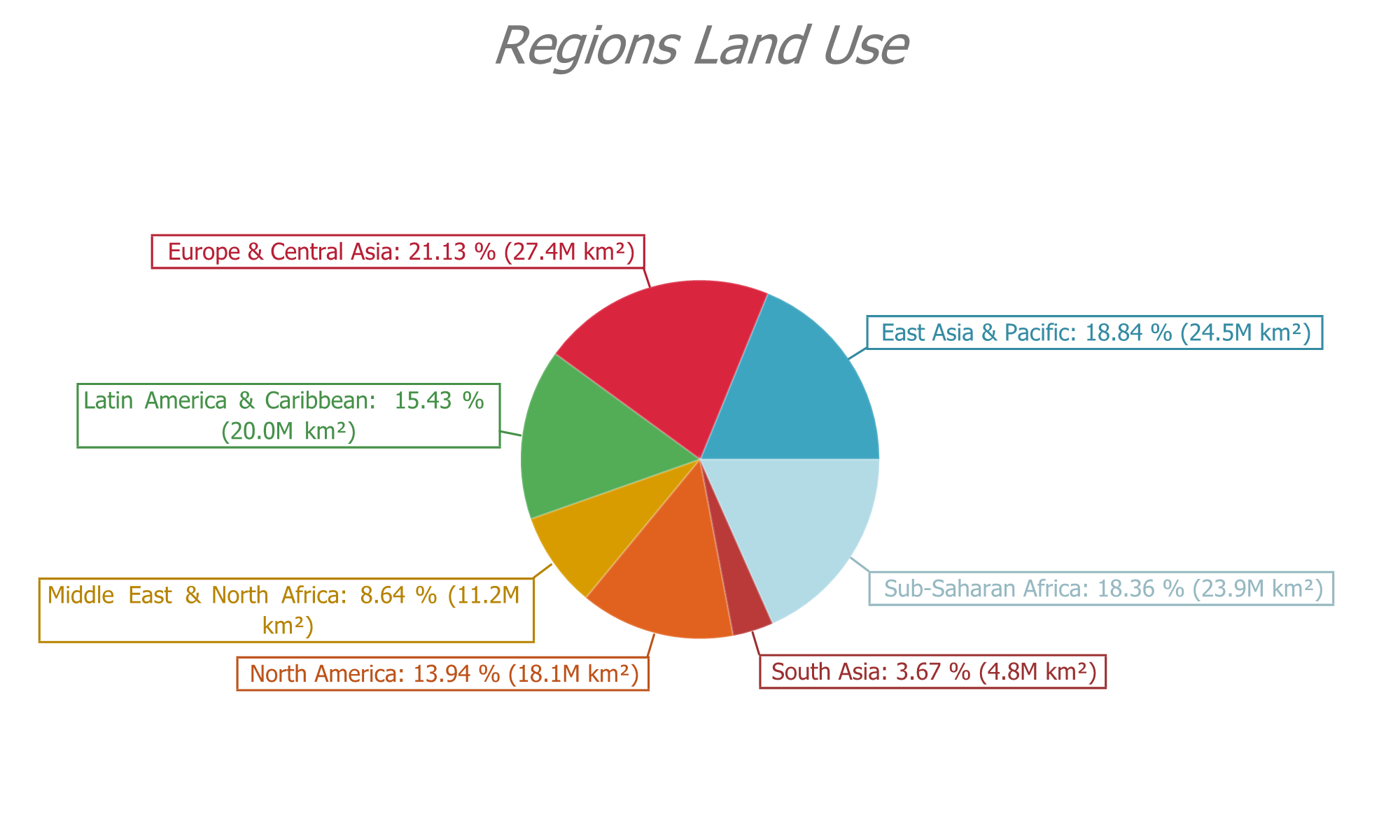




**DataTable**

|  |  |
| --- | --- |
| **Region** | **LandUse** |
| East Asia & Pacific | 24.47 |
| Europe & Central Asia | 27.45 |
| Latin America & Caribbean | 20.04 |
| Middle East & North Africa | 11.22 |
| North America | 18.11 |
| South Asia | 4.77 |
| Sub-Saharan Africa | 23.85 |

**Chart**



Cmdlets that output into **Book** support comments.

Comments can have HTML formatting.

Sample use of **Spreadsheet**

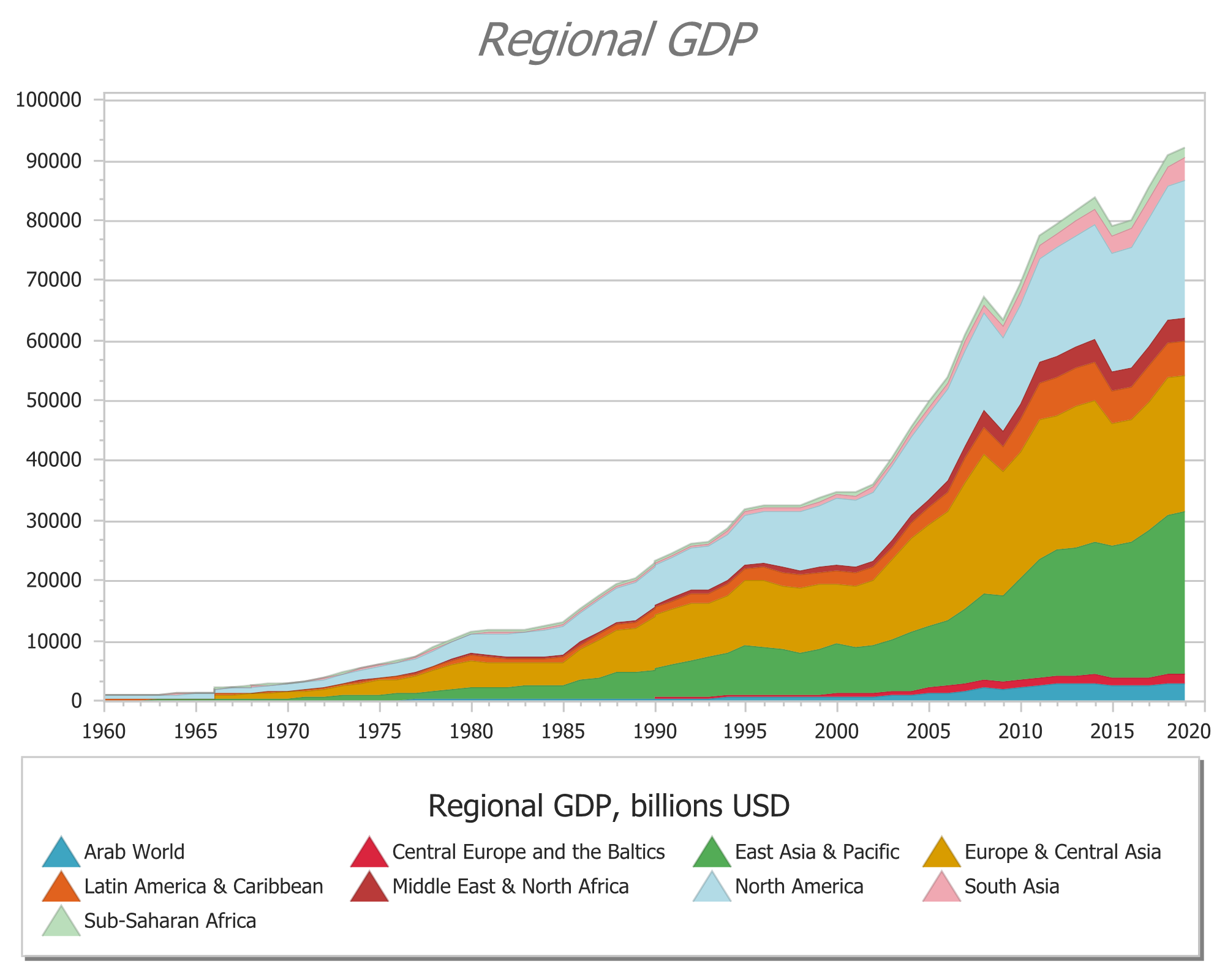
Cmdlet *Out-SpreadTable* can also copy output into **Book**. Do not use this for large tables.

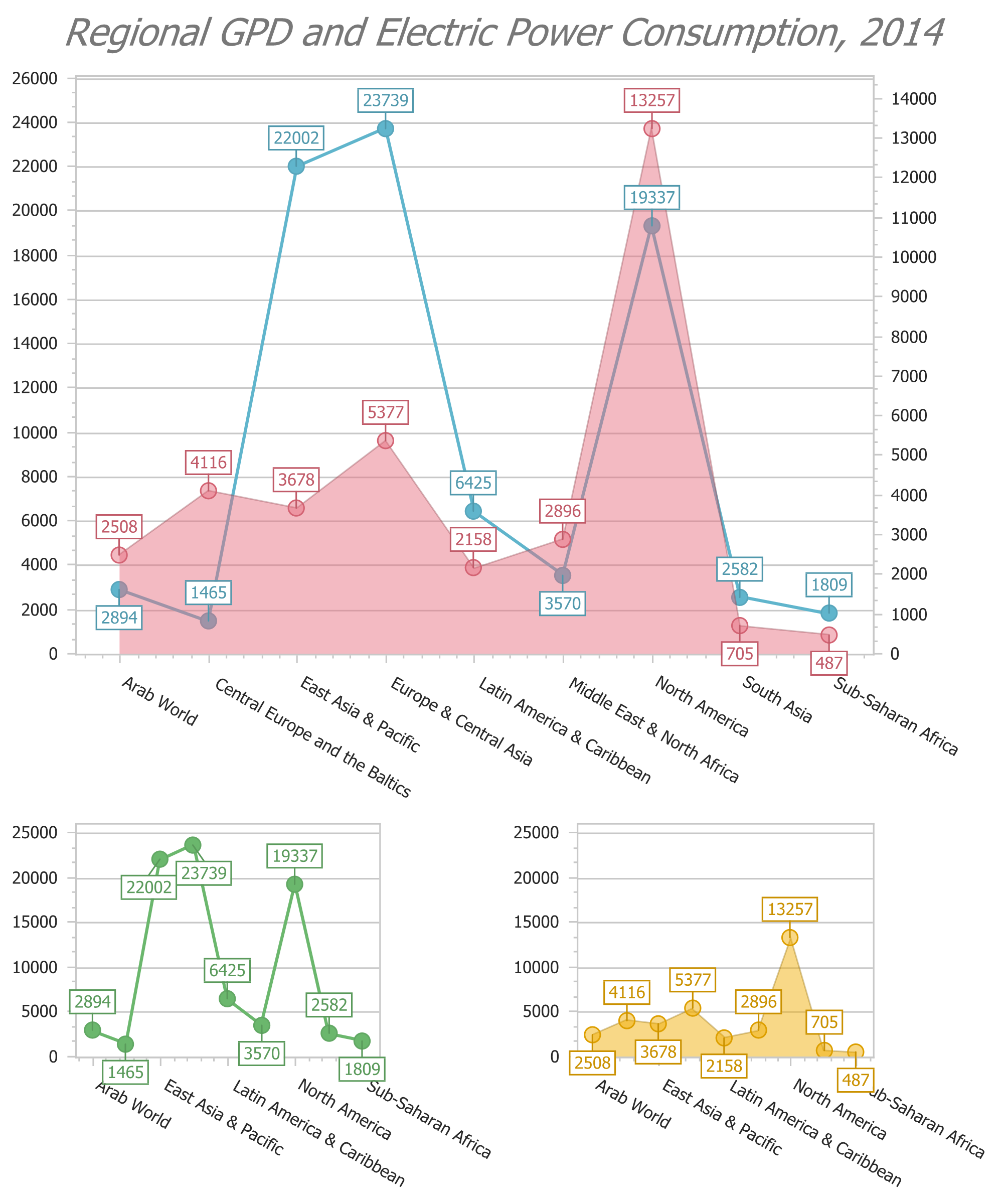
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Income Group** | **MinValue** | **MaxValue** | **AverageValue** | **MedianValue** | **StdDev** |
| Low income | 2.182612689 | 22.54242735 | 6.825873281 | 5.969484615 | 5.765263272 |
| Lower middle income | 4.371436348 | 16.43669801 | 9.86840183 | 9.502806745 | 3.213745163 |
| Upper middle income | 2.756970747 | 21.83630531 | 10.40434963 | 9.922129658 | 4.259275896 |
| High income | 2.006132138 | 27.8011106 | 11.19668187 | 11.02507802 | 4.954743737 |

![](data:application/x-msmetafile;base64,)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Average of Value** | **Income Group** |  |  |  |  |
| **Region** | **High income** | **Low income** | **Lower middle income** | **Upper middle income** | **Grand Total** |
| **East Asia & Pacific** | 12.65658328 |  | 10.29793608 | 7.221952746 | 10.78344144 |
| **Europe & Central Asia** | 11.82647821 | 9.719215374 | 6.197737383 | 8.854501935 | 10.44012184 |
| **Latin America & Caribbean** | 10.19675052 | 7.359414219 | 9.000566576 | 13.10369734 | 11.43590006 |
| **Middle East & North Africa** | 9.426372243 |  | 12.08103088 | 8.726039552 | 9.64766517 |
| **North America** | 6.850945177 |  |  |  | 6.850945177 |
| **South Asia** |  | 5.969484615 | 10.70773755 | 21.83630531 | 11.98580051 |
| **Sub-Saharan Africa** |  | 6.504561486 | 10.22170948 | 10.52244683 | 8.938368695 |
| **Grand Total** | **11.19668187** | **6.825873281** | **9.86840183** | **10.40434963** | **10.29582125** |

Sample use of **Chart**





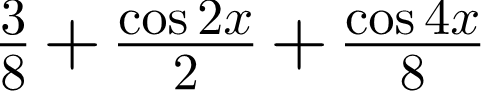
Sample use of **Map**



Sample use of **SQL script** and **Data**

**SpreadCommander** provides advanced features to work with *SQL script* and display results of executing of *SQL queries*. Check output on console tab **Data**.

Sample use of **Math symbolic calculations**



**SpreadCommander** allows advanced data visualization controls - *Chart*, *Pivot table* and *Dashboard*. Check example **Controls** for more details.

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