Workshop on Digital Plant Distribution
13th January, Frankfurt/M, Germany

Summary of the discussion

Topic “chorological resources needed for vegetation reconstruction and modelling”

To be accomplished until end of April 2010 (Francois et al.; vegetation modelling group)

It is considered to include the following pfts in the actual 26 pft classification scheme (Francois et al.).

- pft tree ferns
- pft cycads
- pft palms
- The pft No. 2 “C3 herbs, dry” should split in a pft “C3 herbs, tundra” and a pft “C3 herbs, hot desert”

distribution data of additional plant species are needed for the following pfts:

- tropical pfts (Nos. 11, 25, 26): ckeck the following resources: Enzyklopädie der Holzgewächse; volume on tropical trees of SE Asia, use additional GBIF data sets

- pft No.1 “C3 herbs, humid”: Poaceae is too crude as a “key taxon”. Find additional key species

Objectives in the medium term

- quality of chorological data: ranking of the chorological resources to be used
- key taxa defining pfts: more key taxa are needed in each case for defining a pft
- climate variables defining the thresholds in the model have to be made available for the proxy data as well in order to optimize the classification of the fossils and the model/proxy data comparison

Topic “Digital chorological resources”

Quality of chorological resources

- Europe
  The AFE and its digital data sets are considered as suitable while some classical resources (small maps showing shaded areas) are not precise enough for NECLIME purposes

- China
  For ca. 4,400 woody plants distribution maps on county level can be generated from a digital herbarium data base hosted at the Kunming Inst. of Botany. The resolution of the data in each case depends on the size of the county, but in general is high. Data sets for single species will be provided on demand. Data sets for 25 genera have been provided, currently digital distribution data for additional 50 genera are being processed (Zhou Zhe-Kun, Chen Wenyun) and will soon be available for the NECLIME community.

- Global
  GBIF data are considered as a reliable resource for NECLIME purposes. However, special care is needed when building the query and selecting the data sets displayed

Digital data sets so far available

It was decided to prepare a list of taxa for which digital distribution data are available.

Information on type of the resources (point, raster, polygon), region covered, reference, and quality may be added later.

Climatologies

As climatologies New et al. data and the WorldClim dataset (cf. Hijmans et al., 2005) are likewise used in NECLIME.

The working group still has to decide if a recommendation will be given.

Topic "Practical aspects of data processing"

Different methods of obtaining data from intersecting chorological and climatological data were discussed in detail.
The following, possible approaches were proposed

- Extract data using the same grid resolution in both data sets
- Exclude mountainous areas in general (problems: thresholds, taxa restricted to upland areas)
- Use the frequency distribution of grid points with quantiles to exclude unlikely solutions

A decision on standardizing the procedure has still to be made.

Next meeting of the working group

The next meeting of the working group will be arranged at the EPPC / Budapest