SIKURS
Additional Tools and User Organization

Method Assistant

The built-in method assistant helps to compose a version of the forecast model that satisfies the specific requirements of the user. The dialogue programme makes sure that only a consistent and complete set of modules is selected.

The main programme of SIKURS examines the input data to ensure that they are complete and plausible. If the data are free of formal errors and of inconsistencies the actual forecast calculations will be carried out with data output either in the form of monitoring files or on files containing the results.

Visualization and Further Processing

Additional visualization tools support the user in smoothing out raw data or drawing population pyramids

The results can be further processed by other programmes like Excel, Access, SPSS, by mapping programmes or by any other standard software using CSV files.

Household Forecast

Impact of migration does not only concern individual persons but also households. On the basis of a population forecast and several assumptions with respect to household structures SIKURS also supports forecasts of households. The necessary estimation parameters are derived from a given household-structure (KOSIS project HHSTAT).

User Organization

The users of SIKURS are automatically members of the SIKURS-User Group. The User Group organizes the exchange of experiences and decides on the further development of the programme. The Statistical Bureau of Nuremberg manages the User Group and can be addressed for further information.

Who can become a member

Public institutions can acquire the right to use the programme by joining the KOSIS association and the SIKURS-User Group.

SIKURS
Licence Conditions and Membership

Licence Fee

For public institutions using the programme for their own purposes exclusively, the initial licence fee for the first year is 2,200 Euro, the licence fee for the following years is 1,100 Euro p.a.

Trial Licence

To test the features of SIKURS, you can download the current release from our website and get a trial licence key on request. Indeed, User manual and online help are only available in German, but you can start SIKURS and its tools with an English user interface.

Members of the SIKURS User Group

75 Cities in Germany

Statistical Bureaus of the States
Baden-Württemberg, Bavaria, Berlin, Bremen, Saxony, Saxony-Anhalt, North, Thuringia, Berlin Department of Urban

Development and Environmental Protection Association
Heidelberg/Mannheim, CIVITEC, Mettmann

Members in Austria
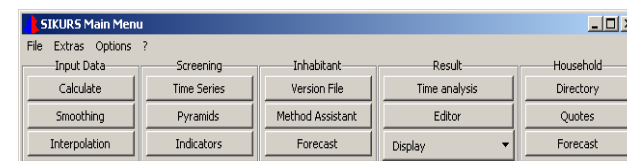Linz, Vienna, Statistic Austria

Members in Switzerland
Cantons Basel-Country, Zürich, Uri, St.Gallen, Thurgau ; City Bern

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SIKURS

Population Forecasts for Small Regional Units

SIKURS
Population Forecasts for Small Regional Units

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Population Forecasts - Indispensable Planning Tools

Municipal policies rely on the knowledge of how populations develop under certain assumptions and which impulses would bring about change in a desirable direction.

Population forecasting is a means of quantifying such dynamics and the conditions associated with them. It provides the political decision-making process with the opportunity to adapt early to changing situations, to predict demand for public facilities and programmes, and to avoid inappropriate investments.

Forecasts for a city as a whole, however, are not enough. In order to plan infrastructure which is tailored to demand, forecasts for small areas are required. Only these will indicate the kinds of population changes which might occur within the catchment areas of specific services such as schools, day care centres, libraries or hospitals.

With the SIKURS population forecast model and programme the KOSIS association can offer a sophisticated instrument which can meet the information demands for small area planning.

The SIKURS programme system is conceptualized as a modular set of forecasting tools. The different modules can be arranged to provide a number of forecast variations. The modular system guarantees the user a high level of transparency as well as convenient guidance and control features.

SIKURS - a Stream-oriented Forecasting Model

The forecasting model of SIKURS is based on standard demographic and statistical procedures to project given initial state of the population on the basis of in- and out-migration as well as deaths and births. In this process SIKURS calculates population changes based on disaggregated streams of change. This is done on the basis of the current demographic conditions of each regional unit in conjunction with population behaviour as determined through an analysis of areas with similar characteristics.

SIKURS
Forecasting Concept and Input Data

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In order to assure the reliability of forecasts for small areas, the individual regional units (e.g. municipal districts) are clustered into structural types ("area types") on the basis of similarities in behaviour with regard to births, mortality or migration.

Input Data

Depending on the forecasting variant chosen different input data are required.

All forecasting variants require essential data for the projection of natural change:

− the initial state of the population for each regional unit disaggregated by sex and age. If desired the age structure can be disaggregated by population groups (i.e. nationality).

− age-specific fertility rates of women according to "area type",

− death rates based on the structure of the initial population,

If, as usually desired, migration is to be included, additional data are required:

− out-migration rates (percent of out-migrants of each demographic group) disaggregated by destinations,

− in-migration from outside the municipal boundaries disaggregated by demographic characteristics.

SIKURS offers many additional forecasting modules, which can be combined in different ways. For instance, variants can run with the input of population and target values for all components of change, the special treatment of new buildings, the deletion of special population groups from the forecast, or the dynamic treatment of birth, death and migration rates.

SIKURS also makes it possible to include changes in population groups. The "area types" can be created separately for the determination of natural changes, the migration-dependent changes and the changes in population groups.

SIKURS
Programme Sequence

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Regional Unit   Area Type

- Initial Population (at 1.1.20XX)
- Exclusion of special groups (e.g. residents of senior citizens homes)
- Ageing — Age + 1
- Births — women x birth rates
- Initial population of period — Persons x rate of chance
- Change of population groups — persons x rate of chance
- Deaths — person x death rates
- Migration out of forecast area (municipal boundaries) — persons x rates of out-migration
- Moves into new buildings — total number x age/ gender quotes
- Moves out of existing buildings into new buildings — pers. x K x internal migration rates
- Migration within forecast area — persons x internal migration rates at origin by destination types
- Residential vacancies
- Total migration into regional unit
- Addition of „special pop. groups"
- Final population (at 1.1.20XX + 1)

Rates of area type

Structural quotes of area type

- Moves within forecast area
- **+**
- Migration from outside forecast area
- Total migrations into area type