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**SESSION II: REGIONS, STATES AND FEDERATIONS: PROBLEMS OF
VARIABLE GEOGRAPHY**

**REPUBLIC OF SLOVENIA - RECORDS AND STATISTICS AS BASIS FOR THE
DETERMINATION OF SPHERES OF REGIONS AND
FOR CALCULATION OF REGIONAL ACCOUNTS**

Report submitted by the Statistical Office of the Republic of Slovenia */

I. ARRANGEMENT OF STATISTICS AND RECORDS

1. Slovenia has, already as part of the former federally managed state of Yugoslavia, statutorily settled its national statistics as in other federal countries (e.g. Federal Republic of Germany). This demanded at least:

- (a) compulsory and priority implementation of statistical tasks, determined in the Program of Statistical Surveys, which were important to the entire former federal state and
- (b) it enabled individual federal units (republics and provinces to implement their additional statistical surveys and to independently determine their tasks in the field of the register and tasks on records.

*/ Prepared by Mr. Tomaz Banovec, Director General.

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2. Within this framework Slovenia independently prepared and accomplished its Act on Social System of Information (1982) 1/ and set up the basic registers which cover the majority of the most important needs of the current national administration and local self-management of the state. The leading role in setting up these registers was held by the National Statistical Institute which in its work cooperated with other state bodies and

ministries. Only little assistance was given by the institutionally organized research organizations. This is understandable as it concerns large data bases which are shaped and reorganized at the time of implementation and is supported by already operating solutions or by the newly defined activity called re-engineering.

3. During that period the Statistical Office changed its title and status a few times, but its basic functions in the field of national statistics and records have remained relatively stable. Other managers of large national administrative data bases have done the same, taking no account of the institutional changes. Thus Slovenia now has at its disposal a relatively well-organized legislation which arranges:

- (a) the operation of national statistics and the Office,
- (b) the contents of the National Programme of Statistical Surveys, which comprises about 420 titles of individual surveys or measurements, already quite well-arranged and harmonized with the recommendations and provisions of UN/ECE/CES/SD and other UN agencies, via Phare programmes with Eurostat and its frameworks, and, with recommendations from IMF, OECD and other international organizations,
- (c) collection, processing and use of records, which hold even for national statistics usable data regarding a person, his/her associations - enterprises and territory,
- (d) the good and strict legal arrangement on protection of personal and statistical data,
- (e) the role of the NSI which still has the possibility to influence, via the statistical programme and via work with the governmental bodies, the harmonization of records and registers to enable their linkage and integration into the national programme as well as their use for para-statistical purposes.

II. REGIONS AND REGIONAL ACCOUNTS IN SLOVENIA

4. Slovenia still does not have a final arrangement and has still not decided on a European statistical classification on NUTS-3 level, but from the professional point of view it is clear that its size does not enable an additional division of the Slovenian territory on NUTS-0, NUTS-1 or NUTS-2 levels. Here we shall probably remain rational as other smaller countries comparable with Slovenia. Thus the debate shall predominantly be held on whether we shall have **seven, ten or even thirteen NUTS-es on level 3.**

5. The new constitutional arrangement presupposes the shaping of provinces which shall be self-managing units, comprised of 147 communities 2/. The

project which will propose such spheres is currently being carried out. It is professionally and politically very demanding as it faces many confronting interests which, despite all the richness and abundance of data, are not easily harmonized.

6. The **old comparable statistical-economic basis used for comparing the power of the local communities - the local accounts** (as in the previous arrangements when calculating the Social Product via the (Material Product System concept) was for the last time calculated in 1990 for the 65 communities. We informed the users that on the level of the community these accounts, when switching to SNA and GDP, shall not be calculated any more and that a new **method of regional accounts** will be used when stable analytical and administrative regions, harmonized with the European arrangement, are introduced.

7. Slovenia does not yet have finally determined regions 3/ which are legally or administratively determined. The new local territorial division from 65 formerly "feudal" communities to 147 Europeanized ones, acknowledges many additional divisions for individual functions of individual bodies and the state (country). Let us point out some facts in regard to this:

- The new local self-government as of 1.1.1995 is organized to comprise 147 4/ communities and among them are 10 city communities. The territory, the size and functions of Ljubljana city community fulfill the criterion for an independent NUTS-3 unit.
- Over the next few years new provinces will be shaped on the basis of these 147 communities, yet they shall probably not be adequate to the proposed European harmonization.
- The national administration has been reorganized: from the previous 65 communities there are now 62 newly formed community offices. Administratively they are only partly functional, as the state administration determined also other units and spheres analogically.
- This is a provisional solution as we still do not have administrative districts.
- Thus many functional spheres ("regions") were shaped which now additionally divide some communities. Separated and divided settlements can therefore be in various administratively functional regions (justice, registration of population, geodesy, taxes, space and locations, inspections and similar).
- Even though the NSI or SORS (the Statistical Office of the Republic of Slovenia) pointed out the possible statistical difficulties that result from reforms done in this way, it still supported such a direction with its material. The politicians,

however, sometimes not only used the detailed data but misused them 5/.

- Today there are many cases in the constitutional court and there is a 2-year deadline to settle the spatial and other determinations of local communities in line with a legally differently organized system and based on a different spherical system.

III. STATISTICS AND RECORDS AS BASIS - THE NUCLEUS OF LINKING

8. Due to the above, we are now undergoing the largest transition and the sequence of the actions to be taken is of great importance. No less than 20 years ago we decided that certain tasks - i.e. linking records and registers with the activity performed by the national statistical office - should be planned in a strategic manner. It was and still is our goal, in a reasonable period of time, to be able to support adequate analytical copying and transfer of data from one analytical space into another, with the geographically defined analytical space being only one of many analytical spaces (social, economic, etc.). Thus every analytical space is in fact a statistically supported factographic presentation of the state of things or matters, objects and phenomena, made in a special manner or from a special point of view and intended for analysis.

9. Such a special point of view in most cases also determines the presentation by itself - by choosing things or matters to be observed, by their specific definitions, by the used classifications and other choices the individual fields of professions appropriate even the things or matters and phenomena of the analysis. Macro-economists decide on a different point of view and a different selection of data required for their analytical space than sociologists; physical planners have still another point of view and ecologists have yet another one.

Some Ground Principles

10. The semantically defined object approach links both actual entities (objects) and also attributes (signs) that are linked to them and are collected for them and enables transfer and copying among analytical spaces or respective presentations. For instance:

- In the social analytical space 6/ it is possible to collect by use of censuses, records and other methods, about 100 titles of attributes for the needs of an individual (i.e. 100 replies to 100 questions with as many classifications and definitions). An individual citizen is also an economic being who is linked to a registered employer via his social code (PIN). In this way we can gather many important data on his employment status, payment of taxes, his occupation and the work he performs.

- Like all residents, all employers and employees work or live in actual residential or business buildings or in dwellings, which means, that in case everything has geo-references (a geo-code with special coordinates), then there are new possibilities on this territory.
- In this manner we can transfer into various analytical spaces, where each object has uniquely determined new locations, with a great number of attributes linked to objects, or we can make extracts from existing records and statistical data bases.
- This solution enables the national statistics and users to dynamically keep in touch with political and professional needs and to make multiple usage.
- The logical centralization of such data bases that are copied or are "cut or split" by a sphere of a territory can be made in various ways. For example, even for new communities that have uniquely determined positions of actual titles of buildings (post-codes), the following is available: there is available:
 1. A list of all owners and users of plots of land, written down and kept in the land-register, of the community (German: Parzellenscharf).
 2. A list of all enterprises (socioeconomic operators) on the territory and all the business contents from various registers, i.e. accounting lists, employment, incomes of life-annuity, taxes, classification of activities, etc.
 3. A list of all persons employed at home - employees and self-employed persons and the data on their employment, taxes, etc.
 4. Assessment of property and assessment of wealth of individual persons or groups of persons who reside at the same location (censuses of population, dwellings, buildings, agricultural holdings), registered cars and the state of the communal services.

11. In brief: Slovenia has at its disposal enough records and statistical and technical means for a detailed transfer of data from various data bases to an actual house number, as we have closely geo-referenced all 4 questionnaires from the 1991 Census (population, households, agricultural holdings, dwellings) and thus we are now introducing new geo-referenced collections of all newly gathered statistical data.

The kernel of linking administrative records 7/for the needs of transfer of data among analytical spaces, with statistical generalization encl.

12. For the future we are preparing even better set-ups, linkages and installations of geo-references, socio-references, business and similar references and the **modelling of their cross-section kerner** (the hard nucleus of linking), which means that:

- (a) on-line users - cooperative producers of administrative data bases shall have to exchange data via the nucleus in an up-to-date manner;
- (b) authorized users, having a low frequency of usage, either weekly or monthly, have to agree to special - controlled services;
- (c) the national statistics and other authorized performers who perform NPSS (National Programm of Statistical Surveys) in line with the NPSS needs shall have to take over not only data from the kerner (nucleus) but also the identifiers in the nucleus and the arranged attributes and use them for statistical purposes and other tasks. This is to be performed in an adequate, methodologically settled manner (time series).

13. Thus, in Slovenia we are well prepared with respect to statistics and registers and have a sufficient quantity of various regionally determined data which can support:

- professional decisions in shaping new European regions and
- simultaneously enable trial or preliminary regional accounts in both extreme possibilities:
 - either "from-top-down", or the use of the lower data for professionally correct division of calculated GDP's and other macro-economic aggregates on the regional level;
 - or "from-bottom-up", which we estimate an extremely interesting methodological problem.

It is most likely that this is really a case of an organized interaction between both levels.

IV. GEO-REFERENCED AND GEO-CODED STATISTICAL DATA BASES AND THE FUTURE

14. The GIS product is a successful result of the cooperation between our statistical office and some private software companies. The developing of the software started in 1989 and is being supplemented constantly. All the data that apply to the level of house number can be loaded in the data base and linked together in order to be represented territorially.

15. So far we have linked together the data from the '91 census (population, house-holds, agriculture, dwellings), from the Business Register and from the Central Population Register. Some data regarding taxes, property and elections have also been added. Time series are important for the best evidence of the development of a certain territorial unit, therefore the inclusion of the data from the previous censuses is planned.

16. Practical value of our GIS-Technology(GIST) is: speed, exactness of the territorial location of the phenomena, analytical help in data modelling and visual presentation. In short, it is a good tool for professional work and for statistical dissemination.

17. Any optional demand for the included data, is easily fulfilled. It is simple to define options and even more simple to choose the territorial units - by encircling the territory. The results are simultaneously presented on the screen. As mentioned above, the exactness of the territorial location is by means of the data from the Register of Territorial Units and geo-coded Postcodes. The changes of the options can guide a statistician or an analyst through the data and through the results all over the territory of Slovenia. One can easily develop ideas and simultaneously examine the definitions and results. Therefore the GIST acts as a useful geo-analytical and decision-making tool in geographical and analytical space.

18. It is used by our statistical office and other institutions. One of its most successful tasks was performed during the discussions about the new territorial administrative division of Slovenia and in the future for supporting the decisions for forming new regions. The visual presentation of the data is another important value but also a danger. The GIST has been used for conferences, government commissions, professional fairs and lectures. However, we have ambitious plans for the kind of dissemination to the mass media, too. The GIST will help us to improve the quality of the press conferences. Its enrichment of the presentation of the data by visual applications is and will be useful for publications, television programme and public in general. Actually, we plan to use multimedia as another promising product (INTERNET). By the combination of picture, sound, data and text a display of statistical tables with comments, video programmes and statistical maps will be able to be produced by GIST.

19. Last, but not least - a few words about the data protection. Following the statistical principles on the protection of individual and personal data, it must be said that GIS is used for statistical purposes only. Whenever the data is shown to the public or used outside the statistical office the presentation of protected individual data or the results of less than minimum units is blocked.

V. WHAT DO WE PLAN TO ACHIEVE BY THE END OF THE CENTURY?

20. We shall continue to cultivate and develop the kind of data model of the Republic of Slovenia as described above. We would particularly like to widen its analytical application.

21. The Slovenian Census 2001 will be conducted on the basis of administrative registers which have been "Europeanized" as much as possible. By then we shall have progressed towards:

- the possibility of the logical and contextual transfers of large amounts of administrative and other data between different analytical fields (business, social..)
- the revolutionary development of information technology (Value-added Networks, INTERNET...) especially for dynamic inclusion of new datasets for new "information needs")
- the linking of Slovenia to the European establishment (statistics and registers) by these means, and linking of the geo-referenced, business-referenced, and socio-referenced data on Slovenia to the data of the neighbouring countries for very small territorial units (census statistical, territorial units or geocoded postcode)
- the adoptions of the world statistical and other standards and analytical experiences.
- the building of different new multipurpose statistical registers from administrative registers and other data sources for determination of regions in Slovenia and regional oriented statistics and regional accounts.

ENDNOTES

1/ The Act was based on the presupposition that all data which are not protected by law are open and available to all users. These provisions were then abolished by the Act on Personal Data Protection (1988) and the new definition of statistical confidentiality in the Act on National Statistics.

2/ Yet this number is also only a preliminary figure as some of the units are not satisfied with their positions and territory and during the 2-year trial period the Parliament is in a position to supplement the current solutions.

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trial period the Parliament is in a position to supplement the current solutions.

5/ In this way Members of the Parliament could, when speaking of the group of residential buildings and with the assistance of a computer and the GSI, in their groups determine in detail the very small changes of boundaries and demarcations and thus they could substantially change the professionally proposed basis.

6/ It is characteristic of this space to underline the importance of the social development, the use of means for division, the social policy, the social indicators, the actual surveys and similar, which is mainly determined by the professional field as is for instance sociology. The economic analysis and component can be neglected in part or to a larger extent. Of course even economy as a professional field frequently chooses - for its space and scope of the analysis - a similar procedure. Statistics should facilitate equal right to access of data even for linking purposes and for encounters among professions.

7/ See: Niko Schlamberger " The Register kernel of a state data model" in the same seminar.