



National Organization Committee of Ukraine  
on Preparation for the Second International  
Conference of UNO (Habitat-II)



**U K R A I N E**

**STABLE DEVELOPMENT  
OF POPULATED POINTS  
AND PROVISION WITH SHELTER**

National Report to the Second International  
Conference on Human Settlements of UNO  
(Habitat - II)  
(Istanbul, June 3-14, 1996)

Kyiv 1996

## INTRODUCTION

In 1991 Ukraine — the twenty second largest country in the world — achieved genuine independence and was recognized by the whole world community as a sovereign state.

Ukraine — one of the largest European states, possessing considerable resources and demographic, intellectual and industrial potential, occupies a very advantageous geopolitical position in the centre of Europe.

In the west Ukraine borders on Hungary, Poland, Slavonia and Romania, in the south-west — on Moldova, in the north-west — on Byelorussia, in the north-east — on Russian Federation. The South of Ukraine is washed by the Black and Asov seas. The plains occupy 95% of country's territory, medium-size mountains cover 3% the territory.

Ukraine's area is 603.7 thousand km<sup>2</sup>, population to January 1, 1995 was 51.7 mill. people, included are 35.1 mill. of urban population and 16.6 mill. people — rural population. 110 nationalities and ethnic groups live in Ukraine, among them: Ukrainians — 37.7 mill. (73%), Russians — 11.4 mill. (22%), Byelorussians, Jews, Tatars and others — 2.6 mill. (5%).

Ukraine consists of Autonomous Republic of Crimea, 24 administrative regions, 489 administrative districts, 445 towns (included are Kyev and Sevastopol — of nation-wide importance and 163 towns of regional jurisdiction), 911 urban-type settlements and about 29 thousand rural populated points.

The leading role in production of gross national product belongs to industry — 65%; agriculture — 14.5%; building — 8%; transport and communication — 6%.

The leading industries are: machinebuilding, fuel, metallurgical, chemical, food, agriculture and others.

In 1986 Tchernobyl disaster caused great ecological disbalance in the territory of Ukraine. As the result 2-% of all town-dwellers live in 13 towns most heavily polluted with radionuclides.

The conditions for development of populated points and providing shelter to population of Ukraine differ from region to region:

- Eastern region (Dnepropetrovsk, Kharkov, Zaporozhzhie regions) are notable for rather great density of population (over 30%) and industry, for presence of large towns, small villages, insufficient level of development of social infrastructure and for the largest scale of population reduction;
- Central region is notable for high density of industry and population in Kyiv agglomeration, for medium density and size of populated points, comparatively developed social infrastructure;
- Western region (Carpathian mountains included) is notable for recreation and sanitation resources, the heaviest density of populated points and the least level of urbanization, small towns and large villages being predominant, also notable for the least level of shelter provision;
- Southern region (Crimea included) is notable for low density of populated points, and the Black Sea Shore of Crimea (especially the Southern Shore of Crimea) — for high density of populated points, mainly of resort type, for low level of social infrastructure development and increased rate of population emigration.

Nowadays Ukraine is on the way of transition from planned to market economy. This entails economic, social and technological changes which tell upon the development of populated points and provision of shelter to population.

This report is based on the recommendations of preparatory committee of Habitat-II (first session in Geneva, 1994, second session in Nairobi, 1995) also on recommendations of regional conference in Ankara (1995).

# 1. Stable Development of Populated Points

## 1.1 Review of Demographic Tendencies and Urbanization Processes

### Demography

Population number of Ukraine by January 1, 1976 was 43.1 mill. people, population density was 81 persons per one km<sup>2</sup>, 59% of them were urban population and 41% — rural population.

To January 1, 1995 the population of Ukraine increased by 19.95 and amounted to 51.7 mill. people, population density being 86.0 person per one km<sup>2</sup>, of which 68% were urban population and 32% — rural.

During the period from 1976 to 1988 there was stable natural growth of 3-5 persons per 1000 people (see fig.1). However, beginning from the middle of the eighties natural growth of population begins to drop, and in the last years deterioration of demographic situation began to show. From 1993 the population number started to drop. In 1993 the population number reduced by 130 thousand people, in 1994 it reduced by 380 thousand people. During the last four years the number of residents of practically all towns with population of over 100 thousand has reduced.

The population structure according to genital factor shows predominance of female population — 54% and male — 46%.

During the last years the average family has decreased from 3.2 family members to 2.9 (see fig. 2).

Infantile mortality before the age of five increased from 3.2% in 1990 to 3.4% in 1994.

Unfavourable demographic processes are caused by hard economic conditions of the country, which has chosen the path of independence, by not yet formed system of social guarantees, first of all, for young families, by the drop of rate of housing construction and also by the first traces of unemployment.

Taking into consideration the social and economic situation in Ukraine in the transition period, it is possible to say that the unfavourable demographic tendencies will go on. It is expected that by the year 2006 the population of Ukraine will reduce to 49.3 mill.

However, in some regions of the country the population number has increased by 1-8% for the last 5 years: in the Southern part of Ukraine, in Autonomous Republic of Crimea, in Nikolayev and Kherson regions; in the Eastern part — Dnepropetrovsk and Zaporozhe regions, in the central part — Kyiv region, in the Western part — Volyn, Sakarpatska (Transkarpatia), Ivano-Frankovsk, Ternopol, Rivno regions.

The most densely populated regions are: Donetsk — over 5 mill. people; Dnepropetrovsk — about 4 mill. people, Kyiv — about 4 mill. people, Kharkov — over 3 mill. people (see fig. 3).

It is prognosticated that with improvement of economic situation, increase of salary and creation of the system of easy access to shelter, with implementation of the policy of support rendered to young families and aged people the population of Ukraine will increase to 50 mill. by the year 2016.

### Urbanization

Vigorous development of industrial production in Ukraine (machine building, fuel industry, metallurgical, chemical, food industry) caused intensive development of towns. From 1976 to 1995 the number of towns has increased from 304 to 445 (by 13%), and urban-type communities — from 892 to 911 (2%). The most intensive development of towns was observed in Vinnitsa region — by 70% (from 10 to 17), in Autonomous Republic of Crimea — 28% (from 14 to 18), in Kyiv region — 26% (from 14 to 24).

At present in Ukraine there are 5 very large towns with population of over one million people (Kyiv, Kharkov, Dnepropetrovsk, Donetsk, Odessa); 5 towns with

*Dynamics of population of Ukraine*

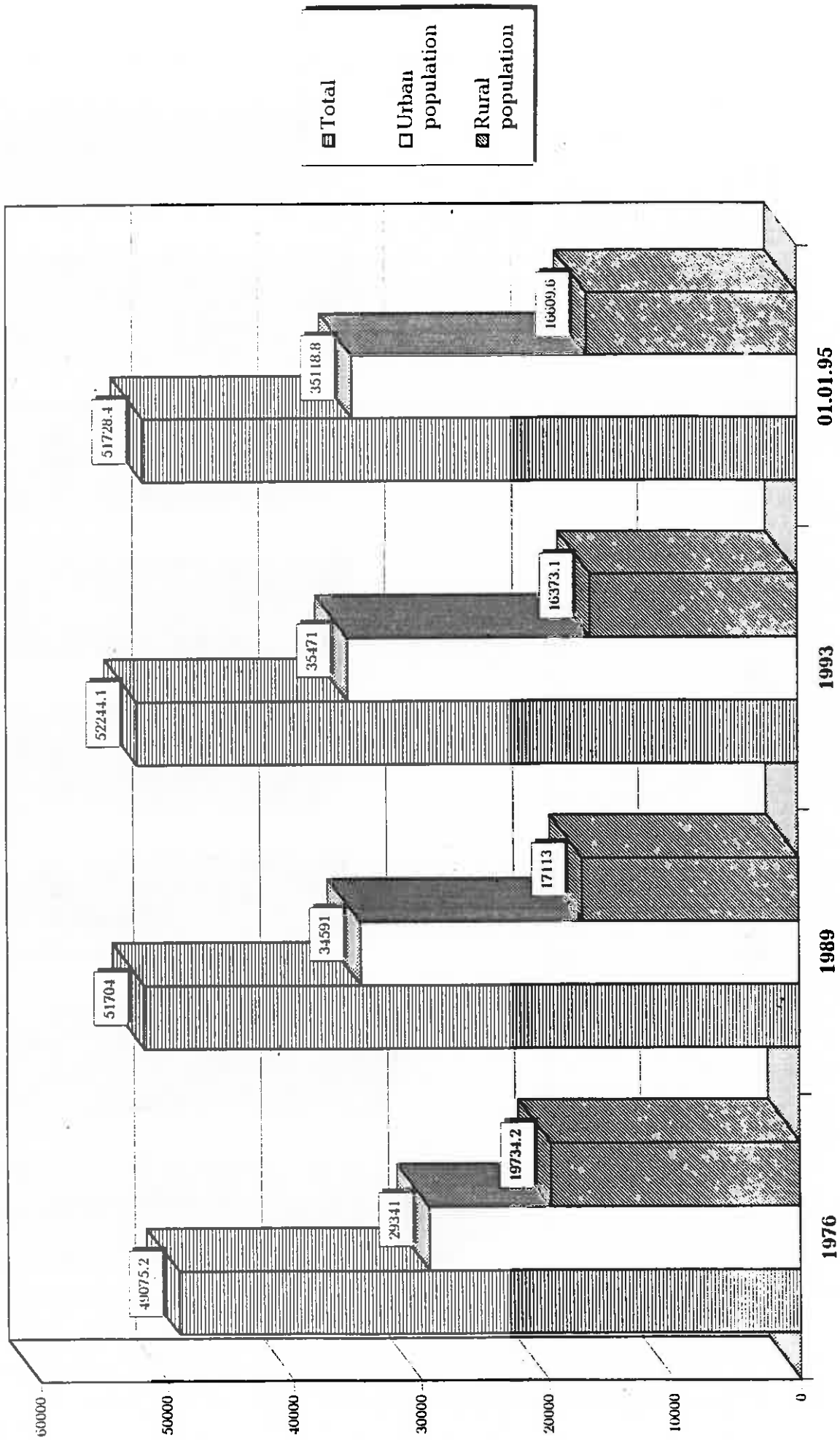


Fig. 1

*Average family in years ( persons)*

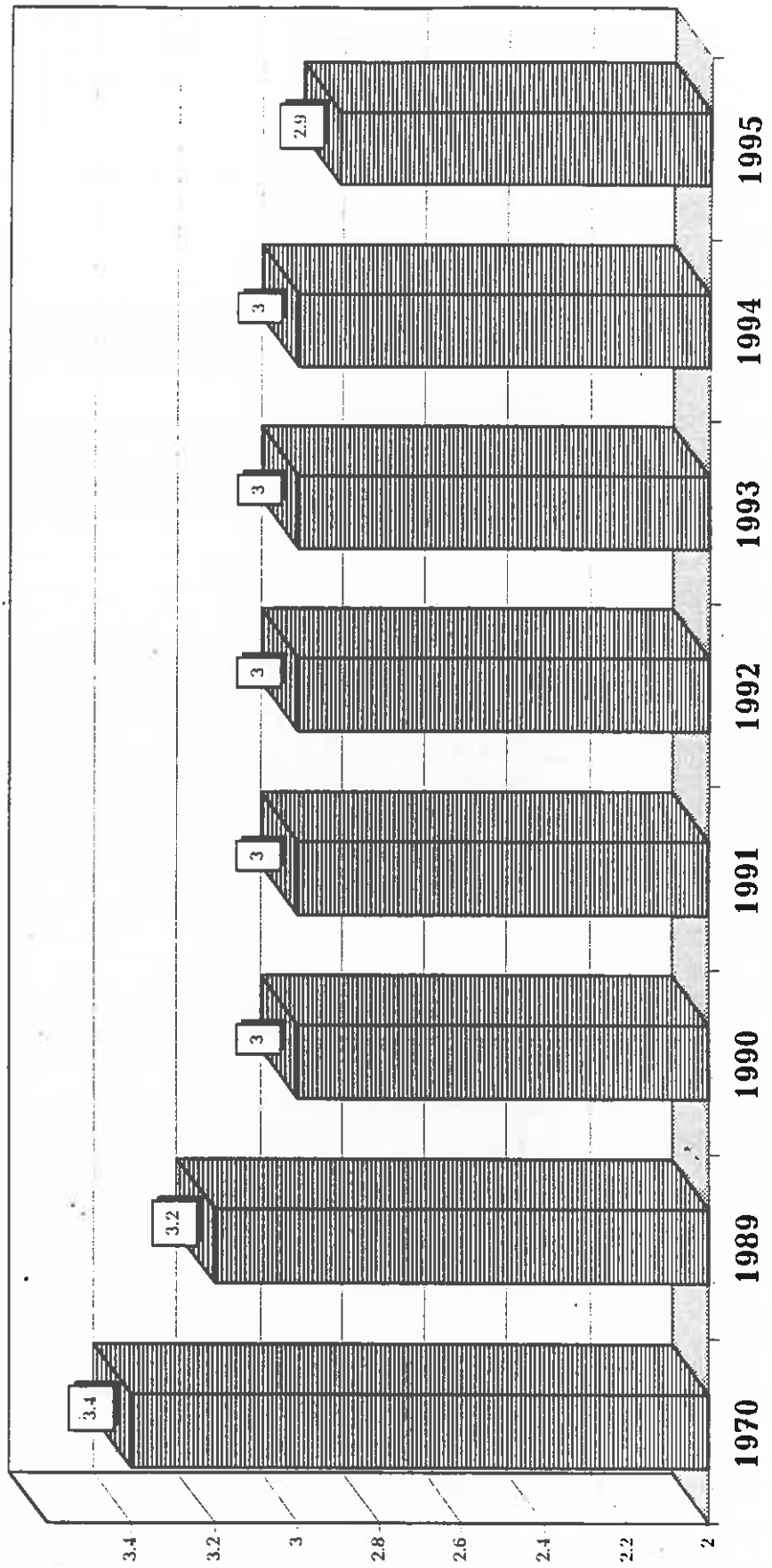
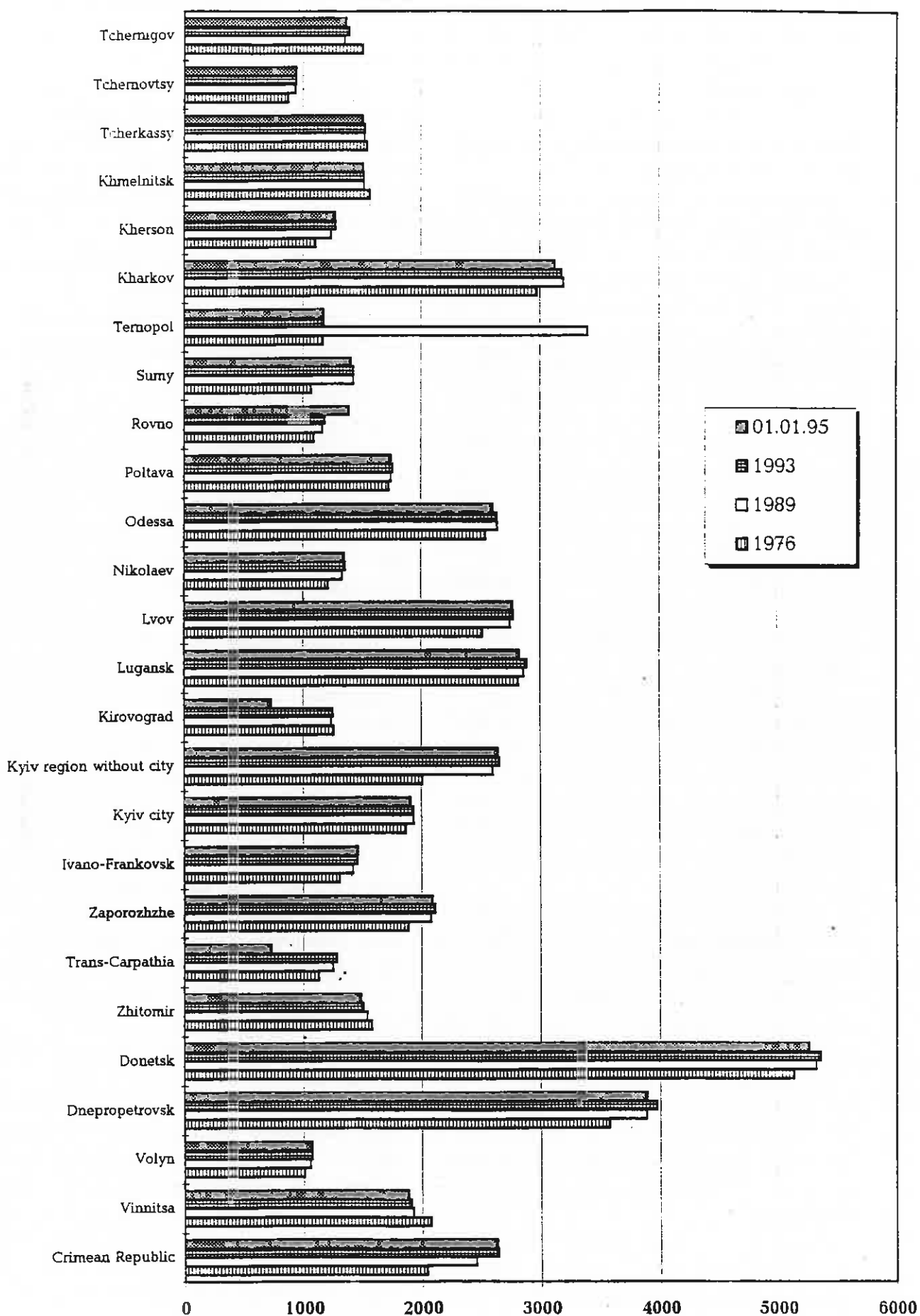


Fig. 2

*Dynamics of population of Ukraine in regions*



population from 500 thousand to one million; 16 towns with population from 250 to 500 thousand; 6 towns with population from 200 to 250 thousand people and 18 towns with population from 100 to 200 thousand people.

In 5 the largest towns of Ukraine (millionaires) lives approximately every fourth town dweller of Ukraine.

Urbanization in Ukraine — is a complicated social and economic phenomenon, one of the criteria of which is growth of large cities and respectively growth of town population — 35.1 mill. of people (68%) in the structure of the population of the country.

As to the density of population Ukraine takes the 12-th place among European countries (86.3 persons per km<sup>2</sup>).

In the period of 1976 to 1986 development were mainly the largest, large and medium-size towns, which was caused by intensive growth of industrial production. beginning with 1986 slow down tendency in development of the largest, large and medium size towns began to show and since 1991 this tendency has gained momentum in all towns.

Of all the largest towns only in Kyiv the population is still growing. Its annual average growth is 0.14%, while in Donetsk, Dnepropetrovsk, Kharkov, Odessa there is a stable tendency for reduction of population. It reduces annually 0.14 — 0.85%. This tendency is also typical for large and medium size towns.

Towns with the population from 50 to 100 thousand people of the Western regions, and especially the new towns built in the seventies for resettlement of workers of atomic and hydro power stations, continue to grow.

Intensively growing are small towns with the population of up to 50 thousand people. Their natural growth of population is 1.1-1.3%, while the total growth of population is 1.7-3.6% due to the migration processes.

However, in small towns of Donetsk, Dnepropetrovsk and Lugansk regions, where miners are resettled, there is a ten-

dency for reduction of the population, caused by fall of birth-rate, and also by immigration of people because of growing unemployment, inadequate living and ecological conditions.

Thus, to summarize, it is necessary to that in 1991-1995 there was reduction of population in the largest and large towns where there are jobs, shelter, social and engineering and transport infrastructure, were actively developing.

## **1.2. Town Economy, Connection with Macroeconomic Indexes, Combatting Poverty, Creation of Jobs, and Formation of Incomes**

### **Employment.**

Steady growth of population in towns in 1976-1991 was caused by development of industry and other town forming economic enterprises. The gross domestic product of Ukraine, agricultural products being excluded, in the period from 1985 to 1990, increased from 90 milliard karb. to 105 milliard karb. (16%), and in terms of per one town dweller — by 20% (see fig. 4).

The increase of jobs resulted in stable employment of town population and this, in its turn, resulted in mechanical growth of town population especially in the largest and large towns and migration of population from rural areas.

During the last five years there was sharp decrease of jobs because of economic crisis, and as a result the town employed population has decreased by 4.8% against 1989. The greatest decrease of employment up to 4.7% (the average in Ukraine being 3.07%) is observed in 8 regions: Crimea, Kharkov, Lugansk, Lviv, Odessa, Ivano-Frankovsk, Kherson, Tchernovtsy and Kyiv.

The registered number of unemployed in 1994 was 83.9 thousand people. Against 1992 it has increased by 75.4 thousand people, the average annual growth being 42.3%. With respect to the total number of able-bodied people percentage of unemployed to January 1, 1995 was 0.29%. The most sharp decrease of employment during

Gross domestic product of Ukraine in years per capita of town population ( USA dollars )

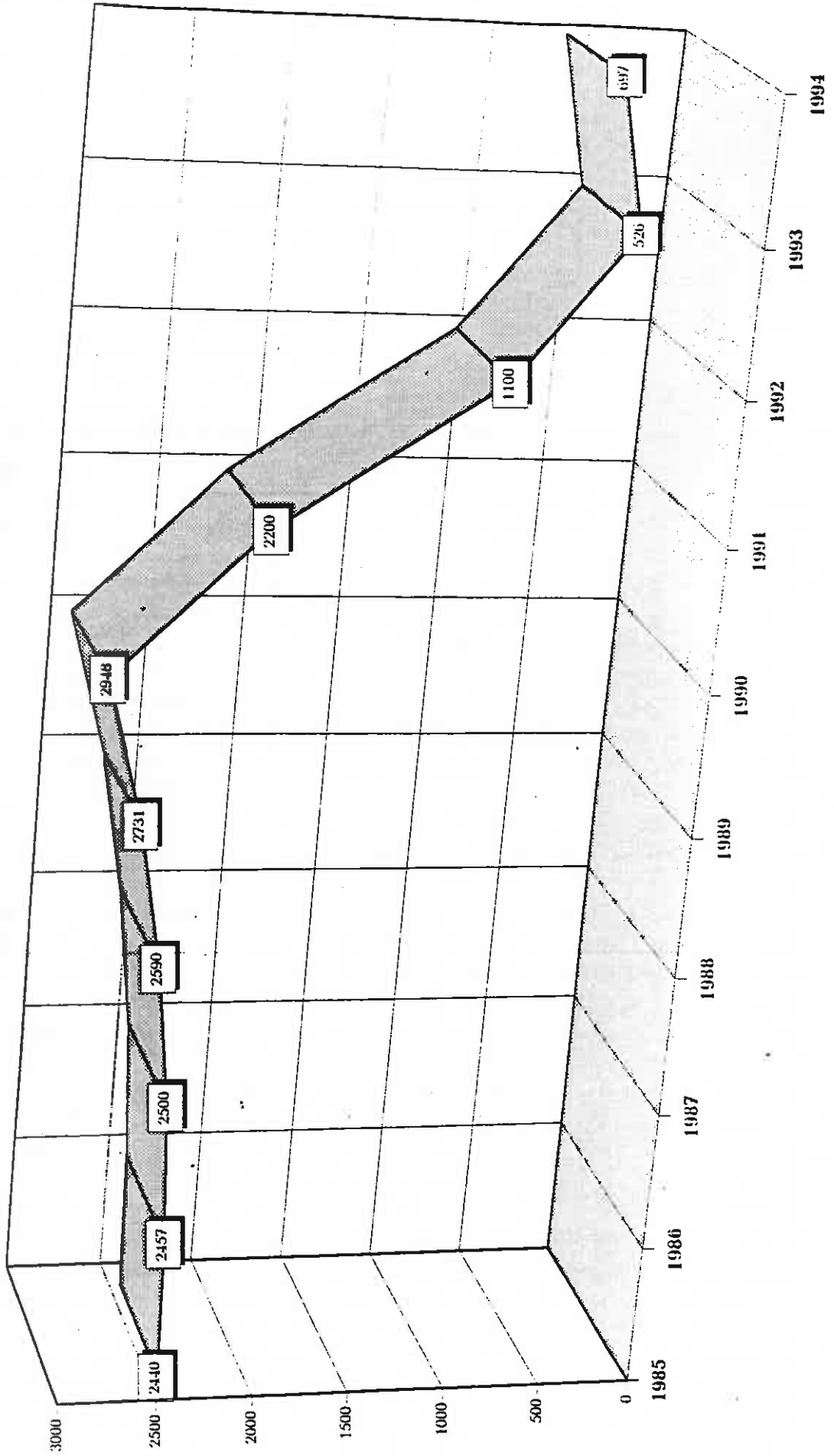


Fig. 4



5 years was in public sector of economy (in industrial and administrative centres) — Donetsk — by 23%, Kharkov — by 20.2%. Reduction of employment in other towns was considerably smaller — 0.6-4%. It is necessary to note, that in all towns according to the data supplied by town authorities besides the officially registered unemployed (0.2-3.2%) there is considerably larger number of concealed unemployed (from 7 to 25%) of able-bodied population.

### Formation of Population Income

The incomes of the population of Ukraine during the last 20 years were formed by money receipts: salary (earnings), benefits, pensions, subsidies, incomes from individual subsidiary homesteads and other sources of public funds.

The state guaranteed free medical care, free secondary education, free education in specialised secondary and higher educational institutions, it subsidised pre-school education in kindergartens, public transport, payment for public utilities and maintenance of housing stock.

Consumption from public funds was about 30-40% of the average per capita income.

In the period from 1985 to 1990 the average money income per capita increased by 47%, but beginning from 1991 the income of population has drastically changed. The average annual income per capita changed from 2.1 thousand karb. in 1990 to 10.4 mill. karb. in 1994 (see fig.5).

However, the prices of consumer goods increased more than 10 times when compared with the incomes of population (see fig. 6).

The structure of incomes of population also essentially changed. In 1970 the salary amounted to 82.1% of family aggregate income. 8.1% of income was formed by benefits, pensions, grants, subsidies for accommodations in sanatoriums, the income from individual subsidiary homesteads was 2.8% , other sources of income — 7%. In

the period of 1992-1994 there was a drastic drop in the share of salary and sharp increase of earnings from individual subsidiary homesteads — up to 30.5%, and from other sources — up to 18.4%. In 1994 the share of pensions, grants, subsidies in the structure of family income decreased against 1992 from 13.6% to 9.9% (see fig.7).

### Creation of jobs.

Employment service is organised in towns of Ukraine. Its task is to help people to find jobs. But at present the scale of this help is inadequate. In 1994 only 35.5% of registered 969.2 thousand unemployed were helped in finding jobs and 37.9% were given the status of unemployed.

The Government of Ukraine and the local organs of self-government take measures to increase the number of jobs . It is planned to develop light and food industries in small and medium size towns for processing agricultural products. This will create new jobs. New jobs will be created in the largest and large towns by developing services industry.

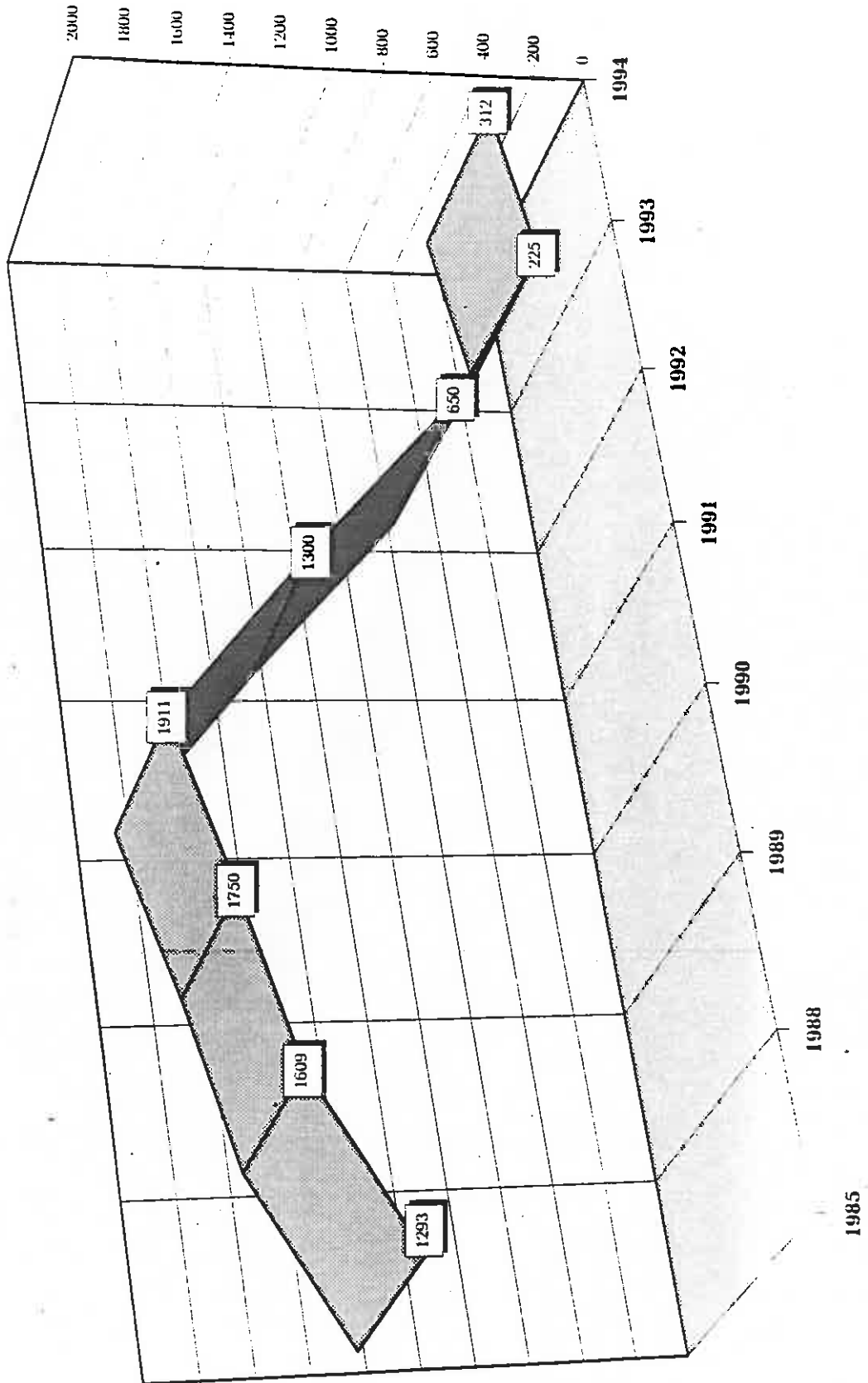
Nowadays 26% of total number of employed people work in the services industry while in the foreign countries this number amounts to 62-77%. As to capital investments the share of services industry amounts to about 25-27%. Privatization of industrial enterprises and objects of services industry will contribute to creation of new jobs.

The taken by the government urgent measures to accelerate the land reform in the sphere of agricultural production, to create conditions for privatization of land parcels for individual subsidiary homesteads, for creation of individual farms and business enterprises, have opened the way for creation of new jobs in rural territories, in construction, in industry development, in the service industry.

All these measures will result in stabilization of population incomes.

Fig. 5

*Average annual money income in Ukraine per capita in years (USA dollars )*



Comparison of the rate of growth of money income and consumer prices in Ukraine against 1990 (in %)

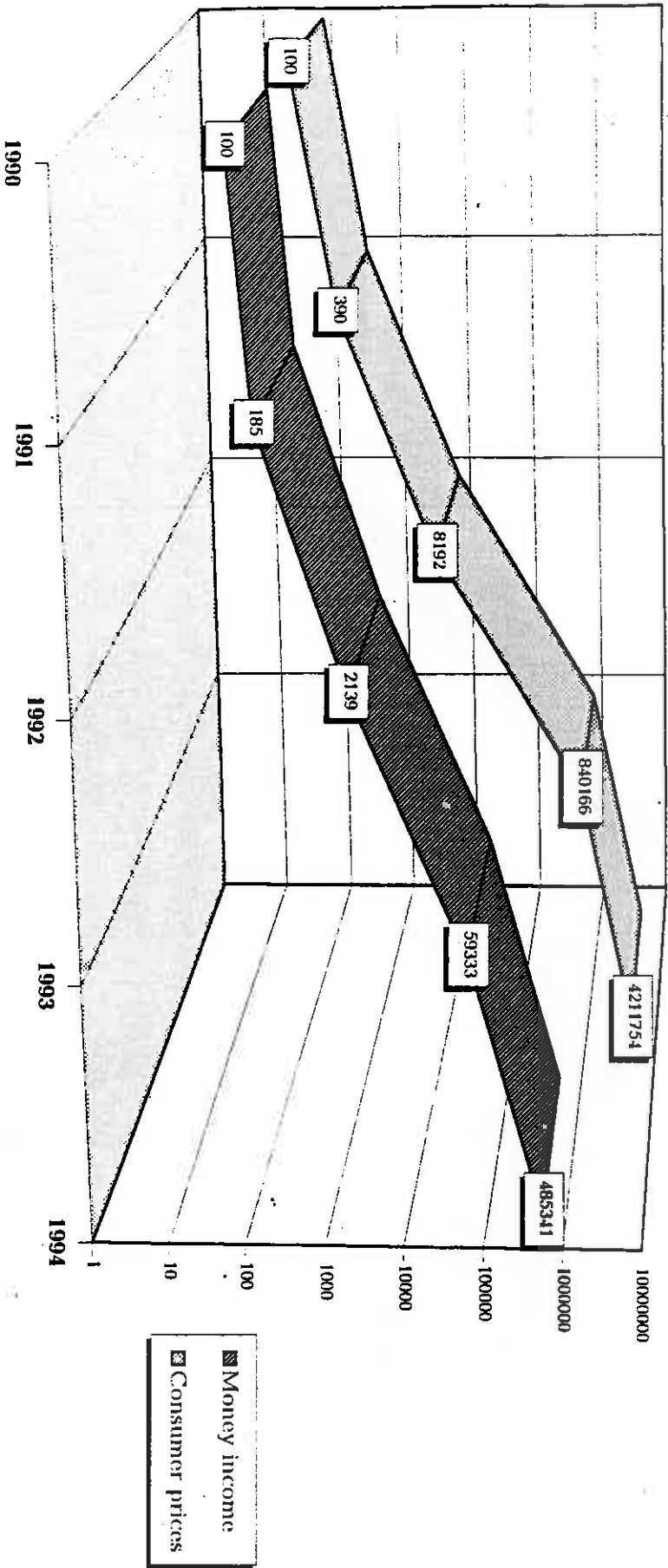
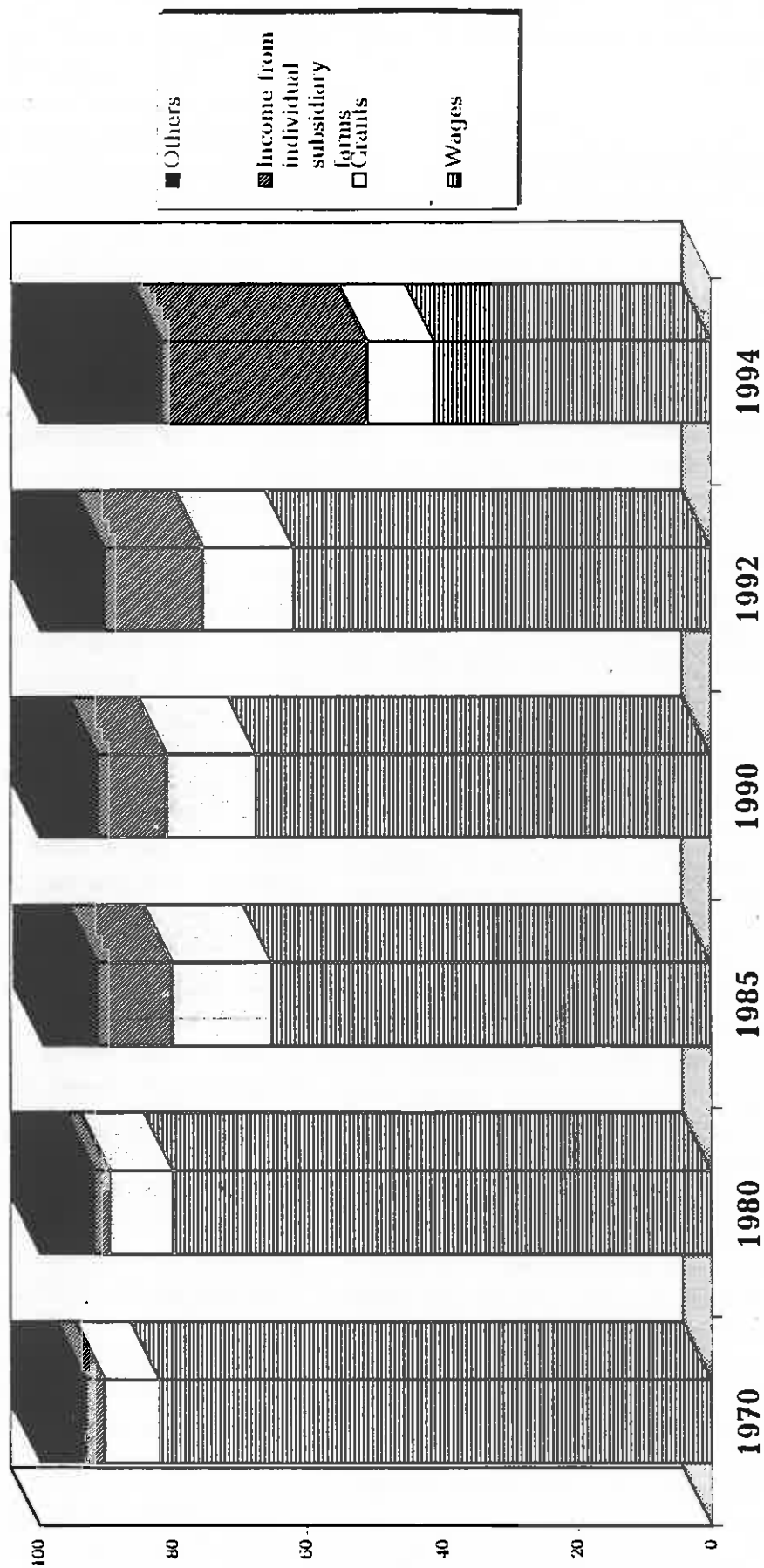


Fig. 6

*Family aggregated income in Ukraine (in %) in years*



\*Pensions, scholarships, benefits, subsidies for sanatoria, rest homes, pioneer camps, pre-school establishments

Fig. 7

### **1.3. Town environment: global consequences of the strategy of stable development, creation of infrastructure and development of main services.**

#### **Territorial development.**

Active development of industry and simultaneous growth of population number resulted in intensive territorial development of towns. The territory of towns amounts to 2.8% of the total territory of the country.

It is necessary to note that planning of the territory of each region of Ukraine is made at the expenses of state budget. The principles of planning were based on the system of state urban development, sanitary, and ecological norms and requirements and were aimed at creation of rational engineering, transport and social infrastructure of human settlements. The state ownership of land and centralized planning were the basis for solution of urban development goals. As the result each town was provided with general plan and projects of detailed planning of each definite region. Under the new market conditions, grounded on new legislation, this system of preparation of planning documentation is being corrected by local organs of self-government.

Territorial development of towns was mainly realised by assimilation of new lands and by tearing down the dilapidated housing stock in the sites of construction.

The ratio of the volume of houses built on newly assimilated territories and built on reconstructed territories in Ukraine is 70% to 30%.

The people living in the houses which are to be torn down are provided with flats in multi-apartment houses built by the state. The flats are provided free of charge.

#### **New building and reconstruction.**

In 1976-1990 new multistorey tenement houses were built of large panel prefabricated sections which were manufactured at special housing building combines. Despite serious shortcomings of industrial house

building (monotony of building and architectural decisions), development of new districts created opportunities to provide greater part of town population with adequate flats, it helped to resettle families living in communal dwellings, to tear down inadequate housing stock and, in spite of all that, to ensure sufficiently high quality of planning and volumetric-spatial decisions.

Town development was also facilitated by reconstruction of historical districts of large towns.

Thus, as a result of organizational, technical, architectural and planning activity of towns organs of self-government reconstruction of central part of Donetsk was carried out.

Families that lived in dilapidated houses or barracks were provided with comfortable flats. The houses unfit for living were demolished, small businesses, polluting environment were moved away, complex development according to typical projects was carried out, street building lines were widened, engineering communications and administrative, public and cultural buildings were constructed, the territory was cleared, public services were organized and greenery was planted along the ponds of the Kalmius and Bakhmutka rivers.

However, complex reconstruction of historical towns was not a large-scale work because of shortage of money.

After 1990 the development of towns became much slower, because of decrease of state subsidies to housing and industrial constructions and to the engineering infrastructure. However, the new legislative basis, which is being created, of protection and encouragement of investments, the progressive system of urban development regulation, the new concept of spatial policy will allow to promote sustainable development of towns and villages of Ukraine under new economic conditions.

#### **Accessibility to land parcels.**

The land legislation, which was in force up to 1990, was based on national land

ownership. It allowed to allot land parcels for permanent use for building houses and industrial objects. Land parcels were allotted in the same way for building houses of homestead type in rural areas and in urban-type communities.

It is worth to note that construction of one family lowstorey houses of homestead type with adjacent plot of land was forbidden by 1989. As a result the town population was deprived access to land parcels. Thus, this influenced on the volume of housing construction in general. Since 1991 these limitations are lifted and measures are taken to promote individual building of houses. People are allotted free of charge land parcels for building individual houses.

The Decree of the President of Ukraine «On Urgent measures to accelerate land reform in the sphere of agricultural production», «On privatization of land plots for subsidiary individual homesteads, datchas, garages», granted the right to people to receive free of charge land parcels for building individual houses.

This facilitated building of individual houses. While in 1991 the individual housing stock amounted to 54.6% in 1995 its share has increased to 62.8%.

Besides, considerable part of population receives land parcels allotted free of charge for building datchas, and garden houses intended for seasonal shelter. By the beginning of 1994 2 mill. 700 thousand land parcels were allotted for these purposes, which occupy the territory of 187 thousand ha.

During the last years we observe intensive construction of small-storey houses in the suburban rural human settlements by town residents. This facilitates solution of shelter problem, which is especially urgent in the towns with short territorial resources. However, the development of social, engineering and transport infrastructure here lags behind.

### **Territorial Resources**

In order to promote sustainable development of human settlements and solution

of shelter problem in the Ukrainian towns new territorial resources are needed.

Intensive development of towns resulted in the fact that considerable number of industrial enterprises became surrounded by housings. Many industrial enterprises still use obsolete technologies of high energy consumption. They are sources of contamination of town territories. As the result considerable territories of towns and sanitary protection zones of industrial enterprises became technogenically disturbed and polluted.

For example, the ore concentration mill in town of Ordzhonikidze, Dnepropetrovsk region, has development the town recreation zone which occupies the territory of 98 ha of recultivated ladds of Alexandrovsky quarry worked out to the depth of 45-60 m. There were created artificial water reservoirs (man made ponds), a landscape park and constructions for relaxation of people.

In most of the towns the territorial resources are exhausted and the available free land parcels require considerable expenses for engineering preparation. By the year 2016 towns of Ukraine will require 300 thousand hectares of new territories to provide each family with the possibility to buy a house or a flat. This is approximately 70% of total territory already occupied by houses and populated points.

The need for new additional territories in each definite human settlement in Ukraine is defined by the General plan of its development.

### **Services Industry**

The development of the territory was planned on the basis of single state building norms and rules, which regulated the volume, dimensions of land parcels and accessibility to such enterprises as trade, public feeding, general schools, pre-school institutions, polyclinics, hospitals, sports facilities, other objects of social sphere.

As a rule, the volume of investments in development of social and cultural, engi-

neering and transport infrastructure was not sufficient. Therefore, among typical shortcomings in developing habitation districts were lagging behind with constructions of services industry. The number of hospital beds in most of the regions is also below the state normative (see fig.8).

In Ukraine, mostly all children at the age of 6-17 are enveloped with secondary education, 7000 thousand pupils study now at general secondary schools, included are 4700 thousand in urban-type communities.

## **Engineering Infrastructure**

### **Street and road network.**

The regions of Ukraine differ greatly as to development of the street and road network and transport communication. Donbass, Crimea and western regions of Ukraine have rather dense network of automobile roads and railways, but in other regions this indicator is 1.3-1.6 times lower. Of 170.5 thousand km. of automobile roads of common use, 95% have hard covering (are paved), but 37% of them are in very bad condition.

The suburban zones of large and largest towns have no adequate transport communication, they cannot provide adequate access to work places, to public cultural and recreation institutions.

### **Town Transport**

The towns of Ukraine have sufficiently developed public transport — autobus — in 415 towns, streetcar — in 24 towns, trolley bus — in 46 towns and taxi — in 210 towns. 3 the largest towns, Kyev, Kharkov and Dnepropetrovsk have underground. Besides, in Kyiv and Kryvoy Rog there are two lined of high-speed streetcars. The lenhth of it is 41.8 km.

However, in 1993 there was 10% reduction of autobus transport units and 635 reduction of taxi units against 1990.

At present in Ukraine there are 4.2 mill. cars, 82 thousand lorries, 12 thousand autobuses, as to the private transport

means, there are 12.1 units per 1000 citizens.

### **Communication Means**

In 1993 there were 33 private home telephones per 100 families. That is 14% more against 1990, but provision with intertown taxophones reduced 16%.

As to the level of provision with means of communication the rural population is far behind the urban population. There are only 4 telephone per 100 village families against 28 in towns. Absence of constant stable communication deprives the rural people of possibility to receive vital information in good time, also to receive timely medical help, fire extinguishing help, etc. This is the main reason why the village life is not fully comfortable.

There are now 339 television sets per 1000. citizens, that is 2.5% more against 1990 and there are 276 radio sets per 1000 people (1.8% less against 1990).

### **Engineering Service**

Most of the towns in Ukraine are provided with centralized system of water supply and sewers.

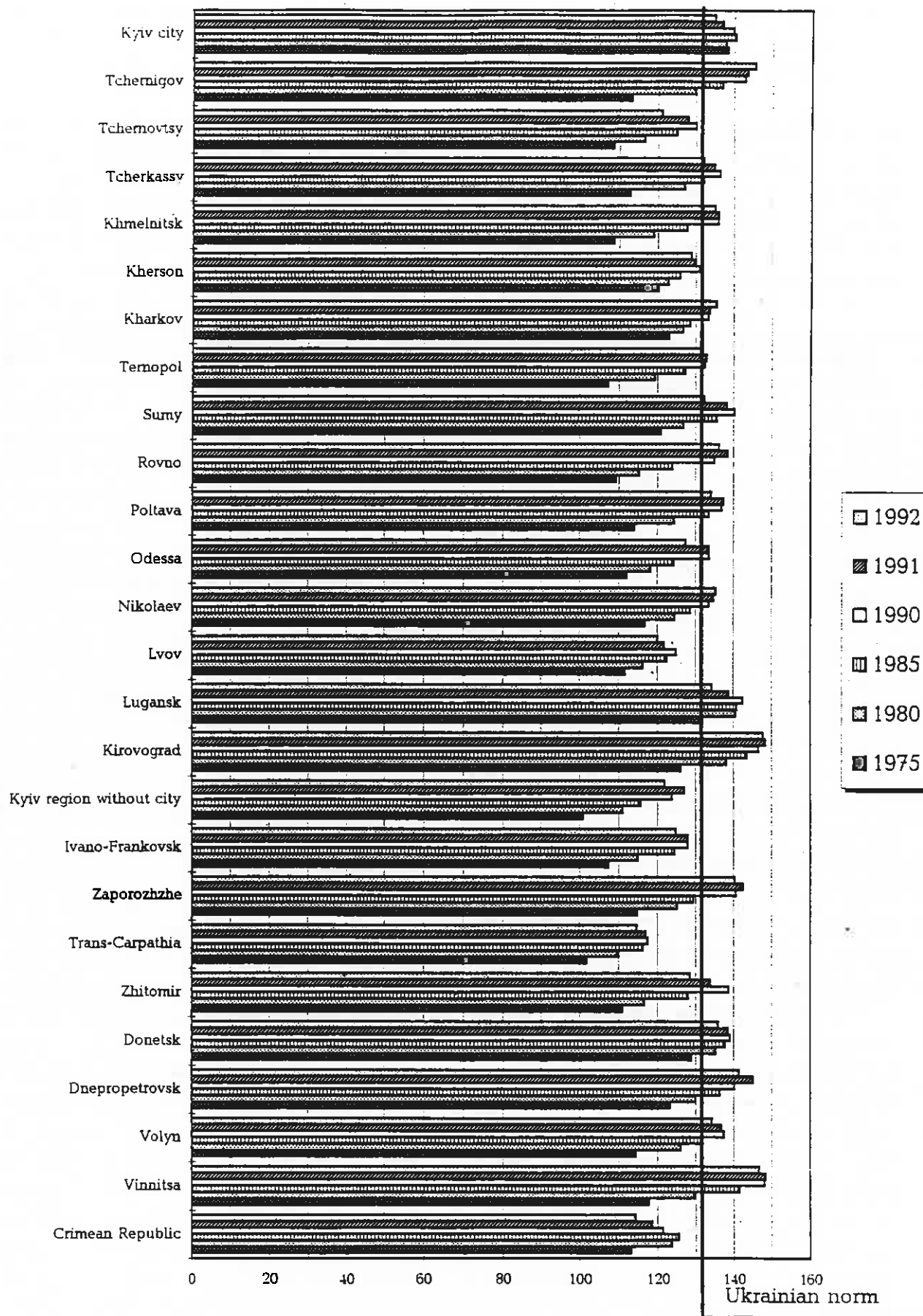
In 31 towns and in mostly 1/3 of urban-type communities there are no sewerage systems, 15 of these populated points have no centralized water supply. The sewerage systems in 110 urban-type communities are overloaded. More than 15 thousand km. of water supply networks (21%) and 5.2 thousand nets of sewerage (19%) require urgent repair.

Development and organization of rural populated points in Ukraine is lagging far behind town type populated points. Their provision with engineering systems is also very low. The number of rural populated points that are provided with water supply system amounts to 5293 (18.2%) which is 16% more against 1990; sewerage system 851 (2.9%) which is 7% less against 1990; natural gas — 3786 (13%) — 55% more against 1990.

Of the total number of rural housing stock only 7% of flats have central water

Fig. 8

*Number of hospital beds per 10 thousand people in Ukraine in years and regions*





supply, 8% — natural gas, 3.7% — sewerage, 8.4% — water heating system. Only the fifth part of rural population is provided with qualitative drinking water, in 1140 villages people are obliged to use water brought in tanks.

To solve the problem of supplying people with qualitative drinking water, a special state programme of development of water supply and sewerage systems of human settlements in Ukraine up to the year 2000 is worked out. There are also regional reconstruction programmes.

### Energy Consumption

Specific energy consumption in Ukraine per one unit of industrial product is 3-4 times more than at similar enterprises in Western Europe. Though production of electric power in Ukraine per capita is practically at the same level as in European countries such as France or Great Britain, consumption of electric power by Ukrainian industry amounts to 60% while in France it equals to 40% and in Great Britain — 35.8%.

Power consumption per capita in kilogram of oil equivalent (KOE) in 1990 was rather high (4600 KOE) and is comparable to the European average indexes. But at the same time, the gross domestic product (GDP) of Ukraine was 8-10 times lower than the average European (Eastern European countries not included) and power consumption for GDP was 8-10 times higher.

Though in Ukraine there are industrial enterprises employing the most up-to-date technologies, most of the industrial stock, especially in coal and electric power industries, is physically and morally obsolete, they require reconstruction and replacement. Energetic plays a very important role not only in providing comfort and power to the industry. Under climatic conditions in Ukraine it also provides vital activity of people.

Production of electric power in Ukraine in 1993 has dropped against 1990 from 298,5 milliard kW to 229.9, or 23%.

At present a rather great amount of fuel and power resources are consumed for maintenance of housing stock and for building new housings.

Today annual consumption of conventional fuel for housing maintenance per one person is equal to 1.3-1.4 tons, and for heating 100 m<sup>2</sup> of housing floor space a year it is necessary to consume approximately 5.6-8.7 tons of conventional fuel.

The existing systems of heat supply to houses (industry excluded) consume 15 times more energy resources than in USA and 2.5-3 times more than in Sweden.

Approximately one fourth of fuel consumed in Ukraine is used for heat supplied to houses and public buildings. The major part of it is consumed for heating (more than 75%) and for hot water supply — 80.25, this is 1.5% and 2.1% more than in 1990 respectively, while gas supply has dropped from 87.3% to 86.6% (by 0.7%).

The houses, built at the time when fuel resources seemed to be limitless, now require so much energy that their maintenance is a great burden to fuel and power complex. Building of new houses also aggravated the problem. But the experience of developed countries shows that with the present state of technology fuel consumption in houses can be reduced more than by one third. These are great reserves for saving energy. These reserves can be fully realized only when work is carried in two directions: warming up of outer walls of the houses and by modernising the heat consuming system.

That is why new normatives were introduced in Ukraine in 1994, which foresee reduction of energy losses through the walls of houses 2.5-3 times, through windows — 1.3-1.6 times. Also new technical decisions on taking stock of consumed heat and gas, on modernization of engineering equipment were taken. This, in general, allowed to save up to 30% of fuel.

In 1994 the Supreme Rada of Ukraine has adopted a law «On energy saving» in which the principles of state policy on control and energy saving were defined.

Reduction of energy consumption is also of great ecological importance as it is aimed at reduction of pollution of atmosphere with carbon dioxide and environment protection.

## **Ecological Problems of Populated Points**

### **Pollution of Air Basin**

The most active processes of urbanization brought to the surface very acute ecological problems — interaction of technogenic artificial habitation surrounding and the nature. The 4/5 of main national product now is produced in towns, which became main consumers of raw materials, energy and water. As a result, they have become the centres of chemical load on nature, throwing out into environment 4/5 of the total volume of contaminants.

The number of stationary sources that throw out contaminants into the air basin of Ukraine increased from 287.9 in 1990 to 347.0 thousand units in 1993 (20%).

The total volume of contaminants that were thrown into atmosphere basin of Ukraine: from stationary polluting sources in 1993 was 7.3 mill. tons (23% less than in 1990); from transport means 2.7 mill. tons (56% less than in 1990).

Leaders in polluting atmosphere are regions with high concentration of industrial enterprises — Donetsk (24%), Dnepropetrovsk (17.5%), Lugansk (11%).

The contaminants composition in 1993 included 1.4 mill. tons of solid particles, 5.9 mill. tons of gaseous and liquid particles, including sulfur anhydride — 2.2 mill. tons, nitric oxide — 0.5 mill. tons, hydroxide — 2.1 mill. tons.

As the result of the measures on protection of atmosphere the throw out of contaminants into air basin of Ukraine from stationary source in 1993 reduced by 1.3

mill. tons or 15% against 1992, and from movable sources — by 0.9 mill. tons (25%).

### **Discharge of Sower (drain) Water**

The second source of pollution of environment in Ukraine is discharge of sewer water. The total volume of discharged water in 1993 was 16.7 milliard m<sup>3</sup>, this is 18% less than in 1990, including 4.7 milliard m<sup>3</sup> of contaminated discharged water (46% more than in 1990), of these 1.2 milliard m<sup>3</sup> were discharged without decontamination. Nowadays, the capacity of decontaminating structures has practically not increased in comparison with 1990.

In Ukraine, in 1993, the average specific weight of discharge of contaminated water was 28% of the total volume of the discharged water. In some other regions this index is 2-3 times higher: in Kharkov region it is 73%; in Lugansk — 71%; in Tchernovitsy — 57%; in Kherson — 56%; in Odessa — 52%.

All discharged water flows into natural reservoirs — rivers, lakes, ponds — contaminating them with heavy elements which affect the genital system of man.

According to the national programmes measures are taken in the towns to improve the quality of decontamination of sewage. Realization of these measures is hindered because of inadequate financing.

### **Dumping (removal) of Wastes**

The third acute problem of populated points in Ukraine is removal of waste. Every year 41 mill. m<sup>3</sup> of waste accumulate on the territory of housing stock, or 1.18 m<sup>3</sup> per one town dweller. This waste is utilized on 656 open dumps (95.7%). Only 4 waste burning plants work on the territory of Ukraine, which reprocess 12% of waste. About 805 of dumps have no special arrangements which would protect subterranean water and air basin against pollution. As we have no native equipment for waste reprocessing the waste is not decontaminated and not reprocessed. The exist-

ing waste dumps containing many toxic elements, cover large territories of suburban zones. The dumps have excluded vast territories from biological cycle for 50 years. Besides, the productivity of the fields around the dumps decreases as the result of soil pollution which kills natural organisms in the soil.

### **Pollution of Environment Caused by Tchernobyl Disaster**

As the result of Tchernobyl APS disaster in 1986, more than 41000 km<sup>2</sup> of Ukrainian territory were polluted with radionuclide. The level of pollution of about 46000 hectares of arable lands and 46000 hectares of forests is more than 15 curie per km<sup>2</sup>. These lands are excluded from production sphere.

More than 12% of arable lands in Ukraine (4.6 mill. hectare) have the pollution index within the range of 0.1 to 15 curie per km<sup>2</sup>.

The Tchernobyl estrangement zone has the radius of 30 km and involves more than 2000 populated points. The most critical situation is in Polesye zone of Zhitomyr and Kyiv regions where the pollution level is equal to 10-15 and more curie per km<sup>2</sup>. The estrangement zone is an object of strict monitoring, as it is of great danger for environment — there are 800 burial grounds of radio active waste.

The number of radioactive particles thrown out into atmosphere as the result of Tchernobyl disaster was estimated to be 50 mill. curie.

## **1.4. Social Help**

### **Needy Group of People**

The needy groups of people are pensioners, single mothers, families with low aggregate income.

The number of aged and disabled pensioners amounts to 14.8 mill. people, or 27% of the population in Ukraine. The number of single mothers receiving child benefits amounted to 1.3% of all female

population of Ukraine. The greatest number of single — mothers is in Autonomous Republic of Crimea (1.9%).

To combat poverty it is foreseen to help needy people in the form of subsidies to compensate the payment for housing and communal service. According to the decision of the Cabinet of Ministers of Ukraine, adopted in 1995, the payment for housing and communal services should not exceed 15% of the monthly average family income. In November 1995 the Supreme Rada of Ukraine established the threshold of poverty which is equal to 4.8 mill.karb. This value will serve as the basis for calculation of pension, and benefits to single mothers. The children of needy families are provided with free meals at school. Provided are also child benefits and cuts in payments for service rendered by pre-school children establishments.

### **Help to Victims of Technogenic Catastrophes and to Deported Peoples**

In order to give help to population living on the territories polluted with radio active elements as the result of Tchernobyl disaster, the Supreme Rada of Ukraine has adopted a law «On legal regime of the territory polluted with radioactive elements as the result of Tchernobyl disaster» which defines the rules of living on the contaminated territories and evacuation of people to safe regions.

A state programme of resettlement of people from polluted districts has been worked out. Resettled were more than 160 thousand people, including 91 thousand people evacuated from 70 villages and urban-type communities and two towns — Tchernobyl and Pripjat.

In order to resettle the employees of Tchernobyl APS a new town Slawutytch for 30 thousand residents was projected and built in a short time.

The Government of Ukraine exercises constant control over complex development of these populated points. Houses with total floor space of 1908 thou-

sand m<sup>2</sup>, 1114 km of automobile roads, hospitals for 1600 beds, polyclinics for 6600 visits per day are already built there.

The other important task is to resettle the deported peoples who return to Ukraine: Crimean Tatars, Germans, Bulgarians, Armenians, Greeks and others. At present about 312 thousand of Crimean Tatars have returned to Crimea. A special state programme of their resettlement is worked out.

The third problem is resettlement of servicemen who are returning from Eastern Europe and other republics of the former Soviet Union. State support is rendered to them, they also receive financial support in accordance with international convention projects.

### **1.5 Control over Populated Points Development**

Up to 1991 there was centralized state control over financial and technical resources of the country. The development of populated points was put into a rigid framework of state normatives, budget allocations, state subsidies for land and real estate.

Superfluous centralization of control over town development did not allow to take into consideration the regional and local peculiarities, and resources limitations did not promote initiative of the local self-government organ.

In 1991, after Ukraine got independence, the development of individual housing constructions, emergence of private enterprises, the land reform called forth new tasks — decentralization of state control over development of populated points, increase of responsibility of private builders and local organs of government for opportune development of land parcels, engineering preparation and organization of territories, development of street and road network.

On the legislative level a Law «On foundation of urban development» was adopted. This Law defines the principles of town

development and the basis of self-government. Rules of development of human settlements are being considered. Work is going on to create a system of legal and normative acts which should include the Law «On territory planning», «On architectural activity» which should promote sustainable development of towns in the transition period.

The faster Ukraine is moving in the direction of establishing private ownership on land and real estate, the more urgent becomes the need to reform the approaches to territory planning, the control over land use and development of land parcels by individuals and organizations.

The principle of territory «zoning» is being introduced. This will allow the land owners to make better choice of land use. It will also protect public interests as it excludes improper use of land.

It is planned to exercise information control, based on urban development cadastre, over development of populated points. The Statute of urban development cadastre of populated points is approved. This Statute defines the procedure of creation and keeping the cadastre, defines the responsible organs, sources of financing, principles of information exchange.

### **1.6 Town and Housing Indicators**

In the process of preparation to the Second International Conference «Habitat - II in Ukraine», a work was carried out in forming up town and housing indicators: in 19 towns — region centres, and in 13 small and medium size towns.

As the old system of statistical accountability of the Soviet Union time is still in force in Ukraine, collection of information in accordance with new methods causes certain difficulties. Some necessary data are not available — number of families headed by women (single-mother families not included), number of needy families, indexes of pendulum migration, income level, etc). Concealed unemployment is a widespread phenomenon, characterized by ori-

anted percentage of unemployed to total number of able-bodied town dwellers.

In order to get real adequate data concerning town and housing indicators, it is necessary to change the system of statistical accountability in Ukraine.

## **2. SHELTER PROVISION IN UKRAINE**

### **2.1 Review of shelter provision to the population of Ukraine in the years of 1976 to 1995**

The main objective in the field of construction in Ukraine after the war of 1941-1945 was urgent need to restore the destroyed inhabited areas, first and foremost, to reconstruct the housing stock. To meet this objective national financial resources and private investments were mobilized.

By the sixties the immediate task to provide the people of Ukraine with minimum shelter (the average norm being 13 square meters of housing floor space per person) was, to a certain extent, achieved mainly at the expense of the large scale individual construction. Thus, by 1960 489000 flats were built, 274000 of them at the expenses of the population. This was stimulated by credits on easy terms and free allocation of land parcels.

During the period of 1975-1990 the annual construction of houses was within the limits of 17-20 mln. square meters of housing floor space (see fig. 9). During the period of 1990-1995 this index has considerably dropped (see fig.10).

The housing stock of Ukraine increased by 20 per cent during the period of 1976-1994 — from 691 to 974 mln. square meters of housing floor space (see fig.11). If to take into account that the increase of population of Ukraine during that period was considerably small, within 6 per cent, the increase of the housing stock resulted in improvement of shelter provision. The housing floor space per one person increased from 14.1 to 18.5 square meters.

According to this index the shelter provision in the countryside is higher (21.2) than in town (17.2) (see fig.12).

The greatest number of built flats falls for 1975-367 thousand flats. By 1990 this number has dropped to 276 thousand, and by 1994-to 139 thousand flats (see fig.13). However, the average room index per one flat has slightly increased from 2.16 to 2.33 room (see fig.14) respectively, the average housing floor has also increased from 49.9 to 58.8 square meters of housing floor space (see fig.15).

In the sixties constructed were mainly standard houses of section-block type, designed for various climatic zone and conditions of construction. As a rule these were five-storey tenement houses with all necessary engineering equipment. During this period new industrial elements found way into housing construction.

The average height of the houses in the sixties in towns was five storeys, at the beginning of the seventies some changes began to show in the increase of the height and by 1983 the average height of the houses in the towns of Ukraine was 7.72 storeys. In 1990 the number of 9 and more storey houses was 75% of the total number of the built houses. Now some changes begin to show in the reduction of the height of houses (see fig.16). In the countryside construction of small houses predominated in 1994. The average height of houses was 2.04 storeys.

The building constructions and materials were subject to considerable changes during this period. If at the beginning of the seventies prevalent were local materials, in 1990 industrial constructions were used for building 60% of all houses in towns. Lately some tendencies began to show in increase of using local materials for housing construction (see fig.17).

Beginning with 1990 the scale of housing construction at the state and cooperative expenses has decreased because of the difficulties caused by transition to market multystructural economy. There is also a decrease of the average storey index and

# Housing put into operation in the territory of Ukraine

thousand m<sup>2</sup> of floor space

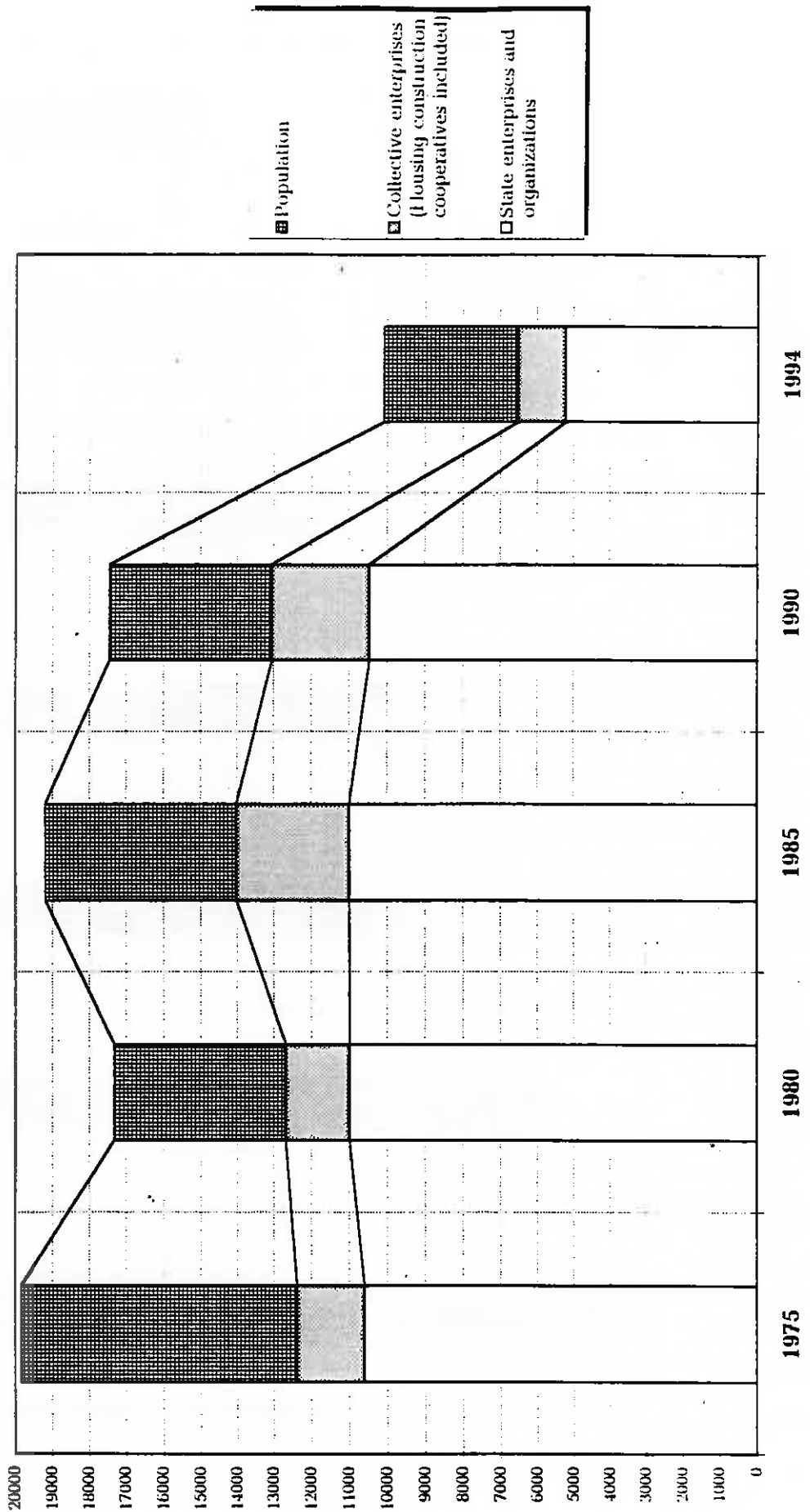
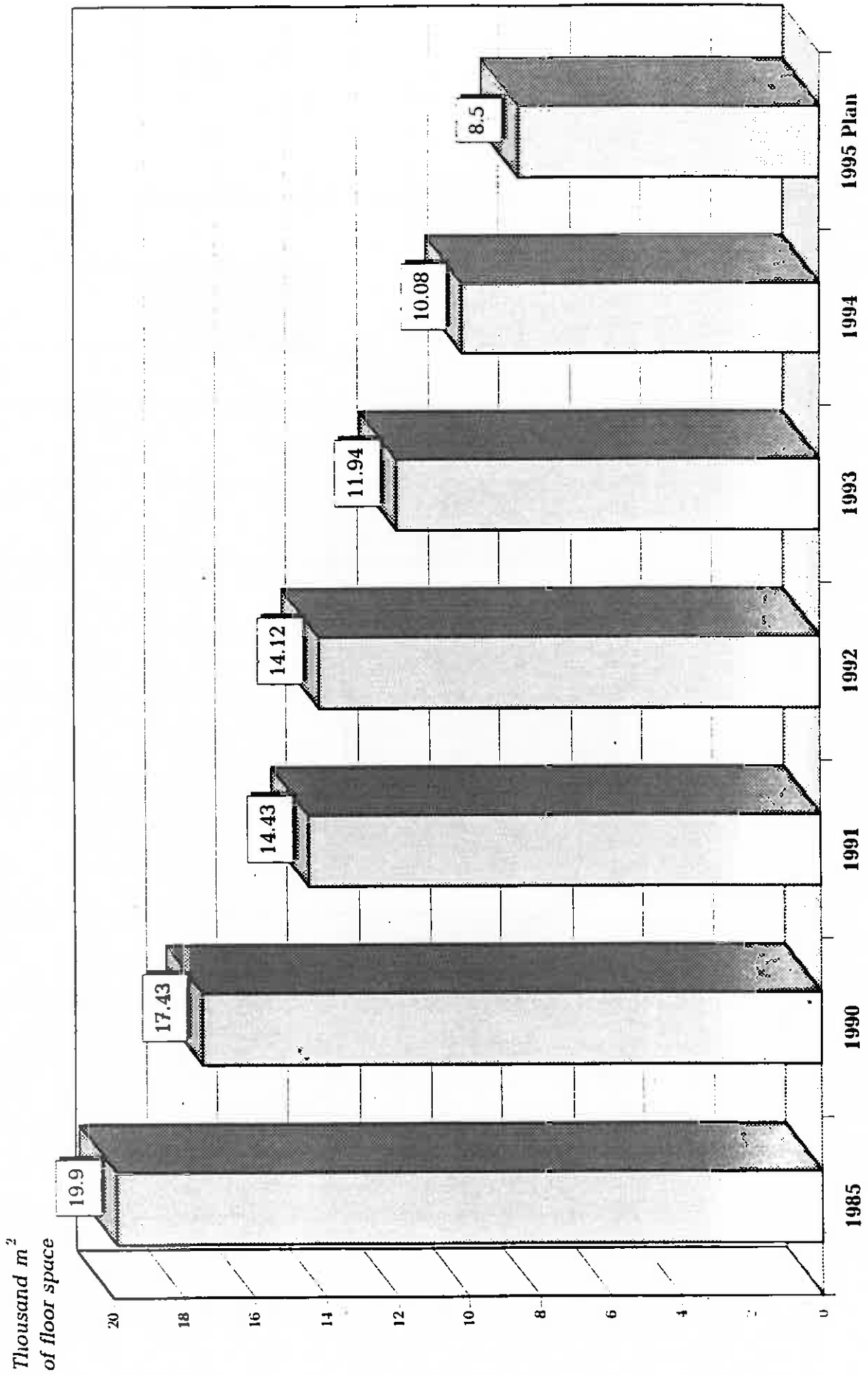


Fig. 9

*Volume of housing construction in Ukraine for the last 10 years*



*Housing stock of Ukraine*

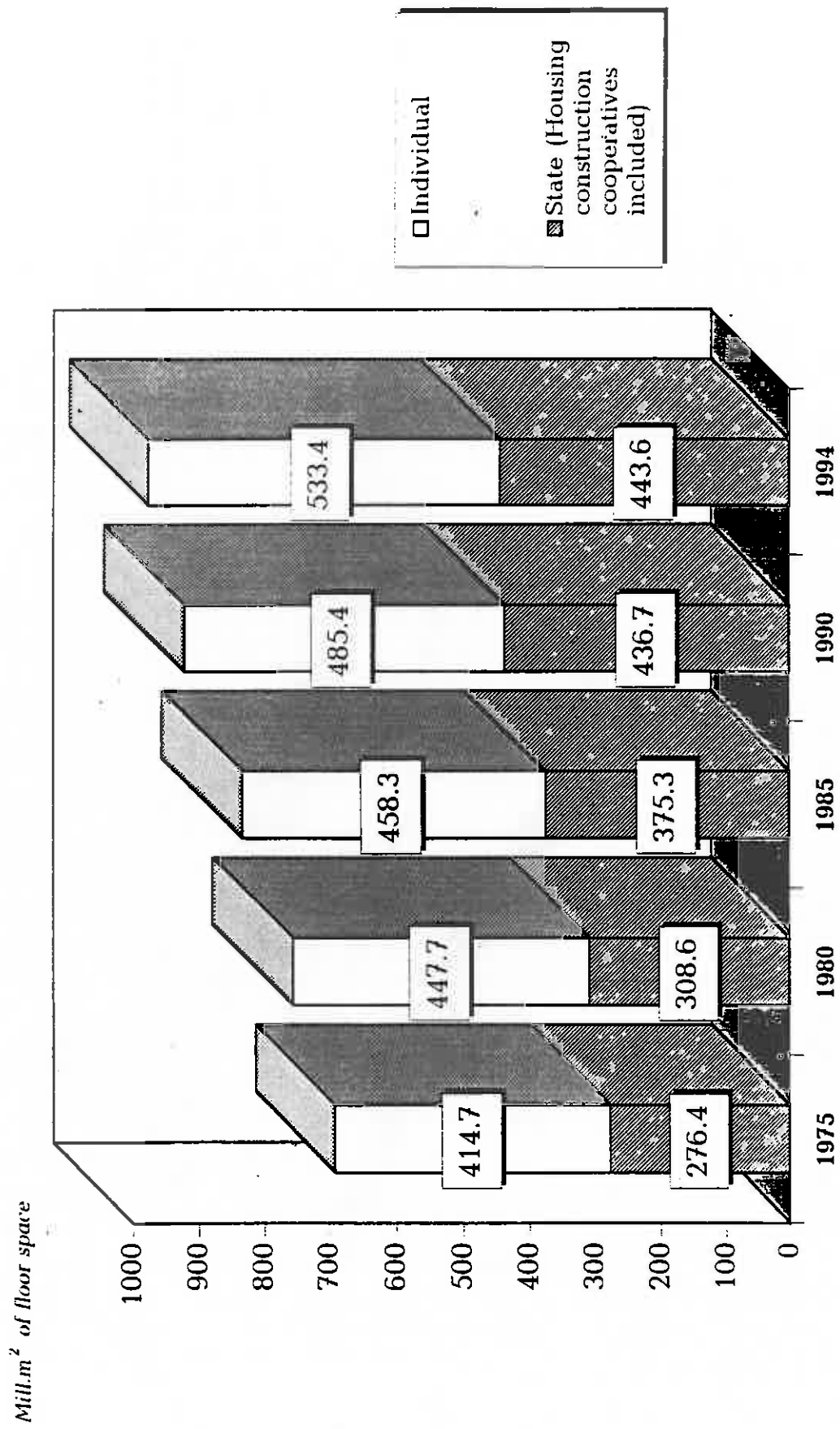
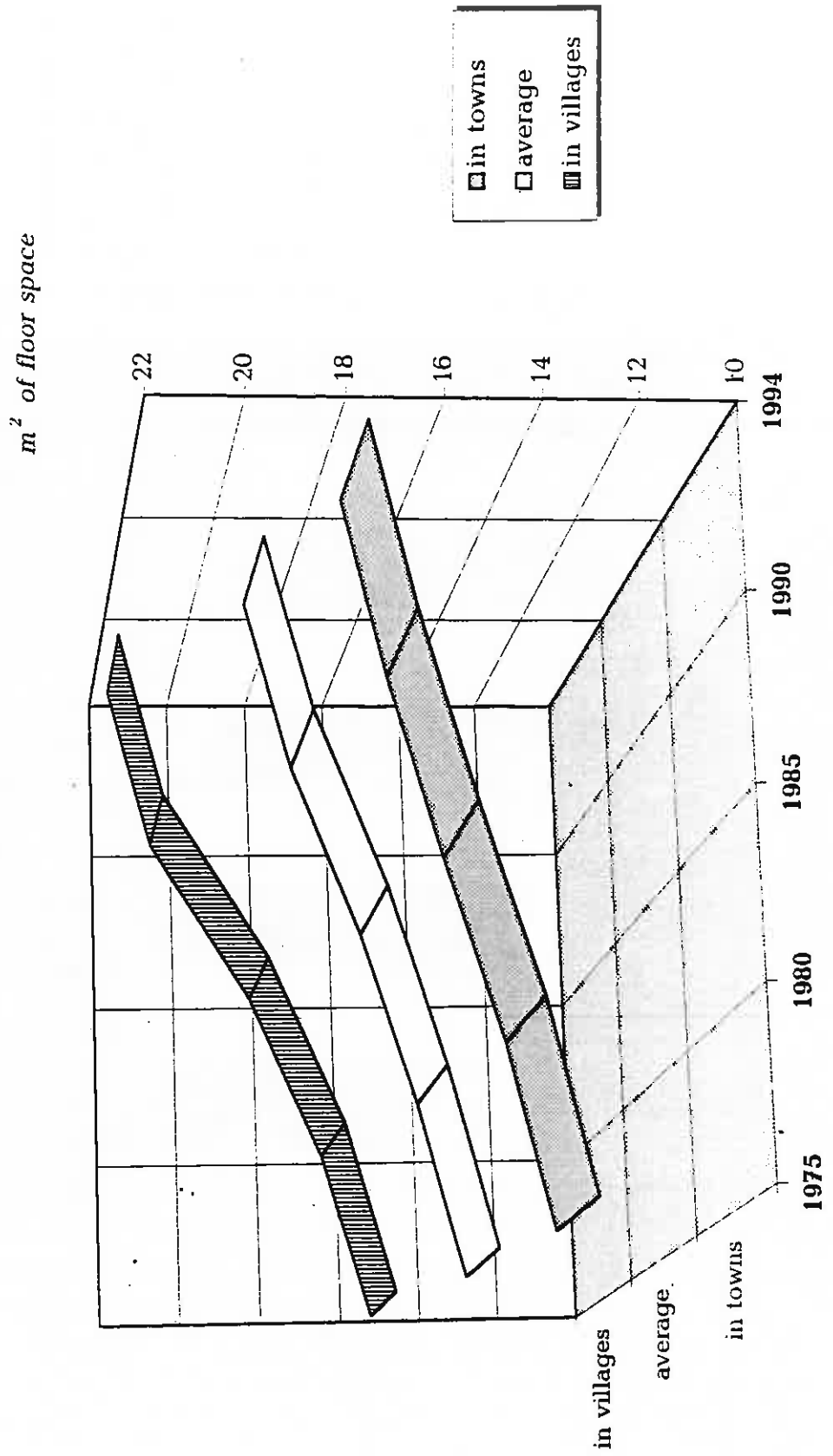


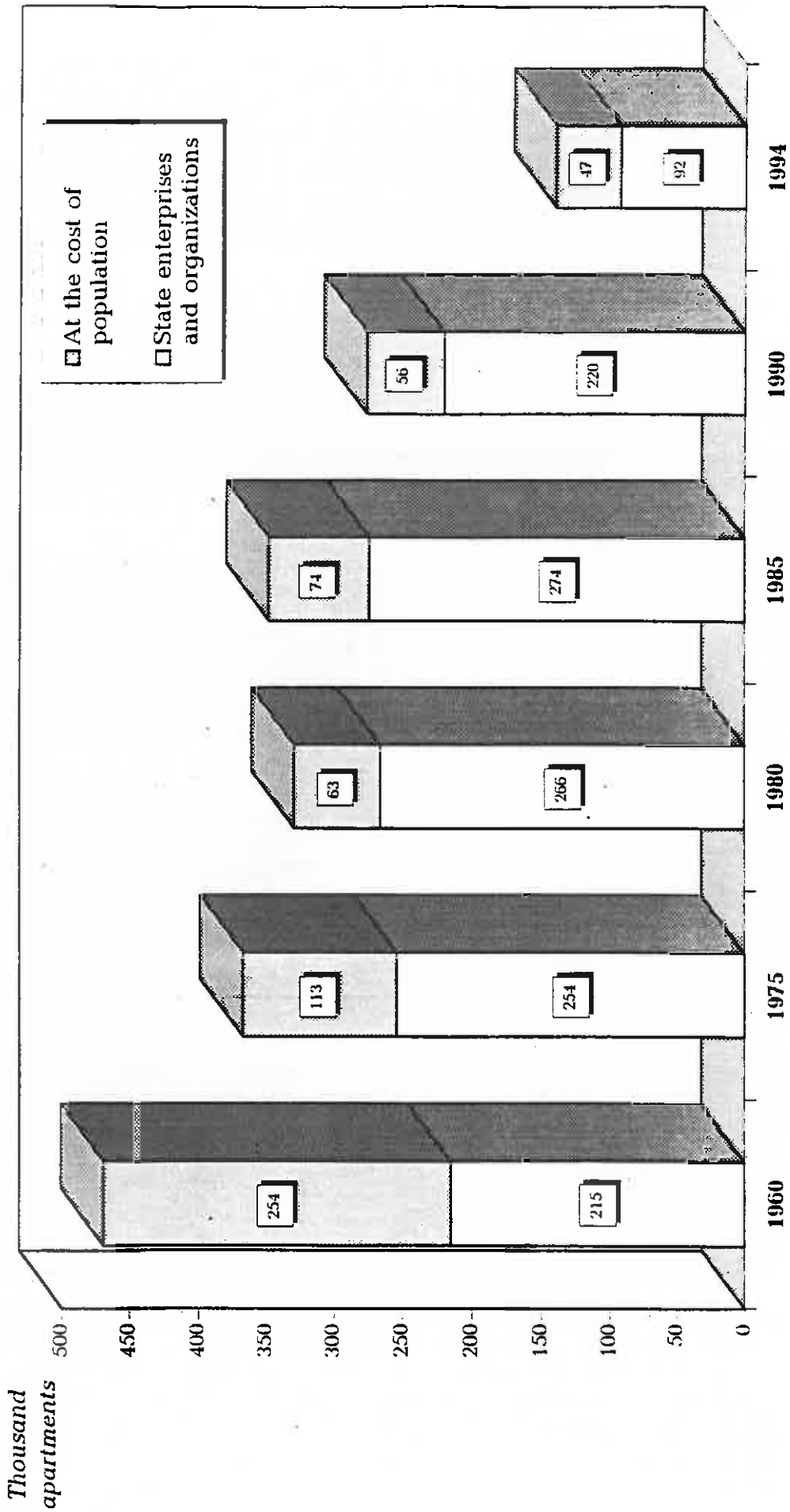


Fig. 12

Provision with housing in Ukraine ( $m^2$  of floor space per one person)



*Dynamics of growth of put into operation apartments in tenement houses in Ukraine*



*Dynamics of growth of average number of rooms in apartments in Ukraine*

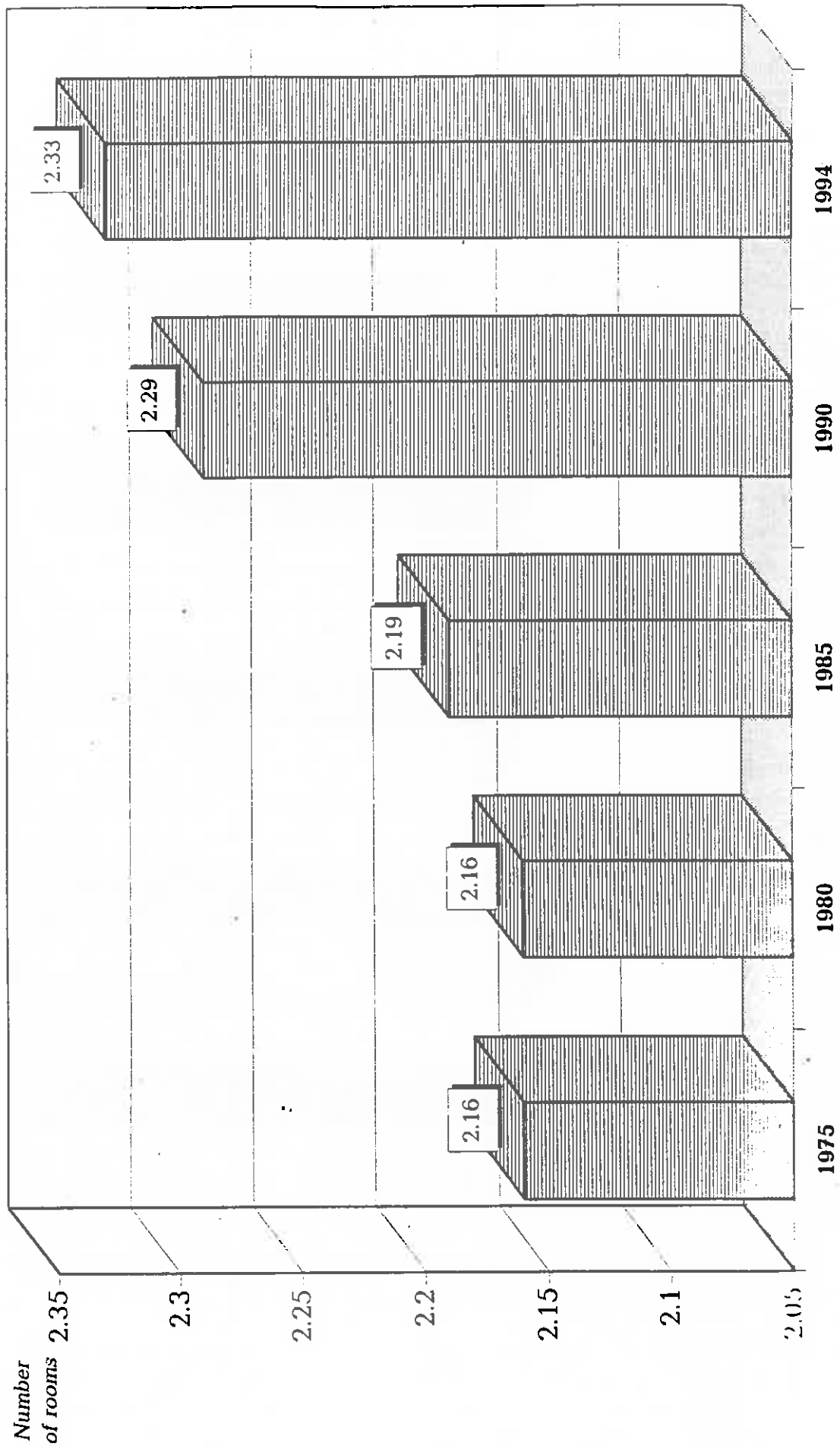
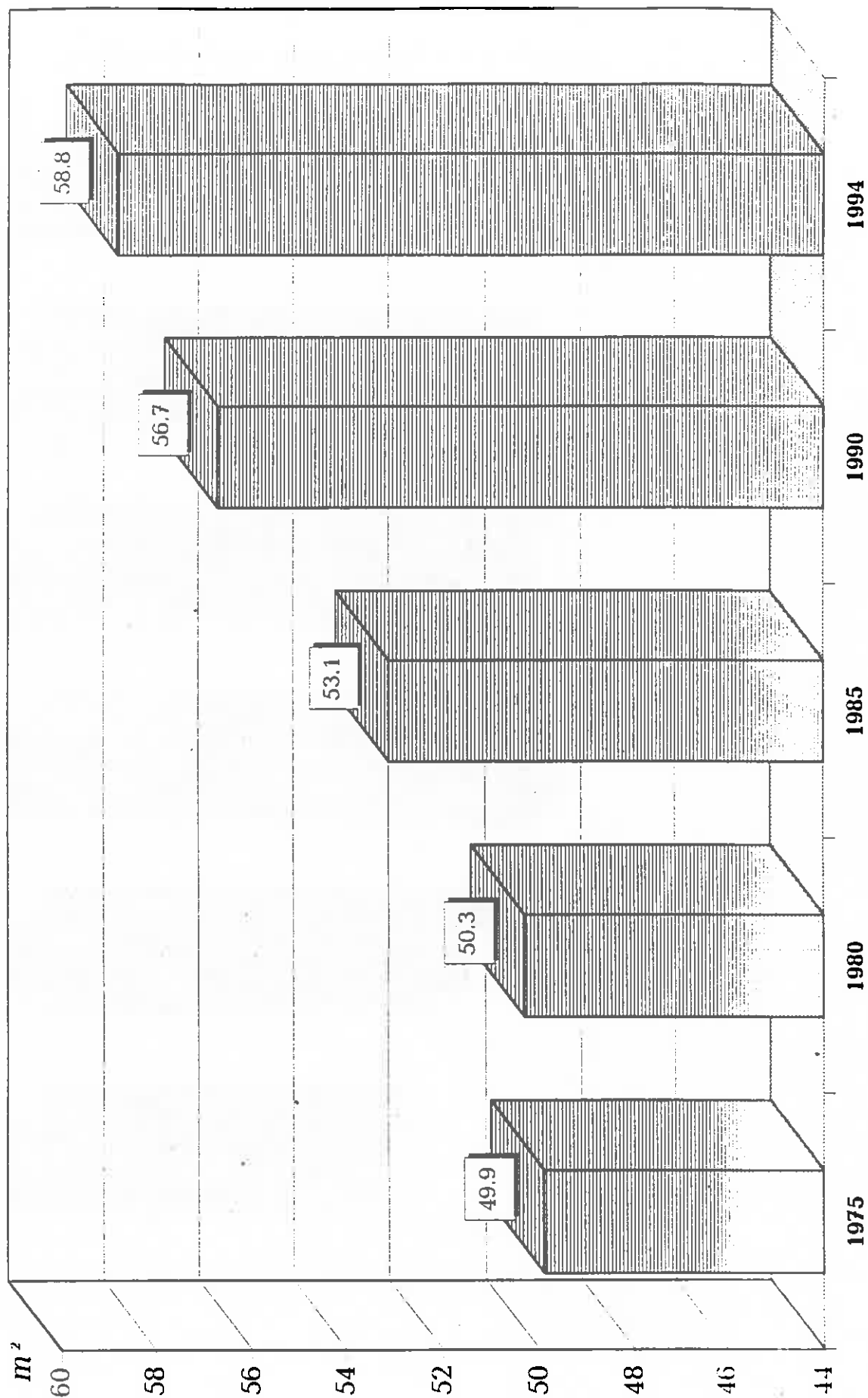
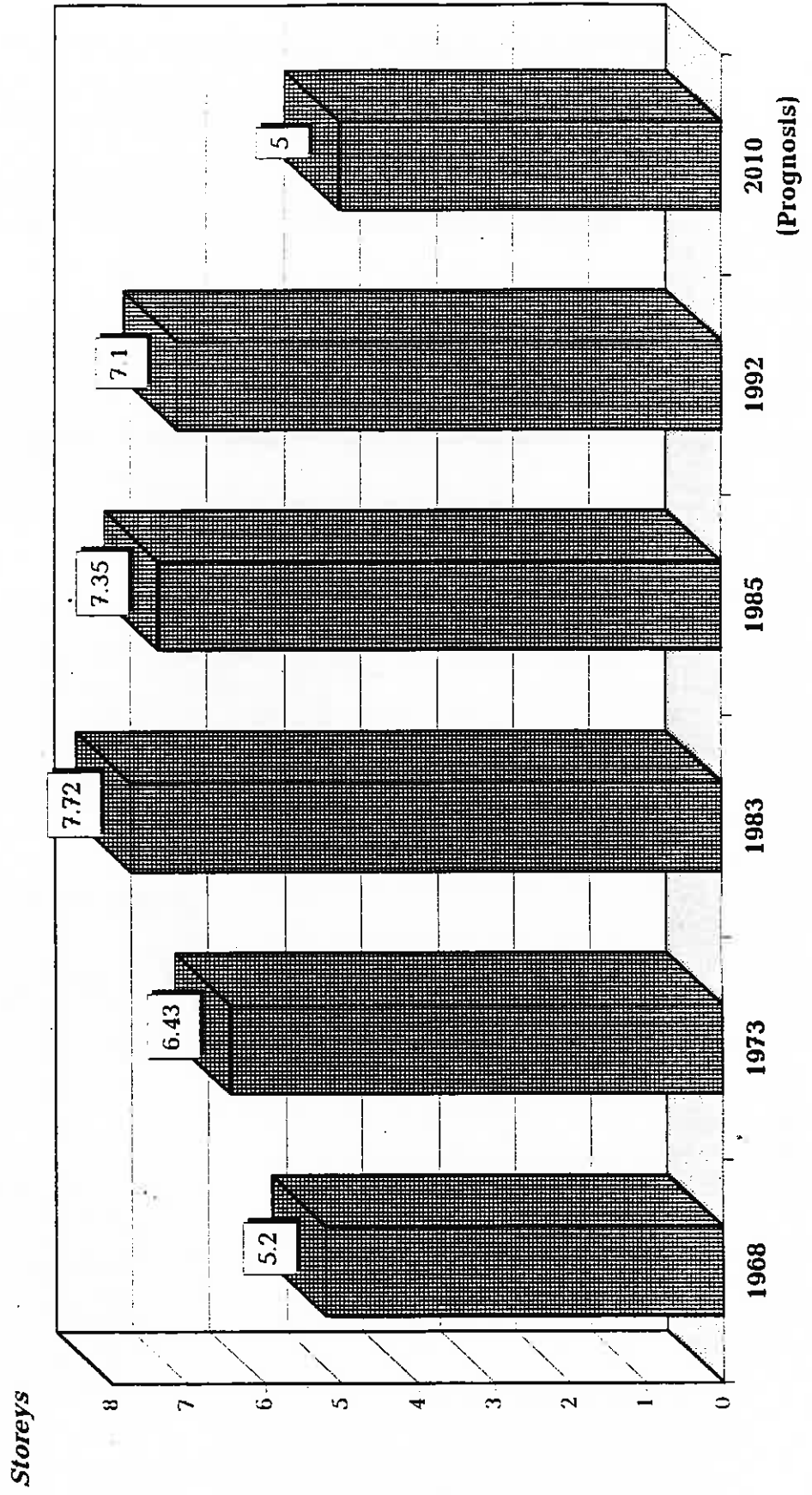


Fig. 14

*Dynamics of growth of apartment average floor space in Ukraine*



*Average height of town housing construction in Ukraine*



Structure of housing constructions according to the type of wall material  
in Ukraine

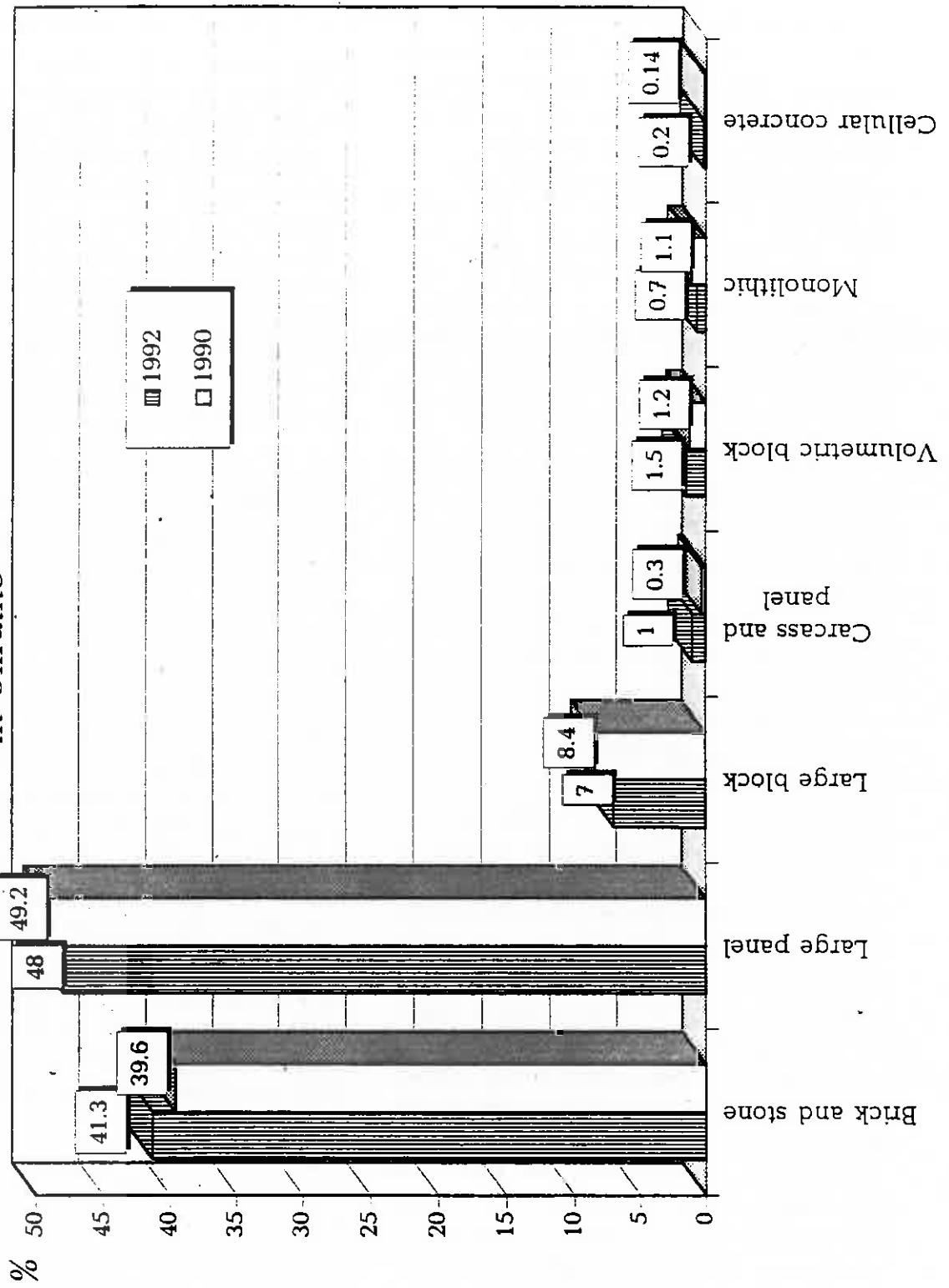


Fig. 17

the share of the volume of industrial housing construction.

### **Housing Stock of Ukraine**

The total housing stock of Ukraine to January 1, 1994 was 974 mln. square meters of floor space, 64 per cent (618.0) of it was town housing stock and 36 per cent (335.8) — rural one (fig.18).

As to the type of shelter and the form of settling in town predominant are tenement houses with one family for a flat. They constitute 60.8 %, next are one family houses (33.0%). There is also a considerable number of communal flats where several families share common flat accommodations (1.1%). There are also families living in hostels (see fig.19) (4.5%).

Predominant in the rural areas are one family houses (92%) though there are also blocks of flats (7.2%) (see fig. 20). As to the form of ownership they are mostly state (57.8%) and private (35.4%) property. The cooperative and public property is not considerable (6.8% and 0.32% respectively) (see fig.21).

The rural housing stock consists mostly of individual houses (92%).

If the houses, constructed in the fifties, were in every respect of good quality, those, constructed in the sixties and at the beginning of seventies were with small-size flats and of rather low quality with respect of their architecture, planning, technical performance. These houses, constituting from 12 to 15 % of town housing stock, need radical reconstruction.

The houses constructed in the eighties and nineties are sufficiently comfortable, having good planning of flats, but their architectural features are not high. The outer walls of the houses need modernization and surface finishing. To solve this problem is close to impossible because of the economic difficulties in Ukraine.

### **Financing Sources Structure**

In 1993 the capital investment into housing construction was: 58% from the state

budget; 16.8% — capital of collective enterprises (including the capital of housing construction cooperatives and agricultural organizations; 25.2% — private capital of people.

In 1994 the share of the houses built at the expense of state budget and the capital of state enterprises and organizations reduced 145 against 1993 and the share of houses built at the expenses of individuals and the housing construction cooperatives increased 12% against 1993.

The state owned shelter is given to some categories of people: the veterans of the Great Patriotic War, disabled soldiers, people evacuated from the Tchernobyl zone, deported nations, servicemen, workers of agroindustrial complexes.

### **Reliability of Housing Stock**

As to the degree of solidity the main part of the housing stock of Ukraine (from 75 to 80%) if property maintained can remain solid during 80 or more years, approximately 4-5% (more than 40 mil. square meters) are in need of urgent repair, about 0.5-0.6% (6 mil. square meters) should be evacuated; 0.3% of the housing stock are damaged and dilapidated houses (more than 4 mil. square meters).

Housing Construction Structure Classified According to Wall Material

In 1993 approximately half of the constructed houses were of large-panel type (48.2%) and in 1994 the number of large-panel houses reduced to 42.3%.

Large-panel housing construction in 1993 amounted to 7.3% and in 1994 it reduced to 6.5%.

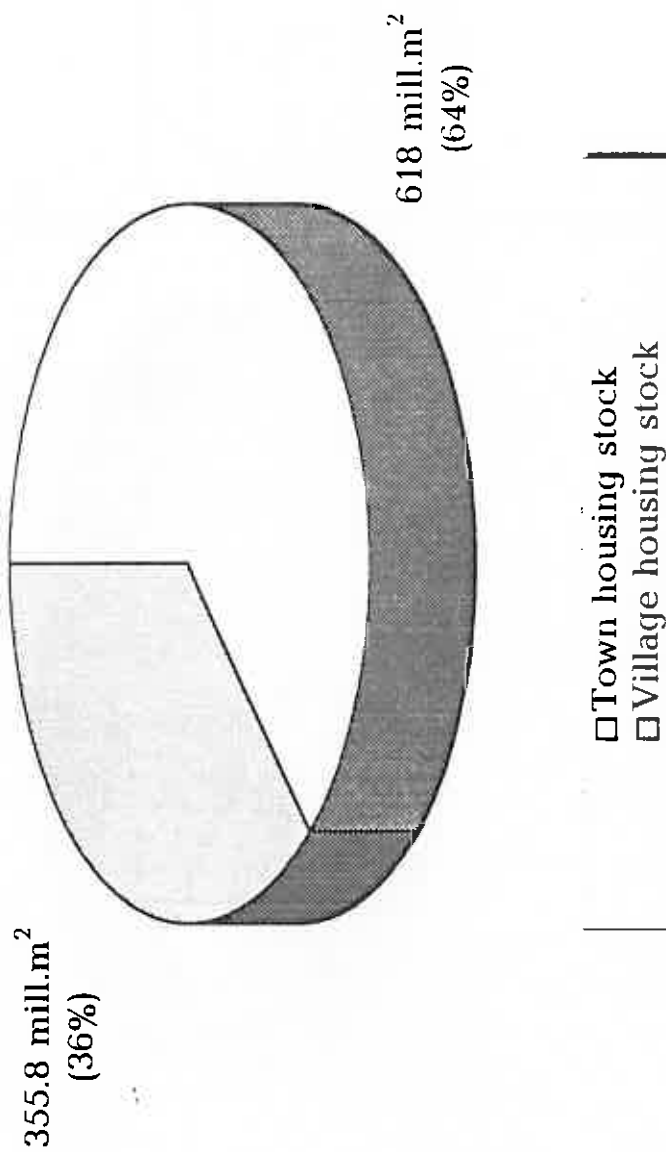
Brick housing construction in 1993 amounted to 37.4% and in 1994 it was 40%.

Monolithic housing construction in 1993 amounted to 0.7% and in 1994 it amounted to 5.76%.

In rural areas houses are constructed mostly from small piece local materials

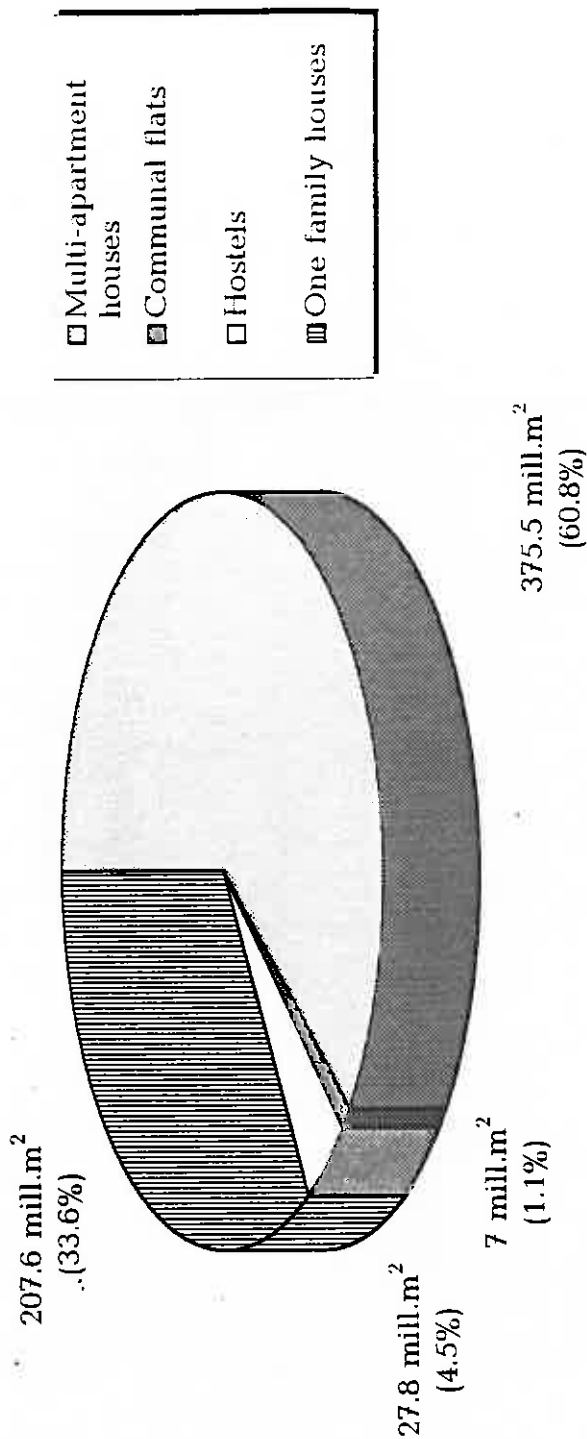
Housing Constructions Structure Classified According to Storeys

*Structure of housing stock in Ukraine according to the type of shelter to January 1, 1994*

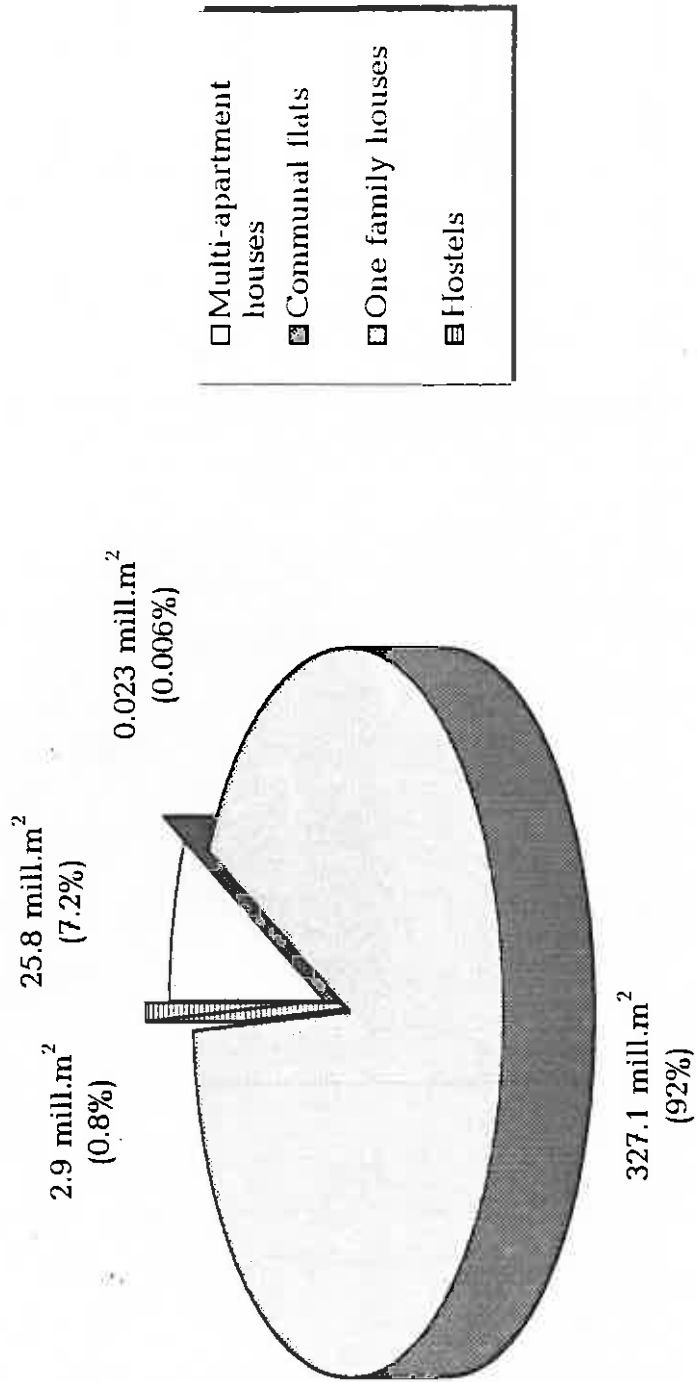




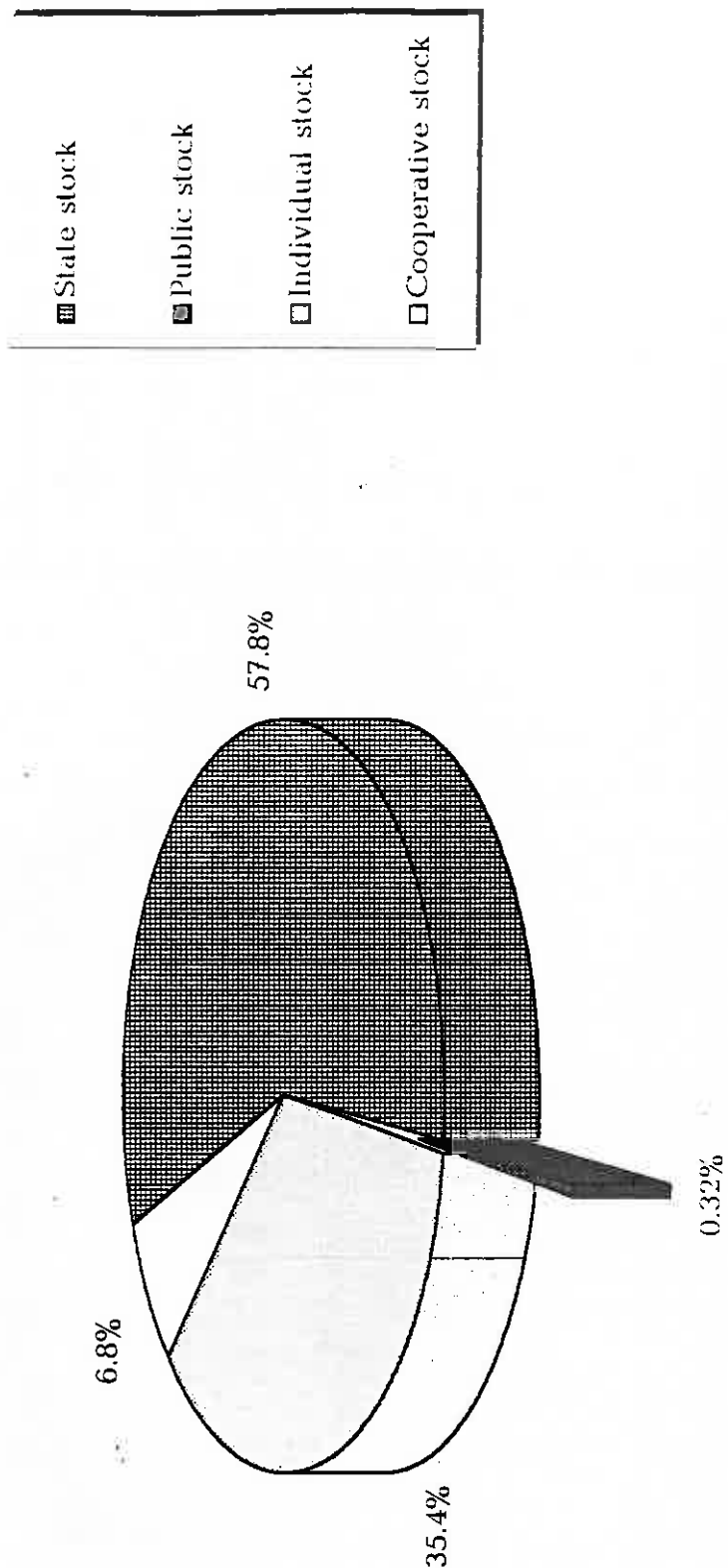
*Structure of town housing stock according to the type of shelter*



*Structure of village housing stock according to type of shelter*



*Structure of housing stock of Ukraine according to the type of ownership, total*



Housing construction structure classified in accordance with the storeys includes 55% of 1 = 5 storey houses, 45% of 9 and more storey houses, the average height of town houses being 8.74 storeys and in rural areas — 2.04 storeys.

Construction of one storey and 3-4 storey houses in town in 1994 reduced 0.4% against 1993. The construction of 2 storey houses remained on the same level, while the construction of 9 storey houses reduced by 5.14%, the construction of 5 storey houses increased by 0.445; construction of non-standard storey buildings has increased (6; 7; 8; 10; 11; 15 storey — by 1.28% and 16 storey houses by 3.96%).

The average height in the rural housing construction in 1993 was 1.66 storeys and in 1994 it was 2.04 storeys. In the rural areas were constructed;

one-storey houses in 1993 — 69.4% and in 1994 — 64.78%;  
two-storey houses in 1993 — 8.6% and in 1994 — 9.03%;  
five-storey houses in 1993 — 6.9% and in 1994 — 13.34%;  
nine-storey houses in 1993 — 0.3% and in 1994 — 2.17%.

Demand for shelter. Proceeding from the norms established by legislation there are 2.6 million families and single persons on the waiting lists for improvement of living conditions, included are 200 thousand families of veterans of Great Patriotic War, (soldiers-internationalists, conferred the same status, liquidators of Tchernobyl catastrophe), 600 thousand of young families living in hostels, etc.

The time of being on the waiting list for improvement of living conditions amounts to approximately 10-12 years, and in some populated areas it amounted to 16-18 and more years. The waiting list increases annually by 320 thousand families, thus the waiting lists practically do not reduce.

The analysis of the condition of the housing stock and the provision of the

population of Ukraine with shelter shows that there is a great shortage of housing in Ukraine and the housing problem in Ukraine is acute.

## **2.2. Availability, Accessibility and Quality of Housing**

Provision with shelter, improvement of comfort of the housing stock, its maintenance remain one of the most acute social and economic problems in Ukraine. Comfortability and the level of housing conditions do not meet the requirements of society. The total floor space of state houses which are damaged and dilapidated amounts to 4.5 million square meters. This housing stock requires urgent repair and reconstruction. Lately the actual scale of repair and reconstruction has reduced by 5 times.

Solution of the shelter problem is considerably aggravated by the necessity to evacuate people from the contaminated regions because of Tchernobyl catastrophe, repatriation of certain groups of indigenous population from other republics of the former Soviet Union, by giving shelter to servicemen who return from Eastern Europe.

At present 5.26 million families or approximately 17 million people, which constitute 1/3 of the whole population of Ukraine live under inadequate conditions — in hostels, communal flats, dilapidated houses, in leased apartments or on a floor space less than 9 square meters per one person.

The level of accomplishment of the housing stock is characterized by the following indexes: 93.9% of all the flats built in 1994 have all necessary engineering equipment (electric power, gas, water-supply, sewerage, central heating, hot water supply bath, electric range). Respectively, in town this index equals to 98.3%, in rural areas — 39.6% (individual houses are not included).

Depending on the type of ownership the engineering equipment of the housing

stock essentially differs: the engineering equipment in the houses of state or cooperative property approximates to 100%; in public houses in town — within the limits of 50%; in rural areas — 30%; in individual houses in towns only 25% have water supply and sewerage systems (there are no data concerning individual houses in rural areas).

The state and public housing stock is maintained by special municipal service organizations which are financed from the state budget.

Nowadays, the rent and the payment for public utilities, the people of Ukraine pay, cover about 60% of their actual cost. The government gives subsidies to cover partially the expenses of people whose aggregate income is low. This category of people will be provided with social shelter in accordance with the waiting lists formed in the previous years.

The quality of public and state housing is low because the state has no resources for repair of houses and engineering equipment, and as a result the objects of engineering infrastructure are in critical condition.

Taking into consideration the demographic prognosis of the growth of population in Ukraine and drastic reduction in construction of houses, to solve the housing problem in Ukraine it will be necessary to increase construction of houses by the year 2000 to the level of 1987, that is, to build 20 million square meters of floor space annually. This will require to use various sources of finance. It will be also necessary to take into account natural losses of houses and to provide for dwellings rational redistribution. It is also necessary to remember that by the year 2000 the social level floor space for one person is to be 21 square meters.

Under the conditions of market economy the state provides shelter only to the people with low incomes (pensioners, disabled people, large families, etc.).

Nowadays, the norms of flat floor space is regulated by the acting state construc-

tion normative, according to which the average level of floor space per one person should be 18 square meters.

In future the flat floor space will be regulated only for social shelter (for the people with low incomes). This regulation will be of regional or municipal character and will depend on the achieved level of housing provision in the given district.

As to the other forms of ownership the regulation will determine only the sanitary hygienic bottom level. The top level of floor space per person will be not limited.

At present the civil Code of Ukraine does not limit floor space for individual houses which are built both in town and rural areas.

Enactment of the laws on private ownership of land, new wording of «Land Code» and the change of normative and legal basis of urban development will result in growth of the share of private investors in housing sphere and in development of low storey houses of farmstead type. All this will result in improvement of quality and comfort of the housing stock.

### **2.3 THE PLACE OF SHELTER IN RESTRUCTURING ECONOMY**

1. Housing is one of the most important components of economy of Ukraine. The volume of investments into housing construction in 1995 was 170 milliard kard. or 30% of total capital investments. 400 thousand people are employed in housing construction. The success of economic reforms greatly depends on shelter reform as it will facilitate improvement of micro-economic proportion, decrease of inflation, reduction of state budget deficit, stabilization of non-money circulation because of growing accumulation of private money on special accounts and in the form of housing property. It will facilitate transition to such forms of town development which would consume less energy and materials.

At present the housing sector is in deep crisis. This is caused by objective process of transition from strict state control to market economy, by repudiation of the state to be an exclusive investor, contractor, proprietor.

The market institutions being not formed, has deepened disbalance in housing sphere. Aggravation of the shelter problem demands that new shelter policy be worked out which should be an inseparable stabilizing part of the structural changes in economy of Ukraine.

At present about 60% of the population of Ukraine are employed in production industry and only 40% are employed in services industry (science, etc.). In countries with developed market economy only about 10-12% of able-bodied people are engaged in production sphere and the rest — in services industry, creation of intellectual values being included. Not long ago such economic structure called forth the necessity to concentrate population in large towns. There information was concentrated and collective activity was provided with adequate communication needed for creation of intellectual product. At present the situation has radically changed: with the development of personal computers, computerized data banks, computerized telephone and telecommunication individual home has again become an optimal place for various human activity.

In this we see future development of housing sphere in Ukraine, the country which possesses enormous intellectual resources. But this is a perspective.

3. Under the present situation in Ukraine a new problem has sprung up — the problem of unemployment. It is especially urgent in industrial regions of the Dniپر basin and the coal basin of Donetsk. One of the trends aimed at easing this problem is expansion of individual housing construction. This will also greatly contribute to solution of the food problem.

4. Individual monolithic houses in comparison with multistorey buildings are more territory consuming. But they preserve the

upper fertile layer of soil which is especially valuable in Ukraine.

This type of construction is more material intensive. But in Ukraine there are unlimited resources of local building materials, and first of all, in those regions, where it is preferable to build individual houses — in Donetsk basin and in the Dniپر basin (boiler slag, granulated slag, rock debris and waste, other materials). By using these materials in housing construction we simultaneously solve the ecological problem.

Individual housing construction is more labour consuming. But, first, it is the labour force that is in excess in Ukraine now, second, building houses by people with medium incomes will open way for using individual resources, but this may not cause increase of labour consumption.

5. The most real sphere, where the available building potential in Ukraine can be used, is housing construction. There is great need in new houses, but the state finances now are very limited. It is necessary to create legal financial, and economic mechanism for attraction of various forms of non-state investment into housing sphere.

Besides the soft credits, state subsidies and tax exemption, the most effective method of attracting non-state allocations into housing sphere is private sale of land for non-state housing construction. Adequate solution of this problem will open the way for wide flow of resources into building of houses, and this, in its turn, will revive the building production basis. As housing construction is connected with application of a great variety of goods and manufactured products it will influence many other adjacent fields of industry.

The housing sphere also will influence on the energy problem in Ukraine which is one of the most acute. Of the total annual energy consumption, approximately 30% of energy resources of country are used for heating and hot water supply for objects of

social sphere and houses, 2/3 of which are consumed by housings.

Reduction of energy consumption in housing maintenance is one of the most urgent problems to be solved by communal economy of the state. These are: to warm up protective constructions and outer walls of houses built of large prefabricated panel sections in fifties and sixties (20% of town housing stock); to replace the outer joiner's elements by more thermostable ones; to install instruments that would regulate house and flat heat and water supply; to transfer from the centralized system of heat supply to local systems. These measures will allow to save up to 35% of energy resources in municipal housing economy.

Combination of all these measures in housing sphere lays special emphasis on economic importance of housing construction and it will facilitate restructuring of country's economy.

#### **2.4. Allowing for Complicated Engineering and Geological Conditions in Housing construction**

The engineering and geological conditions for housing construction in Ukraine are rather complicated. Most of the central regions of Ukraine have soft grounds (about 65% of the territory) of various subsidence rate. This requires to apply special engineering measures in building and maintenance of houses.

The Southern and Western regions, the Autonomous Republic of Crimea, Transcarpatia, Tchernovtsy and part of Odessa region are seismic areas. Construction of houses in these regions requires that antiseismic measures be observed.

The Eastern regions of Ukraine (Lugansk and Donetsk regions) are coal extracting zones

In constructing houses over the coal mine workings also requires that special construction measures should be used.

Thus, mostly on the whole territory of Ukraine there are complicated geological conditions for housing construction. This requires that special construction measures should be taken which results in considerable increase of construction costs. Besides, the territory of Ukraine has complicated ecological and tectonic geology with a stable tendency for development of dangerous geological processes, of which there are more than 20 types. The most dangerous are karsts, slides, erosion, snow avalanches, flooding, settlements of ground and seismic condition in some regions.

During the last 15 years some dangerous active geological processes have been observed. This causes serious problems for construction and maintenance of houses. Because of increase of seismic intensity from 7 to 9 points in some regions of Ukraine priority goal is to create safe conditions of the already built houses.

In this connection the Cabinet of Ministers of Ukraine decided in 1995 to set up a national seismic committee of Ukraine decided in 1995 to set up a National seismic committee of Ukraine and to increase safety of people living in seismic regions.

Beginning with 1993 a long-term seismic programme is being realized on the territory of Ukraine. This programme includes detailed microseismic zoning. Special attention is given to construction of houses on soft grounds and on worked-out territories. Necessary research and experiments have been carried out. Practically everything has been done in order to work out normative documents. Besides, protection of houses built on soft grounds is bound with flooding and technical maintenance of water supplying networks. Hence, special attention should be given to provide reliability of industrial enterprises, hydrotechnical constructions and water supplying networks.

Economic activity, as a rule, provokes seismic activity which is the source of danger for the most of acting atomic power

stations, chemical industrial complexes, hydrocomplexes and other ecologically dangerous objects. Therefore, there is a need to certify the existing constructions and to determine their seismic resistance.

It is planned to create in Ukraine a network of seismographic and seismological stations which would registrate small and strong earthquakes in order to accumulate seismic information at local, regional and national levels to be able to operatively inform the state structures of seismic danger.

Karst processes develop on 60% of Ukrainian territory including 14 regions and the Autonomous Republic of Crimea.

Lately the technogenic factors have considerably intensified karst formation processes, especially in mining and metallurgical industry areas, also in the territories of minerals excavation. Works have been started to zone the karst territories.

Besides, about 800 thousand hectares of lands in Ukraine are overflooded, including 200 thousand hectares in irrigated zones, 138 thousand of private houses, 240 towns and urban-type communities. Flooding of the territories is caused by technogenic factors, insufficient information of geological processes, violation of special requirements, for projecting, construction and maintenance of objects in difficult engineering and geological conditions.

Special methods of projecting and calculation of house resistance are used for construction of houses under difficult engineering and geological conditions. Some special projects of typical houses have been worked out for such zones.

## **2.5. Trends in Reforming Shelter Policy**

In order to solve the shelter problem under the conditions of transition to market economy the Government of Ukraine implements new shelter policy.

Leaning upon the analysis of the state of housing construction and the prognosis of

social-economic relations, a new legislative and normative basis for solution of shelter problem is being worked out.

The Supreme Rada of Ukraine has approved «The Concept of State Shelter Policy». Its main objective is to create conditions for people to realize their right to housing, to expand housing construction, to improve maintenance and preservation of housing stock.

The new shelter policy is aimed at providing the right for every family, for every citizen to chose the most convenient way of improving living conditions according to ones needs and means.

The main objectives of the new shelter policy are:

- voluntary privatization of state housing by people;
- gradual transition to self-payment of housing stock and public utilities (address grants to be given to some categories of people);
- social protection of needy people by state subsidies which are to reduce spendings of people for housing;
- creation of favourable conditions for people and non-budget investors to build houses, to rent or to sell them;
- creation of conditions for competition in construction, repair and maintenance of housing stock;
- development of mediation and respective agencies which would help in selling, purchasing, exchanging or investing into housing construction;
- credit, financial and organizational help to people in building and purchasing private houses;
- control over use and maintenance of houses in all forms of ownership.

The provisions of «The Concept of State Shelter Policy» will be used as the basis for new Housing Code of Ukraine, and other legislative acts regulating housing relations.

The main trends in the development of new shelter policy in Ukraine are:



- to create political and legal basis for housing sphere;
- to mobilize all national resources for construction and improvement of housing stock (to take into account all ecological factors of land use which would exclude contamination of environment);
- to perfect the financial, credit and tax policy, also to improve the system of housing maintenance (coordinated with other sectors of economy);
- to improve planning and management of rural and town settlements, to pay special attention to development of small and medium size settlements and other infrastructure;
- to determine the need in dwelling and resources needed for housing construction;
- to coordinate the work of government organs in order to realize the shelter reform;
- to consolidate material possibilities of local organs of power;
- to improve control over land resources (formation of land market, allocation of land parcels for housing construction, etc);
- to perfect financing of new housing construction (attraction of non-standard resources);
- to develop production of building materials and implementation of new effective technologies;
- to perfect architectural and urban development aspects of housing construction (normative basis, new creative concepts, building constructions and materials);
- to exercise control over realization of new shelter policy.

The listed trends of reforming shelter policy will create conditions for overcoming the housing crisis in Ukraine in the nearest future.

## **2.6. Institutional and normative Aspects of New Shelter Policy**

The realization of new shelter policy is one of the most important links of the government level programme aimed at providing the people of Ukraine with shelter. The legislative acts, depending on the trends, are worked out by various ministries and departments and are approved by the Supreme Rada of Ukraine. The procedure of putting them in force is approved by the Cabinet of Ministers of Ukraine. The normative bases concerning the existing housing stock are adopted by the State Committee of Ukraine for housing and communal economy, and those concerning new housing stock, which is being built, and urban development — by the State Committee of Ukraine on Urban Development and Architecture.

The Law «On Forms of Ownership on Land», the «Land Code», the Decree of the government «On Acceleration of the Land Reform and Land Privatization», the Law «On Payment for Land» remove the groundless barriers on the way to land privatization for individual housing construction.

Besides, some changes were made in the Civil Code of Ukraine which remove the limitation on the floor space of individual houses both in towns and in rural areas.

The adoption of the Law «On Privatization of State Housing Stock» opened the way to formation of housing market.

Realization of the normative acts on new shelter policy on the regional (region, district) level is exercised by the local administration on self-government of the territory, and on the local level (town, settlement, village) — by local administration.

Nowadays, new commercial structures begin to appear in the housing sphere:

- commercial banks, firms (with limited responsibility);
- project, building, and project and building private firms;
- private intermediary agencies (selling, purchase, exchange of housing);
- private dealers — brokers (intermediary service in housing sphere).

Besides, new organizational structures on building houses are formed in some regions, they include:

- association on building of houses and objects of cultural and municipal service (Transcarpatian region and others);
- Hypothecary fund financing housing construction (Autonomous Republic of Crimea).

Penetration of commercial structures in housing sphere increases financial and economic possibility, opens the way for investments into housing, creates more flexible system of control and maintenance of the housing stock under the conditions of diversified economy and all this brings solution of shelter problem closer.

## **2.7. Legislative and Legal basis of New Shelter Policy**

According to the Law of Ukraine, which formulates the legal basis for privatization of houses which are state property, the first step of new shelter policy is privatization of the state housing stock.

The State Committee of Ukraine for Housing and Communal Economy has approved the « Regulations on the transfer of flats (houses) to private property», «the Regulations on granting a license or completion and registration of documents of the right to private ownership of the flat (house)».

The Cabinet of Ministers of Ukraine has approved «The Mechanisms of housing Privatization» and «the Regulations on the use of Premises in living houses and the adjacent territories».

At present the citizens of Ukraine have privatized 30% of the total number of state dwellings.

The financial aspects of the new shelter policy have found place in some normative documents approved by the Cabinet of Ministers of Ukraine, namely: «On Compensation of additional expenses on building of houses, garages, dachas and objects of gardening cooperatives, caused by price liberalization»; «On promotion of

individual housing construction by giving longterm low interest credits»; «On transition to new system of payment for housings and public utilities and address subsidies to some categories of people».

In order to accelerate formation of housing market the Supreme Rada of Ukraine has adopted a Decree «On attraction of additional resources for construction of houses and creation of housing market», which foresees selling of a part of newly built houses at auctions or on contest basis and addressing the money to new housing construction. This will help to attract additional non-budget funds to housing construction.

Particular features of urban development that influence on implementation of new shelter policy, are reflected in the Laws «On private ownership of land» and «On foundations of urban development».

In order to accelerate realization of the new shelter policy the following documents will be soon worked out: new wording of the «Civil Code» and «Housing Code», the Laws «On Capital construction», «On Mortgage» (hypothecary), «On Architectural Activities» also «State Programme of Provision of People with Shelter» and national programme of revival and social development of the country side for the period of up to the year 2005.

Besides, some normative documents are in process of preparation, such as:

- «Regulations on the social housing stock». The social housing stock is municipal property and is used for giving shelter to needy people in Ukraine. The social shelter is given to the people in accordance with the waiting list, which is formed by local organs of power. Payment for dwelling in social housing is made with the account of state subsidies for maintenance expenses and partial compensation for public utilities depending on the family aggregate income.

- «Regulations on the procedure of determining the family aggregate income». The aggregate income of the family is determined on the basis of income dec-

larations. This helps to determine the categories of families in accordance with their income and thus to find the ways of solving shelter problems of each family by allocations from the state budget.

- «Regulation on payment for renting and leasing dwellings, subsidies and compensations for some categories of people». The rent is determined according to the agreement of renting or leasing.

The housing rent, determined on the basis of rent agreement, is realized in the social housing stock with the account of state subsidies for maintenance and compensations for public utilities. The housing rent, determined on the basis of lease agreement, may be of two types: in leasing dwellings of municipal housing stock, and in leasing dwellings in a private housing stock. If the dwelling is rented in a municipal housing stock payed are maintenance expenses and public utilities. If dwellings are rented in the private housing stock the tenants pay for the already named expenses plus the profit of the renter.

- «Regulations on soft credits, compensation and tax allowances for building or purchasing dwellings at expenses of the people». Financial benefits are realized through the initiative of people to provide themselves with dwellings. The benefits include soft short-term and long-term credits with fixed discount rate, tax allowances, exemption of value added tax and the income tax from the sums covering the rate of discount. The benefits are covered by the state budget. The benefit rate depends on the aggregate family income and on the initial living space, and also on the normative size of the dwelling the family claims on.
- «Regulations on credit on mortgage». Credit on mortgage is given against mortgage of property, securities or against other forms of guarantee of juridical persons. The purchased individual house may be also used as the object of mortgage. Credit is given at the fixed discount rate. Receiving the

credit the person, as a rule, pays a part of the cost of the object (up to 30%).

- «Regulations on taxation and insurance of real estate in purchasing or building houses». Taxes on real estate should stimulate privatization of housing stock, also purchasing and building houses because of tax benefits granted to people, whose living conditions are inadequate, to people, whose aggregate income is low but who plan to have dwellings that would meet the established sanitary norms.
- «Regulation on Housing Savings Bank and loan savings system». Creation and functioning of the loan-savings system is intended to help people to save money for improvement of their living conditions. This is achieved due to indexation of purpose oriented deposits, their accumulation with the aim to use them for short-term subsidies and soft credits.
- «Regulation on housing condominium». Housing condominium is a combined form of individual and collective property in multi-apartment houses, where flats are objects of private property and all other elements of the house (basement, roof, staircase and the land parcel) are the objects of collective property. This determines the rights and duties of owners of the flats, also the form and rate of payment for maintenance, public utilities, the tax on real estate, insurance, etc.
- «Regulations on purchasing, selling and exchange of housing». Its purpose is to form national, regional and local housing market by regulation various forms of acquiring the ownership right to dwellings (flats, houses) in the process of selling, purchasing, transferring and inheriting.

Implementation of the new regulations will help to accelerate realization of the new shelter policy and to increase the share of private investment. It will also help to extend the scale of housing construction.

## 2.8 PRIORITY GOALS ON REALIZATION OF NEW SHELTER POLICY

A normative and legal basis has been worked out which created real conditions for realization of priority goals of new shelter policy on providing in the nearest future all people of Ukraine with adequate shelter.

The priority goals foresee to do the following:

- to provide social shelter to the most needy people, who are on the list for urgent improvement of their living conditions;
- to create legal, economic and organizational conditions for building houses by those categories of people who are on the list for shelter and who can participate in housing construction;
- to work out a mechanism of increasing the volume of housing construction at the expense of non-government investments and non-traditional resources, including foreign allocations.

The ways of solving the priority tasks:

First — to provide social shelter for those categories of people who are granted privileges (veterans of war, invalids of 1 and 2 group, people with serious illness, families with many children, young families living in hostels, also those who have priority rights, also families having priority rights, such as victims of Tchernobyl disaster, and others. There are 1.2 mill. families of this category. In order to provide them with housing it is necessary to build about 70 mill. m<sup>2</sup> of housing floor space (at the social norm per one person 21 m<sup>2</sup> and average family being 2,8 members). To solve this problem in 5-6 years it is necessary that 10-12 mill. m<sup>2</sup> of housing floor space were built every year at the expenses of the state.

Second — to provide people with housing, who live in uncomfortable conditions and who are on the list for housing, and express their will to participate in building

of individual or cooperative housing, state support is needed. This support may include allotment of land parcels, engineering preparation of the territory for housing construction and soft credits. This problem, if well organised, can be solved in 6-7 years.

Third task — to prognosticate potential increase of the volume of housing construction, increase of housing stock and norm of floor space per person in the period of recovering from economic crisis and sustainable functioning of multistructural market economy.

With the population of Ukraine being 51.67 mill. people to January 1, 1995, and the housing stock — 932.94 mill.m<sup>2</sup> of housing floor space, the average floor space per one person is 18.5 m<sup>2</sup>. In the eighties, the most favourable years, the floor space in new buildings was increasing annually by 0.3-0.35 m<sup>2</sup> of floor space (the diminishing indicator is taken into account).

In the developed European countries with market economy the average floor space per one person is 35-40 m<sup>2</sup>, the average increase being 0.6-0.7 m<sup>2</sup>.

Therefore, under favourable market economic conditions and urgent need in housing, it is realistic to expect considerable non-budget investments into housing, and respectively, increase of housing construction and increase by 0.7-0.8 m<sup>2</sup> of the norm of housing floor space per one citizen of Ukraine.

It is realistic to see 15 years ahead, up to the year 2010. With the accepted specified rate of the volume of housing construction and guaranteed increase of average housing floor space norm of 0.8 m<sup>2</sup> floor space per one person, the following prognosticated characteristics are received up to the years 2010, housing stock will increase up to 1300 mill. m<sup>2</sup> (35%); the average norm per one person will be 25-26 m<sup>2</sup>; annual volume of housing construction will be 40 mill. m<sup>2</sup>; but the volume of the state housing construction will increase insignificantly, and its share will decrease

significantly, from 75% to 40%. At the same time all forms of non-government building will increase considerably.

The way of meeting the prognosticated figures lies with urgent creation and implementation of legal, financial, economic, market mechanism in housing sphere.

### **3. FIELDS OF INTERNATIONAL COOPERATION**

#### **3.1. On Development of Populated Points**

The following priorities of international cooperation were defined:

- to work out legislative documents in the sphere of:
  - a) control (regulation) of land use, taking stock and registration of land and real estate, formation of land market;
  - b) credit and financial policy, creation of building investment infrastructure, reconstruction of building and engineering equipment of populated points;
- to research on and to work out applied recommendations in planning and building towns, in rational land use, in perfection of the structure and work of administrative organs of populated points;
- to research on and to work out a complex of measures on saving fuel and power resources in planning, building and engineering development of populated points, to work out and to implement local systems and sources of heat supply;
- to work out programmes complying with the international standards and to jointly reconstruct the historical districts of mess housing construction in some large and the largest towns of Ukraine;
- to use advanced building technologies, building and finishing materials, engineering and technical equipment in the territories, buildings and constructions, in local systems of water supply and sewerage;
- to create and implement socially oriented mechanisms of land and housing mar-

kets based on diverse forms of land and real estate ownership;

- to render expert and methodical help in working out programmes of investments into development of territories, including settlement systems for specific conditions, based on use of available resources;
- to approve and monitor the town development indicators.

#### **3.2 On Housing Problem**

It is desirable that international cooperation in housing problem be organized in three directions:

- subregional cooperation with European countries with transitional economy;
- regional cooperation in EEC and UNO;
- global cooperation within the framework of Habitat.

Spheres of cooperation:

- to exchange experience in realization of new principles of shelter reform in European countries with transition economy;
- to train specialists of Ukraine, working in housing sphere, in various countries with market economy;
- to work out shelter reform mechanism in Ukraine jointly with specialists of Western countries and International organizations (USA Agency of International Development and others), to form housing market;
- to realize, jointly with western countries and International organizations, investment projects on some problems of shelter reform.

## 4. NATIONAL PLAN OF ACTION FOR 1996-2000

(and to the year 2010)

### 4.1. Principles and Strategic Aims

The Government of Ukraine has adopted a programme of action in which fundamental principles of stable development of populated points and solution of the problem of providing people with shelter are set forth.

External political principles of the programme are aimed at: maximum possible stabilization of international relations of the state; development of peaceful initiatives; promotion of integration into world economy.

The internal political and economic principles are aimed at:

- promotion of realization of internal social and economic reforms;
- democratization of society, protection and stable development of all urban and rural populated points;
- humane, balanced and ecologically safe strategy in developing populated points;
- recognition of the state and people's responsibility for protection of natural environment and cultural resources;
- realization of national concept of development of a single settlement system, harmonious development of populated points taking into account internal and external migration;
- creation of an adequate habitation environment for all groups of population, which would guarantee survival and stabilization of national economy, improvement of standard of life, including provision of shelter to all groups of population.

Adequate urban development policy that would comply with the new system of social-economic relations, which are being formed now, with the new forms of multi-structural economy, with the increasing demand of the people to the quality of planning and building, with

creation of social, engineering and transport infrastructure of populated points, is aimed at solving the following strategic tasks:

- to provide people with adequate ecological and aesthetic, comfortable habitation environment;
- to rationally use natural and economic resources, first of all the land resources of towns and zones of their influence, to create the system of land reserves for national and public purposes;
- to protect and restore historical and cultural heritage of the people of Ukraine aimed at spiritual revival of the nation;
- to protect, enrich and reproduce the natural environment, to radically improve ecological conditions of the populated points and territories, to secure protection of them against dangerous geological and technogenic processes;
- to provide the populated areas with necessary engineering and social infrastructure;
- to acknowledge the right of the future generation to the accumulated material and spiritual values, natural resources and purity of environment, their protection and enrichment;
- to see that the shelter reform finds national legislative and economic support;
- to guarantee that state provides the socially unprotected groups of population with adequate shelter, to guarantee creation of conditions for housing building at the expenses of enterprises, associations and individuals;
- to pave the way for free choice of housing standard and quality, for creation of houses and flats market;
- to increase annually the volume of housing construction and to modernize the already existing housing stock;
- to protect the victims of techno-ecological catastrophes and political discrimination, including:
  - a) to realize the state programme of evacuation of people from the Tchernobyl

zone and to work out measures for rehabilitation of the districts contaminated with radioactive elements;

b) to meet Ukrainian's obligations and realize the programme of resettlement of deported peoples in their former areas of habitation, including 500 thousand of Crimean Tatars, 95 thousand of Germans, Bulgarians, Greeks and other nationalities.

## 4.2 Legislative and Financial Measures

In order to achieve the strategic goals under the new conditions of development it is necessary to create a system of legal acts, national, regional and local programmes aimed at stable development of populated points and solution of the shelter problem.

In these documents provision should be made for regulation of authorities and duties of the national, regional, and local organs of power. It is necessary to widen the authorities and to increase the responsibility of the local self-government organs, associations of people, and private investors.

The main objective of this activity is to secure transition of centralized state control over development of populated points to local level, to expand the forms of housing construction by attracting the resources of population.

The work on legal and normative basis should be aimed at:

- perfection of land legislation by reforming the procedure of allotting, on favourable term, land parcels to various groups of population for housing construction;
- development of the system of control over land resources, perfection of legal mechanism of open competition, tenders, land auctions;
- perfection of organization of housing construction by encouraging construction of houses at people's own expenses by various groups of population, including construction of houses for sale or leasing;

- perfection of finance, credit and tax policy in order to strengthen the budgets of populated points by differentiated taxes on use of town lands, dwellings, also on real estate, and elements of engineering and transport infrastructure;
- creation of stock exchanges, mortgage banks, investment funds and other market structures of financing housing construction;
- regulation of payment for rent and public utilities by taking into account the comfort and housing quality;
- development of normative basis of planning, projecting and location of all kinds of construction in the populated points.

## 4.3 National Obligations

Proceeding from the principles, strategic goals, the outlined plan of legal and financial support of stable development of populated points and solution of shelter problem within the framework of national obligation, Ukraine will do the following:

- perfect the structure of resettlement on national, regional and local levels by creating an aggregate of economic, administrative and legal permits and conditions stimulating development of small populated points;
- consistently increase responsibility of region and local self-government in dealing with land parcels, budget and other resources concerning development of populated points and housing construction;
- exercise rational functional use of town lands and reform the system of land use, land privatization to be taken into account;
- perfect planning and development of settlements, improve reciprocity of work places, dwellings, objects of social infrastructure and transport means on the basis of their rational location;
- improve the system of inter-settlement transport communication, so that it will ensure freedom and variety of choice of forms and places of works, choice of

place of residence, choice of cultural and every day service, choice of the form of education and rest;

- guarantee stable development of productive-economic sector by implementing economical production lines based on advanced technologies, that would bring high profits and be aimed at meeting the demands of people and at creating new jobs;
- create favourable conditions for attraction of investments into building new and reconstruction of old enterprises, into development of municipal and private objects of services industry;
- promote creation of premises for developed market of real estate and land, and effective system of registration of the right to real estate property, facilitate control over housing market based on combination of financial and economic methods of municipal and state regulation which would take into account social values and conditions of various land parcels for development of populated points;
- ensure development of various cadastre systems and evaluation of town's potential resources;
- develop intertown system of communication and information system which would include maximum number of populated points also create special centers, ensuring public communication;
- improve ecological situation in districts with high concentration of industrial enterprises (Donetsk and Krivoy Rog regions) in the largest and large towns, also in populated points of river basins of Dniper, Southern Bug, Black Sea and Azov Sea coasts;
- work out and realize a programme of preventing technogenic damage and natural catastrophe in the zone where dangerous power and industrial complexes are located, also in territories with complicated engineering and geological conditions;
- promote development and give financial and credit support to construction of individual houses and condominiums and, at the same time, preserve required volume of municipal housing construction in order to provide shelter to needy families, by means of creating special credit-bank system and system of subsidies and benefits;
- create adequate system that would guarantee the rights of residents of populated points to take direct part in discussions, and in implementation of the decisions concerning the use of territories, investments and realization of urban development programmes;
- do one's best to increase standards of provided social shelter, of functional quality of houses and flats, to increase the volume of housing construction at expenses of state, collective organizations and individuals;
- mobilize technical resources of the state, region and local organs of self-government, private investors for development of production potential of building enterprises;
- promote development of new architecture-construction system, production of local building material for housing construction;
- stimulate development of private business in rendering service in housing construction, create conditions for attraction of foreign investments;
- enrich region's experience and work out a system of forming associations of people for building houses;
- develop forms of crediting, participation of organs of power, forms of attraction of private capital, preliminary construction of engineering and transport infrastructure, of the land parcels allotted for construction of individual houses by people at their own expenses;
- ensure safe living conditions in towns by reconstructing the socially dangerous districts;
- expand the volume of reconstruction of physically and morally obsolete housing stock, develop building organizations



potential for them to be able to solve these problems. It should be based on a special system of encouragements and privileges for building organizations which are specializing in reconstruction;

- realize, step by step, the state and municipal programmes of restoration of historical and architectural heritage, protection of historical and cultural monuments;
- carry out experimental building of housing quarters by attracting money from the budgets of state, region, and local self-government organs, from private capital, money of enterprises and population (in Kyiv, Khmelnytsk, Nikolayev, Rivno and other regions of Ukraine);
- establish an effective system of training and retraining specialists in planning and development of populated points, in economics and management of town development, also in licensing for architectural and town building activity;
- update projects of development of territories and populated points to create new conditions for investments, for a new structure of housing construction by taking into account the demand of the people;
- ensure saving of fuel and power resources by working out effective models of towns, by optimizing transport system, decentralization and use of non-traditional sources of energy, introduction into housing constructions effective heat saving materials, constructions and engineering systems;
- reconstruct water supply networks, improve water quality, work out economical norms in supplying people with drinking water.

## C O N C L U S I O N

During the 20-year period that has passed since the HABITAT-I some definite quantitative and qualitative changes in development of populated points of Ukraine occurred: the urbanization process was rapidly developed at the expenses

of centralized state capital investments, the volume of housing construction and objects of social and engineering infrastructure increased considerably, a large-scale work was done on reconstruction and protection of historical buildings of centres of towns, rural habitation environment was created.

Active urbanization processes caused intensive development of towns. The number of towns has increased 13% for 20 years, their population increased 20%. The town territories development mainly by assimilation of new free land parcels, also by tearing down ramshackle housing stock.

Nowadays, because of destabilized economic and political situation in the state, typical for transition period, the problem of stable development of populated points and the housing problem became rather acute.

The following factors impede solution of town development problems:

- imperfect legal and normative basis of town development, land relations and use of resources;
- instability of organization structure of local government organs in the sphere of territory planning and land use;
- lack of interest of potential private investors to invest into development of capital assets of populated points because the right to private ownership on land plots was not legalized.

It is necessary to work out national urban development policy, which would correspond to the new system of social and economic relations, to multistructural economy, aimed at solution of strategic goals:

- to secure the human right to good habitation environment;
- to rationally use the natural, economic, and, primarily, land resources;
- to protect and restore historical and cultural heritage;
- to radically improve ecological conditions of populated points;
  - to attract non-state investments for development of populated points.

UKRAINE:

URBAN DEVELOPMENT AND HOUSING INDICATORS

Region (zone) - DONETSK

Towns: Donetsk city - 1

|   |  | Indicators                             |   |
|---|--|--|---|
| Module name, aims   | Indicators name  | Years<br>(by 1.01<br>or for a<br>year) | Towns<br>Category,<br>as to po-<br>pulation<br>number |
| <b>1 MODULE (Basic Data)</b>                                    |  |  |   |
| Improvement of<br>land effective<br>use                         | D1. Land use.<br>Land area (territory) town boundaries (km <sup>2</sup> ), including:              |  |   |
|   | — town   |  | 369,49  |
|   | — developed  |  | 185,65  |
|   | — under green plantation   |  | 183,84  |
|   |  |  | 1990 1117   |
| Steady positive<br>population<br>growth                         | D2.(8). Population.<br>Town population within town boundaries, thousand people                     |  | 1991 1121   |
|   |  |  | 1992 1121   |
|   |  |  | 1993 1121   |
|   |  |  | 1994 1114   |
|   |  |  | 1995 1102   |
|   | D3. Rate of population growth.   |  |   |
| — Rate of growth, thousand people                               | for 5 year   | -15                                    |   |
| —, %  |  | --                                     | 98,66   |
| — Average increase, thousand people                             |  | -3                                     |   |
| —, %  |  | --                                     | -0,14   |
|   | Migration processes, thousand people   |  |   |
|   | — into town  |  | -- 15,993   |
|   | — out of town  |  | -- 20,457   |
| <b>II Module I. Social and economic development</b>             |  |  |   |
| Reduction of<br>town poverty                                    | (7): Families below the level of poverty (number of families, % of the total number)               | in 1994                                | no data   |
|   | Percentage of needy families, %  |  | -- 11,4   |
| Employment<br>increase  | 2.(4). Unofficial jobs. Percentage of employed population including employed in unofficial sector. |  |   |
|   |  | 1990                                   | 525 583   |
|   |  | 1991                                   | 497,078   |
|   | Employment of population (at the age of 15 and over), thousand people                              | 1992                                   | 462,152   |
|   |  | 1993                                   | 443,853   |
|   |  | 1994                                   | 404,958   |
|   | Pendulous migration, (thousand people)   | in 1994                                | 35,6  |
| (5). Number of registered unemployed (thousand people)          |  | --                                     | no data   |
| including % of able to work population, at the able to work age |  | --                                     | 0,16  |
| Concealed unemployment, thousand people, or %                   |  | --                                     | 11,4  |
| Sanitation for<br>everyone                                      | 3(16). Hospital beds.  |  |   |
|   | Number of beds   |  | -- 12 500   |
|   | People per bed   |  | -- 39   |

|  |  | Indicators                             |   |
|--|--|--|---|
| Module name. aims  | Indicators name  | Years<br>(by 1.01<br>or for a<br>year) | Towns<br>Category,<br>as to po-<br>pulation<br>number |
|  | 4. Infantile mortality. Percentage of children, died before the age of 5   | --                                     | 5,2   |
|  | 9. Mortality caused by infactions diseases   | --                                     | 13,6  |
|  | 5.(15). Number of children ren in class, pupils, %   | by the<br>end of<br>1994               | 35  |
|  | b) secondary school  |  |   |
|  | (12). Number of school-children at schools (thousand people, %) including  |  |   |
|  | — boys   |  |   |
|  | — girls  |  |   |
| Education<br>for everyone  | Percentage of children of respective age, registrated at school, %   |  |   |
|  | a) elementary:   | --                                     | 40  |
|  | — boys   |  |   |
|  | — girls  |  |   |
|  | b) secondary:  |  |   |
|  | — boys   |  |   |
|  | — girls  |  |   |
|  | (13). Full programme number of years of study (years)  | --                                     | 10  |
|  | Same, full programme (years)   | --                                     | 11  |
|  | 6.(17). Criminality estimate.  | in 1994                                |   |
| Increase of social in-<br>tegration  | Number of registered crimes (a year per 1000 people)   |  |   |
|  | a) murders   | --                                     | 0,14  |
|  | b) robberies   |  | 0,72  |
| <b>III MODULE 2. Infrastructure.</b>   |  |  |   |
|  | 7.(19). Level of provision with housing and public utilities   | 1994                                   |   |
|  | Percentage of families (housing stock) connected to the network  |  |   |
| Public service impro-<br>vement  | — water line   | --                                     | 100   |
|  | — sewerage   | --                                     | 74,5  |
|  | — electric power   | --                                     | 100   |
|  | — telephone  | --                                     | 56,5  |
|  | (41) Consumption of electric power per one person, kW/h  | --                                     | 10428,6   |
|  | 9.(21). water consumption.   | 1994                                   |   |
| Guaranteed quality<br>an stability of supply   | Annual water consumption in liters per person: -- total per 24 hours   | --                                     | 195,5   |
|  | (28) Sewerage removal, thousand m <sup>3</sup>   | --                                     | 192758  |
| <b>IV. MODULE 3. Transport.</b>  |  |  |   |
| Improvement of func-<br>tioning and increase<br>of stability of town<br>transport system | 12 (28). Travel time.<br>Average year time in min. of one day travel to workplace  |  |   |
|  | (28). Death-rate in transport casualties, Number of deathes per 1000 people in the last year as the result of transport casualties | --                                     | 0,58  |
|  | (29). Cost of fuel. Prices in USA cents per 1 litre:   |  |   |
| Improvement of road<br>network   | — petrol   | --                                     | 50  |
|  | — diesel fuel  | --                                     | 35-40   |
|  | — liquefied gas  | --                                     | no data   |
|  | (31). Hard-pavement roads, km/thousand m <sup>2</sup>  |  |   |
|  | — percentage of all roads  | --                                     | 56,2  |

|  |  | Indicators                             |   |
|--|--|--|---|
| Module name, aims                                      | Indicators name  | Years<br>(by 1.01<br>or for a<br>year) | Towns<br>Category,<br>as to po-<br>pulation<br>number |
|  | — percentage of repaired roads                               | --                                     | 12,5  |
|  | (34). Seats in public transport                              | --                                     | 5171,2<br>58 per 1000                                 |
|  | Number of rolling stock, pieces                              | --                                     | no data   |
| Assistance in<br>safe use of indi-<br>vidual transport | 13.(32). Expenses for road infrastructure, in US dollars     | --                                     | 146856,1  |
|  | Capitation expenses in US dollars (average for 3 years)      | --                                     | 0,14  |
|  | 14.Cars in private property. Number of cars per 1000 citizen | --                                     | 76,37   |

## V MODULE IV. Control over environment.

|   |  |      |         |
|---|--|------|---------|
| Improvement of<br>water quality   | 15.(35). Percentage of purified sewage (total)   | 1994 |         |
|   | Subjected to one of the kinds of purification  | --   | 75,6    |
|   | 16.(38). Reprocessing of waster (separation of solid waster ), m <sup>2</sup> per year     | --   | 1148284 |
|   | Quantity of waster per one person, m3 per year   | --   | 1,042   |
| Improvement of<br>collection and re-<br>moval of solid<br>wastes                          | 17.(39). methods of separation and quantity of solid wastes,<br>kg per persons in 24 hours | --   | no data |
|   | a) sanitary dumps  | --   | no data |
|   | b) burning of wastes   | --   | no data |
|   | c) open dumps, kg per person in 24 hours   | --   | 1,33    |
|   | d) reprocessing  | --   | no data |
|   | e) others  | --   | 0,11    |
|   | Availability of special plants   | --   | --      |
| Reduction of after-<br>effects of calamities<br>of natural and tech-<br>nogenic character | 19.(42).Housings on unsafe territories (number of houses)                                  | --   | 932,5   |

## VI MODULE 5. Local administration

|  |   |         |         |
|--|---|---------|---------|
| Stimulation of<br>democratic parti-<br>cipation of local<br>selfgovernment<br>organs in taking<br>decisions. Effec-<br>tive use of soci-<br>al resources | 23.(43).(49) Elected and appointed advisers. Total number of elected<br>deputies to local Soviets and persons appointed to the selfgovernment<br>organs |         |         |
|  | Total number of deputies, including   | --      | 327     |
|  | — men   | --      | 273     |
|  | — women   | --      | 54      |
|  | The staff of the local self-government (executive body)<br>Total number of person   | --      | 919     |
|  | 20.2. Main incomes of the budget, including:  | 1994    |         |
|  | — taxes   | --      | 100     |
|  | — payments of consumers (land included)   | --      | no data |
| — budget means   | --  | no data |         |
| — others   | --  | no data |         |

## VII HOUSING CONSTRUCTION INDICATOR

|  |   |  |
|--|---|--|
| MODULE 6.<br>Housing comfor-<br>tability and provi-<br>sion with shel-<br>ter.<br>Accessibility to<br>comfortable hou-<br>sing | H1, H2. Cost of housing compared to income.                                       |  |
|  | Average market price of a housing and family average yearly income.               |  |
|  | Housing rent compared to income.  |  |
|  | Average yearly rent for a housing and overage yearly income of<br>renter's family |  |

|   |  | Indicators                             |   |  |
|---|--|--|---|--|
| Module name, aims                                   | Indicators name  | Years<br>(by 1.01<br>or for a<br>year) | Towns<br>Category,<br>as to po-<br>pulation<br>number |  |
| Adequate hou-<br>sing for everyone                  | H3, H4. Housing floor space per person.  | --                                     | no data   |  |
|   | Percentage of housing in   |  |   |  |
|   | — state housing stock  | --                                     | 70.91   |  |
|   | — cooperative housing stock  | --                                     | no data   |  |
|   | — individual houses  |  | 29.1  |  |
|   | H5. Capital buildings. Percentage of flats in houses which will be fit for living during 20 and more years if properly maintained. Longevity of building, quantity of dwelling in the housing stock (thousand m <sup>2</sup> ) in: |  |   |  |
|   | — capital houses   |  |   |  |
|   | — ramshackle   |  |   |  |
|   | — dilapidated  |  |   |  |
|   | Percentage of total housing stock in houses subject to evacuation  |  |   |  |
| <b>VIII MODULE 7. Provision with shelter.</b>       |  |  |   |  |
| Provision with<br>adequate comfor-<br>table shelter | H6. Increase of land area for housing construction.<br>Ratio of average price of developed land within the town boundaries and the price of a not developed land plot which is being developed                                     |  |   |  |
|   | H7.H8. Expenses for infrastructure.  | to 1.1.94                              | 38.23<br>mil.karb.                                    |  |
| Improvement of<br>housing financing                 | Ratio of total expences management, maintenance, capital investment) by all levels of government on infrastructure mainte nance (roads, sewerage, drainage, water supply, removal of wastes) in current year                       |  |   |  |
|   | Ratio of general credit means and the total loan in both, commercial and government financial structure  |  |   |  |
| Advanced produc-<br>tion in housing<br>construction | H9. Building of housing.<br>Total number of dwellings (put into operation) in state and non-state sectors, put into operation last year per 1000 people (m <sup>2</sup> of housing floor space)                                    | in 1994                                | 100500<br>172.3                                       |  |
|   | — state  |  | 185700<br>168.5                                       |  |
|   | — cooperative  |  | 4800<br>4.38  |  |
|   | — individual   |  | 55882<br>50.7   |  |
|   | H10. Investments in housing construction.  |  | 911094<br>mil.  |  |
|   | Total amount of investments into housing construction (in state and non-state sectors), percent to gross domestic product  |  | 321444<br>mil.  |  |
| — individual Percent of gross domestic product      |  | 39650<br>mil.                          |   |  |

**NOTES;**

- Town categories:
  - over 1000 thousand people;
  - over 500 to 1000 thousand people;
  - over 250 to 500 thousand people;
  - over 100 to 150 thousand people; V over 50 to 100 thousand people;
  - over 50 thousand people;
  - less 50 thousand people.
- Region number 1-25: the order of regions indexes in information analysis.
- Column 3 in the table: The letter and the figure without brackets — information about Program of indicators; in brackets — in accordance with the previous system of indicators.