

The Fourth Five-Year Plan of the U.S.S.R.

The operation in the pre-war decade of the system of long-term economic plans which was inaugurated by the Soviet Union at an early stage has previously been described in these pages.¹ The following article contains an analysis of the Fourth Five-Year Plan, which the Supreme Soviet of the U.S.S.R. adopted, in the shape of a Law, on 18 March 1946. Besides the text of the Law², the analysis is based on the report made to the Supreme Soviet by the President of the State Planning Commission, Mr. Voznesensky, when presenting the Plan on 15 March 1946, and on the debate which followed.

In accordance with the instructions given to the State Planning Commission of the U.S.S.R., in August 1945, at the end of the war, a Fourth Five-Year Plan has been prepared, to cover the years 1946-1950. It takes the form of a Law adopted by the Supreme Soviet of the U.S.S.R. on 18 March 1946 and signed by the President of the Presidium of the Supreme Soviet, Mr. N. Shvernik, and the Secretary of the Presidium, Mr. A. Gorkin. The Plan defines the fundamental tasks of Soviet economy during these five years, and lays down in particular the programme of production and the main construction work to be done between 1946 and 1950. There are also directives for the rehabilitation and development of the sixteen federated Republics which form the Soviet Union.

One period of peaceful socialist construction, the introduction to the Law states, was interrupted by Nazi aggression; the war caused the country and its people immeasurable loss; but the national effort led to victory, and the time has now come to reconvert and reconstruct the national economy on a peace footing. The principal aims of the new Five-Year Plan, which is intended to direct this process, are: "to rehabilitate the devastated regions of the country, to recover the pre-war level in industry and agriculture, and then considerably to surpass that level".

THE BACKGROUND OF THE NEW PLAN

Planning of the Soviet economy was begun a quarter of a century ago when the Eighth All-Russian Soviet Congress adopted a first reconstruction plan, the State Commission Plan for the Electrification of Russia (*Goelro*). The State Planning Commission itself (*Gosplan SSSR*) was established soon afterwards, under a Decree signed by Lenin on 22 February 1921.

The State Planning Commission's first task was to prepare the national food supply plan for 1921-22. In 1922-23 it drafted a plan

¹ Cf. *International Labour Review*, Vol. XLI, No. 2, Feb. 1940, pp. 177-201: "The Economic Development of the Soviet Union under the Second and Third Five-Year Plans", by A. ABRAMSON.

² Cf. *Law on the Five-Year Plan for Rehabilitation and Development of the National Economy of the U.S.S.R., 1946-1950* (London, "Soviet News", 1946).

for the rehabilitation of agriculture in the regions which had been particularly affected by the famine of 1921. These first schemes were followed by others of a less general character.

In December 1927 the 15th Congress of the Communist Party gave detailed instructions for the preparation of a five-year plan for the development of the national economy, and called attention to the need for a rapid expansion of heavy industry and for agricultural collectivisation. In April and May 1929 the First Five-Year Plan was approved by the 16th Conference of the Party and the 5th Congress of Soviets of the U.S.S.R. Whereas the Goelro plan contained no more than brief directives relating to 17 branches of industry, the First Five-Year Plan made concrete provision for the development of about 50 branches. This initial attempt to lay the foundations of a socialist economy provided for the expenditure of 64,600 million roubles during the period 1928-1933. It was completed in four years and three months.

The Second Five-Year Plan, of 1933-1937, covered a still larger number of branches of industry. Whereas the first plan had related to heavy industry only, the second extended to all Soviet industry, contained directives for 120 branches, and provided for an expenditure of 133,000 million roubles. It aimed at the elimination of all capitalist elements, the technical reconstruction of industry, and a considerable increase in the output of consumers' goods.

At the 18th Congress of the Communist Party in March 1939, Mr. Stalin and Mr. Molotov submitted reports on the application of this second plan and defined the objects and basic data of the Third Five-Year Plan (1938-1942). The final resolution adopted by the 18th Congress stated that, despite the rapid progress of industrialisation, the country was still economically behind the more advanced capitalist countries, judging by its production per head of the population. This applied both to heavy industry (iron, steel, etc.) and to light industry (textiles, for instance). The total industrial output per head of the population of the United States in 1937 was three and a half to four times as great as in the U.S.S.R. The main directive given by the 18th Congress was to overhaul and outstrip the most advanced European countries and the United States, as regards production per head.

But the economic handicap of the U.S.S.R. could not of course be made good during a single five-year period, and the third plan aimed only at bringing the country closer to achievement of this goal. Hitler's attack on 22 June 1941 interrupted its execution and forced the country to mobilise all its potential economic strength and concentrate its energy on the struggle against Germany.

In a speech made in Moscow on 9 February 1946, Premier Stalin gave a number of figures showing the results achieved in industry and agriculture during the first two five-year periods and the initial two years of the third. In 1940, he said, Soviet output of pig iron was 15 million tons (four times as much as in 1913), that of steel 18.3 million tons (four and a half times as much), of coal 166 million tons (five and a half times as much), and of oil 31 million tons (three and a half times as much). Production of grain for the market was 38.3 million tons (17 million tons above the 1913 figure) and that of cotton 2.7 million tons (three and a half times as much

as in 1913). It was industrialisation — beginning with heavy industry — and the collectivisation of agriculture which had enabled such material results to be achieved in thirteen years and made it possible to prepare the U.S.S.R. for active defence.

The immense human and material losses, Premier Stalin continued, which the U.S.S.R. had suffered (1,700 towns and 70,000 villages devastated or destroyed) had brought the country face to face with an entirely fresh task. This was embodied in the new Five-Year Plan for 1946-1950, which would bring output up to and beyond the pre-war level. Rationing would soon be abolished and special attention given to increasing the output of the principal consumers' goods, raising the workers' standard of living by a gradual reduction in all prices, and constructing various types of scientific and research institutions.

Lastly, Premier Stalin referred briefly to the more distant aims of the Soviet Union. The Party was contemplating a further powerful extension of the national economy that would enable industrial output to be raised to — in some cases — three times the pre-war figure. The Union must produce 50 million tons of pig iron, 60 million tons of steel, 500 million tons of coal, and 60 million tons of oil; only on that condition would it be proof against any surprise. But to effect this, three five-year plans, if not more, would be required.¹

GENERAL DIRECTIVES OF THE PLAN

The objects of the Fourth Five-Year Plan are defined in the Law itself. The most important are:

(a) To give priority to the restoration and development of heavy industry and railway transport, without which the rapid and effective recovery and development of the entire national economy of the U.S.S.R. would be impossible;

(b) To promote agriculture and the industries producing consumers' goods in order to raise the material well-being of the people of the Soviet Union (and with this object to strengthen the currency);

(c) To promote technical progress in all branches of the national economy of the U.S.S.R., as a condition for a powerful increase of production and a rise in the productivity of labour;

(d) To attain a high rate of capital investment, 250,300 million roubles to be allocated during the five-year period to centralised construction and 234,000 million roubles (at 1945 prices) to putting new or rehabilitated enterprises into operation (the fourth plan is not restricted to devastated areas);

(e) To enhance further the defensive power of the U.S.S.R. and to equip its armed forces with up-to-date weapons.

This is not the first time that the national economy has had to be rebuilt after the destruction of war. At the end of the First World War, as Mr. Voznesensky recalled in his report to the Supreme Soviet, the U.S.S.R. took six years to recover the 1913 level of industrial production. The Fourth Five-Year Plan provides for

¹ *Pravda*, 10 Feb. 1946.

a considerably more rapid rate of reconstruction. The 1940 level is to be reached by 1948 and to be "considerably surpassed" by the end of the five-year period. Industry will then have been rehabilitated three times as fast as was the case after the war of 1914 and the civil war. To step up the pace of reconstruction, a role of the first importance is allotted to Siberia and the Urals, which more than tripled their industrial output during the Second World War. Mr. Voznesensky called on workers, peasants, and intellectuals to devote all their efforts to the achievement of the plan.¹

PLAN OF INDUSTRIAL DEVELOPMENT

The report of the special State commission appointed to investigate the material damage done by the invaders gives a long list of losses to industry. In all, 31,850 industrial establishments, employing 4 million workers, were destroyed during the war, and the enemy also destroyed or removed an enormous quantity of industrial machinery and tools.²

According to the Plan, the total value of industrial production in the fifth year (1950) will be 205,000 million roubles (at 1926-27 prices) — an increase of 48 per cent. over 1940. Of course this percentage cannot be achieved in the devastated regions, where almost the whole of industry will have to be raised from the ruins. Mr. Voznesensky evaluated the increase in industrial output of these regions by the last year of the five-year period at 15 per cent.

The situation varies from one Republic to another. In the Ukraine, for instance, the Plan is content to provide for the recovery of the pre-war production level. For the Karelo-Finnish Republic and for Byelorussia, which were also invaded, the percentage increase is comparatively small — 11 per cent. and 16 per cent., respectively. For the R.S.F.S.R. (Russia proper), only some of the western parts of which were occupied by the Germans, a 50 per cent. increase is counted on. On the other hand, for the Kirghiz and Armenian Republics, the Plan provides for an increase of 110 per cent. in industrial output, and for an increase of 120 per cent. in Kazakhstan. The intended increase is particularly large in Estonia, although it was invaded; according to the Plan, there is to be a 200 per cent. increase in industrial output, owing to the anticipated development of the shale deposits.

In accordance with the general directives of the Plan, which requires first of all the recovery and development of heavy industry, the rate of increase of means of production will slightly exceed that of consumers' goods during 1946-1950. Thus, the policy adopted for the first three five-year plans has been continued.

In order to carry out this programme, the Plan fixes the total to be spent on capital investment in the industry of the U.S.S.R. during the five years at 157,500 million roubles (at estimated 1945 prices). This sum is intended to provide for the construction or re-

¹ The 15th Plenary Session of the Central Council of Trade Unions, after hearing a report on the role of the trade union organisations in the execution of the Fourth Five Year Plan — submitted by its Chairman, Mr. V. Kuznetsov, on 10 Apr. 1946 — resolved that the struggle to apply and exceed the new Plan should be the principal task of the organisations (*Trud*, 5 May 1946).

² Cf. *International Labour Review*, Vol. LIII, Nos. 1-2, Jan.-Feb. 1946, p. 71.

construction and putting into operation of about 5,900 State undertakings, including 3,200 in the devastated regions and excluding small establishments.

The whole process of industrial reconstruction and development will be based on the principle of rational distribution of the productive forces of the different regions, in order to bring industry as close as possible to the sources of raw materials and to avoid overlong hauls by the transport services. Faulty distribution of industry before the war in the now devastated regions will therefore be corrected; and for these regions, as for all the Republics, the Plan provides that they shall have their own sources of power and fuel, building materials, industries and principal consumers' goods industries. Credits for capital construction are divided between the devastated regions and the other parts of the Union, the latter — in particular, Siberia and the Far East — receiving a relatively larger proportion. The building of new undertakings in the great industrial cities — Moscow, Leningrad, Kiev, Kharkov, Rostov, Gorki, Sverdlovsk — will be limited.

Finally, the Law of 18 March 1946 contains much information concerning the intended development of the various industries — iron and steel, non-ferrous metals, coal, peat, gas, petroleum, electric power, engineering, chemicals, rubber, building materials, timber, paper, textiles, food, and industrial construction and installation. Some of these items are summarised below.

At the end of the five years, the production of *iron and steel* is to be as follows: pig iron 19.5 million tons, steel 25.4 million tons, rolled goods 17.8 million tons — or 35 per cent. above the pre-war output. Owing to the destruction caused by the war, these objectives are lower than those fixed for the Third Five-Year Plan. To achieve these figures, it will be necessary to have in operation, new or reconstructed, 45 blast furnaces, 165 open hearth furnaces, 15 converters, 90 electric furnaces, 104 rolling mills, and 63 coke batteries. By 1950, the Ukraine is to be the principal producer of pig iron, with 9.7 million tons, closely followed by the R.S.F.S.R., with 9.5 million tons. For steel, on the other hand, the R.S.F.S.R. will come first with 16 million tons and the Ukraine second with 8.8 million tons. Since the Ukraine is only to bring its output back to the pre-war level, the increase in national production will be achieved by the iron and steel centres of the Urals, Siberia, and the Far East, which are to be developed to the utmost.

Mr. Voznesensky stated in his report that the principal object of the production programme for *non-ferrous metals* is to ensure full satisfaction of national needs from national sources. With this object, the output of non-ferrous and precious metals is to increase as follows in the period 1946-1950: copper, 60 per cent.; aluminium, 100 per cent.; magnesium, 170 per cent.; nickel, 90 per cent.; lead, 160 per cent.; zinc, 150 per cent.; wolfram concentrates, 340 per cent.; molybdenum concentrates, 100 per cent.; and tin, 170 per cent.

According to the Minister for the Non-Ferrous Metal Industry, 12,000 million roubles will be invested in this industry, as against 7,500 million roubles in the first years of the Third Plan. Ore-

mining centres will be developed, particularly in the Altai Mountains. Speaking of gold mining, the Minister said that the industry had been in difficulties during the war, tens of thousands of workers having been called up. The new plan would make great resources available for mechanising extraction and prospecting, and the output of gold would be considerably increased.¹

Rapid expansion of the *coal mining* industry is provided for. As against a production of 166 million tons in 1940², the new Plan fixes production for 1950 at 250 million tons, of which the R.S.F.S.R. is to produce 141.9 million tons, the Ukraine 86.1 million tons, Kazakhstan 16.4 million tons, and Georgia 2.4 million tons. This involves the recovery of pre-war output by the Ukraine, despite its enormous war damage; the operation of new coal areas, particularly in Kazakhstan; and extensive mechanisation. The quality of the coal is to be improved by concentration, screening, and briquetting.

The Plan provides also for the development of peat extraction, a new natural gas industry, and the processing of peat, coal, and shale for gas or liquid fuel.

Owing to the serious damage suffered by the *petroleum* industry during the war, recovery of the pre-war level of production is not expected until 1949. A net increase is however intended for 1950, when the figure fixed is 35.4 million tons, or 14 per cent. more than before the war. As during the war years, the extraction and refining of petroleum are to be continued and developed, particularly in the eastern regions, whose contribution to national output is to rise from 12 per cent. in 1940 to 36 per cent. in 1950. Azerbaijan will however continue to be the chief supplying region, with 17 million tons in 1950, followed by the R.S.F.S.R. with 14.5 million, Kazakhstan with 1.2 million, Turkmenia with 1.1 million, and Uzbekistan with 1 million tons.

Geological surveying and the preparatory work on new oilfields are to be developed, to ensure the above increase of output and to complete by 1950 the surveying of commercial reserves sufficient for at least two or three years ahead. High-speed methods of boring will be extended, production of high-octane aviation spirit developed, and 4 new refineries, 16 processing installations and several new oil pipelines built.

The building and rebuilding of *electric power* stations, the Plan states, must be conducted at such speed that the increase in power-producing capacity keeps ahead of the restoration and development of other branches of industry. Provision is therefore made for an increase of electric power production up to 82,000 million kwh. or 70 per cent. above the 1940 figure. The Plan also requires the complete restoration of hydro-electric and other electric power stations in the ex-occupied regions; the construction and operation of new stations, in Armenia and Azerbaijan for instance; the rehabilitation of the power and transmission systems of the war-damaged cities; and increased electrification of the railways and agriculture.

¹ *Pravda*, 22 Mar. 1946.

² *Idem*, 7 Mar. 1946.

In the *engineering* industry, to which outstanding importance is attached, the output of industrial equipment is to be doubled by 1950 as compared with the pre-war figure. Priority will be given to undertakings producing the following: equipment for the iron and steel, power, coal and oil industries, electrical machines, railway rolling stock, motor vehicles, tractors, agricultural machinery, equipment for the building industry, equipment for geological survey work, special and complex machine-tools, foundry equipment, and equipment and instruments for the chemical industry. Construction and production programmes are laid down for these various classes of factories. For instance, in 1950 a total of 2,750 long-distance locomotives are to be produced, or 2.4 times as many as before the war. For motor vehicles, the goal in 1950 is 500,000. The output of agricultural tractors is to be 112,000, an increase of 260 per cent. For some classes of machines, tools, etc., the increase will be still greater, for instance, in the case of optical and electrical measuring instruments (600 per cent. increase over 1940).

In 1950, the *chemical industry* is to produce 50 per cent. more than before the war. The chemical industries of the formerly occupied regions will be rehabilitated, priority being given to the production of nitrates, phosphates, soda products, and dyes. The production of mineral fertilisers is to be restored. New branches of industry will be established, new processes introduced, and the output of synthetic rubber will be doubled.

The extent of the war damage places a heavy burden on the *building materials* industry, the output of which is therefore to be greatly expanded. The production of cement is to increase by 80 per cent. and to reach 10.5 million tons by 1950. The same increase is laid down for glass (80 million square metres in 1950). Moreover, the prefabrication of dwelling houses and standard component parts made of wood, gypsum, asbo-cement and other materials will be started as a new industry.

The programme of recovery in this industry is closely connected with the success of the Plan in the *building* industry itself. There is to be extensive mechanisation of most construction processes, particularly excavation, concrete-making, and related jobs. Builders must learn, Mr. Voznesensky said, to work even faster and more economically than during the war, with no waste on non-essentials; and a body of permanent workers must be established under the public works agencies.

By 1950, the felling of trade *timber* is to increase by 59 per cent. over the pre-war figure (reaching a total of 280 million cubic metres), and the output of sawn timber by 14 per cent. (39 million cubic metres). The timber-felling area will be extended, particularly in the north, in western Siberia and in the Far East, timber transport roads will be built, and the felling and hauling of timber will be converted into a highly-developed, mechanised industry, with a permanent staff of skilled workers doing 75 per cent. of the work and having increased productivity.

The rehabilitation of the *paper* industry is to be completed by 1948, so that in 1950 the output of paper may exceed the pre-war level by 65 per cent. The R.S.F.S.R., the chief producer of paper, should turn out 996,000 tons in 1950 as against 740,600 tons in 1937.

The pre-war output of all branches of the *textile* and *light* industries is to be "recovered and surpassed". As regards the *food* industry, measures will be taken for its "rapid restoration and development . . . production of the pre-war range of stocks shall be resumed and quality improved". With this last object in view, the increase in the output of foodstuffs and other principal consumers' goods has been fixed, according to Mr. Voznesensky, at 17 per cent. per annum. The 1950 targets set by the Plan for various products are compared in the following table with the figures for 1933 and 1938¹ (which apply to the territory within the old boundaries).

	1933	1938	1950
Cotton fabrics (million metres)	2,732	3,491	4,686
Woollen fabrics (" ")	86	114	159
Silk fabrics (" ")	26	59	141
Leather footwear (million pairs)	99	213	240
Socks and stockings (" ")	251	440	580
Meat (thousand tons)	427	1,140	1,300
Butter (" ")	124	197	275
Fish (" ")	1,303	1,560	2,200

The Plan determines the geographical distribution of the various branches of the industry, and insists on the introduction of the most efficient technical processes. For instance, parallel with the production of cotton fabrics in the European part of the Union, the industry is to be developed further in Siberia and central Asia. As regards sugar (output to be 2.4 million tons in 1950), the Ukraine will continue to be the principal producer, with 1.6 million tons, followed by the R.S.F.S.R. and the Kirghiz and Kazakh Republics.

Execution of this vast industrial programme demands an increase in the *productivity of labour*. As compared with the pre-war level, there is to be a rise by 1950 of 36 per cent. in industry and 40 per cent. in construction. This can be achieved, stated Mr. Voznesensky, by increasing the technical equipment of the workers about one and a half times, by a comprehensive scheme to improve the occupational skills of all classes of workers, and by the full use of the 8-hour day; recovery of pre-war productivity levels in undertakings not yet fully reconstructed is possible with present personnel if the above methods are adopted. Above all, it will be necessary to expand the engineering industry and to turn out so many high-production machine tools that technical standards throughout industry can be further raised. The Plan, Mr. Voznesensky reported, provides for an increase in the total available number of metal-cutting tools to 1,300,000 — or about 30 per cent. more than the number available in the United States in 1940. The above developments are to contribute to a heavy fall in costs of production by 1950: by 12 per cent. in construction and by 17 per cent. in all industry, as compared with 1945.

AGRICULTURAL DEVELOPMENT

The War Damage Commission referred to above reported that the Germans had destroyed or burnt 98,000 collective farms, 1,876

¹ Taken from *Sotsialisticheskoe Stroitelstvo SSSR, 1933-1938* (Socialist Construction in the U.S.S.R., 1933-1938), Statistical Survey (Moscow, 1939), pp. 73 and 77.

State farms, and 2,890 machine and tractor stations, and were responsible for the loss of 7 million horses, 17 million cattle, 20 million pigs, and 27 million sheep and goats. The war also deprived the farms of the invaded areas of most of their equipment, including 137,000 tractors, 49,000 harvester-thresher combines, and about 4 million ploughs, harrows, etc. The damage done to the collective farms alone is estimated at 181,000 million roubles (official 1941 prices).

The Plan states that the farming and animal husbandry of the ex-occupied regions "shall be rehabilitated and developed and the pre-war level of agricultural production for the U.S.S.R., as a whole exceeded". With these objects, 19,900 million roubles will be spent on development works in the agricultural sector, plus 38,000 million roubles to be invested by the collective farms themselves, between 1946 and 1950.

The general agrarian structure of the Union will remain unchanged. The Plan requires maximum consolidation of the collective farm system and a strengthening of the role of the State farms as examples of fertility and productivity, and of the machine and tractor stations as factors of organisation and mechanisation.

The total *farm produce* of the U.S.S.R. at the end of the five-year period is to be 27 per cent. above the 1940 figure. The output of wheat, rice and pulses is to be increased in particular, as is that of the following industrial crops: sugar beet, raw cotton, flax fibre, and staple sunflower seed. Estimates for the 1950 harvest are summarised in the following table:

Crop	Total	Percentage increase over 1940	Average per hectare
	million tons	%	quintals
Wheat.....	127	7	12
Sugar beet.....	26	22	190
Raw cotton.....	3.1	25	18.4
Flax fibre.....	0.8	39	4
Sunflower seed.....	3.7	11	10

Furthermore, the areas sown to hemp, high oil-content crops, and tobacco are to be restored and yields increased, and measures taken to improve and develop meat and dairy farming and market gardening in the vicinity of the big industrial centres. The Plan also emphasises action to improve farming methods and to apply the latest achievements of agricultural science, so that crop yields and the gross harvest may be increased.

Lastly, there is an extensive programme for the restoration and development of irrigation and drainage systems (in Georgia and Kirghizia, for instance), the electrification of collective farms, State farms, and machine and tractor stations, and the mechanisation of field work. Between 1946 and 1950, 720,000 tractors — calculated in units of 15 hp. — will be supplied to the farmers, as against 512,000 during the second five-year period, when the highest output of agricultural machines and tractors was achieved.

The task of development in the field of *animal husbandry* is particularly heavy, first of all because the process of reconstituting stocks depleted during the collectivisation period had not been

completed — at least as regards horses, sheep and goats — when the war broke out, and secondly because of war damage in the occupied areas. The number of horses is therefore to be increased by 46 per cent., of cattle by 39 per cent., of sheep and goats by 75 per cent., and of pigs by 200 per cent., as compared with 1945. By 1950 the stock on collective farms should be as follows: cattle, 25.9 million (29 per cent. increase over 1940); sheep and goats, 68.1 million (62 per cent.); pigs, 11.1 million (35 per cent.). Special importance is attached to increasing the number of draught cattle on the collective farms of the former occupied regions, which have lost the tractors held before the war, and to raising the productivity of cattle, especially by ensuring an efficient organisation of fodder crops on each State or collective farm.

As stated above, the existing *system of organisation* — collective farms, State farms, and machine and tractor stations — is to be maintained. The Plan calls on the members of the collective farms to increase the community's wealth, protect its land, and prevent breaches of its rules and of democratic principles, as to, for example, the eligibility of managers and their accountability to general meetings. The productivity of collective farm labour is to be increased, and the piece-work system of payment extended.¹

The State farms are required to increase the yield of crops and livestock, use tractors and machines more efficiently, reduce cost prices and recover pre-war stock levels. Staffs of permanent workers must be built up for these farms; they will be provided with small holdings and given State aid in building their own houses.

The collective farm system which predominates within the pre-1938 frontiers of the Union is, however, not in force in the territories incorporated in the following two years (Lithuania, Latvia, Estonia, Moldavia, Western Ukraine, and Western Byelorussia). Agriculture in these regions is still based on the small holding, aided by State services; and the Plan includes a special directive stating that these peasant farms "shall be helped in their work by strengthening the agricultural co-operatives, extending the chain of machine and tractor stations and machine and horse-hiring centres, granting credits, increasing the supply and sale of farm machines and mineral fertilisers, and organising farms to rear thoroughbred cattle".

TRANSPORT DEVELOPMENT SCHEME

This is regarded as a leading feature of the Plan. War damage was considerable, and the special Commission on the subject cites the following losses: 65,000 kilometres of permanent way, 4,100 stations, and 13,000 bridges destroyed; 15,800 locomotives and 428,000 cars broken up, damaged or removed; 1,400 seagoing vessels and 4,280 river craft sunk or damaged.

Nevertheless, to satisfy growing needs, goods traffic must by 1950 exceed the volume carried before the war. Total freight carried by rail, road, and water, which was 483,000 million ton-kilometres in 1940, is to reach 657,500 million in 1950 — an increase of 36 per cent. This will involve a great development of each branch of the transport system.

¹ For an account of this system, see *Industrial and Labour Information*, Vol. LXIX, No. 7, 13 Feb. 1939, p. 209.

The capital invested in the *railways* during the five-year period will amount to 40,100 million roubles, or one sixth of all investments in the national economy.

The increase in railway goods traffic is fixed at 28 per cent. Home industry is to produce and deliver 7,585 locomotives during 1946-1950, as against 5,960 in 1933-1937, and the number of freight cars delivered will be 472,500 (in terms of two-axle cars) as against 250,000 in 1933-1937.

Apart from the rehabilitation of the railways in the devastated regions, new lines are to be built to a total of 7,230 kilometres, including 3,550 kilometres in Siberia. Secondary tracks to a total length of 12,500 kilometres will be built or restored, and 5,325 kilometres of line will be electrified. In order that the existing material during the opening years of the Plan may be able to meet growing needs, every available device will have to be used — maximum utilisation of cars, elimination of delays, abolition of uneconomic traffic, etc.¹

Freight carried on the *inland waterways* is to have increased 38 per cent. and maritime freight 120 per cent. over the pre-war figure by 1950. Large-scale inland transport reconstruction work will be undertaken in the devastated regions, on the Volga and elsewhere; and the "Stalin" White Sea-Baltic Canal will be rebuilt. The *mercantile marine* will be increased by 600,000 tons. The seaports on the Sea of Azov, Black Sea, and Baltic are to be completely rehabilitated, the construction of ports in the Far East completed, mechanised loading and unloading introduced, and new ship repair yards built. The conversion of the Northern (Arctic Ocean) Route into a normally working sea lane is to be completed by 1950.

The Plan provides also for doubling the stocks of *motor vehicles* and for building 11,500 kilometres of improved motor roads. Lastly, the civil air fleet is to be built up and the airline network expanded to 175,000 kilometres.

PLAN FOR MATERIAL AND CULTURAL ADVANCEMENT

A large section of the Plan is devoted to this subject. It deals with the national income, wages, vocational training, education, health, housing, and consumption. After the strain and sacrifice of the war, a considerable improvement in material and cultural conditions must be aimed at.² Here again, therefore, pre-war standards are to be recovered and surpassed during the next five years.

Mr. Voznesensky referred in his report to the gradual increase in the national income from before the First World War until today. It had been, at 1926-27 prices, 21,000 million roubles in 1913, 45,500 million roubles during the period of the First Plan, 96,300 million roubles during the second period, and 128,300 million roubles during the third. As a result of expanded production, extended trade, and increased expenditure on housing and cultural and social services, the national income in 1950 is estimated at 177,000 million roubles, 73 per cent. of which is to go to consumption, 21 per cent. to investment, and 6 per cent. to State reserves.

¹ Statement by the Minister of Transport (*Pravda*, 22 Mar. 1946).

² Cf. *Bolshevik*, No. 6, Mar. 1946, p. 7.

Wages

Parallel with a rise in the number of workers, there is to be an increase in total wages from 162,000 million roubles in 1940 to 252,000 million in 1950. Productivity is also to go up, and with it the average annual wage, which is put at 6,000 roubles in 1950, or 48 per cent. more than in 1940. With a view to attracting labour to the key industries and creating staffs of permanent employees, higher remuneration will be provided for workers, engineers, and technicians in the various branches of heavy industry (coal, iron and steel, oil). This, as Mr. Voznesensky pointed out, is in conformity with the policy of making wages depend not only on skill but also on the conditions in which the work is done.

Piece rates remain the predominant form of payment for Soviet workers, and the Plan provides for the perfecting of piece-rate or bonus systems and the systematic increase of the proportion of bonuses to wages and salaries for all grades of workers.

Vocational Training

The number of workers, which was 27,800,000 in 1938¹ (with the old boundaries), is to be 33,500,000, according to the Plan, in 1950.

The chief sources from which the additional skilled labour must be drawn are the factory, trade, and railway schools, from which 1,200,000 pupils will graduate annually by 1950. A total of 4,500,000 young skilled workers will enter Soviet industry from the schools during the five-year period, and 1,900,000 engineers and technicians will pass out of the special, intermediate, and higher schools in the same period.

Among other methods, that of training unskilled workers on the job is to be extended in the common trades, by means of individual or group instruction; this will apply to 5,400,000 workers in factories and 2,300,000 workers in agriculture. In addition, 13,900,000 other persons will have their existing skills increased in the same way.

The engagement of additional workers in industry, transport, and the building trades, according to Mr. Voznesensky, is a decisive factor for the success of the Plan; many undertakings, he said, do not realise that the labour they require cannot be provided automatically, and that new methods must be employed. The Plan therefore lays down that organised recruiting by means of contracts between business organisations and collective farms shall be resumed: the farms agree to make a number of workers available to the factories, which undertake in their turn to help the collective farms by supplying machinery, etc.

Culture and Health

The following items of State expenditure come under this head: social insurance; education; public health; training of labour reserves; allowances to mothers of large families, unmarried mothers, service men's families and war widows; and cultural and social facilities for the workers (excluding housing and municipal services).

¹ *Sotsialisticheskoe Stroitelstvo SSSR, 1933-1938, op. cit., p. 20.*

By 1950, the annual total for this expenditure will have been raised to 106,000 million roubles, or 2.6 times the 1940 figure. Social insurance contributions — paid in full by the employing institution — will amount during the five years to 61,600 million roubles; and the expenditure on industrial safety and similar measures to at least 5,000 million roubles.¹

Fresh tasks are imposed on the education and public health services.

The war restricted elementary education, and many school buildings were destroyed or pillaged. Education is now compulsory from the age of seven, both in the towns and in the country, and during the five-year period the level reached before the war will be recovered. Secondary and higher education will be extended, and schools instituted for the young workers and peasants who were unable to obtain normal schooling owing to the war. The number of children in kindergartens in 1950 will be 2,260,000, or double the number in 1940.

As regards health, the number of hospital beds will be increased to 985,000 in 1950 (710,000 in 1940), and accommodation in permanent crèches to 1,251,000 places (859,000 in 1940). The network of rest homes and sanatoria for workers, peasants, and professional workers will be fully restored. Attention will also be given to medical aid for war invalids, including the manufacture of artificial limbs.

Housing

The War Damage Commission estimated the number of buildings destroyed by the enemy at 6 million and the number of homeless persons at 25 million. The Plan provides for rehabilitation of the wrecked housing, and new construction to ensure considerable improvement in conditions throughout the country. Investment in housing will receive a comparatively larger proportion of national capital investment than under the Third Plan — 14.5 per cent. as against 10.5 per cent. — and actual total expenditure under this head in 1946-1950 is fixed at 42,300 million roubles, as against 15,500 million roubles. This sum will permit rehabilitation or new construction of 72.4 million square metres of floor space, apart from 12 million square metres to be built by individuals with the aid of State loans. This vast programme, it is pointed out, can only be completed if the whole process is industrialised, the parts being prefabricated and assembled on the spot.

Furthermore, with a view to improving living conditions and creating permanent staffs of workers in industry, business organisations are required to build one-family and two-family houses for sale to their staffs on the instalment plan. A great programme of housing construction and rehabilitation in the rural areas, and particularly in the ex-occupied regions, is also to be undertaken.

Trade and Consumption

More active retail trade, through the State shops in the cities and the co-operatives in the rural districts, is to contribute to a

¹ *Trud*, 13 Apr. 1946.

higher standard of living. On the assumption that there will be a lowering of the 1945 prices, the total volume of retail trade in 1950 will be 275,000 million roubles, or 28 per cent. more than in 1940 (at comparable prices). It is believed that the reduction in military requirements will enable the quantity of food available for civilian needs to be raised by 23 per cent.; and the production and sale of industrial consumers' goods will be increased by 36 per cent. over 1940. This increase, it is pointed out, appears far higher if the real starting point, 1945, is taken as the basis of comparison; in that year the Soviet Union was still at war and unable to manufacture or distribute sufficient quantities of the goods in question.

Lastly, the Plan provides for an early end to rationing. The ration schemes for bread, flour, cereals and macaroni are to be abolished in the autumn of 1946, and for other products in that and the following year. Mr. Voznesensky noted in his report that the extension of trade, based on the abolition of rationing and on systematic price reduction, should strengthen the rouble throughout the economic system of the Union.

* * *

The Fourth Five-Year Plan controls the economic development of the Soviet Union during the years 1946-1950. It aims both at repairing the enormous damage caused by the war, and at augmenting the economic strength of the Union as a whole. Of the 250,300 million roubles which are to be invested in the country during the five years, about 115,000 million are allotted to reconstruction of the devastated regions, and about 135,000 million to other parts of the Union, in particular, Siberia and the Far East; the industries of these eastern areas, greatly expanded as they were during the previous five-year periods and the war years, will make a powerful contribution to the rebuilding of the west. Before the invasion, the economy of the western regions helped to industrialise Siberia and the Urals. Now the east is paying its debt and has become a leading factor in hastening national recovery.

Recovery implies in the first place the development of heavy industry and transport and above all of the engineering industry. The directives with which the Plan opens specify that the Union is to be provided with better technical equipment and all-round mechanisation, that productivity must be raised and costs of production reduced. Thus, and by reconstructing and developing agriculture, it is intended to create abundance of the principal consumers' goods of which the population was deprived during the long years of war. The success of the Plan is regarded by its authors as largely dependent on the parts relating to labour, such as improved vocational training and the establishment of permanent staffs of workers and technicians in every undertaking.
