

**Agreement Between the Union of Soviet Socialist Republics and the People's Republic of China on Joint Research Operations to Determine the Natural Resources of the Amur River Basin and the Prospects for Development of its Productive Potentialities and on Planning and Survey Operations to Prepare a Scheme for the Multi-Purpose Exploitation of the Argun River and the Upper Amur River**

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Signed at Peking, 18 August 1956

Considering the interest of both Parties in investigating the prospects for developing the productive potentialities of the Amur River basin and in the multi-purpose exploitation thereof,

Have agreed as follows:

Article 1

Over the period 1956-1960 the Parties shall carry out joint research operations to determine the natural resources of the Amur River basin and the prospects for development of its productive potentialities in accordance with the indications given in annex I to this Agreement.

Article 2

Over the period 1956-1959 the Parties shall carry out joint planning and survey operations to prepare a scheme for the multi-purpose exploitation of the Argun River and the upper Amur River in accordance with the indications given in annex 2 to this Agreement.

Article 3

With the co-operation of the appropriate ministerial and departmental organizations, the Parties shall organize, through their Academics of Science, all-purpose field parties to carry out the operations mentioned in article I of this Agreement.

The two all-purpose field parties, using their own personnel and their own resources, shall carry out research operations to determine the natural resources and the prospects for developing the productive potentialities of areas in their own territories, whilst in frontier sectors they shall carry out joint research operations with equal participation by the Soviet and Chinese sides.

Research operations shall be carried out by the two field parties in accordance with the indications given in annex 1, and all reports on such operations shall be completed by 1960.

A joint Scientific Council on problems connected with the study of the productive potentialities of the Amur River basin, composed of equal numbers of representatives of the USSR and the People's Republic of China, shall be set up to provide uniform scientific and

methodological guidance of the operations of both all-purpose field parties, to review their annual work programmes and to study and approve their scientific reports. The number of representatives and the statutes of the Scientific Council shall be decided by agreement between the Parties.

Annual research programmes shall be drawn up by the two field parties separately for their own territories and jointly for frontier sectors. The research programme for each year shall be drawn up not later than the end of the preceding year.

A plan for the siting and organization of a base system of hydrometric stations on the frontier sectors of the Amur basin rivers shall be prepared by the Soviet and Chinese hydrological institutions, by agreement between them.

#### Article 4

For the purposes of the operations mentioned in article 2 of this Agreement, the Soviet and Chinese organizations, using their own personnel and their own resources, shall set up upper Amur survey parties, each working in its own territory.

The survey operations shall be carried out in accordance with a single programme and procedure and on the basis of plans agreed upon by the Parties every year.

The scheme for the multi-purpose exploitation of the Argun River and the upper Amur River shall be prepared by Soviet organizations with the participation of the corresponding Chinese organizations. For this purpose the Chinese side shall assign a deputy chief project engineer and the necessary number of specialists by agreement with the Soviet side.

The hydrometric stations necessary for planning and survey operations on frontier sectors of the Argun River and on the upper and middle Amur River shall be organized by the Soviet side with the participation of the Chinese side.

#### Article 5

The Soviet and Chinese organizations shall, for information purposes, exchange data, reports and other documentation on research, planning and survey operations carried out in the Amur basin before 1956, and shall exchange similar material in carrying out the operations mentioned in articles 1 and 2.

#### Article 6

In order that both sides may be kept informed of the matters under study by the all-purpose field parties and of the direction and progress of research and survey operations, and in

order that joint research and survey work be carried out, the members of each field party shall be entitled to enter the' territory in which the other is working and to carry out operations there, within the limits of the approved programmes and plans.

The formalities for entry into the territory of the other State shall be established by the competent organizations of the Contracting Parties.

#### Article 7

The Soviet organizations shall provide the Chinese organizations with technical assistance in carrying out the research and survey operations provided for in articles 1 and 2 of this Agreement in the territory of the People's Republic of China by sending Soviet specialists to the People's Republic of China and receiving Chinese specialists in the USSR for technical training and by supplying the People's Republic of China with equipment, apparatus and instruments for carrying out these operations, the quantities, types and dates of delivery to be decided by agreement between the Parties.

#### Article 8

At the request of the Chinese side, the Soviet organizations, using their own personnel and their own technical resources, shall make, at the expense of the Chinese side, an aerial photographic survey of the territory on the right banks of the Argun and Amur Rivers and shall prepare a map of the territory surveyed on the scale 1 : 25,000.

Ground preparations for the survey shall be carried out with the participation of the Chinese organizations. The area to be surveyed and the order of operations and the dates by which they are to be completed shall be decided by agreement between the Parties.

#### Article 9

All expenses arising from the presence of Soviet specialists in Chinese territory and Chinese specialists in Soviet territory for the purposes indicated in article 6 shall be borne by the sending Party.

The assignment of Soviet specialists to the People's Republic of China for the purposes indicated in articles 7 and 8 shall be subject to the conditions laid down in the Soviet-Chinese Agreement of 25 October 1950.<sup>1</sup>

The technical training of Chinese specialists in the USSR as provided in article 7 shall be subject to the conditions laid down in the Soviet-Chinese Agreement of 6 December 1951.<sup>2</sup>

#### Article 10

Payment for the equipment, apparatus and instruments supplied by the USSR and payment for expenses incurred in the provision of other kinds of technical assistance under this Agreement shall be made in accordance with the Soviet-Chinese Trade Agreement currently in force.

#### Article 11

The Soviet and Chinese organizations shall conclude the necessary contracts with each other concerning the quantities and dates of delivery of equipment, apparatus and instruments to be supplied, and concerning the extent of and the conditions for the services to be provided by the Parties to each other under this Agreement.

#### Article 12

Each Contracting Party shall be entitled to publish only such research materials and results as relate to its territory.

The conditions for the publication of results of joint research shall be decided by agreement between the Parties.

### **ANNEX No. I**

#### **Types of Research Operations to be Carried Out to Determine the Natural Resources of the Amur River Basin and the Prospects for Development of its Productive Potentialities**

Research operations shall be carried out as indicated in the following sections:

##### 1. Study of natural conditions

Survey of the physical and geographical characteristics of the Amur River basin (geomorphological, climatological, hydrological, pedological, pedologico-geochemical, geobotanical, silvicultural and piscicultival conditions) in order to determine the regions having the most suitable natural conditions for the establishment of integrated industrial developments, agriculture and transport facilities.

##### 2. Geological surveys

Study of the geological structure of various areas of the Amur region offering particular interest as possible sources of minerals providing raw materials for industrial undertakings consuming power supplied by future hydroelectric stations on the Amur.

##### 3. Surveys of water and water power resources

Study of the water power potential of the Amur River and of the main rivers of the Amur River basin and preparation of preliminary proposals relating to possible outline schemes for the regulation and use of its waters, with a view to the construction of hydroelectric power stations, the improvement of navigation conditions, the prevention of floods, the execution of land-improvement projects and the development of the fishing industry.

#### 4. Transport surveys

Study of the present state of water transport in the Amur River basin and preparation of an outline scheme for the development of transport on the Amur River, its main tributaries and connecting railways and roads in the light of the prospective construction of cascades of hydroelectric power stations with large reservoirs.

Investigation of the possibility and advisability of linking the Amur River by water with the Tartary Straits (in the area of Lake Kizi and DeKastri), with the Zaliv Petra Velikovo (by the Ussuri and Suifun Rivers) and with the Yellow Sea (by the Sungari and Liao Ho Rivers).

#### 5. Economic surveys

Analysis of the economic state of the territories of the USSR and the People's Republic of China in the Amur River basin and preparation of a preliminary plan for their economic development (priority being given to electricity-consuming branches of industry and to agriculture and transport facilities).

Estimation of approximate outlays of materials and labour entailed by the multipurpose development of the Amur River and formulation of principles for the distribution of those outlays between the different sectors of the scheme and between the USSR and the People's Republic of China.

Determination of the economic effectiveness of measures for the multipurpose exploitation of the water resources of the Amur River basin (evaluation of the economic implications for the USSR and the People's Republic of China of the development of the natural resources and productive potentialities of the Amur River basin).

### **ANNEX No. 2**

#### **Types of Planning and Survey Operations for the Preparation of a Scheme for the Multi-Purpose Exploitation of the Argun River and the Upper Amur River**

Planning and survey operations shall be carried out as indicated in the following sections:

##### A. Survey operations

1. Hydrometric operations to study the regime of the Argun and Amur Rivers from the source to the Maly Khingan range, and of their main tributaries on both banks.

The purpose of the hydrometric operations shall be to provide data to determine the variations in the level and flow of the rivers, their winter flow, their solid flow and the chemical composition of the water.

2. Geodetic and topographical operations:

- a. Preparation of longitudinal sections of the Argun and Amur Rivers up to the Maly Khingan range and of the lower reaches of their largest tributaries on both banks;
- b. Preparation of 1:10,000 scale maps of areas where it is proposed to site hydroelectric power stations and of larger-scaled maps of top priority projects;
- c. Surveys of flood areas of water reservoirs of top-priority projects, on the scale 1 : 25,000;
- d. Geodetic operations of various types connected with the hydrometric and geological operations;
- e. Simple triangulation operations with a view to the establishment of a network of base points for survey work;
- f. Levelling operations of various kinds with a view to coordinating heights in the network of geodetic points on both banks and establishing a basis for survey work.

3. Engineering and geological surveys:

- a. Geological and geomorphological strip surveys along both banks and area surveys of installation sites;
- b. Profiling of installation sites by electrical means;
- c. Drilling operations at installation sites on banks and in beds of rivers; mining operations on banks at installation sites;
- d. Experimental hydrogeological operations;
- e. Special engineering surveys;
- f. Prospecting for and study of building materials in the area of top-priority projects under the scheme;
- g. Exploration of flood areas, for top-priority projects;
- h. Laboratory analyses of soils and chemical analyses of water;
- i. Preparation of geological cross-sections, longitudinal sections and diagrams.

4. Preparation of a hydrological description of the Argun and Amur Rivers.

5. Preparation of a report on the topographical and geodetic operations.

6. Preparation of a report on the engineering and geological surveys and notes on the geological basis for the scheme.

## B. Planning operations

1. Hydraulic engineering surveys of the Argun and Amur Rivers and field planning of variants of the scheme.

2. Preparation of projections of economic development and electricity consumption in areas around the proposed power stations.

3. Study of problems of water transport on the Argun and Amur Rivers:

- a. Preparation of projections for the development of freight turnover;
- b. Calculation of economic dimensions for the waterway and for ships under different variants of the scheme;
- c. Determination of volumes of water to be discharged from reservoirs at the various stages of the scheme in order to maintain water transport;
- d. Provision of transport facilities to serve reservoirs of top-priority power stations.

4. Evaluation of the economic consequences of regulating the flow of water in order to reduce the frequency and scale of flooding of economically valuable territory on both banks caused by sudden rises in the river level and to create favourable conditions for land improvement.

5. Study of aspects of the fishing industry in relation to different variants of the scheme.

6. Estimation of losses due to flooding under different variants of the scheme.

7. Calculation of the regime of the river under planning conditions for different variants of the scheme.

8. Choice of optimum utilization plan, determination of basic parameters, of hydroelectric power stations, and selection of top-priority projects.

9. Design of power stations, in greater detail for those having top priority, and estimation of work and cost. Proposals for execution of work on top-priority power stations.

10. Main conclusions and proposals with regard to the scheme for the multi-purpose exploitation of the Argun and Upper Amur Rivers.