

CASE CONCERNING THE GABČIKOVO-NAGYMAROS PROJECT (HUNGARY/SLOVAKIA)

REPUBLIC OF HUNGARY

ANSWERS TO QUESTIONS

A. RÉPONSE A LA QUESTION DE M LE JUGE FLEISCHHAUER

1. La question de l'eau potable dans la plaine du Rhin en général et le long de l'axe fluvial en particulier a fait l'objet de très nombreux débats scientifiques et publics. J'ai été un des deux experts biologistes du Gouvernement français après la catastrophe de la pollution Sandoz du Rhin du 1er novembre 1986. Une des questions posées alors fut : quels sont les puits d'eau potables qu'il faut éventuellement fermer le long du Rhin? Je suis, d'autre part, président du Conseil scientifique de l'Agence publique de l'eau Rhin-Meuse, Conseil ayant assisté cet organisme dans l'élaboration des plans de gestion de l'eau dans le Nord-Est de la France, en application de la nouvelle loi française de janvier 1992 sur l'eau.
2. Le public ne connaît que la pointe de l'iceberg formé par la dégradation continue de la qualité des nappes phréatiques fluviales, aspect plutôt inquiétant du futur de l'eau potable en Europe. Si d'ores et déjà on constate que la stérilité des mâles de l'espèce humaine est en constante progression, c'est en partie dû aux eaux potables et aux polluants dits xénoestrogènes. La dernière population de loutres disparut dans les années 1960 dans un secteur très sauvage des bras latéraux du Rhin. Nous savons aujourd'hui que la cause en était la stérilisation chimique, cette fois des femelles par les polluants organochlorés véhiculés par le fleuve.
3. L'axe essentiel de la réponse à la première partie de la question se trouve d'une part dans deux schémas cartographiques montrés au cours des exposés scientifiques et, d'autre part, dans les passages de mon deuxième exposé énonçant l'énorme inertie de la nappe, que ces schémas illustrent (CR 97/6, pp. 50-55).
4. En premier lieu, revenons donc au schéma représentant la limite de pénétration du tritium, polluant nucléaire de la décennie 1950, véhiculé par le Danube et infiltré à partir du fleuve dans les eaux souterraines du Szigetköz (**Illus No 7.10**). L'on voit qu'en 30 ans cette limite de pénétration ne dépasse que de peu celle de la plaine alluviale active.
5. Or, la situation dans la plaine rhénane est strictement identique, remarquable homologie, permettez-moi d'insister. Reprenons donc la carte de la pollution de la nappe riveraine du Rhin, établie à l'aide du traceur mercure et qu'ont confirmé les traceurs chlorures, phosphates, oxygène dissous (**Illus No 4.11**). L'on voit que la largeur de la zone polluée est du même ordre de grandeur correspondant également à-peu-près à la plaine alluviale active. Les zones contaminées restent donc encore limitées du fait de l'inertie des eaux souterraines, et du caractère récent (environ 30 ans aussi) des pollutions industrielles en cause.
6. Comment, dans ces conditions, les villes disposent-elles encore d'eau potable dans la plaine du Rhin? Regardons à nouveau le schéma 2: les agglomérations et captages se situent à l'extérieur de la plaine alluviale active. Nous voyons sur le schéma les villes d'Erstein et de Sélestat. Elles sont situées sur la partie préservée de la nappe. Celle-ci dépend de la rivière Ill, dont nous avons décrit la plaine inondable fonctionnelle

comme bioréacteur naturel de production d'eau souterraine propre. La plupart des captages d'eau potable de la plaine du Rhin sont ainsi situés suffisamment loin du fleuve pour échapper pour le moment à la zone d'influence du Rhin.

7. Mais il y a plus, et c'est là que cesse l'homologie avec le Szigetköz. L'environnement géographique de la plaine du Rhin supérieur diffère totalement de la petite plaine slovaco-hongroise par la présence des montagnes bordières. Les Vosges, la Forêt-Noire, reçoivent 1.5 à 2 mètres de précipitations par an et constituent donc de vrais châteaux d'eau. Aussi, des villes, comme Freiburg en Allemagne, Mulhouse et Colmar en Alsace, bénéficient-elles des apports d'eau souterraine en provenance des deux chaînes de montagnes. Citons aussi les villes à l'aval du secteur canalisé (Karlsruhe), qui bénéficient à la fois des apports d'eau de la montagne et des effets épurateurs de la plaine alluviale restée active.

8. La ville de Strasbourg où j'ai enseigné pendant 25 ans l'écologie des pollutions, présente un cas intéressant: un des groupes de captages se trouvant à proximité de la zone d'influence des infiltrations du Rhin, a donné des signes progressifs d'altération. L'on a dû approfondir les puits contaminés d'environ 40-80 mètres, solution bien évidemment provisoire, à partir des années 80, ou recourir à des mélanges avec des captages situés plus à l'Ouest.

9. Le Szigetköz, quant à lui, ne bénéficiant nullement de la proximité de montagnes, dépend de ce fait totalement, comme la majeure partie de la Hongrie, de l'eau du Danube. Sa vulnérabilité en est décuplée. De plus, nombre de captages, contrairement à la plaine du Rhin, sont situés dans la plaine alluviale influencée par la Danube. Je vous suis reconnaissant, Monsieur le Président, Messieurs les Juges, de l'occasion qui m'a été donnée d'apporter ces précisions supplémentaires.

10. La deuxième partie de la question demande: que faut-il faire? Il y a plusieurs réponses possibles.

11. Une solution qui, elle, est irréalisable, est de purifier une nappe souterraine. Une autre solution, très souvent proposée aujourd'hui, est de traiter l'eau pour extraire les polluants. Les technologies actuelles très sophistiquées permettent, en effet, de rendre potable la plus détestable des eaux d'égout, mais avec quelle sécurité et à quel prix! Un prix assurément exorbitant. Permettez-moi d'évoquer cet enjeu financier. Le prix de l'eau potable payé par le public grimpe rapidement, tendance, hélas! très générale, qui a donné lieu, par exemple, dans la vallée du Rhône canalisé, aux eaux très dégradées, à beaucoup de discussions.

12. Par contre, une solution alternative consiste : ou à conserver ou à restaurer les usines naturelles de purification et de recharge que sont les plaines alluviales fonctionnelles. Ainsi, dans la plaine du Rhin, en regard de la raréfaction rapide de la ressource, le recours futur au potentiel représenté par la nappe riveraine du Rhin apparaît essentiel. En effet, dans la plaine d'Alsace un quart environ des puits de captage d'eau ne sont plus conformes aux normes européennes, à cause de multiples sources de pollution agricoles, industrielles et aussi des densités de population. Les inquiétudes sur l'avenir de la nappe sont considérables. D'où le regard porté vers le potentiel abondant offert par la nappe riveraine du Rhin. Toutefois, ce recours ne sera possible qu'à deux conditions: d'une part une protection énergique des eaux du fleuve contre les pollutions, telle que prévue par le plan international dit "action Rhin", d'autre part et surtout des efforts considérables de restauration des plaines alluviales actives, notamment par la reconstitution des zones inondables, opération également coûteuse, tout le long de son cours.

13. Si nous continuons à gaspiller des potentiels d'une aussi grande valeur que les nappes alluviales des grands fleuves, ce seront nos petits-enfants qui payeront la note, vu l'énorme inertie dont je vous ai entretenus.

Roland Carbiener

B. ANSWER TO THE QUESTION OF JUDGE VERESHCHETIN

On 6 March 1997 Judge Vereshchetin posed the following question to Hungary:

“This morning, the counsel for Hungary mentioned that in November 1989, Hungary had handed over to Czechoslovakia a preliminary draft treaty on the completion of the project without Nagymaros. My question is the following: In 1990-1992, the period preceding the termination of the Treaty by Hungary, did Hungary formally reiterate this proposal or propose new concrete modifications to the 1977 Treaty and to the project itself which, if accepted by the other Party, would have met Hungary’s environmental, political and economic concerns and permitted to preserve the integrated character of the project?”

Answer:

1. In the years 1990-1992 Hungary did not reiterate its proposal of November 1989 on the completion of the Project without Nagymaros, nor did Czechoslovakia ever make an equivalent offer.

2. On 30 November 1989 Hungary submitted its proposal for the amendment of the 1977 Treaty. In the next month the “velvet revolution” took place in Czechoslovakia. A new Government was formed in Prague under the leadership of Marian Calfa. The President of the Czechoslovak Republic became then Václav Havel. The Hungarian Government of this period of political transformation believed that the new Czechoslovak Government would pursue a different policy regarding the Barrage System. That is why on 10 January the Hungarian Prime Minister wrote to Prime Minister Calfa:

“We completely understand the fact that during the last few weeks, during this period of a change for modern Czechoslovakia the new Government you lead was not able to consider the amendment of the [1977] Treaty to be of prime importance.”¹

He added that—

“history at the present time offers us the opportunity to reassess the Barrage System in depth, governed by natural sciences, technical and economic considerations, freed from the fetters of the earlier political decisions made by our Governments.”²

The Prime Minister proposed that joint investigations of the various problems should be extended to the Original Project as a whole. These investigations could be carried out in

¹ HM, vol. 4, annex 32.

² Ibid.

the first half of 1990, then, in the second half of the year, "negotiations as to the modification of the [1977] Treaty" could commence. Hungary would suspend work on the Project for this period and he recommended that Czechoslovakia do the same.³

3. In Hungary's view it would have been inappropriate to propose any specific "concrete modification" without a full and effective joint investigation, involving appropriate international bodies. Thus it kept reiterating its proposal for the reassessment of the whole Project, pending which construction should not proceed.

4. On 15 February 1990 Prime Minister Calfa responded to the letter of the Hungarian Prime Minister. He accepted the proposal for negotiations but made no reference to any joint investigations.⁴

5. On 6 March 1990 the Hungarian Prime Minister reiterated his proposal with regard to joint scientific-environmental investigations and recommended that after the forthcoming parliamentary elections in both countries the new governments should make their decision on the fate of the Project.⁵

6. Elections were held in Hungary on 25 March 1990 and in Czechoslovakia on 8 June 1990.

7. On 5 September 1990 the Environment Ministers met. The Czechoslovak Minister handed over a list of seven alternatives which could be investigated by the parties.⁶ The first one was the completion of the Project according to the Original Plan, the last was the restoration of the construction site to *status quo ante*. The list also contained what became Variant C. In spite of the reference to Variant C, at that time the Hungarian Government believed that the Czechoslovak Government was offering an investigation of all possible alternatives. The Environment Ministers continued their negotiations.

8. The Plenipotentiaries also met but did not reach any conclusions. Their first meeting subsequent to the Hungarian proposal on the amendment of the Treaty took place on 31 May 1990 when the Hungarian Plenipotentiary handed over the relevant section of the Hungarian National Renewal Programme calling for a renegotiation of the 1977 Treaty.⁷

9. The Plenipotentiaries met twice more in 1990, on 6 September and on 17-18 October. The Hungarian Plenipotentiary confirmed the Hungarian position regarding renegotiation, while his Czechoslovak colleague elaborated planned research on what was to become Variant C.⁸

10. The Hungarian Prime Minister drew the conclusion in a letter to his counterpart dated 14 December 1990 that the bilateral negotiations between the Plenipotentiaries

³ Ibid.

⁴ HM, vol. 4, annex 33.

⁵ HM, vol. 4, annex 35.

⁶ HM, para 3.123.

⁷ HM, para 3.111.

⁸ HM, vol. 4, annex 37.

had “reached a standstill”, however, the meeting of the Environment Ministers “seem promising”. He wrote that:

“during these negotiations, a principle agreement was concluded concerning a joint intergovernmental committee to prepare an amendment of the Treaty... The work of the committee could be assisted by the experts of the European Communities according to our agreement with EC Commissioner Ripa de Meana. The Czechoslovak and Hungarian section of the committee will separately submit their proposals for their governments.”⁹

11. However, the negotiations of the Environment Ministers did not reach a result. By that time Slovakia was, as has now become clear, working hard on the preparation of Variant C. Thus it opposed any compromise that could be reached by the federal Government. In December 1990 and January 1991 the Slovak Government completed and approved design details of the construction of Variant C.¹⁰

12. The Plenipotentiaries next met on 9 January 1991. They informed each other about the decisions of their respective governments. The Hungarian party handed over new assessments of the environmental risks of the Project. The Czechoslovak party confirmed that their Government was ready to examine the questions within the framework of the 1977 Treaty, that is, according to the Original Project.¹¹

13. On 13-14 February 1991 the experts of the Hungarian and the Slovak Academies of Sciences met. They agreed that the ecological risks had to be investigated on a “strictly scientific basis, without political consideration”. They decided to elaborate in the first half of the year a common program regarding joint investigations, and, in the second half of 1991, to set up joint expert teams. In the third stage, by the end of 1992, these teams would prepare short term programs, and, in the fourth stage, by 1995, a long term program regarding the environmental problems of the Barrage System. However, at the end of the meeting, the experts of the Slovak Academy informed their Hungarian colleagues of the “technical details and ecological aspects of Variant C, approved by the Slovak Government”.¹²

14. On the following day, on 15 February 1991, the Hungarian Plenipotentiary sent to his counterpart a draft agreement on the joint termination of the 1977 Treaty.¹³ Two days later the Slovak Government gave instructions for the implementation of Variant C.¹⁴

15. On 22 April 1991 the first intergovernmental meeting was held in Budapest. Hungary proposed to terminate the Treaty and to investigate what might be done with the existing constructions. It proposed entering into a formal agreement dealing with alterations to the Project and also with compensation.¹⁵ Czechoslovakia did not accept the Hungarian proposals.

⁹ HM, vol. 4, annex 40.

¹⁰ HR, Annexes, vol. 4, annexes 66 and 68.

¹¹ HM, Annexes, vol. 4, annex 41.

¹² HM, vol. 4, annex 43.

¹³ HM, vol. 4, annex 45 at p 93.

¹⁴ HR, Annexes, vol. 3, annex 70.

¹⁵ HM, Annexes, vol. 4, annexes 41, 45, 48, 49.

16. The last meeting of the Plenipotentiaries was held on 10 July 1991. They discussed matters related to the construction of the Project but did not try to reach an agreement on those questions which were on the agenda of the intergovernmental negotiations. The Joint Operational Group held 5 meetings in 1990 and 8 meetings in 1991. Its last meeting was held between 3 and 7 February 1992.¹⁶

17. Minister Vavrousek returned to the alternatives as late 9 November 1991, when he said in front of Hungarian Parliamentary Committees that "I believe that we should reach an agreement as to a method, that could lead to a solution of this situation. As late as in the second period I regard as possible to discuss which of the variants is the least bad."¹⁷ Hungary agreed, but by that stage Variant C was well underway and no joint investigation was possible.

C. ANSWER TO THE QUESTION OF JUDGE RANJEVA

On 7 March Judge Ranjeva put the following question to Hungary:

"Can Hungary draw up a table calling to mind:

- (1) the financial commitments announced by the Union of Soviet Socialist Republics;
- (2) the fulfilment of those commitments by the USSR; and
- (3) the impact of that fulfilment on the performance of the Gabčíkovo-Nagymaros Project?"

The answer is as follows.

Question 1:

1. The financial commitments announced by the Union of Soviet Socialist Republics were provided for in the Agreement between the Government of the Hungarian People's Republic and the Government of the Soviet Socialist Republics on Co-operation in the Construction of the Nagymaros Barrage on the River Danube as a Part of the Gabčíkovo-Nagymaros Barrage System, concluded on 30 November 1977.¹⁸ The Agreement provided for assistance in the form of delivery of certain goods and the provision of certain services. The value of these goods and services was not specified but was expressed solely in physical terms. At this period assistance between socialist states did not usually take the form of loans but of additional goods to be supplied beyond normal arrangements for barter trade.

2. As to goods, the Agreement provided for the delivery of (1) six generator-turbine units, together with auxiliary equipment; (2) large capacity cranes; and (3) specialised machines and tools. As to services, the Agreement obliged the Soviet Union to (1)

¹⁶ Closing Report on the Work of the Joint Operational Group. OVIBER, Budapest, 10 December 1992.

¹⁷ SM, vol. 4, annex 97.

¹⁸ HM, Annexes, Annex 23.

participate in the elaboration of the plans of the Barrage System; (2) send trained staff assisting in the mounting of the machinery and providing technical help; and (3) consult with Hungarian experts, as required. The delivery of the turbine-generator units was planned for the years 1985 to 1987. These units were to be installed in the Nagymaros Power Station. The cranes, machines and tools were to assist in the construction of the Barrage.

3. There are several ways in which an approximate value of these items may be estimated. One is by reference from Hungary's loan request to the USSR. Another is by reference from the amount eventually loaned by Austrian banks.

4. In 1974 Hungary and Czechoslovakia submitted a joint proposal to the USSR for external financing of the project, requesting that they be provided with an amount no less than 150 million transferable roubles.¹⁹ The official transferable rouble/US dollar exchange rate was then approximately 1/1.06.²⁰ In the pre-Treaty period, the total cost to Hungary of constructing the Nagymaros Barrage and associated works was estimated at 12,286 million Hungarian forints (HUF). Depending on the HUF/US dollar exchange rate (which was fixed, depending on the purpose, at between 30 and 70 HUF to the dollar), that would have amounted to something in the range of US\$175-350 million. In other words, the financing requested from the USSR amounted to something in the range of 25-45% of the cost of construction at Nagymaros.

5. The Austrian loan initially offered and agreed was in the amount of 5750 million Austrian Schillings, approximately \$US 321 million, which was again to cover the costs of construction at Nagymaros.

Question 2:

6. Due to financial constraints, none of the commitments were fulfilled by the USSR, with the exception of those relating to planning and consultations.

Question 3:

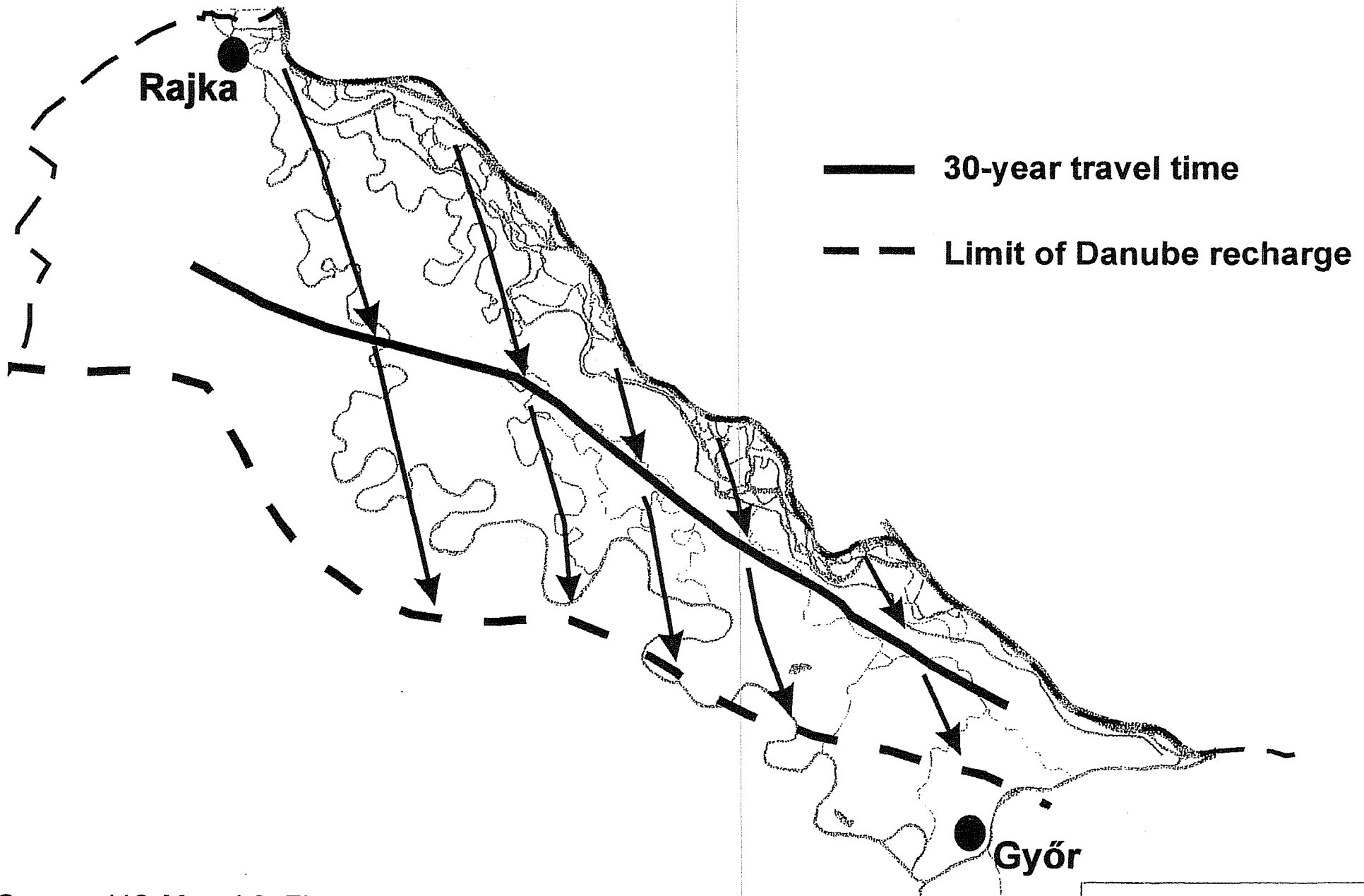
7. When the USSR's loan did not materialize, Hungary faced a serious resource shortage; in particular it was not able to manufacture the necessary turbine-generator units, which would have to be acquired with hard currency. Eventually, on 28 May 1986, Hungary concluded a loan agreement with a consortium of Austrian banks in the amount of 5750 million Austrian Schillings, approximately \$US 321 million. As repayment, Hungary committed itself to supplying an agreed amount of electricity to Austria over a 20 year period from 1996 to 2015, with Austria paying any difference between the value of the loan installments and the value of the electricity. This commitment significantly affected the long-term financial viability of the Project.

15 April 1997

¹⁹ See HM, Annexes, Vol. 4, Annex 7.

²⁰ On the difficulties of equating currencies under the exchange rate system operating in the region at the time see HR, para 1.93, note 248.

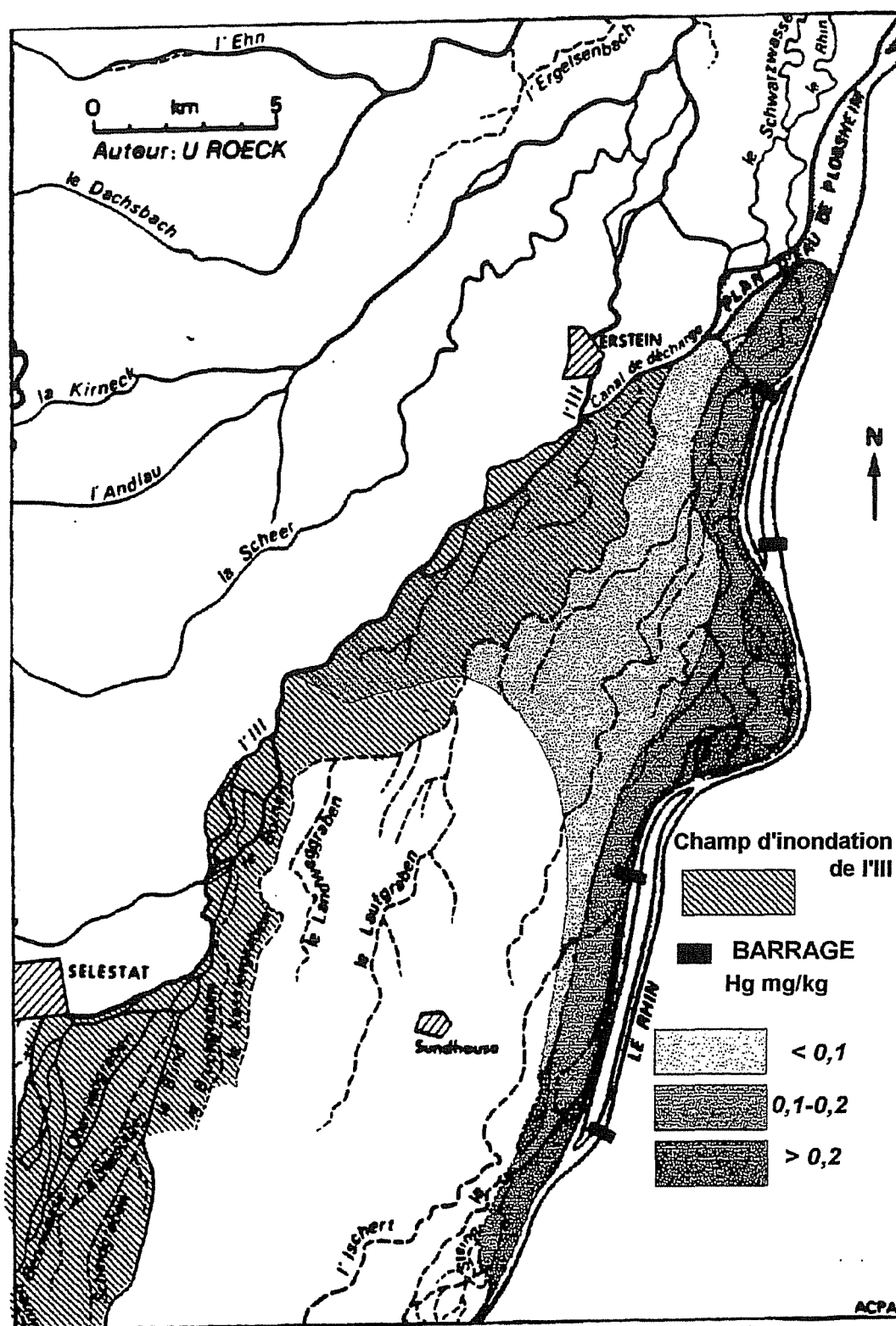
Groundwater Flow Path in the Szigetköz



Source: HC-M, vol 2, Figure 3.7a

Illustration No.

Le mercure dans les eaux souterrain de la plaine du Rhin indiqué par les mousses des eaux de drainage



Source: Roeck et al, 1991

