Inland Water Transport in Europe and the USA


Reviewed by Hannan Ezekiel

The development of inland water transport has suffered from considerable neglect in the countries of South-East Asia so far, although in most of them there are considerable waterway systems and transport is an important bottleneck hampering their rapid economic development. If the effects of this neglect are to be overcome in the future, two types of preliminary effort need to be made. On the one hand, the existing waterways in these countries need to be studied, their existing uses and potentialities assessed and their problems and difficulties analysed. On the other hand, the various techniques and types of equipment used in inland water transport systems under various conditions in different countries must be studied to obtain the maximum benefit from their experience in this field. The present report falls into the latter class.

Whatever the utility of such a study, and this can hardly be denied, it might be questioned at the outset whether it should not have followed extensive studies of the first type rather than preceded them as seems to have happened in the present case. In fact, many of the useful suggestions for India, Pakistan, etc., made in the report flow very obviously from the specialised knowledge of the experts about the conditions prevailing on particular waterways of importance in their own countries. The Report notes that "Members from various countries gave a resume of their problems in developing inland water transport and in the light of the experience gained during the tour" recommendations were drafted and finalised. This only emphasises the need for more data on the actual problems existing in these countries. Another feature of the present report which might be noted at this stage is that the working group consisted entirely of technical experts and did not include a single economist interested in transport problems.

The most important chapter of the Report, considering the composition of the group, describes the technical aspects of the inland water transport system in the countries visited. On most of the waterways in Europe and the United States, it is the practice to carry out extensive towing operations. In other words, in addition to self-propelled vessels for the purpose of carrying freight, dumb craft towed by tugs are used on a large scale. The chapter on "Craft, Methods and Costs" provides technical data on both types of vessels used on each system. In each case, an attempt has been made to relate the characteristics of the vessels used, to the conditions prevalent on the particular waterway, presumably with the object of finding out their suitability for conditions in South-East Asia.

In each case, attention has been carefully drawn to the existence of features through which full advantage is taken of every favourable factor in the waterway system to ensure maximum capacity for carrying freight, the achievement of maximum speed and the reduction of costs. Thus, in the dumb craft used in the Canal Fleet in France, it is noted that "The vessels have no longitudinal stiffening as they operate in sheltered waters, and groundings are rare. The weight thus saved permits extra pay load" (emphases added). This functional emphasis in the report greatly enhances its value.

In order to bring out the relationship of the functional aspects to the conditions prevalent on each system, the latter are carefully described. The difficult condition caused by rapidly varying water-levels, the shallow bars at low water, the narrow and winding channels with short radius of curvature, the steeply-sloping bed, strong currents, shifting channels and ill-defined banks on the Rhone river are contrasted with the easier conditions found on the River Seine and the Canal system in France. The river-training schemes including provision of shiplocks, by which difficult stretches of river are being slowly made easier for navigation, are briefly described and their effects on the pattern of vessel construction is noted.

While considerable fleets of dumb vessels exist on most systems in Europe and the USA, the Report notes an increasing tendency towards the use of self-propelled craft, particularly in France. This tendency has been encouraged by the increasing mechanisation of loading and unloading operations at many points as a result of which the turn-round time for river craft has been considerably reduced.

The operating techniques of singly-operating vessels as well as those operating in groups with only one powered vessel are examined at some length with particular operation to their economics. It is noted that "push-towing gives better towing efficiency than pull-towing." The importance of loading and unloading operation has already been mentioned. This is recognised through the devotion to it of a special section of the Report. The volume of freight carried on the inland water transport systems is considerable and in large part this is carried in bulk, a practice which has been encouraged by the development of suitable facilities at all points. "The fact that most cargo is carried in bulk and that large quantities are involved" says the Report, "have made it possible as well as economical to introduce a great deal of mechanization in cargo handling in spite of the heavy capital outlay." The fact that according to estimates "in many cases mechanization has reduced turn-round delays of vessels by 60 per cent" brings out the significance of this factor on the economics of operation. The development of mechanical shore installations is, however, "even more marked in Europe than in the United States because most European rivers have been trained over the entire navigable length and the seasonal range of this water-level is smaller than on American rivers". This shows how many factors are involved in such questions.

From the detailed studies made in France and the United States, the
Members of the group have drawn certain conclusions and made certain recommendations for their respective countries. Reading the relevant chapter, one sees quite clearly the advantages that would have been obtained from the present study if more detailed information had been available about our waterways and the problems they present.

The main conclusions of the report are given below, though their tentative character is quite apparent:

1. Replacement of steam-engines by diesel engines will in most cases, be advisable;
2. Attention should be paid to training of personnel, particularly for repair and maintenance of diesel engines;
3. Possibility of adoption of shallow draught self-propelled craft with screws running in tunnels should be investigated;
4. Application of Kurt nozzels seems advisable;
5. Feasibility of push and pull towing, especially in Burma, Pakistan and India, should be considered further;
6. Increased use should be made of light alloys for shallow-draughted dumb craft;
7. A modest start should be made with mechanization of cargo handling operations;
8. Water conservancy work should be the responsibility of Governments rather than of private companies.

The specific recommendation of the group refers to the organisation of a demonstration project covering craft design and operation and including experimentation with suitable tugs, pusher craft or other means of moving country boats and cargoes. The group came to the conclusion that "such a project would be extremely useful to development of inland water transport in the region, especially if testing of modern dumb craft were also included."

Many of these defects are remediable without much effort and many in the know might disagree with the sweeping conclusion drawn in the report. The recommendation made by Mr Otto Popper and endorsed by ECAFE that "a demonstration project of shallow-draught tugs towing country boats be run for the benefit of the ECAFE region" has in fact much to commend it. Any recommendations in this sphere must necessarily take into account the overall limitations of resources with which the countries of the region are faced. One of the most important reasons for paying particular attention to inland water transport at this stage lies for these countries in the great improvements in the transport system that are likely to result from relatively little investment. This important fact must not be lost sight of and emphasis should be laid rather on improvements in organization or in techniques of operation which will benefit the country. The Sailing Vessels Committee's Report had concerned itself with those sailing vessels which operated on the coast or across the seas. A study of inland transport and the sailing vessels operating on our extensive waterway systems needs to be carried out today. The present Report in spite of its competence only draws attention to the urgency of carrying out such a study.

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