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The Government and Inland Water Survey

THE short official statement published in NATURE of July 21, p. 93, of the reception by the Minister of Health of the joint deputation from the British Association and the Institution of Civil Engineers, in reference to the memorial previously addressed by those bodies to the Prime Minister on the urgent need for the institution of a National Inland Water Survey, will have been read by those most keenly interested in the subject with a sense of profound disappointment. Despite the assurance of Sir Hilton Young that the suggestions of the memorialists would receive the most careful consideration of the Government, the underlying implication of his remarks that the sources of information at the disposal of the Ministry of Health are considered (with some possible slight amplification in detail) adequate for meeting the requirements of the situation, has created a feeling of serious misgiving. There is a growing conviction that the matter is being side-tracked for departmental reasons, and that the real nature of the application and its vital importance are not properly realised.

In the first place, it is difficult to understand why the deputation was referred by the Prime Minister to the Minister of Health. The memorialists had clearly indicated and given reasons why the matter should be dealt with by the Department of Scientific and Industrial Research. Apart from other considerations, the scope and aim of the survey contemplated is far wider and more comprehensive than the interests of the Ministry of Health. It is true that the Ministry is intimately concerned with, and exercises supervision over, questions of public water supply, and that the legislative proposals of water undertakers are referred to that department for investigation and approval. But a water survey, if it is to be of national utility and value, must transcend the relatively narrow limits of public health and take account not merely of supplies of water for domestic consumption but also the no less important needs of industry and commerce, the possible creation of hydro-electric motive power, the requirements of fisheries, irrigation and navigation, the drainage of low-lying lands and the prevention of floods and safeguarding of lives and property, with a score of other matters which do not come, or only come very indirectly and remotely, within the purview of the Ministry of Health.

This department of public health, moreover,

despite the assurance which we have stated is implied, if not definitely expressed, in Sir Hilton's speech that it is capable of dealing with all the requirements of the case, will, as he himself admits, be dependent for the major part of such information it may require on various external organisations, such as the Catchment Boards and the Geological Survey. The Catchment Boards, created under the Land Drainage Act of 1930, are undoubtedly in a position to render very effective and valuable service in the gauging of rivers and streams (this was pointed out in a leading article in NATURE of November 5, 1932) as it is indeed one of their primary duties and responsibilities, but they report to the Ministry of Agriculture and Fisheries and not to the Ministry of Health. Similarly, the Geological Survey comes under the Department of Scientific and Industrial Research, and is in no sense a branch of the Ministry of Health. The Ministry of Health cannot supervise and control the operations of these bodies, or lay down rules for their guidance.

The fact is that in Government circles there is some confusion of thought on the matter. Replying to a question in the House of Commons, on July 16, asking whether a survey of the water supplies of the country would be instituted, Sir Hilton Young made the statement that: "A survey of water supplies is undertaken by the Ministry as part of their ordinary work, and a special organisation is not necessary." We have no wish to be discourteous, and we are not charging Sir Hilton with intentional misrepresentation, but we are obliged to point out that in the strict technical sense of the word, the statement is not true. There is no survey of the kind contemplated in the question, nor in the sense in which it is used by the deputation, in operation at the present time. This is the whole point of the report of the investigational Committee of the British Association. Sir Hilton Young probably had in mind certain returns and records supplied to the Ministry of Health by various water companies, and others, but these are necessarily fragmentary and incomplete, relate to established undertakings, and do not in any way meet the considered finding of the British Association Committee "that a systematic survey of the water resources of Great Britain is urgently required".

It is essential to proper appreciation of the situation that the sense in which the word 'survey' is used, both by the British Association and the

Institution of Civil Engineers, should be clearly understood. Here are the *ipsissima verba* contained in the British Association Committee's report:

"The scope of a water survey to meet the requirements of civil engineers and others interested in water conservancy should include observations and measurements and the preparation of continuous records in standard form, in connection with rainfall, surface storage and flow, and underground storage and flow—in conjunction, in each case, with the physical and geological characteristics of the area. The records from all sources should be collated, brought into harmony and made available."

The report goes on to show, as a result of the Committee's widespread inquiries, that, while "some bodies take gaugings and measurements and keep records for their own purposes, so far as it has been possible to ascertain, these form a small minority and, in general, there is an entire absence of co-ordination or of any organisation for systematic recording of data". Hence the need, and it has become a clamant need, for a properly organised national survey "of all water received in these islands from its first arrival in the shape of rain and dew to its final disappearance in the ocean".

The Department of Scientific and Industrial Research is, as was stated in the memorial to the Prime Minister, particularly suitable for instituting and supervising a scientific investigation of this kind. It would be able to advise on methods and operations, on instruments and appliances, in a way that no merely administrative bureau could be expected to do. Assistance in the taking of observations and measurements will have to be enlisted from various quarters, private as well as public, and it was pointed out in the article in NATURE to which we have already alluded, that there must be some centralised authority of high-technical standing to supervise and unify the methods and systems of measurement, otherwise the records will tend to be of different values. The Department of Scientific and Industrial Research, comprising as it does such related branches of work as the Geological Survey and Water Pollution Research, is specially adapted for the purpose, and, moreover, it has the outstanding merit of being entirely independent of interest of any sort in the use and control of water. This is a most important consideration and is a qualification for the body to be entrusted with the survey

specially emphasised in the report of the British Association Committee.

From the half-forgotten lore of one's school-days one recalls an incident in the Fables attributed to Æsop which may give point to these observations. It is the story of the ox, who, desiring to feed at its stall, found a dog in possession. Despite all reasonable argument to induce it to go, the dog obstinately refused to give way. We should hesitate to affirm that the Ministry of Health is deliberately pursuing the policy of the "Dog-in-the-Manger", but there is a danger that its action may be so construed, and it is to be hoped that wiser counsels will prevail. With its onerous duties and responsibilities in many directions, the Ministry will find it advantageous to waive any particular concern it may have in the present question in deference to the wider interests involved, and, at the same time, it will be able, from the undoubted store of records and returns which it possesses relating to existing undertakings, to render invaluable aid to the Department of Scientific and Industrial Research in an investigation which will call for the earnest and painstaking co-operation of everybody concerned.

The matter is too vitally important to the nation at large to be shelved or ignored. Great Britain lags behind the practice of other countries, which have long since recognised the necessity of investigating and conserving their water resources. The Dominion of Canada, the United States, Germany, Italy, Switzerland and many other nationalities have inaugurated special departments to deal with the control and administration of water within their respective territories. Unless the British Government is prepared to follow their example it will fail to provide for the developments which are impending in civic and industrial life and the nation will continue to find itself involved in unpleasant predicaments, which must accompany a short-sighted policy.

The question of the systematic allocation and distribution of the water resources of Great Britain raises, however, a number of subordinate issues for the discussion of which the present occasion is not opportune. The matter of supreme importance at the moment is the establishment, on lines of scientific accuracy, of a complete survey of the national water resources. This, it is urged, is not a duty germane to the functions of the Ministry of Health: it can only be undertaken effectively through such a body as the Department of Scientific and Industrial Research.

The Passing of Rural Crafts

- (1) *Change in the Farm*. By T. Hennell. Pp. x+201. (Cambridge: At the University Press, 1934.) 10s. 6d. net.
- (2) *The Wheelwright's Shop*. By George Sturt ('George Bourne'). Reprint. Pp. xii+236+8 plates. (Cambridge: At the University Press, 1934.) 7s. 6d. net.

MANY of us who are immediately associated with scientific work are in certain respects very fortunate. Our horizon is continually expanding and we can look back to the past with a feeling of confidence that the work put in hand by our forefathers has been carried steadily forward in the way they would have wished. This state of happy confidence is sadly lacking in many directions, conspicuously so in the field of economics and international politics. But we can find the same feeling of uncertainty much closer at hand in our own countryside. Are the changes which have come about in our rural economy during the last half century changes for the better?

(1) It was in the hope of getting some new light on this problem that we eagerly scanned Mr. Hennell's book. Certainly there is here much information which it is satisfactory to have collected together between two covers. The book is a compilation of notes on sundry matters rather than a narrative, and for this reason does not leave any very clear impression on the mind except perhaps that the writer resents the passing away of the practices he describes. His readiness to quote the opinion of farmers who see objections to new departures, such as the use of 'artificial' and the cultivation of sugar beet, further reveals his prejudices. The principal praise he can find for the county organisers is that they have been the means of introducing into the eastern counties of England the more thorough methods of hedging which have been developed traditionally in the Midlands. It would, perhaps, have been better to omit altogether a reference to these admirable men than thus to praise their work so faintly.

In any event, Mr. Hennell does not take us to the root of the matter. The changes in the farm that really matter are not the alterations in a hundred and one details, but the gradual changes which have taken place in the relationships of the farm labourer to his work and to his employer. On the material side, he has reason to thank the effects which the industrialism of the towns has