

public wastes can be kept from our rivers, but the means of polluting them should not be made too easy, and the pollution (if allowed) should only be to such an extent that it might be possible to repurify the water if required for public purposes. Certainly no wastes of a solid nature should be admitted to our streams. This applies especially to sawdust, flax-fibre, and sewage. Apart from its mechanical effect on the streams, it is well known that sawdust will remain a long time in water before it rots or undergoes other processes of disintegration. Its fatal effects on fish are well known. I regret that I am unable to speak as authoritatively on flax-wastes, but having some knowledge of the Oroua, I am confident that the daily discharge into that river of some 24 to 30 tons of flax-waste (as stated by Mr. Robertson, M.P.) must, under certain conditions of the river, bring about a collection of fermenting heaps or pools that would be inimical to animals drinking the water therefrom. Again, it is well known that flax is possessed of certain medicinal properties. It belongs to the same natural order (*Liliaceae*) as aloes, which is well known as a purgative; and though I have no knowledge that the drinking of water impregnated with this plant has caused illness among stock, I cannot imagine that such potions if taken repeatedly would be for their benefit. On this occasion I need not refer to pollution by sewage. Butter and cheese factory wastes: With one or two notable exceptions, there has been little difficulty with regard to the disposal of these wastes. For the most part these factories are situated near running water, and I cannot think that under these conditions fresh wastes, if admitted to a stream of reasonable size and velocity, can be inimical to animal or plant life, and in animal life I include fish. But in those few instances where dairy factories are situated on sites remote from running water, the difficulties of disposing of their wastes are many and serious. I know of one factory in particular where exhaustive experiments have been made to deal with its wastes, but unfortunately with little result. There is little doubt that the disposal of these wastes is still a matter of experiment. A system of settling-tank and filters in conjunction with intermittent irrigation is the best means of disposing of these wastes; but as we are principally concerned with these wastes in relation to rivers, I need say no more just now, except to reiterate what I have already stated, to the effect that I can see no objection to the effluents being admitted to streams of reasonable size. A great deal has been said as to the difficulty of disposing of flax-fibre other than by discharging it into rivers. I think I am right in saying that the discovery of many of the valuable by-products of industries has been stimulated by injunctions restraining the disposal of crude wastes. It would certainly appear from the evidence submitted to this Committee that it is quite possible that flax-millers may be able to make a useful and remunerative by-product of the fibre now cast into the streams, which may remain undiscovered if the present practice is allowed to continue. I may say here that I agree with those witnesses who have stated that no amount of decomposing matter, whether flax or dairy waste or sewage, can breed typhoid. The organism must be present to produce the disease, which does not arise *de novo*. Nor do I consider that the wastes referred to are likely to harbour the germ if once introduced. Nevertheless, it is somewhat significant that typhoid cases are constantly being reported from the neighbourhood of flax-mills, which cannot be easily accounted for. I may possibly be pardoned for saying that I do not like the Bill. It makes too easy the pollution of our rivers. To obtain an injunction it must first be proved that the water is unfit for use. This is often very difficult. The Department is often confronted with the same difficulty with regard to the condemnation of houses. We know that a certain house is unfit for human habitation, but it is mighty hard to prove our point, and, unfortunately, a fell disease among the occupants does not always come along to support us. The same may be said of a suspected water-supply: it is difficult to prove that it is unfit for use. It seems to me that for actions of the sort big guns are needed, and I mean by "big guns" local authorities or Commissioners. Then, again, the plaintiff has also to prove that he has not a sufficient supply of unpolluted water upon or immediately near his property. Now, I do not profess to know anything about law, but this strikes me as particularly hard if plaintiff has, until the establishment of an industry, been satisfied with the water for his cattle. One witness has stated that damages will be to the benefit of the mortgagor, but to the detriment of the mortgagee. Quite so. I think that the collection of damages will become a thriving industry on the banks of the Oroua and Manawatu, as already has been the experience of another witness who comes from that neighbourhood. Nor do I like clause 6. The weather here is so variable that it is difficult to forecast what the flow of a river will be at certain times of the year. And least of all do I like clause 8. Is it right that the methods to minimize pollution are to be limited to those that are "usually and properly adopted in New Zealand"? Who is to set the standard? And even if it is a fairly good one, is it to remain at that? We gain more knowledge of disposal of such wastes every year. A few years ago crude sewage was discharged into the streams of the United Kingdom, but since the Rivers Pollution Commission insisted on a purification of the effluents the water has so improved—especially in the Thames—that trout have been found in the lower reaches where they had never been seen before. No, I do not like the Bill. What is wanted: We want to protect our streams and rivers, but in so doing we do not want to unduly hamper our industries. I am of opinion that sections 63 to 67 of the Public Health Act provide what is needed. It may be thought by this Committee, however, that some other legal provisions are necessary. There is much to be said in favour of admitting to rivers effluents only of a certain standard. Such standardization should be considered under the following headings, and be proportionate to—(1) The possibility of the water ever being required for public purposes—a public water-supply; (2) the locality and nature of the industry; (3) the volume, velocity, and general nature of the stream. It may be argued that it would not be wise to leave this responsibility in the hands of one Department. The bulk of the work could well be done by the District Health Officers with the assistance they now receive from the Government Analyst and Government Bacteriologist and Public Works Engineer when needed. Larger questions of this nature might, however, be submitted to a Board