Appropriate action must be taken in advance to alleviate the ensuing disturbance in their mode of life.

There do not exist enough data to permit a positive statement to where useful action in advance must also be taken. For example, intelligent planning is required so that the destruction of the downstream reaches of the rivers concerned, and of their ecologically sensitive estuary and bay areas can be minimized.

Quoting further:

Finally there are those impacts which are unavoidable and unalterable consequences of the James Bay development scheme, for example, flooding of forest-producing lands, loss of anadromous fish from one or more river channels, and some reduction in sediment and nutrients reaching sea level as a result of entrapment in upstream reservoirs.

The task force found:

There are insufficient data to support a clear-cut over-all preference between the NBR—

Meaning the Nottaway, Broadbank and Rupert proposal.

—and La Grande proposals.

Indeed, one of the terms of reference of that task force was to see which of those two major alternative schemes was preferable from an over-all environmental point of view. Apparently, the task force was unable to reach a conclusion by the spring of this year in respect to that term of reference. Again quoting:

The Task Force has found no cases of fauna or flora species that are near extinction or which are very rare and would be endangered to the point of extinction.

Again quoting:

There do not exist enough data to permit a positive statement to be made that climate in James Bay itself, or in the surrounding area, or even continentally, will or will not be measurably influenced by one or both of the hydroelectric projects now being considered.

Later, it said:

—the Task Force feels that on the geographic scale of these projects alone the effects on the ice regime and other climate-controlling factors will not be more than local.

In other words, the effects, which are likely to be minimal, would be highly localized and probably confined to the province of Quebec.

Mr. Nielsen: What is the date of that report?

Mr. Davis: The report is dated December, 1971, and it was released in early February.

The final paragraph in its conclusions section reads:

The Task Force sees that James Bay now provides, on a grand scale, an opportunity to integrate ecological research with a major engineering program in order to develop data and experience that will be needed in future resource developments in these latitudes. In this way James Bay could become a laboratory of world-wide significance.

In other words, we are embarking on something which both in scale and in consequences is in some measure unique, and considerable care is necessary in order to protect the environment.

Finally, Mr. Speaker, I might refer briefly to several of the recommendations which the task force has produced, and which flow logically from the conclusions which I have already quoted. One of these recommendations is:

That the James Bay project be used as a large-scale natural laboratory for comprehensive multi-disciplinary research into environmental problems and studies of how ecological processes are modified by major developments at these latitudes.

Another recommendation is:

That priority attention be given, before construction starts, to the gathering of data of existing environmental conditions to constitute a base-line measurement against which to relate subsequent changes both temporary and permanent.

And still quoting, Mr. Speaker:

That particular attention be given to river reaches below points of diversion, the estuaries into which they flow, and the storage reservoirs upstream to insure that the transition between the existing ecological equilibrium of these areas and the ultimate new equilibrium shall be as gradual and as non-destructive as possible. This means a planned control of flows and water levels during construction, particularly including maintenance of adequate minimum flows. Effective planning and action to regulate this transition process can be expected to prevent serious consequences similar to those created by the Bennett Dam in the Athabasca Delta area in Alberta.

And still quoting:

That every effort be made to completely cut as much flooded timber lands as possible.

I might say parenthetically that I believe this is the intention of the Quebec government and of Quebec Hydro. Quoting further:

That all future environmental impact studies related to the James Bay development be centrally co-ordinated so as to insure effective communication and interaction between the different scientific teams involved, to avoid duplication of effort in some areas and lack of effort in others.—

The final conclusion I will quote is:

That the co-ordinating mechanism be designed so as to (i) reflect the inter-relationships between the various identifiable elements of the total ecosystem; (ii) provide for the conduct in parallel of both short-term and long-range research studies; and (iii) recognize the jurisdictional responsibilities of the various agencies concerned and harmonize their efforts in the common task.

From what I have already said, it must be apparent to all hon. members that there has been some considerable measure of co-operation between the province of Quebec and the federal government on this matter. This is certainly to be welcomed in view of the fact that there has been very little co-operation of this kind in the past relative to large hydroelectric projects anywhere in the country, so that in one very important sense we are breaking new ground. There has been very close and, I believe, very effective liaison between the new ministry of the environment in Quebec and Environment Canada.

We have offered our considerable expertise to that province, and Quebec Hydro has taken advantage of that offer not only in respect to Phase I studies, which I have summarized in my preceding remarks, but also in respect to Phase II, in which we will be gathering a lot of new basic data necessary to carry out a thorough environmental appraisal.

If I could return to that point of principle which I tried to outline at the beginning of my remarks, Mr. Speaker, ecological investigations must precede the decision to uproot nature, to uproot our natural surroundings. In other words, Mr. Speaker, environmental engineering must be completed before construction starts on a large scale. This is a principle which I believe the province of