of socio-economic impacts. Table 1.3 provides a broader view of the scope of the environment, and of the environmental receptors that may be affected by a project.

Prediction involves the identification of potential change in indicators of such environment receptors. Scoping will have identified the broad categories of impact in relation to the project under consideration. If a particular environmental indicator (e.g. SO_2 levels in the air) revealed an increasing problem in an area, irrespective of the project or action (e.g. a power station), this should be predicted forwards as the baseline for this particular indicator. These indicators need to be disaggregated and specified to provide variables that are measurable and relevant. For example, an economic impact could be progressively specified as

direct employment → local employment → local skilled employment

In this way, a list of significant impact indicators of policy relevance can be developed.

An important distinction is often made between the prediction of the likely *magnitude* (i.e. size) and the *significance* (i.e. the importance for decision-making) of the impacts. Magnitude does not always equate with significance. For example, a large increase in one pollutant may still result in an outcome within generally accepted standards in a "robust environment", whereas a small increase in another may take it above the applicable standards in a "sensitive environment" (Figure 5.1). In terms of the Sassaman checklist (see Figure 4.8), the latter is crossing the threshold of concern and the former is not. This also highlights the distinction between *objective* and *subjective* approaches. The prediction of the magnitude of an impact should be an objective exercise, although it is not always easy. The determination of significance is often a more subjective exercise, as it normally involves value judgements.

As Table 1.4 showed, prediction should also identify *direct* and *indirect* impacts (simple cause–effect diagrams may be useful here), the *geographical extent* of impacts (e.g. local, regional, national), whether the impacts are *beneficial* or *adverse*, and the *duration* of the impacts. In addition to prediction over the life of a project (including, for example, its construction, operational and other stages), the analyst should also

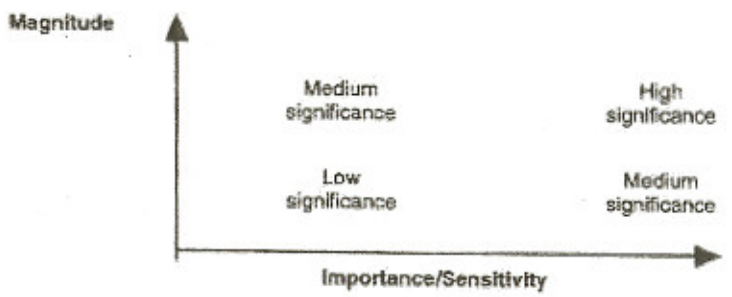

Figure 5.1 Significance expressed as a function of impact magnitude and the importance/sensitivity of the resources or receptors. (Adapted from English Nature 1994, and Institute of Environmental Assessment (IEA) and Landscape Institute 1995.)