



Reverse Sensitivity Analysis

Description

Reverse sensitivity analysis examines the phenomenon whereby an existing activity or land use faces opposition from neighbouring activities that have subsequently established nearby, close enough to experience effects from the existing activity. Often both the existing activity and the more recent neighbouring activity are mandated by planning policies and rules, such as zoning. The problem can arise from possible faults with planning rules and poor consideration of the interface of different activities, inadequate understanding of how circumstances might change over time, and poor communication and lack of in the planning process when new activities are established.

An example of reverse sensitivity analysis in tourism development would be consideration of the effects of a noisy tourist activity on nearby residents, who came to live in a new subdivision nearby that was promoted for its amenity values including peace and quiet.

How and when the tool is used

There are a number of ways by which reverse sensitivity analysis can be applied to tourism developments. Where, for example, residents have settled close to an existing tourist activity and subsequently are concerned about impacts from the tourist activity such as noise emanating from night-time entertainment, or traffic congestion. A number of impact assessment methods such as [environmental impact assessment](#) and [social impact assessment](#) will help to identify the impacts of concern. In assessing impacts it is important not just to identify the impact (such as noise) but also who is affected and the significance of the impact for these people.

Provisions in the [Resource Management Act \(RMA\) framework](#) can assist to a degree. For instance, Section 16 provides for a general duty to avoid creating unreasonable noise and Section 17 states a duty to avoid, remedy or mitigate adverse environmental effects of activities. There is provision for enforcement such as abatement notices and enforcement orders. However, these provisions can be regarded as dealing with the horse that bolted, when the original planning processes did not assist tourist activities to avoid the issues of reverse sensitivity in the first place. There is emerging case law on reverse sensitivity issues under the RMA.

There are formal requirements for [monitoring](#) environmental effects in the RMA and these should reflect potential reverse sensitivity when formulating conditions placed on a resource consent.

The requirement for monitoring and evaluation of reverse sensitivity issues and the underlying impacts falls on district and regional councils in particular. They need to define matters such as amenity values in the first instance, and establish performance or outcome standards against which change can be assessed. Councils also need to ensure the planning and consenting processes used facilitate a level of community involvement and iwi participation sufficient to recognise reverse sensitivity issues well in advance. In some circumstances structured participation such as a [focus groups and workshops](#), a [charrette](#) or working party may help to recognise and find ways to alleviate these issues in advance.

Application

As tourism developments intensify in and around natural areas there will be increased potential for reverse sensitivity issues to arise. There is particular sensitivity between new residents seeking lifestyle amenity in new, often expensive, subdivisions in coastal and other scenic areas and existing tourist activity. There is also considerable potential for conflict between existing rural land uses and processes, such as dairying, forestry and intensive horticulture, and tourist activities starting up nearby. These sorts of conflicts between “rural” and “urban” values have been at the heart of much of the interest in reverse sensitivity issues to date.

Problems faced by formal planning and consenting activity arise because of the rapid growth of tourism activity in some areas since the most recent district plan was formulated. In these instances a [structure plan](#) may assist councils and communities to deal with underlying issues in a systematic way.

Reverse sensitivity analysis has tended to be applied in instances where there has been considerable, often public investment in major infrastructure developments that by their very nature have ongoing negative impacts. Examples include airports (noise effects), highways (air pollution and noise), and landfills (noise,



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dust, water quality). The reverse sensitivity issue applies in regard to activities that locate near to the facility well after it has commenced operations. As a result, people affected then attempt to limit expansion of, or even halt altogether, the original activity. Consequently, the facility has to internalise effects or avoid, remedy or mitigate them. There are a number of mediation and compensation or legal settlement activities that follow.

There are potential ways to apply this analysis to managing the impacts of visitors in and around natural areas. For example, attempts to concentrate visitor activity in a land-based or marine park, in order to manage environmental effects, could end up with residents or other recreationalists coming to the area later and still being concerned about the effects of the managed activity.

Our evaluation

There is no simple way to resolve the inherent conflicts between land holders, residents and visitors, where the apparent right to undertake an activity and cause environmental effects comes into conflict with the rights of others to live, do business or visit nearby. The RMA and common law provide frameworks to protect the rights of property owners. However, in practice poor application of planning and resource consent provisions often fails to avoid potential conflicts. Reverse sensitivity analysis, applied in conjunction with other impact assessment tools can assist the more proactive management of impacts from tourism.