



MOD Scientific Risk Management DG(Scrutiny and Analysis)

Fact sheet

SCIENTIFIC RISK

Scientific Risks are non-military risks to MOD where science has a significant role to play in *identifying* or *addressing* the problem.

While projects have traditionally addressed the technical risk of failing to achieve explicit objectives, the implicit need to ensure the **health and safety** of our personnel and the public and to protect the **environment** is sometimes harder to achieve.

THE FOUR CATEGORIES

Control of legacies

Where science is needed to understand or manage risks from legacy systems

Collateral effects

Where an action may (or may be perceived) to cause unexpected side effects.

External change

Where historic assumptions are invalidated by changes beyond MOD control (e.g. changes in recruit fitness).

Support to policy

Where policies are vulnerable to challenge without a proper scientific justification.

'Scientific Risks' are not usually owned by scientists. Most are Strategic or Policy risks requiring a reduction in scientific uncertainty.

TEAM REMIT

The remit of DG(S&A)'s Scientific Risk Management team is to:

- Promote best practice in addressing scientific risks;
- Identify new scientific risks;
- Track the management of identified scientific risks;
- Facilitate an efficient response when risks arise.

Addressing scientific risk is one aspect of good **Corporate Governance**.

CORPORATE GOVERNANCE

Corporate Governance is a **risk based system of internal control** used in the public and private sectors.

A key principle is that risks should be identified and evaluated not in isolation but in the context of their potential impact on the achievement of objectives. This leads to a balanced approach to risk.

JSP 525 explains corporate governance in MOD.

BEST PRACTICE

Best practice on addressing a scientific risk usually involves the use of impartial scientific advice, ideally from a wide range of sources. Wherever possible this should be openly published and reviewed, although this is not always possible where there are security constraints.

Clearly obtaining such advice can take time so early identification of the risk is always desirable.

The Office of Science and Technology **Guidelines 2000** describe this process. OST also publish **Codes of practice for the employment of scientific advisory committees**. In MOD, the Defence Scientific Advisory Council (DSAC) often fulfils this role.

Responses to scientific risk that may affect human health or the environment should usually be guided by the **'Precautionary Principle'**. The purpose is *"to create an impetus to take a decision notwithstanding scientific uncertainty about the nature and extent of the risk i.e. to avoid 'paralysis by analysis'"*.

PRECAUTIONARY PRINCIPLE

The Government is committed to using the precautionary principle. The 1992 Rio Earth Summit phrased the principle as :

Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

This should lead to *"a decision that seeks to avoid serious damage if things go wrong."*

There are other definitions of the Precautionary Principle that have been written in other contexts.

PUBLIC PERCEPTION

Scientific risks may also arise purely because the public perceives that there is an issue. The techniques of early impartial analysis and publication that address real risks are equally applicable to phantom risks.

Other scrutineers in DG(S&A) check the risks to time, cost and performance in MOD equipment projects. Scientific risk scrutiny is broader and covers procurement, policy, legacy systems as well as service personnel issues.

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