Table 1. Assessment purpose

BIOMASS guidance	**SSI FS 1998:1**
Alternative purposes identified by BIOMASS include • Demonstration of compliance • Public confidence • Confidence of policy makers and scientific community • Guidance to research priorities • Guidance to site selection • Proof of concept • System optimisation	• Risk shall be calculated on the basis of relevant scenarios (grouped, e.g., as normal scenarios, less likely scenarios and residual scenarios) and resulting probabilities of radiation detriment. • The risk thus quantified shall not exceed 10^{-6} per year to individuals represenative of the most exposed population. • Scenarios resulting in doses >1 mSv per year should be treated separately. • Environmental consequences shall be assessed as well as the protective capability after intrusion (SSI FS 1998:1). • A safety assessment shall be presented supporting the EIS.

Table 2. Endpoints

BIOMASS guidance	**SSI FS 1998:1**
Alternatives identified by BIOMASS include • Individual dose/risk • Collective dose/risk • Doses to biota • Changed radiation environment • Fluxes and, as a special case, • Uncertainties/confidence	Health protection to the level of 10^{-6} annual risk for individuals representative of the most exposed population, a factor of 100 as as a reasonable distribution around the mean, and a maximal level of 10^{-5} annual rsk for a reasonably maximally exposed individual, such as a subsistence farmer. Hypothetical definitions of exposed groups/individuals. Environmental protection considers • Biological diversity • Biological resources

Table 3. Assessment philosophy

BIOMASS guidance	**SSI FS 1998:1**
Distingusihes between “cautious” and “equitable” approaches, although these should no be considered as opposites.	• The choice of a 10^{-6} risk standard is “cautious” in the sense that it gives reasonable allowance also for future practices or activities causing discharges from several sources, separated in borth space and time. • Requirements on optimisation and BAT call for a realistic approach.

Table 4. Site context

BIOMASS guidance	SSI FS 1998:1
The site context needs to be known in order to establish what reference (or assessment) biosphere that would be appropriate. Defines the spatial domain to be included within the biosphere system description.	• The biosphere at the time of application and its known evolution forms one case, other shall be defined as necessary. • Affected ecosystems shall be described in order to assess environmental effects outside health protection. • No limit given for collective dose • Collectiove dose may be used by proponent to distinguish between alternatives. Transmutation might imply a high collective dose, for example, which must be reported.

Table 5. Source-term and geosphere-biosphere interface (GBI)

BIOMASS guidance	SSI FS 1998:1t
Limited to groundwater release scenarios. Important to consider the GBI in relation to time-dependent changes, e.g. if climatic evolution will affect the receiving medium.	• Consideration of both the environment and public health effectively rules out limitation to only a well scenario for temperate climates. • Changes caused by known climate and ecosystem evolution shall always be included in one, basal scenario.

Table 6. Time frame

BIOMASS guidance	SSI FS 1998:1
Time frames will have to be selected on the basis of • Institutional control period • Surface environment evolution • Engineered barrier degradation • Geological evolution • PA results • Radionuclide decay	• Radiation protection standards in principle not limited in time. • Quantitative estimates have to be provided for the first 1000 years, whereas qualitative judgements become more prominent for longer time periods. • Draft safety regulations (SKI) specify that the assessment has to cover 10 000 years and need not be performed for longer times than 1 000 000 years.

“Never ask as a favour for what you can get by force”

Miguel de Cervantes Saavedra: ***Don Quixote de la Mancha***
Madrid, 1604