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Safety in law – legal bases for safety-related decisions on technology in Germany: hazard, risk, residual risk and best-possible safety in nuclear disposal

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1 Overview

Law is both a catalyst and a driver for safety. Different countries apply different legal approaches to safety. This oral presentation aims at describing the main characteristics and basic description for the legal system handling risk and safety in Germany (and how it is applied to nuclear technology).

2 The role of (technology) law in the context of safety

Laws can change society, but society can change laws. Putting focus on the basic organization of a democratic state, the majority of people are entitled to change the way they want to treat themselves – and technology. Therefore, risks linked to technological development can be evaluated in a different manner depending on societal pressure and interests in each country. Law sets the scene for activities and also the area of technology. One of its key functions in this area is to provide a safe environment and is thus a prerequisite for sustainably dealing with technical risks such as nuclear waste. Law serves as a benchmark for safety. Defining what is safe plays an important role in how to handle technology.

3 Hazard, risk and residual risk in Germany

Faced with the case of the nuclear power plant project in Kalkar, the German Constitutional Court has issued certain standards on how to treat technology in Germany. Technological risks are to be classified in three different ways, each one implicating different legal consequences. The Kalkar I decision has evolved as one of the most important rulings concerning technology.

In the awareness that absolute safety cannot be achieved, each piece of technology bears a certain amount of risk that needs to be assessed. The transition from risk to hazard depends on the citizens' attitude. It is the state's duty to prevent hazards from arising and to provide precautionary measures. If one hazard has in fact arisen, it is the state's duty to eliminate it. As long as this threshold from risk to hazard is not yet reached (and even whilst fighting the hazard), precautionary measures are to be provided. For certain, unlikely events, the so-called residual risk, must be tolerated.

4 Radiant effects

Many areas of law are still based on the court's ideas of 1978 on how to classify risks, even though risk attitude in German society has undergone several changes. Concerning nuclear power, as of 2000 a societal majority have judged this technology to be hazardous. Nuclear waste plays a role in this context. Because people tend to feel the risk of nuclear waste to be very high, there is a need for special provisions on its handling. Coming from this societal background, the German search for a space for a final nuclear waste repository is pursuing the goal of best-possible safety. This legal requirement sets the scene for the current efforts and illustrates the ambitious goals that Germany pursues handling its waste.

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