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THE PROSPECTS FOR NUCLEAR LAW

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Introduction

It is a great honour for me to have been asked to speak about such an important subject, but I am aware also of the difficulty involved since it is obviously less risky to predict the past than to foresee the future! I shall therefore be careful not to try to describe what nuclear law will be like in the ten or so years to come; I shall simply try to identify, in light of its past evolution, how it is likely to develop, having regard to the needs which the nuclear sector will have to meet. I hope that my paper will contribute towards the ensuing discussion on the future and possible orientations of the Nuclear Law Committee.

I should like to make clear first of all that the following reflects my views alone.

First of all, I think it is important to describe some fundamental characteristics which, in my opinion, should determine in part the future of nuclear law. I shall then endeavour to discuss possible developments, having regard to the way in which our societies are evolving and, more precisely, in the context of economic globalisation.

1. Evolution of nuclear law: observation

First observation: the boundaries of nuclear law have constantly expanded and now encompass all aspects of the use of radioactivity.

I am making this observation mainly with regard to French law, but I know that it applies also in many other countries. Nuclear law has constantly broadened its scope: today, it covers all the rules which apply to nuclear activities, i.e. those making use of the properties of radioactivity, whether civilian or defense-related, industrial, research or medical.

It is a cross-cutting law which does not fit into the traditional branches since it forms part of both public and private law, affects the environment, work, health, safety, defence and concerns very many stakeholders: public authorities, private operators, international organisations, hospitals, doctors, etc.

Today, it covers not only the safety of nuclear installations, radiation protection (of the public, workers and the environment), nuclear third party liability, the transport of radioactive materials, the protection and control of nuclear materials, the management of radioactive sources and radioactive waste management, but also the physical protection of installations against malicious acts, the management of emergencies and radiological crisis situations, and lastly of course non-proliferation and the ending of nuclear tests.

This observation about the constant increase in the content of nuclear law is closely linked to my second observation, that of the interdependence of norms (in the broad sense of the term) adopted at different levels and of the growing harmonisation of national rules.

Second observation: the interdependence of norms and the harmonisation of national rules.

Another characteristic of nuclear law is that it developed, although not necessarily at the same speed, on three different levels: international, regional (in particular European) and national, and that these different levels are closely interdependent. Apart from environmental law, there is no other branch in which this interdependence is as strong. It results without doubt from the transboundary nature of the risks linked to the use of radioactive materials.

This situation presents a considerable advantage in that it promotes the adoption of national nuclear legislation which tends to be relatively similar on certain issues (for example the safety of installations, which is based on internationally recognised standards, radiation protection, where the exposure limits have been agreed by scientists, the control of nuclear activities, which, it is agreed, must be independent of operators, and lastly the participation of the public and the role of information, where citizens' rights are better recognised).

It can thus be seen that there is a strong legal current feeding the different levels of rule-making and which, moreover, makes it possible for "soft law" provisions to be transformed into binding ones.

This development, linked to the broadening of the scope of nuclear law, has undoubtedly helped constitute a veritable autonomous branch of the law.

Third observation: the long journey towards a veritable autonomous branch of the law.

Nuclear law took a long time to emerge as such. At national level, it began by being simply a chapter of other branches of the law: that of hazardous installations which gradually became environmental law, that of labour and health with radiation protection, that of defence for sensitive installations or that of urban planning with regard to the construction of installations, and it borrowed something from each of these branches.

It is no doubt at international level that nuclear law had, from the outset, a specific identity, with treaties dealing specially with the activities of this sector (nuclear third party liability, radiological emergencies, the safety of nuclear power plants, the safety of waste and spent fuel management, etc.). As for the European level, nuclear law was immediately given a separate status with the Euratom treaty.

Over time, i.e. a period not far short of fifty years, new laws and regulations were added to existing ones, some favourable to nuclear power, and others not. This, it seems to me, is what makes it possible to speak today about a veritable nuclear law.

Admittedly, it is not the quantity of rules that creates an autonomous branch of law although the way in which regulations have piled up in French law is impressive and provides material for substantial course work at university (which is in fact seriously lacking).

I am also aware of the point of view of some lawyers that nuclear law necessarily forms part of the broader branch of "risk law" (industrial, occupational and health) or that it addresses the same protection issues as environmental law and is in fact simply a metamorphosis of it. None of these arguments seems totally convincing to me even if there is some truth in them. After all, many branches of law pursue the same objectives or interlock or influence each other.

I will use two arguments in support of my position: the first is that an autonomous branch of law is traditionally defined as "a coherent and autonomous set of rules adapted to a given sector of activity".

In this respect, it is clear that there is a body of rules applying specifically to the nuclear sector, even although general provisions also apply to it, and in addition that this body of rules exists not only at national level but also at regional (essentially European) and international levels.

The second argument, which seems to me important, is that nuclear law today includes general principles which are specific to it and that even though some of them are taken from environmental law, the way in which they are applied to nuclear activities is specific to this sector.

Thus for example, the institutional organisation of nuclear activities has given rise to important legal discussions by virtue of which a fairly broad consensus has been arrived at with regard to basic principles, such as for example the independence of the safety authority vis-à-vis the political power, or the independence of technical experts vis-à-vis both operators and the safety authority.

I am therefore convinced that a real coherent structure has gradually been put into place and that it has become autonomous vis-à-vis the other branches of law from which nuclear law was undoubtedly derived and with which it retains very close links.

Nevertheless, I do not think it desirable for nuclear law to become so specific that it alone contains particular and excessively binding rules which would not apply to other hazardous activities, notably industrial ones.

It should certainly have its own characteristics but it must not be such as to oblige those in charge of nuclear activities to suffer more constraints than others, or in any case constraints which are out of proportion not only to the objectives pursued but also and above all to competitor activities. It goes without saying in any case that such a situation would be fundamentally contrary to the principle of free competition.

II. Prospects

Let us now turn to the prospects which I feel nuclear law must have. I see three of them: nuclear law must become a major component of a prevention and protection culture; it must ensure a balance between the interests involved and which it appears legitimate to protect; lastly, it must be one of the essential conditions of the acceptability of nuclear energy.

Nuclear law must become a major component of a “prevention and protection culture”

Nuclear law is without doubt a technical law, profoundly marked by technology because of the technical nature of the field of activity to which it applies. Thus, science and technology play an important part in the process of drafting legal norms. It is for this reason that it is sometimes described as law for engineers.

This is not going to change any time soon (to judge in particular from the example of French law on nuclear installations). But I should like to point out a risk which has to be avoided, namely that nuclear law becomes what I call a “users’ guide”, i.e. a law which is essentially regulatory, in the strict sense of the term, in which it is sought to anticipate all the situations which might occur. There is a serious danger that this type of approach would lead either to long and cumbersome rules which are difficult to read and which, as is well known, cannot in any event regulate everything, or to a transformation of legal provisions into technical manuals which would require no further intervention by lawyers.

That is why I hope that nuclear law will in general evolve in line with the evolution of the role of law. The law must not simply lay down mandatory rules or absolute requirements, the enforcement of which is in some cases backed up by a panoply of penal provisions, but must define obligations of result

requiring the stakeholders (in this case those responsible for nuclear activities) to make available the resources needed to meet them and to demonstrate to the supervisory authorities that these resources are sufficient to obtain the result in question.

Thus, it seems to me that nuclear law should be thought of as an instrument for making all the stakeholders in the sector (research, industry, medicine, defence) more responsible for their actions, and not as a series of safety barriers to protect society from potential delinquents.

This approach to nuclear law leads me to hope that it will become a full component of a prevention and protection culture, in parallel with the general trend of all law evolving towards a preservation culture reflecting the growing influence of environmental interests, in particular with the appearance and application of environmental principles in other branches of the law.

I should like to illustrate this with an example: the system of basic standards laid down by the ICRP with regard to radiation protection are no longer based exclusively, as they were formerly, on maximum admissible doses used as the upper limits of acceptable risk. Indeed, the concept of limits, in their “legal” sense of prohibition, is no longer considered to provide an assurance of absolute radiation protection.

Instead of constituting a legal straightjacket, as is usually the case in matters of safety, the system of radiation protection is defined, in dynamic fashion, around rules setting out the framework for decisions by operators and not around requirements whose non-respect will be punished.

I should like this idea of the law considered as a component of a prevention and protection culture to take on an international dimension, not only with regard to objectives but also, more concretely, with regard to norms. In this respect, I think there is a genuine need for the internationalisation of technical norms. It seems to me that in a sector in which power plant constructors offer their services throughout the world, it should be possible for the safety standards with which these installations must comply in a given country to be accepted in the same way, or without too many difficulties, in another country. This assumes naturally that these standards correspond to widely recognised norms and therefore that they have been established in the framework of international institutions.

Nuclear law must ensure a balance between the legitimate interests to be protected

Nuclear law has accompanied the development of nuclear energy (and, as such, can be described as development law), but is today moving increasingly towards becoming prevention and protection law, as we have just seen. Even if they sometimes are in conflict, these two characteristics are not, in my opinion, incompatible; a balance must be struck between the two.

Clearly, it is no longer possible today to think of nuclear law as intended solely to promote the development of the activities of the nuclear sector. But it is not conceivable either that protection and the prevention of risks should become its sole objective, the purpose of which, either directly or indirectly, would be to stifle development in this sector.

This need for balance is even more marked in light of technological developments within the nuclear sector, which represent important legal and societal stakes.

In this respect, we can refer to the examples of research carried out within the ITER project or the Generation IV Forum. Can nuclear law, whether national or international, be applied in its current state to this research and the objects (i.e. the installations) which may result from this research ? In more concrete terms, should the law applicable to fission installations be applied in its entirety to fusion installations

which, without a doubt, do not present the same risks ? This is a question which has arisen, as you know, in the field of nuclear third party liability.

Similar questions apply with regard to the different concepts of reactors envisaged within the Generation IV Forum. Should nuclear law adapt itself to these new subjects in order to facilitate their development or should it intervene with a view to establishing criteria designed to protect environment or social interests to which they may be considered detrimental. And in the case of such an evolution, which interests should be prioritised ? The quest for clean and economical energy ? The protection of the environment from danger ? Should energy independence be pursued, and for whom ?

Another example is that of nuclear waste, whose disposal must be managed within a timescale that goes considerably beyond the life of present generations. Technically, it is possible to envisage surveillance of a waste disposal site during hundreds of years. However, such control must have a legal basis. But, the legal rules which govern the current control of sites may not be those which our society will require in 100, 200 or 300 years. We only need to look back over a similar period to conclude that the legal techniques of the 18th century would no longer be acceptable today. The need to accompany nuclear activities with a legal framework also arises for disposal in a deep geological formation, where it will be necessary to determine whether such site is or not irreversible after several decades of surveillance.

Nuclear law must therefore reconcile the need to develop nuclear activities, in light of their utility, with that of protecting legitimate interests, including those of future generations, in light of the risks inherent to these activities. It must be a means of promoting sustainable development, the aim of which is precisely to reconcile the various economic, ecological and social interests involved.

That is why, even although law is necessarily the instrument of a policy, I think we must ensure that it does not itself become the victim of extremist points of view, which would result in its losing its ability to guarantee a certain balance not only between the interests at stake but also between generations.

Nuclear law must be one of the essential conditions of the acceptability of nuclear activities

We all know that the existence, and *a fortiori* the development, of nuclear activities depend on their being accepted by the public.

It is no longer sufficient for the people's elected representatives, in their parliamentary assemblies, to take a majority decision to use nuclear power, even if intended simply as one of the elements of an energy diversification policy. It is essential that the public be associated with decisions concerning it at local level. Whether we like it or not, participative democracy, alongside representative democracy, has become a fundamental aspect of the development of our societies, and this applies even more particularly to nuclear activities given the risks they are deemed to represent and also their very long-term complications (such as radioactive waste management) and implications for future generations.

In this context, the law is called upon to play an important role since it must be the guarantor of the expression, and to a certain extent of the taking into account, of local interests. Thus, the principles of participation by the public in decisions concerning it and more generally of information have been adopted at international level.

French law is somewhat ahead of the field in this sphere since, in addition to the already existing public enquiry and public debate procedures, the recent Act on nuclear transparency and security introduced the right to access nuclear information, by virtue of which anyone is entitled directly to ask nuclear installation operators and those in charge of transporting radioactive materials for information about the risks of exposure to ionising radiation which could result from the activity and about the safety and radiation protection measures taken to prevent or reduce these risks or exposures.

The purpose of such instruments is to make it possible to continue to use nuclear energy since it can be hoped that the public, once it has been informed and got beyond the stage of irrational fear or emotional debate, will be more objective about nuclear power which is a source of energy which does not emit greenhouse gases and which fosters economic development and energy independence.

These developments without doubt mark the change from a culture of secrecy, which characterised the beginnings of nuclear energy, to one of transparency, something which today constitutes the fundamental criterion for the acceptance of nuclear activity in general.

Conclusion

Nuclear law is a recent branch of the law which, like environmental law, has evolved enormously over a very short period (i.e. since 1945). In this respect, it is very different from civil law, for example, which remains characterised by principles and ideas which are at least 200 years old.

It is also of itself an evolving law since it adapts to changes in the things to which it applies, for example, the installations the operation of which it governs, but also clean-up and dismantling; similarly, radioactive sources or fuels until they become waste.

Different bodies – international, regional and national – have used nuclear law as an instrument for their policies, developing it through more or less normative provisions. We may wonder, in this regard, about the role of the courts which, although they have been involved in a few cases, have not yet created veritable case-law in this field. In France, for example, the first judgments handed down tended to support the development of nuclear activities by comparing their environmental impact with the economic and social interests involved, giving priority to the latter. A shift in this case-law towards greater protection for environmental interests seems likely, however, like nuclear law itself.

This change leads me to think that although nuclear law has sometimes been described as a “law of fear” – which has always seemed to me absurd since I do not think it possible to combat irrationality by legal provisions, which naturally follow a certain rationality – its vocation is to be or to become a “law of confidence”, which means that nuclear law must inspire confidence in the protection it offers to legitimate interests, and also ensure it in the discharge of their responsibilities by the players in the sector.