TA-INSTITUTIONEN UND -PROGRAMME

The long awaited birth of a Flemish TA-institute*

by Dirk Holemans, MP

On the 5th of July 2000, the Flemish Parliament decided to establish the *Vlaams Instituut voor Wetenschappelijk en Technologisch Aspectenonderzoek* VIWTA (Flemish Institute for Scientific and Technological Assessment). With this vote, almost ten years of societal and parliamentary debate came to a fruitful end. This article deals in a concise way with the context of this decision. First, Flanders as a region, its technology policy and TA-activities will be discussed. Next a short history of local TA will be presented. Finally, the objectives and structure of VIWTA will be dealt with.

1   The Flemish technology policy

Flanders is one of the three regions of Belgium with a population of around six million people. The competencies of the Flemish Government include a.o. education, environment, science and technology policy. In 1982 the Flemish Government started with the so-called TIRF-policy (Third Industrial Revolution Flanders). Characteristic of the TIRF-policy is the concentrated support for the development of strategic new technologies, including microelectronics, information technology, biotechnology and energy. The TIRF-policy includes an explicit public relations dimension. Through the set up of temporary "Technology Action Programs" and the foundation of permanent institutions for the development of these technologies, research for industrial applications is stimulated in a substantial way. It is clear that technology is an important (policy) issue in Flanders. The attention for Technology Assessment (TA) in contrast has been less extended and varied over different periods of time.

2   The Flemish TA landscape

If one uses "TA – Flanders" as combination for a search engine, one would find rather little. This however does not mean that TA is absent in Flanders. On the contrary, there are quite a lot of TA-related activities, but these are seldom coined as technology assessment. A lot of these projects and initiatives are academic research projects. So, different to some neighbouring countries such as Germany or the Netherlands, TA initiatives in Flanders do not always have a high profile. This could be linked to the fact that until now there was no official national or regional TA-institute (e.g. associated with parliament). Most of the TA takes place at (autonomous) governmental institutes and universities.

The following technology research institutions have TA as an official assignment:

- *Foundation Technology Flanders* (STV): this foundation became operational in 1984, and focuses on TA-research concerning problems related to labour and employment. In the past, it also coordinated TA-sections of Technology Action Programs of the Flemish government.
- *Flemish Institute for Technological Research* (VITO): this institute carries out research in the fields of energy, environment and new materials, with sustainable development as a central objective.
- *Flemish Interuniversity Institute for Biotechnology* (VIB): in their reports TA is stated as one of their core activities. However, only a small part of their overall budget is spent on TA.

Compared to countries like e.g. the Netherlands, TA as a real scientific discipline is not very strongly established at the Flemish university level. As already stated, this however does not mean there is little TA research carried out. Most TA research is performed in particular contract research projects, or is carried out under another label (risk assessment, feasibility studies, …).

Most TA-activities can be related to: (i) analytical TA (risk assessment, Delphi-method) that have as result written reports; (ii) TA at the level of R&D itself. TA that directs itself to the general public is mostly information seeking

(e.g. questionnaires), rather than interactive (e.g. consensus conferences). Until recently, the majority of the projects that addressed the general public was based on enquiries and questionnaires. So one can say that there is very little experience with interactive or participative forms of technology assessment that sustain in an active way a structured public debate. This fits in the broader historical picture of Belgian corporatism, which gives few incentives for debates at the level of the citizen.

3 A short history of the forthcoming Flanders TA-Institute

Alongside the development of the Flemish TIRF-policy, TA-activities were developed but never sustained in a permanent way. Only at the beginning of the nineties, some members of the federal (Belgian) parliament discovered TA. At the end of 1993, two different parliamentary initiatives were taken, both without success however (see Belgische Kamer van Volksvertegenwoordigers 1993, 1994).

The first proposal of christian-democratic MP's aimed at creating an internal advisory group. Members of that group would be parliamentarians assisted by a very small staff. The MP's would perform TA studies themselves and formulate assessments addressed to the whole parliament. The second proposal of socialist MP's foresaw the creation of a mixed committee of parliamentarians and scientists. This committee would be assisted by a selected team of TA experts and would have a budget for this purpose. As the following observation shows, things went slower than one expected at that time: "There seems to be good hope that the advocates of both options will come to an agreement on one common project. A decision is expected in October 1994" (Langenhove 1994).

At the regional level, a proposal of the Green Party introduced in the Flemish Parliament in 1996 did not get the support of the then socialist/christian-democratic majority. The main reason for this rejection lies possibly in the assumption of some christian-democratic ministers, that TA-initiatives would hamper their (high priority) technology policy focussed on domains such as biotechnology.

With the elections of June 1999 the political situation in Flanders changed. Now a "purple-green" coalition of the liberal, socialist, green and the Flemish democratic party is in power. This new government has the ambition to accelerate not only technological but also social innovations. The foundation of a TA-institute linked to the parliament is one of them (Flemish Parliament 1999 - 2000a).

In the meantime however, the social context also changed. Intensive social debates on topics such as the health effects of waste incineration, genetic engineering and dioxins in the food chain intensified the public awareness of the controversial effects of many technological developments and practices.

A good example here is the case of the social debate on genetic engineering. In August 1999, there was a highly visible demonstration surrounding a field of genetically modified rapeseed, organised by several non-governmental organisations. In the weeks after this demonstration social scientists, genetic engineers, parliamentarians, and members of some action groups started the debate in one of the leading Flemish newspapers *De Standaard*. They all asked for a structured public debate on biotechnology in Flanders (Holemans and Vandenabeele 1999).

More recently the Flemish Parliament requested an advice on the social aspects of biotechnology from five official advisory committees, active in the field of human health, environment, agriculture, socio-economics and science policy (see Flemish Parliament 1999 - 2000b).

In all five recommendations, one finds the same elements, namely:

- The need for balanced information for the broad public
- The urgent need for a structured public debate, including issues such as trade, Third World and ethics
- The recognition of the potential risks related to genetically modified organisms
- The need for the development of a social frame that can guide or even steer research and (product) development
- The importance of moral objections related to the patenting of genes
- The need for more permanent technology assessment initiatives.

4 Objectives and structure of the Flemish TA-Institute

The main goal of the Flemish Institute for Scientific and Technological Assessment – VIWTA is to stimulate and sustain in an active way the social debate and the political decision-making process related to scientific-technological developments. This goal comprises three equally important tasks, as aptly put in the definition of technology assessment by Smith and Leyten in their doctoral thesis: "TA is a process consisting of analyses of technological developments and their consequences as well as a debate on the basis of these analyses. TA should provide information that could help the actors involved in developing their strategies and that might define subjects for further TA analysis" (Smits and Leyten 1991).

First of all there is the need for balanced, apprehensible documents on the social implications of new technological developments. Unfortunately, even in the year 2000 this kind of information is not readily available to the Flemish public and its representatives.

But in fact, things are even more serious. Before speaking about the impact of new technologies, one has to gain some knowledge on the vast amount of new developments in all the different fields of technology, ranging from cloning over nanotechnology to robotics. It is impossible as an individual to take into account the rapid change of technological developments. Only with such an overview, one can make up an agenda for a proper TA working plan.

The *second* task implies the organisation of broad social debates in a well-structured way. Flanders does not really have a strong tradition in open public debates, for example different to its neighbour countries no consensus conference was organised until now. So here is a real chance of realising social innovations next to technological ones.

Last but not least the results of these debates will be of great importance for the Flemish Parliament. With the support of the TA-institute, well-informed political debates should lead to decisions aiming at maximum social embedding of science and technology. And as more and more discussions in Parliament deal with technological issues, the need for TA will only increase in the future. Examples in case

are the ongoing debates concerning genetic engineering and the possible environmental impacts, the possible dangers connected with mobile phones especially for kids, the relation between air pollution and health problems, etc.

Al these questions relate to a rather classical focal point of TA, namely the development and implementation of a new technology, the potential impacts and the way different groups in society perceive and evaluate these.

In the motivation for the legal proposal for a parliamentary TA institute, two other important issues are mentioned.

First there are not only new developing technologies, but we also have existing technological systems, or must I say "socio-technological systems" (as sociologists of technology such as Wiebe Bijker would say). As society changes, it occurs that the existing technological systems do no longer satisfy, or worse, cause structural problems. Thus there is the urgent need for changing these systems. This is however not an obvious task, as these systems are strongly socially embedded. Energy supply is for instance an example of a socio-technological system, which will change strongly in the next years. Not only the federal government in Belgium decided to phase out nuclear energy plants, at the European level there is the ongoing liberalisation of energy markets, next to the goal of the Flemish government to create more green power, based on renewable energy such as wind power or solar energy. How to realise a major change in the energy system without serious institutional, social or ecological problems, is a question TA will have to deal with.

Second there is the problematic role of scientific experts in social and political debates. Until recently, politicians liked to rely on experts, as they could answer difficult and annoying questions. But, as in Flanders the debate on waste incineration made visible in a painful way, experts have more and more contradictory opinions which leads to a lot of confusion. Or to put it in another way: science is transformed into a strategic reservoir each actor in a debate will make use of in a selective way. You will always find an expert that stresses the points you find important. This leads us to the question of the quality of the public and political debate. Don't we need, as the French sociolo-

gist Bourdieu points out, a "reflexive" public debate, to debate the debate? Or as was stated in an interesting article in *Nature* last year: "Scientific knowledge is playing an increasing part in political decision-making. Scientists themselves will have to recognise that blind acceptance of their work cannot be taken for granted." And I would add: politicians will have to learn that no expert will ever take over the responsibility of taking decisions in an uncertain world (Padilla and Gibson 2000).

Similar to some other European examples, the Flemish TA-institute will be a parliamentary institute. It will consist of a small staff of expert people. The aim is not to conduct in a substantial way own research. It will be a knowledge institute rather than a research institute. Necessary long-term research will be subcontracted. It is hard and maybe unwise to say what kind of instruments will be used to realise the above mentioned objectives. The TA-initiative starts from the hypothesis that there exists no universal blueprint for TA. For each country or region, an appropriate, temporary, culturally sensitive mix of methods and instruments has to be determined. This will be the task for Flanders in the coming years. Luckily, the international TA-community has developed and tested in the past years an impressive tool box of methods and instruments.

Finally, it is not that because VIWTA is a parliamentary institute, MP's are its sole clients. As also stated very clearly in the legal proposition, the general public is considered as a very important target group. Therefore, the organisation of public debates is stated as an explicit task of the institute.

5   Risk politics in an uncertain world

Following authors such as Beck (1992, 1997) today's society can be described as a *risk society*. Different from the earlier welfare society, the distribution of *bads* has become the central issue. And quite a lot of "bads" relate to technological developments and their industrial use. In this type of society uncertainty and unpredictability are common features. What will the next innovation in ICT bring us, will we clone human beings, is using a mobile phone really unhealthy, how safe are sheep now that cows can become mad…?

All citizens nowadays pose these questions, see their lives mingled with (r)evolutions at the socio-technological macro-level. This is the reality of the reflexive nature of the late-modern times in which we live. Not an easy day for a politician! He or she can no longer give easy and comforting answers. It would be unwise to consider this situation only as a problematic one. At the same time, it can be taken up as a unique opportunity, as a chance for strengthening our democracy. Answers in the future will have to be developed at all levels of society. The importance of new and creative forms of public debate will only grow in the near future. In our pluralistic democracy, this is the only way forward. How can we, in times of "reflexive modernity", create new forms of "social learning"? This means learning through participatory systems such as groups, networks, organisations and communities, in conditions which are new, unexpected, uncertain, discordant and hard to predict. Central to the concept of social learning are processes of action, reflection, communication and co-operation. Inherent to social learning is that the actors involved try to develop creative answers to the challenges they cope with. The "capacity to make a difference" today relates to the three angles of the captive triangle of creativity, power and responsibility. It is my strong conviction that the TA-institute in Flanders will stimulate these three vital qualities.

Note

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Sozioökonomische Umweltforschung. Die Sektion Ökonomie, Soziologie und Recht am UFZ-Umweltforschungszentrum Leipzig-Halle GmbH

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Das UFZ-Umweltforschungszentrum Leipzig-Halle GmbH mit Standorten in Leipzig, Halle und Magdeburg ist Mitglied der Herrmann von Helmholtz-Gemeinschaft deutscher Forschungszentren (HGF). Es wurde 1991 mit dem Auftrag gegründet, Umweltforschung in von Menschen genutzten und gestörten Landschaften zu betreiben. 1996 wurde am UFZ die Abteilung „Ökologische Ökonomie und Umweltsoziologie" etabliert. Aus ihr ging im Juni 2000 die Sektion „Ökonomie, Soziologie und Recht" hervor, in der zur Zeit die beiden Disziplinen Ökonomie und Soziologie vertreten sind. Sie wird ab dem 1.10.2001 durch eine Arbeitsgruppe „Umweltrecht" erweitert. Mit dieser Entwicklung wird nunmehr das Ziel umgesetzt, die sozioökonomische Kompetenz am UFZ zu stärken und die Integration naturwissenschaftlicher und sozioökonomischer (einschließlich umweltrechtlicher) Umweltforschung zu forcieren.

Zielsetzung und Forschungsansatz

Die Sektion Ökonomie, Soziologie und Recht am UFZ-Umweltforschungszentrum Leipzig-Halle stellt den Menschen mit seinem umweltrelevanten Verhalten und Handeln in den Mittelpunkt der Forschung und orientiert sich am Leitbild einer nachhaltigen Entwicklung. Sie untersucht die Bedingungen und Umsetzungsmöglichkeiten eines umwelt- und sozialverträglichen Lebens und Wirtschaftens, um zur Erhaltung der Lebensgrundlagen für gegenwärtige und künftige Generationen beizutragen.

Den Ausgangspunkt für die Forschungsarbeiten der Sektion bildet dabei die Erkenntnis, dass die Entwicklung und Umsetzung von Konzepten zur Lösung von Umweltproblemen nur mit den Menschen – und nicht gegen sie – möglich sind. Daher müssen die Lösungsangebote ökonomische, soziale und rechtliche As-