Opinion of the European Economic and Social Committee on the Communication from the Commission to the European Parliament and the Council addressing the challenge of water scarcity and droughts in the European Union

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On 18 July 2007 the European Commission decided to consult the European Economic and Social Committee, under Article 262 of the Treaty establishing the European Community, on the

Communication from the Commission to the European Parliament and the Council addressing the challenge of water scarcity and droughts in the European Union.

The Section for Agriculture, Rural Development and the Environment, which was responsible for preparing the Committee's work on the subject, adopted its opinion on 29 April 2008. The rapporteur was Mr Buffetaut.

At its 445th plenary session, held on 28 and 29 May 2008 (meeting of 29 May), the European Economic and Social Committee adopted the following opinion by 97 votes, with 1 abstention.

1. **Conclusions and recommendations**

1.1 It is clear that the issues of water scarcity and drought must be addressed not only as an environmental issue but also as a key element of sustainable economic growth in Europe, in short as an issue of strategic importance.

1.2 Whilst people need water to live, it is also a vital resource for many economic sectors, starting with agriculture and the agri-food industry, which work with living things.

1.3 Commendably, the Commission communication highlights the importance of the problem and sets out a number of ways forward with regard to, on the one hand, combating water scarcity and drought and, on the other hand, the possibilities of adapting to the new circumstances.

1.4 Climate change, recognised as a problem by scientists and the general public alike, could make matters worse and the measures proposed by the Commission need to be introduced swiftly.

1.5 Admittedly, the situation is not the same in all the Member States, and the circumstances vary in Europe from north to south and east to west. Nevertheless, all the Member States are affected and all have experienced periods of summer drought, including the Nordic countries.

1.6 That is why these differences in circumstances must not be allowed to stand in the way of the adoption of a concerted policy in Europe and the implementation of practical measures, adapted, of course, to the specific conditions prevailing in each Member State, as there is no catch-all solution for the whole of the European Union.

1.7 The EESC therefore calls for close and systematic monitoring of the measures which will be taken on the basis of the present communication.

1.8 As regards the price of water, the Committee would point out that pricing policies can prove ineffective if a major part of water abstraction is not metered or registered. It therefore recommends that the Commission propose an appropriate definition of water use to Member States.

1.9 The EESC recommends the creation of a European website dedicated to river basin plans, where local authorities would be able to find specific examples which they could use to draw up their own plans and to improve the information they provide.

1.10 As concerns the allocation of water-related funds, the Commission could differentiate its assistance rates in accordance with the criterion of rational water use and conservation of water resources so as to encourage local authorities who do not behave responsibly to change their practices, without penalising regions which already make efforts in this field.

1.11 In order to improve drought risk management, the Committee calls on the EU to encourage the interoperability of means of preventing and fighting fires within the framework of the European Mechanism for Civil Protection.

1.12 In discussions on supply infrastructure, the EESC recommends that the possibility of using underground water storage and re-injection of groundwater be explored. The Committee does not believe that water transfers within one and the same Member State should be excluded *a priori* but that they must be regulated with a view to avoiding an extravagant approach towards the use of water resources, which must be managed with the ongoing aim of saving water and using the most advanced techniques for controlling water use ([1]).

1.13 To promote rational water use, the EESC recommends the introduction of the techniques of smart metering and bespoke billings. It would also stress the importance of good practice in the agricultural sector and recommends reforestation, the planting of hedges in areas where it is useful and feasible

([1]) The public hearing held in Murcia on 3 April 2008 and the associated study visit indicated that techniques for the responsible and rational use of water resources are already available on the market. In addition, land cultivation and, in particular, afforestation help to combat desertification.

and the promotion of sustainable drainage and irrigation techniques, with the support of rural development policy funds. Water use in agriculture is gradually becoming more efficient but needs to improve further through, for example, modernisation and more sparing use of watering and irrigation. In this context, it is worth stressing the need for deepening and developing research and new technologies in agriculture. The Committee believes that individual systems for water saving, recycling and sanitation could be useful, particularly in the case of dispersed housing.

1.14 With regard to improving knowledge and data collection, the EESC proposes the creation of a website where climatic parameters, drawn from the IPCC's global models, would be downloadable and available to local and regional players.

2. **Gist of the communication**

2.1 Problems of water scarcity and increased frequency of droughts have now emerged as a major challenge in Europe, not only for traditionally vulnerable regions but also for the continent as a whole. The proportion of European river basin areas suffering from severe water stress could increase from 19 % today to 35 % by 2070. Especially, southern, central and eastern Europe are likely to be severely affected.

2.2 The number of areas and people affected by droughts has risen by 20 % in the space of thirty years. In addition to the human cost drought brings with it an economic cost. In 2003 the cost of the damage to the European economy was at least EUR 8.7 billion. A study of water use worldwide reveals a wide variety of situations. An American consumes 600 litres a day on average, a European 250 to 300, a Jordanian 40 and an African 30. Faced with the threat of water shortage, everyone must try to change their habits, but action must be taken where efforts are likely to have the greatest impact. Agriculture is the biggest user (71 % of water abstraction), followed by industry (20 %) and domestic water consumption (9 %) ([2]).

2.3 In response to a request for action from the Environment Council in June 2006, the Commission therefore presents an initial set of policy options at European level:

— putting the right price tag on water;

— allocating water and water-related funding more efficiently;

— financing water efficiency;

— developing drought risk management plans;

— further optimising the use of the EU Solidarity Fund and European Mechanism for Civil Protection;

— fostering water-efficient technologies and practices;

— introduction of a water scarcity and drought information system in Europe;

— RDT opportunities.

2.4 In so doing, the Commission seeks to establish the foundations of an effective strategy for promoting efficient water use, as part of efforts to combat climate change and reinvigorate the European economy.

2.5 The Council of the European Union ([3]) stressed that the issue of water scarcity and droughts should be addressed separately, not only from a European perspective but also at international level, and acknowledged the need for full implementation of the Water Framework Directive (WFD).

2.6 The Council asked the Commission to present a follow-up report on the implementation of the communication and to flesh out the EU strategy in these areas by 2012.

2.7 The EESC does not intend to make its own diagnosis of the situation, which would be superfluous, preferring instead to comment on and complement the proposed ways forward and, above all, to put forward practical recommendations and incentives.

2.8 The issues of water scarcity and drought in the EU impact on several policy areas. Thus, for example, depending on the case at hand, the competent Commission bodies could be DG AGRI, DG ENV and DG REGIO, since these issues concern agriculture, water policy, climate change, crisis management and the organisation of European civil defence. It would be desirable if the Commission were to ensure that water-related concerns are taken on board in a cross-cutting manner.

3. **General comments**

The EESC's comments follow the structure of the communication.

3.1 *Price of water*

3.1.1 The Commission's thinking in this respect is in line with the WFD. The Commission regrets that not enough use has been made of economic instruments and points out that pricing policies can prove ineffective if a major part of water abstraction is not metered or registered by the authorities.

3.1.2 Moreover, many Member States have adopted restrictive definitions of waters uses and users. By adopting a restrictive definition of water users — distribution of drinking water and sanitation — and omitting to take into account irrigation, navigation, hydro-electric schemes, flood protection, etc., some Member States have limited the scope for full cost recovery and effective pricing of different water uses.

([2]) Source: Atlas pour un monde durable. Michel Barnier. Edition Acropole.

([3]) Brussels European Council, 14 December 2007, Presidency conclusions 16616//1/07 REV1, p.17.

3.1.3 Consequently, the EESC suggests that the Commission urges Member States with overly 'restrictive' definitions of water uses and users to modify their approach, for example by relating it a list of water uses where they would have to justify the exclusion of any particular use from that list. It would be useful to define criteria for establishing a hierarchy for water use, which would also serve as an aid in introducing a smart pricing system.

3.1.4 The EESC also recommends the setting-up of a research programme in applied economics for modelling financial flows and social utility flows associated with different water uses and water circuits at the level of a river basin as a whole.

3.1.5 Discussions on a fair price for water must be clarified by analysing the economic costs and benefits incurred or received by all sectors of activity, consumers, users and taxpayers, in relation to water usage.

3.1.6 The Committee would also draw the Commission's attention to the tendency, resulting from the over-restrictive definition of water uses, for some Member States to pass on the cost of water conservation to urban consumers, to the benefit of agricultural or industrial users. Should prices for agricultural users increase, then there would be a need for a balanced tariff.

3.1.7 The EESC notes that pricing incentives to save water must be powerful enough to prevent their impact from being mitigated by costs arising from any complexities generated by such schemes. The Committee would recall that the first source of saving is to be found in the proper maintenance of networks and tackling leaks, which sometimes lead to unacceptably high levels of wastage. Finally, the Committee would point out that pricing cannot solve everything and that regulation has a role to play in situations where a balance has to be struck between different water uses.

3.1.8 Where the demand for non-agricultural use of water is seasonal, which is often the case in holiday resorts, a two-part pricing system would be advisable. It would constitute an element of fairness between resident consumers and holiday-makers with regard to sharing the fixed costs of the system.

3.2 *Allocating water and water-related funding more efficiently*

3.2.1 The Commission notes that the economic development of some river basins can lead to adverse effects on water resource availability and points out that particular attention needs to be paid to river basins facing 'stress' or scarcity.

3.2.2 The EESC recommends the creation of a European website dedicated to river basin plans, under the control of the European Environment Agency and/or the Commission and intended in particular for local and regional authorities and other relevant authorities, on which specific examples of such plans would be publicly available.

3.2.3 The website could be a source of methodologies, objectives, solutions to problems and economic figures for players at local level. Considerable time could be saved in drawing up such plans.

3.2.4 The impact of agriculture on water resources is well known. Steps should be taken to promote more efficient water use, including sustainable irrigation and drainage (for example, the drop-by-drop irrigation technique). The 2008 CAP Health Check must be used as an opportunity for more mainstreaming of quantitative water usage issues into CAP instruments. Thus the aim to achieve the total decoupling of aid should be accompanied by an increase in support for water management within the framework of rural development programmes. Similarly, specific instruments should be introduced for drought risk management in the agricultural sector.

3.2.5 Generally speaking, the Commission could differentiate its assistance rates in accordance with the criterion of rational water use and conservation of water resources (5 to 10 percentage points within the maximum rate of assistance, for example). This criterion, established at the time of the project study or when put out to tender in the case of construction, would be audited, at the initiative of the authority receiving European assistance, on completion of the project and after an interval of five years. The additional assistance would take the form of a deduction in the cost of reimbursing investment, as a reward for observed performance.

3.2.6 The Committee believes that containing the overall costs of projects pertaining to the supply of drinking water or purification is the appropriate approach both from the economic point of view and in terms of sustainable development. Overall cost is understood here to mean the net present value of the investment and the operating, maintenance and renewal costs over a long period.

3.2.7 Therefore, projects offering selection criteria and guarantees based on them should be promoted, in particular by the Commission, in order to disseminate good practices relating to rational water use and conservation of water resources.

3.2.8 The whole approach is in line with the Commission's desire to give first priority to supporting water saving and efficiency measures. Consistency will have to be established between this policy and the policy with regard to biofuels, which are consumers of water.

3.3 *Improving drought risk management*

3.3.1 The Commission wants to foster exchanges of good practice.

3.3.2 The EESC would like to see maps drawn up each spring, with the aid of satellites and backed up by local meteorological analyses, showing the risks of drought, shortfalls in agricultural production and fire. Data from river basins plans already drawn up should also be used in this context. This data should be accessible to farmers or farmers' associations in connection with their risk management.

3.3.3 The Committee believes it would be desirable to move from crisis management to drought risk management. As far as the former is concerned, there is still room for improvement, as demonstrated during the catastrophic fires in Greece summer 2007. The EU could facilitate and encourage the interoperability of means of preventing and fighting fires, the standardisation of equipment, the containerisation of diesel pumps, and the carrying-out of joint exercises. This would entail the practical application of the European Mechanism for Civil Protection.

3.3.4 The Commission's proposal to apply for assistance from the EU Solidarity Fund, as amended and adjusted, to deal with the consequences of severe droughts should clearly be retained. It would also be advisable to set up an insurance scheme to offset the consequences of drought periods, particularly for farmers, who are the first victims.

3.4 *Additional water supply infrastructures*

3.4.1 The Commission has in mind here projects of a collective nature. In certain cases individual initiatives could also be considered, giving prominence to the notion of a hierarchy of water uses.

3.4.2 Whatever the case, the communication considers not only water transfers from one river basin to another and the construction of dams and micro-dams under highly regulated conditions as potential options, but also the reuse of waste water and desalination. As regards the reuse of waste water, the problem is the accumulation of pollutants over successive reuse cycles. Consequently, it would be useful to launch or support a research programme on modelling concentrations after multiple cycles, in order to derive stabilisation criteria to determine when concentrations reach limit values compatible with the system's self-purifying capacity.

3.4.3 In the case of desalination there are two types of problem: on the one hand, energy-related ones and, on the other hand, environmental ones relating to by-products and the mixture of saline concentrates.

3.4.4 One option that could be considered is a programme for the development of solar desalination, with a range of micro installations which would represent a technological contribution by Europe to developing countries facing drought.

3.4.5 In general, there is a need to encourage research and development into water-saving techniques or techniques fostering the replenishment of groundwater (surfacing of roads in urban areas, for example) and biotechnologies enabling the development of less water-consuming agricultural crops.

3.4.6 Finally, there is also a need to explore the possibility of underground water storage and re-injection of groundwater. Here pilot projects should be selected and standards established for stored water which are both realistic and protect the subsoil. This concerns both the quantity and quality of underground water as water tables are also victims of pollution. Special attention should be paid in this context to high water-consuming industrial activities, which both tap groundwater supplies and have the potential to pollute them.

3.4.7 In addition, the EESC calls on the Commission to explore the possibility of inter-regional water transfers. A transfer from a surplus to a deficit basin could be desirable, also from a European viewpoint in terms of, for example, agricultural self-sufficiency, if water use in the recipient basin is efficient and water-saving. Technical, pricing or regulatory measures must be designed to prevent wastage elsewhere, that is collective aid granted to a 'deserving' sector must not lead to increased water consumption in non-priority sectors.

3.4.8 The EESC believes that possible measures should be agreed to regulate water flow between third countries and EU Member States through which a river flows across the external EU border.

3.5 *Fostering water-efficient technologies and practices*

3.5.1 The Commission feels that the use of water-efficient technologies could be increased substantially. In addition to tackling the problems of leakages, which are considerable in some networks, and wastage, the upgrading of water management practices offers interesting possibilities.

3.5.2 The measures proposed by the Commission are clearly desirable (standards for water-using devices and equipment, water performance of buildings, a performance indicator, adaptation of economic activities to water scarcity and droughts, etc.).

3.5.3 The possibility of using grey water should also be explored, whilst bearing in mind that this would require investment, particularly with regard to installing separate piping and adopting precautionary measures. Consideration should also be given to how rainwater could be recovered in a more systematic way.

3.5.4 One potentially promising technique is smart metering and bespoke billings. Metering technology and remote transmission of consumption data suggest the possibility of introducing several kinds of pricing, as is already the case with electricity. The customer could then have an account tailored to his specific circumstances, but nevertheless conducive to energy-efficient behaviour: seasonal tariff, permanent tariff, off-peak tariff, etc.

3.5.5 With a view to conserving water resources, combating floods and the erosion and pollution which accompany them, policies for the protection of the rural environment should strongly encourage reforestation and the planting of hedges, where such practices would be feasible and useful, and the maintenance of agriculture. Applications and checks could be made on the basis of the most advanced systems for defining geographic areas. It would be desirable to encourage basic agricultural research under the Seventh Framework Programme for Research and Development, with the aim of creating plant varieties which are more resistant to drought.

3.5.6 Continuing on the subject of agricultural practices, there is a need to promote sustainable drainage and irrigation and, in general, the use of best available techniques. Drainage ditches, particularly at points where there are crossings, should be equipped with sections where water can be held back and stored locally so as to limit the concentration of waters, and the erosion and pollution which go with it, and foster re-infiltration. Storing water locally in this way would, of course, bring with it clean-up obligations, which would have to be studied with professionals.

3.6 *Fostering the emergence of a water-saving culture in Europe*

3.6.1 The comments made by the Commission can only be welcomed: certification and labelling to foster water efficiency and saving are appropriate ways forward. However, in the case of labelling, it should be borne in mind that there is a vogue for ecological labelling and there is a danger here that excessive labelling could make the information provided incomprehensible.

3.6.2 The whole of organised civil society, i.e. the social partners and associations, together with the world of education and training, should be mobilised to contribute to the emergence of a water-saving culture. Training and the diffusion of new technologies in the relevant sectors must avoid making the mistakes of the past, particularly in the area of urban hydraulics.

3.6.3 It is worth noting that there is a growing market today for equipment for the recovery of rainwater and recycling of grey water in individual homes. This points to the emergence of a water-saving culture as advocated by the Commission. However, the justified concern to save water must not lead to an individualist quest for self-dependence, which would undermine, technically and economically, the public provision of water supply and sanitation services, which was and still is at the root of major advances in hygiene and life expectancy. In fact, it has been forgotten in our developed societies that, while water is necessary for life, it can also be the bearer of death.

3.6.4 Thus individual (non-collective) systems for water saving, recycling and sanitation would seem to be an interesting option and suited to dispersed housing. But they would appear to be less attractive, in economic and social terms, in an urban environment, unless water collected and recycled using such systems, even if they capture run-off on private property, is treated and used by public services.

3.7 *Improving knowledge and data collection*

3.7.1 The Commission notes that reliable information on the extent and effects of water scarcity and droughts is essential. The Committee fully endorses the idea of producing an annual European assessment and making better use of the services of the Global Monitoring for Environment and Security (GMES) initiative to provide satellite-based data and monitoring tools to support water policies. Universities and scientific research centres should be encouraged to produce studies on water-related issues, preservation of water resources and ways of increasing them through the development of new technologies.

3.7.2 There is a need to standardise the status criteria used in the inventories of water bodies provided for in the WFD. In practice, the reports produced by Member States are disparate both in terms of the size of the water basins studied and the density of measurements of water quality and biodiversity.

3.7.3 The EESC therefore encourages the Commission to go ahead with the work of the specialised committees monitoring application of the WFD and to publish scoreboards showing the progress made by the Member States, with a view to stimulating efforts in this area and bringing about their convergence.

3.7.4 From a realistic point of view, there is a need to focus efforts in the most vulnerable areas, without waiting for the achievement of uniformity and quality in all assessments and action plans. The selection of these areas could be made on the initiative of Member States, but in accordance with common criteria (rainfall deficiency and definition of geographical area).

3.7.5 Raising local and regional players' awareness of the risk of water scarcity and the effects of climate change more generally would be easier if information on climate trends were made accessible to as large an audience as possible.

3.7.6 The EESC therefore proposes, as a practical step, the creation of a website, possibly as part of the Water Information System for Europe (WISE), where climatic parameters, such as rainfall, evapotranspiration, temperature, wind speed and hours of sunshine, drawn from the global models of the Intergovernmental Panel on Climate Change (IPCC), would be downloadable (along the lines of the PRUDENCE or ENSEMBLES projects but more systematic in their coverage, and providing numerical data in addition to geographical data).

3.7.7 The responsibility for the scientific character and updating of the data made available online would be entrusted to a group of European laboratories which are members of the IPCC.

3.7.8 The EU could finance the initial setting-up of the website and modest fees for downloading could be used to support the work of the research laboratories contributing to the models.

Brussels, 29 May 2008.

The President
of the European Economic and Social Committee
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