

ANALYSIS OF THE STRATEGIC ENVIRONMENTAL ASSESSMENT DOCUMENT OF THE NHP PRESENTED TO THE EUROPEAN COMMISSION BY THE SPANISH GOVERNMENT

Summary

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Given that the *Environmental Assessment of Plans and Programmes Directive* has not yet been transposed, the Strategic Environmental Assessment (SEA) presented by the Spanish Government was not, strictly speaking, a legal necessity, but rather at a request from the European Commission. However, we believe that, for political coherence, the conception, methods, and procedure of this evaluation should have been carried out in accordance with this Directive. To this end, it would have been logical to carry out this process before the NHP was passed into law, with civic participation and a technical and scientific debate.

We will now summarise in 15 points the principal reasons why we believe that this SEA does not fulfil the coherence and objectives of the process required by the aforementioned Directive. We will point out the main errors and shortcomings of the NHP, and how it contradicts EU laws and policies. We will also synthesize the strategic options and viable alternatives to this project from a sustainable perspective.

1. The SEA fails to seriously assume a central objective of Sustainable Development

The NHP presents the unshakeable objective of *increasing the offer of water supplies to maintain and improve the productive capacities of existing irrigated lands (both legal and illegal ones) and other present and potential water uses* on the Mediterranean coastline. The objectives of sustainability required by European environmental legislation are much less important for this Plan.

The SEA tries to hide this failing by using extravagantly the term “*sustainable development*”. It mentions it, though, by applying this concept to *scarcity* situations and implying an increase in water supplies. In this way the appropriate strategies of demand management, linking it to the sustainable availabilities of each area, are left aside. This leads to a serious misrepresentation and false use of the term *sustainable development* confusing it with what should be properly known as “*sustained growth*”.

2. The SEA is not a study of the complete NHP, only the Ebro transferences

The SEA document does not evaluate the whole NHP, as would be necessary, but only the projected water transferences of the Plan. In this way a strategic assessment of the global coherence of the Plan is avoided. The impacts of the obsolete policies of “*subsidised supply*” are ignored. These impacts would be caused by the proposed new dams – about 120 new large regulating constructions in Spain, the country with most reservoirs per inhabitant and per square kilometre in the world - , linked to the corresponding extension of new irrigated lands – over 1 million new hectares.

3. The global impacts on the Ebro Basin are not analysed

The SEA fails to study and evaluate the impacts on the Ebro Basin as a single ecosystem. The synergic impacts of tens of new large dams (especially in the Pyrenees), together with the

development of 450,000 hectares of new irrigated lands, combined with the proposed huge water transferences, guarantee an unsustainable future for the *Ebro Delta*.

4. The causes of the problems are not analysed in the NHP's diagnosis

The analysis of the Mediterranean coastline's situation is based on the problems derived from the "scarcity of water". The causes of these problems are neither investigated nor diagnosed anywhere in the SEA (nor in the NHP memorandum). These problems are implicitly put down to the climate. The socio-economic and political interests which have encouraged this situation over the last few decades, and encourage it even more so in the present, are not studied. These interests have led to an illegal development of irrigation in over-exploited areas, illegal and uncontrolled pollution, and an urban-tourism development ignoring reasonable territorial and urban plans. That is to say, the unsustainability of the development model and the prevailing misgovernment of these areas is not analysed.

5. The NHP's diagnosis assumes an unsustainable growth in demand, avoids dealing with the misgovernment in these over-exploited areas, and undervalues the aquifers of the Levante (south-east coast of Spain)

The NHP accepts excessively large expectations for agrarian demand – based on over 1 million hectares of new irrigation – and urban/industrial demand – with a growth of 35%. This is the traditional strategy of exaggerating the expectations of demand to justify the huge amount of large water infrastructures projected in the NHP. These strategies of "supply" with a massive public subsidy are backed by important interests and lobbies.

The administration's lack of control over ground water management has led to serious misgovernment. The Administration has ended up as an accomplice to the massive and illegal over-exploitation of aquifers. This leads to the increasing cultivation of more and more land, and yet more new illegal irrigation. At the same time, demands to supply the active processes of the urban-tourism speculation common to most of the coastline also increase. This approach is encouraging expectations of legalisation of these actions, and even the assignation of new resources via the proposed water transferences. This promotes the circle of more and more irrigation and aquifer over-exploitation, as explained and documented in this report.

The supposed 300 hm³/year deficit of the Jucar Basin, mentioned in the NHP and assumed in the SEA, contrasts with the 1,100 hm³/year of available "excess water" established in the Basin Plan. In our report we document the serious errors in the calculation of resources in the NHP, which fails to take into account many of the underground resources and agrarian returns.

6. Insufficient analysis of the effects of the Climate Change

The NHP memorandum presents an optimistic scenario for the Climate Change. However, even using this scenario, the supposed "excess water flows" in the Delta will have disappeared in just over twenty years. For this reason, the NHP reduces its analysis to a twenty year horizon. Simply projecting these predictions forward to 50 years gives the expected flow as negative: -217 hm³/year in the NHP, and – 2,244 hm³ in the White Paper of Water, published only two years ago by the Spanish Government itself. To sum up: the SEA of the NHP suffers from a lack of rigour in the application of the caution and preventative action principles.

7. The Water Directive's quality criteria to assure the conservation of the ecological state of rivers, deltas, estuaries and coastline are not followed. This compromises the Sustainability of the Delta.

It is worth noting that the aforementioned calculations have even been carried out using as environmental needs the badly-named “*ecological river flows*”, proposed in the Basin Plans. These obsolete figures should be revised in accordance with the Water Framework Directive. The arbitrary figure of 100m³/sec fixed for the Ebro Delta in the Basin Plan is particularly serious. The studies presented herein have been published over the last few years by teams of the most prestigious specialists in this matter. They demand a flow system to guarantee the sustainability of the Ebro Delta (9,000 – 12,500 hm³/year) which is almost four times that given by the NHP and SEA as environmental requirements (3,000 hm³/year).

8. The sustainability of the best conserved fluvial ecosystems of the Pyrenees and other mountain areas is threatened by the construction of 120 new large dams

There are about 120 large dams proposed in Appendix 2 of the NHP. Many of these threaten sections of rivers at the head of basins making up the best conserved ecosystems of Spain, or even Europe in some cases. This breaks the “*No Deterioration*” principle established in the Water Framework Directive. In many cases these reservoirs will flood inhabited valleys or even urban settlements. The foreseeable effects in the Central Pyrenees, in the Ebro Basin, would be particularly serious as a direct or indirect consequence of the transference plans of the NHP.

9. There is no serious analysis of the quality of the waters to be transferred, nor the impacts on the receiving areas.

The waters to be transferred from the Lower Ebro are of poor quality. They contain on average more than the 1000 µs/cm salinity limit for pre-drinking water recommended by the UE. These waters would then be stored in the Tous reservoir and mixed with waters from the Júcar, which at present are within the above mentioned limits. However, this mixture would then be over the limit, putting in danger the potable quality of the drinking water for the Valencia area (1 million inhabitants). Future predictions of the evolution of this quality, given in our report, show a drastic worsening. This would occur especially due to the huge water extractions for new irrigation along the Ebro, and the returned salinity impacts. Besides this, the SEA avoids analysing the effects on the salinisation of cultivated land as a consequence of using this poor quality water and the intensification generated by the present unsustainable development model. As a reference for this, we analyse the spiral of deterioration of the Lower Segura fields caused by the Tajo-Segura transference, in spite of the high standard of waters transferred.

10. The SEA document lacks a rigorous analysis of the effects on protected areas, habitats, and species.

There is a unanimous opinion amongst the most prestigious ecological movements, independent experts, and Doctors of Ecology at Spanish Universities: *the NHP involves the largest combination of negative impacts on protected areas and species ever passed in a EU country.* WWF reports point out in detail serious effects on 14 types of habitat and 18 species, protected by the Habitat Directives. They also detail effects on 82 CIAs (Common Interest Areas) proposed by the Spanish Government itself for the Nature 2000 Network. The SEO-Bird Life report details effects on 109 of the 391 IBAs (Important Bird Areas) in Spain (27% of the total), and 47 of the 202 SBPAs (Special Bird Protection Areas), which make up 23%.

We also include the clearly critical reports of the main ichthyologists Spain, which denounce the negative impacts on fish species of high value, given the high number of endemic species in Spanish rivers (the highest in Europe). Both the dams and, especially, the transferences will threaten the indigenous biological structure of Spanish rivers, in some cases even threatening the survival of protected species.

11. *There is no serious study of the social impacts and regional inequalities due to these water transference policies.*

The SEA document presents a poor treatment of the social impacts without studying the serious conflicts created by the NHP (with the largest social movement of recent decades, over one million people in demonstrations against the NHP). Civic movements are ignored; those of the Pyrenees against the threat of flooding inhabited valleys; the movements of the Ebro Delta against the negative impacts on their fishing industries, agriculture, and the very existence of the Delta; in inland areas, especially Aragon; even in areas such as the Lower Segura in Alicante which has lived through the tragic experience of a previous transference (Tajo-Segura), accelerating the salinisation and pollution of their waters and lands.

Referring to the application of a principle of regional inequality, here we insist on the need to know precisely which areas will be affected positively or negatively to see if this balance is being sought. The areas affected most negatively by the NHP and its water transferences are without doubt those of the Pyrenees and Lower Ebro. Their socio-economic development parameters are clearly inferior to those of the areas which, theoretically, will benefit: the Barcelona metropolitan area and Levante, Murcia and Almeria coastline already have the highest income per inhabitant in Spain. The SEA takes average values at a regional level (Aragon, Catalonia, Valencia Autonomy, Murcia, and Andalusia) which deforms the territorial reality.

12. *There is no serious analysis of the economic irrationality of the transferences and NHP.*

This study details the errors and twists which have permitted a fraudulently positive cost-benefit balance in the NHP memorandum (which the SEA uncritically accepts). In reality, if this balance is calculated rigorously the result is clearly negative. The main points behind these errors and tricks which unacceptably slant the NHP's calculations are summarised here:

- a) The opportunity value for urban waters is overestimated at 0.81 Euros, taking values five times above the real market price. The legal market price for ground water in the considered areas is really only 0.15 Euros.
- b) A simplified calendar for the construction works and their start up is taken (it assumes that 100% of the water will be available one year after the start of the works). This distorts the cost-benefit balance, avoiding costs which from a realistic scenario would increase the unit costs by about 20-35% per cubic metre (because of erosion of discount rates in the period from the beginning of the works until 100% of the promised water is supplied).
- c) The methodical bases of economic analysis are transgressed by counting costs and profits derived from the use of and production of electrical energy; specifically, substituting the relevant *economic analysis* with a *financial analysis*, the energy produced by turbines is valued at 0.07 Euros/Kwh while the energy consumed by pumping is only valued at 0.03 Euros/Kwh. A *single opportunity value* for both energy consumed and energy produced should be taken, as is the case in the economic analysis required by any project with public finances.
- d) The predicted agrarian benefits are overestimated. Accounting concepts are confused as the concept of *net added value* is used as *benefit*. This leads the NHP to consider average profits of 0.54 Euros/m³, while in the same document the market price for ground waters is accepted as between 0.12 - 0.18 Euros. It is estimated that there would be almost no demand for water at over 0.36 Euros/m³, as the capacity for paying generated by irrigation does not arrive so high.

- e) The increasing problems to guarantee the supply due to the Climate Change are not accounted for economically. This Change would logically raise the costs of the water flows to be transferred.
- f) Technically pre-mature budgets are assumed. In projects on this scale, this would generate budgetary errors when the works are carried out which would easily be higher than the 30% predicted. The redemption period of over 50 years ignores that between 20 – 25% of the foreseen investments are for the kind of works (pumps, turbines, pipes etc) which should be redeemed over no more than 20 – 25 years.
- g) More realistic scenarios are needed, taking into account that the liberalisation of the international agrarian markets would erode the benefits and preferential conditions which the Spanish south-east and Levante intensive agriculture currently enjoys in the EU.

13. *The criteria of “complete cost recovery” of the Framework Directive is ignored, even in future predictions.*

Presenting the unit costs per cubic metre (0.32 Euros/m³) as average costs, there is no calculation of costs for separate stages. This calculation would allow us to detail more precisely the costs assigned to each unit of demand. It would allow us to compare these costs with other alternatives, giving an adequate dimension to the project. Developing these calculations for Alicante, Murcia, and Almeria the costs estimated by the Government itself rise to almost 0.60 Euros/m³. This is clearly above the costs of desalinisation of sea water. The Government’s own estimates that agriculture will not pay for water above 0.36 Euros/m³, shows the economic inconsistencies of the project, at least in its present dimensions. The costs after Tous (Valencia) are way above this limit, even after the Government’s optimistic calculations.

14. *The SEA unacceptably, and even suspiciously, excludes the consideration of market options as a tool for demand management.*

The PP Government reformed the Law of Waters to legalise the markets of concessive rights of water. Hence, the leaving aside of this kind of options is surprising. These options, adequately regulated by the Administration, could deal with many demands for water, especially in dry periods (Water Banks), based on voluntary transferences. This would allow tools for demand management without needing to increase supply.

15. *The SEA simplifies the range of strategic options and rules out evaluations of options not based on large transferences.*

As explained in detail in this study, there are viable alternatives based on mixed strategies not evaluated in the SEA which combine:

- a) The selective reconversion of irrigation lands, starting with the illegal ones. Referring to legal ones, the successful experience of the La Mancha area is analysed. Here, a suitable European compensation programme has managed to reduce by 300hm³/year the water extracted from the overexploited aquifers in very few years.
- b) The application of programmes and incentives to improve the efficiency of urban, industrial, and agricultural uses. There is a possible saving of about 650 hm³/year in the Levante area (between urban and agricultural savings).
- c) Optimising an integrated management of surface and ground waters.
- d) Reusing urban waste water, and desalinising brackish and sea water. These processes should be based on the urban demands of the coast to suitably manage the salty residues. The costs of these processes today is documented here as between 0.18 Euros/m³ for desalinising brackish water and 0.36 – 0.39 Euros/m³ for sea water. This is way below the obsolete and exaggerated values offered in the NHP and SEA.

e) Options of intervening markets (water banks) to give flexibility to the concessive system for surface waters, especially in times of drought, and resolve demand problems without increasing the available supply.

f) Promoting regional and urban planning strategies, in coherence with perspectives for a sustainable development.

A mixed strategy option of this kind offers reasonable and coherent alternatives to the NHP. Taken from new perspectives of sustainable development, they are not only viable but also much more economical than the water transference policies of the NHP.

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