



Position paper on the Foz Tua dam and the Alto Douro Wine Region

By local development, environmental NGO and companies of the Alto Douro,
to the WHC/ICOMOS/IUCN mission to Portugal,
following up on the meeting of 1 August 2012, Peso da Régua, Portugal

EXECUTIVE SUMMARY

1. Brief history. The Alto Douro Wine Region was inscribed in the World Heritage List in 2001 due to: (i) the long standing production of high quality wines including the world famous port wine, (ii) a landscape of unique and outstanding beauty resulting from the work of generations and (iii) a reflection of technological, economic and social evolution. In 2009 the Government approved the construction of the Foz Tua dam in the Alto Douro region. After complaints, UNESCO promoted missions to evaluate this threat.

2. Threat to authenticity and integrity of the property. The Foz Tua dam endangers the Alto Douro Wine Region: (i) vineyards are destroyed and port wine production and quality are threatened by climate changes caused by the reservoir, (ii) the landscape is shattered by the dam, highly visible from de Douro river and (iii) the lower 22 km of the Tua railway line, one of the most beautiful in Portugal and an integral part of life in the Alto Douro Wine Region for 140 years, is destroyed. In short, the Foz Tua dam compromises irrevocably the authenticity and integrity of the Alto Douro Wine Region.

3. Unsustainability of the Foz Tua dam. World Heritage Centre guidelines call for the sustainable management of classified properties, but the Foz Tua dam is a true paradigm of unsustainability: (i) social — the dam defaces the unique landscape of Alto Douro, destroys the Tua railway with a centuries-old way of life, and hinders the development of quality tourism in the Tua and Douro valleys; (ii) environmental — the dam and reservoir degrade water quality and destroy agricultural land, endangered habitats and species; and (iii) economic — the Foz Tua power plant is redundant and its electricity production will be ten times more expensive than the best alternative (energy efficiency measures). In the words of the official environmental impact statement, “the negative impacts present higher values than the positive impacts caused by the Foz Tua project.”

4. Flawed arguments for not stopping the dam. The dam promoter EDP, aided by the Portuguese Government, have presented a number of arguments to try and keep the Foz Tua dam, but every one of those arguments is false or flawed.

5. Positions of Portuguese State and UNESCO. EDP and Portuguese authorities have been consistently remiss in their commitments to protect the Alto Douro Wine Region. UNESCO’s WHC and advisory bodies produced excellent technical reports on the Foz Tua case that, strangely, so far were not followed by decisions in the World Heritage Committee. Works at Foz Tua go on, further degrading The Alto Douro Wine Region.

We can still save the Alto Douro Wine Region —stop the Foz Tua dam now.

1. Brief history

“Wine has been produced by traditional landholders in the Alto Douro region for some 2 000 years. Since the 18th century, its main product, port wine, has been world famous for its quality. This long tradition of viticulture has produced a cultural landscape of outstanding beauty that reflects its technological, social and economic evolution.” (Brief description of the Alto Douro Wine Region, <http://whc.unesco.org/en/list/1046>)

The Alto Douro Wine Region was inscribed in the World Heritage List in 2001.

In 2007 the Portuguese Government launched the National Program for Dams with High Hydropower Potential, commonly known by its Portuguese acronym PNBEPH (INAG *et al.* 2007). The program called for the building of ten new large dams, one of whose Foz Tua, located on the limit of the Alto Douro Wine Region core area. Those dams are very expensive and counter-productive for the Portuguese energy system, but by 2009 seven of them had been approved by the Government. In 2010 a concession contract was signed between the Portuguese State and EDP-Electricidade de Portugal (the largest utility company in Portugal) for the building of the Foz Tua dam.

During the decision procedures for the Foz Tua dam, the Portuguese Government did not inform UNESCO of the threat to the World Heritage property and did not consult with other relevant interested parties, national and international. Dr. Manuel Maria Carrilho, then Portuguese Ambassador to UNESCO, warned repeatedly both EDP and the Portuguese Government about the risks of the project, but his advice went unheeded.

The impact of the Foz Tua dam on the Alto Douro Wine Region is very significant but was never properly assessed by either EDP or the Portuguese authorities. This was shown beyond doubt by ICOMOS/IFLA (2011) and World Heritage Centre (WHC 2012a) reports to UNESCO.

However, the 36th meeting of UNESCO’s World Heritage Committee, convened at Saint-Petersburg in June-July 2012, chose to believe that the Portuguese State was willing to “slow down the pace of the construction work of the Foz Tua Dam and related infrastructure, as from the adoption of this decision until the report of the joint reactive monitoring mission is published and to implement the recommendations”. The monitoring WHC/ICOMOS/IUCN mission was in Portugal on 1-3 August 2012.

EDP and the Portuguese State did not comply with their commitment: works at Foz Tua go on, degrading the site more and more.

A large consortium of local development and environmental non-governmental organizations, along with wine producers, have opposed the dam due to its uselessness, unsustainability and impact on the Alto Douro Wine Region. Representatives of these organizations met with the monitoring mission on 1 August 2012. This paper is both a synopsis and follow-up of the information provided at that meeting.

2. Threat to authenticity and integrity of the property

As stated in the description of the property, the classification of the Alto Douro Wine Region rests upon three major features: (i) the long standing production of high quality wines including the world famous port wine, (ii) a landscape of unique and outstanding beauty resulting from the work of generations, and (iii) a reflection of technological, economic and social evolution.

The construction of the Foz Tua dam significantly endangers all of those key features.

Wine production is a delicate business, depending on ancestral know-how, technology, soil and climate. You can duplicate technology and to a certain extent know-how, but you certainly cannot duplicate the combination of soil and climate. The Foz Tua dam and reservoir will directly destroy a significant area of vineyards, and will inevitably change the climate in the surrounding area. The exact dimension of this influence has never been evaluated: the environmental impact assessment (Profico Ambiente 2008) did take note of this hazard, but, like other issues, did not pursue the matter in depth. In the opinion of wine producers in the region, some of whom are subscribers of this document, there is a high risk that even minor variations in the local climate due to the reservoir, namely higher humidity, will increase the likelihood of diseases in the vineyards; hence reduced production and lower quality of the wine. The proposed dam of Sela on the river Minho, on the border between Portugal and Spain, was reprovved due to this precise reason, in 1996 and again in 2004. In short, the Foz Tua dam significantly threatens integrity of wine production in the Alto Douro Wine Region, and this hazard was not properly assessed.

The landscape of the Douro is a result of the work of both Nature and Man. Along the centuries the human influence has taken a fundamental role, giving rise in particular to the extensive vineyards that are the trademark of the Douro valley; but the natural component, particularly in the valleys of the tributary rivers Sabor, Côa, Tua, Tâmega and Távora, have always been an integral part of such landscape (comprehending many of the vineyards), as acknowledged in the World Heritage classification. The destruction of the Tua valley by the Foz Tua dam and reservoir (along with the destruction of the other rivers by other dams, wished by EDP and by a faction in the Portuguese Government) is nothing short of an amputation of World Heritage property.

Technology evolves, and we can see a lot of new technology being used in the Alto Douro. We now have stainless steel vats and indoor plumbing, electricity and automobiles, railways and dams. The Douro railway line began construction in 1873 and the Tua line was inaugurated in 1887. They have been an integral part of life in the Alto Douro for the past 140 years, essential to a whole life style, to the social and economic development of the region and particularly the development of wine production. Where they were not decommissioned, railways are still important means of transportation, besides an excellent asset for quality tourism. Like rivers and their tributaries, major railways like the Douro line live off tributary lines such as the Tua. Destroying the Tua line, as implicated by the Foz Tua dam, is in fact killing the last rail link into the hinterland of the Douro valley, the last testimony to a fundamental part of the past and present development of the Alto Douro, and a threat to the continuation of the Douro line itself. The first two kilometres of the Tua line are actually inside the core area of the Alto Douro Wine Region, therefore strictly protected by the original classification, and they are absolutely essential for the operation of the line as a whole, since no equivalent alternative was considered.

Large dams are a more recent addition to the Douro, begun by 1960. The Douro dams tamed the river, but they did not change significantly the surrounding landscape; they did not eliminate vineyards or the riverine ecosystems, which subsisted in the tributaries and, to a lesser extent, in the Douro river banks (all the Douro dams are run-of-river, with small water-level variations); and the planning of those dams took great care not to affect the Douro railway. In stark contrast, the Foz Tua dam and power line will be, by any reckoning, a huge, ugly scar highly visible from the Douro valley (even if you hide part of the power station and line and paint the dam with funny colours); it will also irreversibly destroy the landscape, the ecosystem, the life style and the touristic value of the Tua valley, that is an integral part of the wine production region.

International expertise in regional planning, land management and impact assessment prove that core zones in sensitive areas are strongly influenced by events and changes at their boundaries — this is certainly the case at Foz Tua, the dam being only a few meters outside the core zone of the Alto Douro Wine Region and well within the buffer zone.

One might say you could obliterate the tributaries and still keep the core zone of the Douro valley, as one might say that you could amputate limbs off a person and keep him or her alive, even substitute the limbs with prosthesis; it would be true in a narrow sense, but it would also be intellectually dishonest and completely miss the point.

In a nutshell, the Foz Tua dam compromises irrevocably, on all counts, the authenticity and integrity of the Alto Douro Wine Region, as defined in the classification act of 2001.

3. Unsustainability of the Foz Tua dam

Operational Guidelines for the World Heritage Convention call for sustainability as an essential criterion in classification and management of World Heritage properties (WHC 2011, nos. 6, 36, 119 and 132). The Foz Tua dam is a true paradigm of unsustainability, socially, ecologically and economically. In the words of the official environmental impact statement: “The negative impacts present higher values than the positive impacts caused by the construction and exploitation of the AHFT [Foz Tua project], in the components analyzed by the EIS” (Profico Ambiente 2008, vol. 2, section 6.14, page 397)

3.1. Social unsustainability

The Foz Tua dam destroys unique cultural heritage, life style and job prospects. The overall effect is unquestionably damaging for local development.

The dam and reservoir will destroy or submerge the lower 22 km of the Tua railway line, between Foz Tua and Brunheda, eliminating definitely the viability of one of the most beautiful railways in Portugal, a fantastic touristic asset, a very important transportation means for local population, and the best chance for a rail link between the Douro and the upcoming high-speed line of Galicia that will shortly have a station at Puebla de Sanabria (Conde 2010, Pelicano 2010).

The dam will destroy irreversibly the unique landscape of the fabulous Tua valley, with a high value for rail, cultural, ecological and white water tourism, transforming it into a sterile reservoir with large water-level variation, which will be virtually useless for touristic purposes (IDP 2009). The cost of creating a job in the Foz Tua dam is 11 (eleven) times higher than the cost of creating a job in the tourism business in the Tua valley. Answering a questionnaire, the large majority of touristic businesses in the region said the dam would be harmful for local development (Simão and Melo 2011).

The difference between culture- and dam-based development is evident at Foz Côa: a half-built dam was stopped to save the World Heritage “Prehistoric Rock Art Sites in the Côa Valley and Siega Verde”. The Archaeological Park of the Côa Valley created 40 direct and hundreds indirect jobs, while the nearby Pocinho dam on the Douro created 2 jobs.

3.2. Environmental unsustainability

The Foz Tua dam will have a devastating environmental impact, well documented in the official impact statement (Profico Ambiente 2008) and in independent studies (Arcadis/Atecma 2009): (i) obliteration of rare river and riverbank ecosystems, including the extinction of migratory fish and other species that depend on natural rivers; (ii) disruption of ecological corridors essential for the connectivity of larger ecosystems, affecting other habitats and endangered species, e.g. the grey wolf among many others; (iii) cumulative degradation of river habitats resulting from several old

and new dams in the Douro basin; (iv) water quality degradation, by creating conditions for eutrophication; (v) added risk of coastal erosion by retention of sediments; (vi) destruction of vineyards and of good agricultural land that, in mountain areas, is largely confined to the riverbanks of major valleys.

3.3. Economic unsustainability

The alleged goals of the national dam program, PNBEPH (INAG *et al.* 2007) were to reduce greenhouse gas emissions, to improve energy import dependency, and to improve the share of renewables; but no targets were set for these goals. The only targets were to increase national hydropower capacity to 7 000 MW and hydro pumping capacity to 2 000 MW. Investment in the proposed projects will amount to some 3 600 M€, that with financial charges and electricity rates will translate to a total burden of 16 000 M€ to the consumers and taxpayers.

To the untutored eye, the program appears to be a major improvement in “renewables”, increasing hydropower capacity by nearly 50%. But when we look at the economic indicators, the new dams show an appalling performance: cost of electricity per kWh is twice the average cost of the existing system; production amounts to only 3.5% of electricity, 0.7% of energy imports and of CO₂ emissions avoided, and 0.5% of gross energy consumption of Portugal. Meanwhile, six power reinforcement projects in existing dams were approved, with a power capacity of 1 968 MW. Together with pre-existing capacity, this surpasses the PNBEPH targets: we shall have shortly, in the old dams, 7 020 MW of total hydropower and 2 510 MW of pumping capacity. Hence, none of the new dams are needed to reach the targets defined by the Program itself.

Portugal does not need more electricity production capacity: consumption is decreasing, partly due to the economic crisis but, more structural and important, due to a new trend of improvement in energy efficiency. We do need a transition from coal to sustainable solutions. Today the best and most cost-effective alternatives to the new dams are: (i) efficient use of energy, with a cost per kWh ten times lower than new dams, and a savings potential up to 30% of total consumption; and (ii) power reinforcement in existing dams, with a cost per kWh five times lower than new dams (Melo 2012).

In Portugal there was never an official study on the burden of energy policies to consumers and taxpayers. Our estimate, widely publicized and never challenged by the Portuguese authorities, is that the “new dam strategy” would represent an increase of 10% in the electricity bill, while a serious “energy efficiency strategy” would represent a decrease of about 30% in overall electricity cost (GEOTA *et al.* 2011).

4. Flawed arguments for not stopping the dam

EDP, aided by the Portuguese Government, has presented a number of arguments to try and keep the Foz Tua dam going, none of which stands close examination:

4.1. Minister for Environment: “Revoking the concession of Foz Tua is too expensive”

The Foz Tua concession cost 53 M€ to EDP; works executed to date may have cost a couple dozen million euros; our estimate, never contested by the Portuguese authorities, is that ending the concession would cost between 80 and 100 M€, or much less if the infractions by EDP were properly challenged (GEOTA 2012). In contrast, the subsidies to new, useless dams, approved in August 2012 by the Portuguese Government, amount to 300 M€, of which 33 M€ for Foz Tua. The burden to consumers and taxpayers created by the Foz Tua dam alone, were it allowed to proceed, will amount to between 2 000 and 3 000 M€ — 20 to 30 times more than the cost of stopping the dam now.

4.2. EDP: “Hydropower is a renewable energy”

Today our gauge is not renewability but overall sustainability. Rainwater is a renewable resource, but land and heritage destructed by large dams are not, especially in sensitive areas. Foz Tua roundly failed to follow World Commission on Dams guidelines for sustainability (WCD 2000), and is unsustainable on all counts, as demonstrated above.

4.3. EDP: “The impacts can be mitigated, by interring the power plant and other measures”

Of course the problem is not the power plant, ugly as it might be: the problems are the dam and power lines, highly visible from the Douro and impossible to conceal, and the destruction of the Tua valley and railway line, an integral part of the Alto Douro life and economy — impossible to compensate given their intrinsic value and unique role.

4.4. EDP: “Many workers will become unemployed if the work on the dam stops”

The real issue is of course sustainable development and employment in the region, not the jobs in construction per se. We have shown that quality tourism creates many more jobs with less investment than construction works, with the very important difference that tourism jobs are permanent and create local development, while construction jobs are temporary and do not contribute to durable development.

5. Positions of Portuguese State and UNESCO

The Portuguese State has been consistently remiss on its commitments to protect the Alto Douro Wine Region, crossing successive governments of different political parties — this is not a partisan issue, but rather a matter of concept of development (or lack thereof) and submission to corporate pressure. The Portuguese authorities repeatedly neglected to inform or deliberately withheld relevant information regarding the conflict between the Alto Douro Wine Region and Foz Tua and other dams (namely the project of Carvão Ribeira in the river Távora).

UNESCO promoted two excellent reports on the Foz Tua case: the ICOMOS/IFLA (2011) mission report and the WHC (2012a) status report to the World Heritage Committee. The contents of those reports must be upheld, because they illustrate clearly the reality on the ground and show the Foz Tua dam will indeed have a very significant and irreversible impact on the Alto Douro Wine Region.

Then, contrary to all evidence, the World Heritage Committee in Saint-Petersburg, June 2012, decided, strangely, to downgrade the request for halting construction works at Foz Tua, pending complete evaluation, to “significantly slow down the pace of construction work” (WHC 2012b). This blind acceptance of the declared goodwill of the Portuguese State was sadly misplaced, because it was interpreted by EDP and the pro-dam faction of Government as a sign of weakness and gullibility on the part of UNESCO. In practice EDP was allowed a free hand to create a *fait accompli*. Two facts show this:

- a) Works at Foz Tua proceed unchallenged, before and after the Committee meeting and the WHC/ICOMOS/IUCN mission. Despite lip service by EDP and the Government, the site is being destroyed in earnest as we write these lines;
- b) On 6 August 2012 (three days after the monitoring mission visit to Portugal), the Portuguese Government signed Portaria no. 251/2012, published in 20 August 2012. This attributes up to 300 M€ to subsidize construction of the new dams under PNBEPH, including 33 M€ earmarked for Foz Tua.

In short, EDP and the Portuguese State have repeatedly infringed commitments assumed before UNESCO regarding the Alto Douro Wine Region and the Foz Tua dam.

We have presented the WHC/ICOMOS/IUCN mission with clear evidence that the pace of construction work has been kept and the destruction of the site goes on. We also presented irrefutable evidence that the Portuguese Government attributed a large subsidy to the Foz Tua dam, only days after the mission visit to Portugal, with obvious contempt for the conclusions of the mission, whatever they may be.

WHC Operational Guidelines are very clear: should the authenticity, integrity or sustainable management of a property be endangered or significantly damaged, the property should be inscribed in the List of World Heritage in Danger. This is clearly the situation of the Alto Douro Wine Region due to the Foz Tua dam.

Should UNESCO allow this blatant disregard for World Heritage guidelines to go unchallenged, they will never have authority to demand anything from the Portuguese State. The Alto Douro will be severely damaged, and other properties will follow suit.

Conclusion

A clear WHC/ICOMOS/IUCN mission report, requesting the immediate and definitive halting of the Foz Tua dam and associated infrastructure, would go a long way to avert both the damage to the Alto Douro Wine Region and the loss of credibility of UNESCO.

The signatory organizations represent directly some 25 000 people — association members, employees and managers of companies, subscribers of manifestos and petitions, citizens from the Alto Douro region, Portugal and all over the world:

GEOTA - Grupo de Estudos de Ordenamento do Território e Ambiente

LPN - Liga para a Protecção da Natureza

Quercus - Associação Nacional de Conservação da Natureza

FAPAS - Fundo para a Protecção dos Animais Selvagens

GAIA - Grupo de Acção e Intervenção Ambiental

COAGRET - Coordenadora de Afectados pelas Grandes Barragens e Transvases

MCLT - Movimento Cívico pela Linha do Tua

AAVRT - Associação dos Amigos do Vale do Rio Tua

ALDEIA - Acção, Liberdade, Desenvolvimento, Educação, Investigação, Ambiente

MCDLT - Movimento de Cidadãos em Defesa da Linha do Tua

Quinta do Crasto

Quinta dos Murças (Esporão SA)

Quinta Nova de Nossa Senhora do Carmo (Grupo Amorim)

Quinta do Portal

SPEA - Sociedade Portuguesa para o Estudo das Aves

Grupo Flamingo

Grupo Lobo (Universidade de Lisboa)

The drafting of this Position Paper took 60 hours of voluntary work (not including previously available data and expertise).

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(Note: further references are cited in the above referred documents)