



Integrated Waste Management Systems & Public Private Partnerships: Probably the only viable perspective for Greece

by Konstantinos Nikolopoulos and Stavros Damianidis *, November 2008

Solid waste management is considered to be a multi-dimensional issue due to the variety of factors involved. Such factors indicatively include technology issues in respect to environmental performance and output, issues of strategic and political policy and planning, public awareness and social maturity questions, as well as issues of financial viability. In particular, most solid waste management projects:

- are defined by significant requirements in terms of technology used, during all phases of planning, construction and operation;
- possess a high technological risk, primarily arising from the complexity and the interdependence amongst factors such as raw matter for process, mechanical equipment and human management;
- depend on the project's construction contractor and its suppliers, since they define the operation of the project and its maintenance in terms of implemented technology;
- encounter issues of public awareness and social acceptance.

According to the Greek legislative framework, administrative jurisdiction in respect to solid waste management is allocated in all levels of public administration. Depending on the form of jurisdiction, namely:

- the Ministry of Environment, Physical Planning & Public Works (ΥΠΕΧΩΔΕ) is competent for issues regarding principal policy, national management strategy, national level planning, national legislation, consultancy on financing of projects, approval of environmental permits for projects of its jurisdiction, and incorporation of plans and projects in Operational Programmes (e.g. ΕΠΠΕΡ – Environmental Operational Programme);
- the Regional Administrations are competent for issues regarding the elaboration of Regional Management Planning (ΠΕΣΔΑ) and the incorporation of plans and projects in Regional Operational Programmes (ΠΕΠ), as well as the supervision of local ΠΕΣΔΑ projects and the approval of environmental permits for projects of their jurisdiction;
- the Local Administrative Authorities (ΟΤΑ) and the Solid Waste Management Authorities (ΦοΣΔΑ) are competent for issues regarding the design of management plans, the realisation of projects, the operation of facilities, the realisation of rehabilitation and post-care projects, the planning and observance of time-schedules, the implementation of pricing policy, and the cooperation and coordination with other waste management schemes, when and where this is necessary.



Solid waste management practices have evolved in Greece over the last years through various stages. This procedure has been combined with the gradual harmonisation of Greek legislation with European Directives and the elaboration and approval of solid waste management plans in prefectural, regional and national level. This frame has given ground for overambitious expectations, has initiated painful realisations and has finally thus demanded radical restructuring. Waste management is depicted by wishful thinking, still most expectation remain unfulfilled.

The overall combination of the aforementioned parameters has proven so far sterile, according to the majority of parties involved in the sector. Uncontrolled dump sites are an existing common practice of gratis waste disposal for many municipalities, "protected" by an unofficial law of silence. Notifications by the EU referred on the elaboration of ambitious management plans, which are still not implemented, while the fines procedure has not brought around any significant change. At the same time, even though most management plans and designs are accepted by the majority of the public and policy makers, their implementation confronts reactions of oppositional local government parties, NGOs, citizen movements and other interested parties, who express their disagreement just before the project's realisation. Such reactions often lead to appeals to the Council of State, which is the highest administrative court in the country, quite often resulting in annulment decisions. An annulment at such a level of court jurisdiction draws usually a review, partial or total, of all design requirements of the project, or even the repetition of the tender process with revised specifications or a new placement design.

One more reason for the failure of solid waste management practices in Greece is their segmental consideration. Even though most projects are considered within regional planning, allowing a regional integrated management scheme, their tender process is realised gradually. In this manner, projects including combined operations are not realised at the same time, causing a deficiency in their sustainability and an inconsistency in the required standards and their potential capability.

In the frame of a non-promising status and facing numerous issues on management practices, Greece undertook some very optimistic tasks for the near future, including:

- the reduction of biodegradable urban waste to be forwarded in landfills to 75% of their total per weight quantity produced in 1995, until July 16th, 2010,
- the reduction of biodegradable urban waste to be forwarded in landfills to 50% of their total per weight quantity produced in 1995, until July 16th, 2013,
- the reduction of biodegradable urban waste to be forwarded in landfills to 35% of their total per weight quantity produced in 1995, until July 16th, 2020.

Fulfilling these tasks comprises an optimistic scenario, since it presupposes that:

- integrated solid waste management systems will have been elaborated and realised, diverting significant quantities of biodegradable waste from landfills and thus prolonging the landfill's lifetime. This approach has to be implemented in contrast to the up-to-day practice of design and construction



of isolated facilities, which in the best of cases do not operate in coordination within the whole system;

- recovery and recycling projects will have been prepared and matured in the course of time, aiming particularly at:
 - the construction and operation of time schedules and the contribution to the local ΠΕΣΔΑ designs,
 - project funding,
 - implemented technology and project capacity,
 - products and their post-use and utilisation, and
 - pricing policy of the offered services;
- ΦοΣΔΑ will have been upgraded in respect to their role and operational capabilities in the long-term, so as to become key players in development and operation of the solid waste management sector, as also foreseen by the legislative framework.

It has been widely acknowledged in the last five years that the soundest way to realise such management schemes is the provision of motives aiming at the active participation of the private sector. Such approaches offer reciprocal gains, such as concession and operation fees of services and facilities for defined time periods. The required projects in solid waste management possess budgets that cannot be undertaken solely from the national budget or the Community Support Frameworks (CSFs). Furthermore, international experience and knowledge transfer for similar infrastructure projects deem necessary for cooperative operation and effective performance. By implementing such an approach, Greece shall overcome the status quo of waste burial and obtain an active, effective and profitable potential in waste management, promoting technological development and implementing financially sustainable technologies. Local administration along with ΦοΣΔΑ ought to have an active participation in these projects as project coordinators and supervisors and not act as the project's operator. If this is not the case, ΦοΣΔΑ, along with the local administration and the public sector in general, play the double roles of the controller and the controlled, usually unveiling in practice opposable interests.

Greece falls actually short in sound solid waste management, but the issues in question have been already detected and confronted in other advanced countries. International experience shows that solutions are neither simple nor imminent. Still though, private sector initiatives have provided answers in such cases. The example of the United Kingdom shows a fertile cooperation between public and private sector in developing waste management systems under the Public Private Partnership (PPP) scheme. As a result, solid waste process units were constructed and are being operated by private companies. At the same time, the public sector binds the operators with thorough and detailed performance contracts, ensuring a clean environment and providing for quality standards. These provisions are offered for the



price of an annual concession fee, until the facility stems back to public ownership after suitable training of the competent public sector officials.

The European market in respect to solid waste management has a wide span and increases steadily in size. Its annual turnover is estimated at approximately 100 billion € (EU-25), showing increasing rates of a range of 3 to 5%. A distinctive feature of this market though, is that it regularly undergoes significant changes, being dependant on the European institutional framework regarding environmental protection.

According to EUROSTAT, private investments depict an increase of 0.8%, compared to the 0.6% of the public sector and in respect to the European GDP. Forecasts show a further increase in private investments, mainly due to the strict fiscal policy and the excessive expense of the public sector.

It is hard to believe that this successful model has already been in operation in Greece as well. The first Greek PPP project recently entered its construction phase, assigned to a local engineering construction company. This example, being a building project, is definitely simpler in conception and operation than a waste management infrastructure. Still though, the key to success for PPP projects in all cases, and independently of size or complexity, is an economically healthy and know-how rich investor company or consortium.

Greek law 3389/2005 regulating such partnerships has entered now into force and important PPP projects keep maturing and developing throughout the country; in this frame, two tender for consultancy services comprise a unique opportunity in the solid waste management sector, these being:

- the implementation of infrastructure for the integrated waste management system in the Region of Western Makedonia (northern Greece), and
- the implementation of an integrated waste management system in the Prefecture of Thessaloniki (northern Greece).

A clear indication of the importance given to PPP issues is the intense interest shown by international consultancy groups specialised in waste management and PPPs. PPP projects are definitely not the only solution available for waste management. Still though, they are a sound way for large-scale project development, since the involvement of private funds ensures a quality of services and a requested performance level, being also profitable for the operator company. Time shall prove that solid waste management via PPPs is an effective and sustainable provided service both in the short and in the long term.

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