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CONSENSUS BUILDING AND SUSTAINABILITY: SOME LESSONS FROM AN ADVERSE LOCAL EXPERIENCE IN GREECE

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Abstract. The paper focuses on the example of a local island community in Greece, to illustrate the difficulties of effective consensus building, in support of sustainable policies. In the first section the issue of sustainability and the importance of participation are discussed, before moving to a brief outline of the nature of participation and its sources since the 1960s. It follows an analysis of the epistemological framework of consensus building process which is considered as the most integrated and sophisticated version of participatory planning. This analysis serves as a background for judging the appropriateness of consensus building for the resolution of an environmental problem harassing a Greek island community. It is about the problem of water availability and management in the small Aegean island of Leros. The paper shows how illegal practices in the use of water, administrative fragmentation and confusion over knowledge of the problem and its solutions lead to divisions in the stakeholder groups and to obstacles in the way of participation. The intrinsic problems embedded in Greek (and probably not alone) society and political culture, which prevent collective action and participation, account in part for the anticipated risk of unwelcome, illegitimate outcomes of a potential consensus building process. Nevertheless, if communicative planning is to gain universal acceptance, it should first resolve some critical theoretical and practical shortcomings related to its normative, ethical and philosophical assumptions.

Key words: communicative planning, communicative rationality, consensus building, Greece, participation, sustainability, water policies in the Mediterranean region, water shortage.

1. Sustainability and the quest for participation

Sustainable development is a major goal of EU policy. The objective of achieving "balanced and sustainable development" is now firmly established in the Treaty of the European Union (*Consolidated Treaties*, Luxembourg, 1997, p. 12). The sustainable use of space and resources is a precondition, emphasized in the European Spatial Development Perspective, as adopted in Potsdam in 1999, where the three components of sustainable spatial development (social, economic and environmental), are

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specified as including economic and social cohesion, protection of natural resources and cultural heritage, and balanced competitiveness of the European territory. Sustainable development and planning is now established both as a body of theoretical investigation and as policy, at European and national levels. However, its assumptions, objectives and content are not always understood by the public at large, especially their comprehensiveness and global nature. Inversely, the community of academics, researchers, government officials and professionals, engaged in the study, planning and implementation of sustainable development, particularly spatial development, does not always have a satisfactory grasp of the view of the citizens, which, quite naturally, tends to focus on the level of everyday life and experience. It is therefore essential to bridge this gap, if EU sustainability policies in a variety of fields are to be comprehended and espoused by Greek citizens.

The European Union action programme "Towards Sustainability" of 1993 (Council of European Communities, 1993) contained repeated references to the role of the general public, as individuals concerned with quality of life and the state of the environment, producers of waste and pollution and consumers of goods and services, as well the active involvement of NGOs, professional associations and trades unions in the process of awareness-building. Eight years later, the Commissioner for the Environment, in a statement to the European Parliament in July 2001, on the results of the European Council in Göteborg, stressed that "the environmental dimension of sustainable development is now on a par with economic and social development". The European Commission now wishes to "evolve an environmental policy that is more guided by the principle of partnership and shared responsibility and less by regulatory norms" (Baker, 2000). Hence, it is argued here that the sooner the public embraces the priorities of sustainability, the higher will be the chances of early success of policies and actions with a direct impact on economic growth, social welfare and employment generation. For this reason, raising public awareness of sustainability content and policy can facilitate the success of policies on, say, regional development, social cohesion, employment and the protection of the natural and manmade environment. Sustainability without meaningful participation now seems both impossible and almost a contradiction in terms. The Aarhus Convention, adopted in 1998 at a ministerial conference convened by the UN Economic Commission for Europe and now in force, is based on three pillars:

- the right of public access to environmental information;
- the right of the public to participate in decision-making processes; and
- the right of the public to have access to justice.

In their discussion of strategies for sustainable development, the authors of a handbook of the World Conservation Union and the International Institute for Environment and Development, emphasize that "sustainable development involves trade-offs between economic, social and ecological objectives. Such trade-offs cannot be determined by "scientific" means alone, no matter how multi-disciplinary. They are value judgements, and therefore "people-centered" approaches to sustainable development strategies are needed. Participation of stakeholder groups is critical for decision-making, and for all tasks of the strategy cycle, taking different forms for each task". In their view, successful strategies are participatory. Conversely, "failed" strategies – those that appear to be going nowhere, even though the documentation may look good – are frequently characterized by lack of participation" (Carew-Reid et al., 1994).

2. The nature and recent history of participation

However, the question is what kind of participation? And under what conditions? Although this paper does not presume to be a theoretical treatise on the subject, certain introductory remarks are in order. We can start by recalling Arnstein's "ladder of public participation", which starts with manipulation and therapy and proceeds, in ascending order, to information, consultation, placation, partnership, delegated power and, finally, citizen control (Darke, 2000). Also, by reminding ourselves that participatory attempts may end up by reinforcing systems of domination and social control (Saunders, 1983). They may, on the other hand, nurture more radical movements. It could be, as Friedland (1982) points out, that "participation is necessary to power". This is so because existing power structures manipulate participation (the first rung of Arnstein's ladder) so that the social system can limit public intervention "to forms which reinforce capitalist social relationships" (*ibid.*).

The interest of governments in public participation in one form or the other is not usually innocent and motivated by democratic considerations. It can be a "hidden agenda" of mobilizing interest simply to counteract expected reactions to particular policies or of striking first in order to confuse the issues. At best it can be the result of a realization that without a formalized system of controlled participation there can be no chance of success of their policies or actions, not to mention the influence of a populist stance, designed to please their party constituents. This may have been the case of the introduction of participation procedures in the town planning system in Great Britain in the 1960s, at least if we interpret correctly the analysis by McKay and Cox (Cockburn, 1977; McKay and Cox, 1979), or of the creation of neighborhood councils, now virtually forgotten, by the Greek socialist administration in the mid-1980s.

Naturally, the movement towards participation internationally owes a lot to developments in Britain and the United States in the 1960s. Advocacy planning as a concept evolved in the USA, both theoretically, with the writings of Paul Davidoff (see his 1965 "Advocacy and pluralism in planning", reprinted in Campbell and Fainstein, 1996), and in practice, as encouraged by the Model Cities Program of that period (Rein, 1972). As Herbert Gans wrote at the time, there is "a more general re-evaluation of the relationship between the planner and the citizens, which began with the realization that the traditional appeal for citizen participation in planning was often only a demand for citizen ratification of the planner's decision…" (Gans, 1972). Participation in the British town planning system became a statutory requirement, following the 1968 Skeffington Report (Fagence, 1977; Gibson and Langstaff, 1982). The report's recommendations did not of course remain uncriticized, e.g. because of their paternalistic nature (Eddison, 1972). These developments in the Anglo-Saxon world made an impression in other European countries. It is difficult to decide why, e.g. in a country like Britain, these developments occurred in that particular period. "The growth in the number of local pressure groups" and the "growing attempt by people to become involved with specific institutions of which they are an integral part", as Craven (1978) has suggested, may have been the reasons, although they seem to be outcomes themselves of other deeper reasons. The fact is that they became an important precedent, which was later followed by the encouragement of voluntary organizations during the inner cities crisis of the 1970s (Gibson and Langstaff, 1982). The doubt of course remains as to whether participation did indeed spread beyond the confines of the middle class (Buttimer, 1972), to those most in need or those who had something of value to contribute. There is also the lingering doubt whether the mass of the citizens wishes to participate or not (Fagence, 1977).

Demands for participation and citizen involvement are now placed on a new footing as a result of the universal adoption of sustainability goals and policies. Under this new light, it is no longer a matter of concessions to the public at large, to win acceptance of actions and policies, but a matter of equity, a basic goal of sustainable development. Haughton (1999) distinguishes five interconnected equity principles: Intergenerational, intragenerational, geographical, procedural and interspecies equity. His concern with procedural equity "covers what is sometimes referred to as the principle of participation", some forms of which, he acknowledges, "can undermine rather than support democratic processes of engagement". But he goes on to insist that "it is clear that participation is central to achieving effective and sustainable processes of regeneration, owned and mobilized by the general public as well as state authorities".

In the late 1980s and throughout 1990s the discourse on participatory planning moves forward to what is usually referred to as communicative and collaborative planning. This step forward of the relevant international dialogue is rooted on communicative rationality as developed by Habermas (1984). The attributive adjective "communicative" was introduced in the planning terminology by Forester (1989) and signified a major turn in the perception and use of information in planning. The "objectivity" of information produced by experts – and including such material as surveys, costs and benefits of alternative policies, feasibility studies, etc. – is no longer undeniable. Already by the early 1970s, there has been a growing skepticism about the conventional role of planners as objective information providers delivering unbiased, professional advice and analyses to elected officials and the public, who in turn make decisions. Indeed, there is more literature documenting the failure of information to influence decisions than demonstrating success (Innes, 1990).

Communicative action and planning discredits the model of instrumentally rational information use. According to the adherents of this stream of planning thought "truth", "information objectivity", "communicative rationality" and "collective knowledge" are ideals which can never be achieved fully. Nevertheless, these are best approached through collaborative, communicative processes producing better products than does individual expert-based analysis. This is because communicative planning brings to light shadowed but valuable kinds of information. Technical, formal or scientifically validated information has of course its place, but it is not privileged. Other important kinds of information are participants' own experience; unscientific knowledge related to myths, fantasies and mentalities; images and representations as well as intuition (Innes, 1998). This holistic information and knowledge incorporating rational, ethical and imaginative elements and formulating the new and enriched foundation of planning policies goes back again to Habermas notion that there are three types of knowledge interests: (1) The interest in knowledge for instrumental or technical purposes which is served by empirically based, scientifically grounded knowledge, (2) The practical and interpretive interest which is served by knowledge grounded in experience and tradition (myths, metaphors, stories, etc.), (3) The critical or "emancipatory" knowledge interest to break out of assumptions, rules and expectations that make us lose touch with some deeper reality. According to Habermas this is served basically by intuitive knowledge (Innes, 1998).

From a wide range of collaborative, communicative forms of planning consensus building among stakeholders is considered – in the USA and not alone – as the most systematic, integrated and sophisticated version. This form of planning grows continuously in popularity among both academics and policy-makers (Innes and Booher, 1999). This is because consensus

building can produce such innovative and pioneer results as "collective knowledge", "collective intelligence" and new "intellectual, social and political capital". It does so through dialogue that engages all those with differing interests around a task or a problem, in order to deliver and exchange all above kinds of information and knowledge.

Consensus building according to Innes and Booher (1999) can be understood as *…part of the societal response to changing conditions in increasingly networked societies where power and information are widely distributed, where differences in knowledge and values among individuals and communities are growing and where accomplishing anything significant or innovative requires creating flexible linkages among many players*. Consensus building owes a substantial debt to the practice and literature of negotiation and mediation (Moore, 1987; Susskind and Cruikshank, 1987; Carpenter and Kennedy, 1991) which have produced techniques for meeting management and discussion that ensure a civil environment where all can express their interests and become informed, where constructive discussion can occur and where consensus is the goal. The adherents of consensus building contend that it leads to agreements among stakeholders who would otherwise not talk to one another, much less join a common proposal. They also argue that these agreements are of higher quality than decisions made through more conventional processes (e.g. voting or multi-party negotiation) in that they can produce mutual-gain solutions (Innes and Booher, 1999; Harter, 1997; Susskind and Field, 1996). Furthermore, they believe that these agreements are more durable and implementable because they are less likely to trigger sabotage during implementation by disregarded stakeholders (Ostrom, 1990; Innes and Booher, 1999). These agreements are also more likely to be fair and be regarded as fair. Finally, the solutions produced by consensus building are likely to be sustainable because both environmental and economic interests have been taken into account; also because the process boosts the capacity of key-players to adapt information, knowledge and policies to change (Innes and Booher, 1999).

Several authors preoccupied with consensus building evaluate its intangible and indirect products as the most important ones. The formulation of shared definitions of problems, building mutual trust between traditional political opponents, fostering of new relationships and creation of shared learning, the development of new public interest conceptions are only a few of these intangible products. Communicative action produces new "holistic" information. This new information type condensing and incorporating multiple scientific and ethical individual "knowledges" transforms the participants themselves during the process. The new type of information is then embedded in the thoughts, practices and institutions of the community influencing in the long-run public policy actions. A new micro-culture is generated.

3. The fundamentals of consensus building processes: A framework for judging its application

Consensus building has been invented and conceived as a process to "break logjams created by intransigent positioning", to "satisfy mutually conflicting interests", to "reduce areas of conflict". Consensus building constitutes an alternative way of policy-making very different from the well-known confrontational tactics of the past. Actually it is about a series of methods and principles for "getting to yes" as Fisher and Ury (1981) put it eloquently. To put it another way it has been generated, among others, as a response to the problem of frictions between public agencies and private interests in the field of public policy formulation and implementation.

The contemplation behind consensus building is the first issue under question. Consensus building processes take place within specific contexts of socio-economic relations and cultural patterns. These imply a set of fixed assumptions and settled conditions. From first view consensual agreements cannot be otherwise but restricted by the established context; in other words the agreements cannot be but manipulated or controlled by the fixed conditions and hierarchies. Communicative rationality speaks for participants' ability to challenge assumptions and question the *status quo*. But can they?

Hence, the intentions behind consensus building is the first issue under question. The second issue is connected to the conditions lending epistemological and ethical credibility to the process. These conditions are explicitly quoted in the theory of communicative rationality (Habermas, 1981, 1989):

- All key-stakeholders must be engaged in the dialogue.
- All participants must be equally informed, listened to and respected and none can be accorded more power than others to speak or make decisions.
- What participants say in discussion must be sincere, comprehensible (it must make sense to others and fit the context), accurate (in the scientific sense) and must have a legitimate basis (the participants must have acceptable reasons for the claims they make).

The reasonable question raised is the following: Do real micro- and macro-environments in terms of the economy, society and political structure allow for such conditions to take effect?

The next critical issue is the appropriateness and legitimacy of the solutions from the environmental, social and political point of view. Whatever the proposed solutions are acceptable as long as they have been the harvest of consensus building deliberations? Moreover, there is the problem of implementation. Are there in place the necessary administrative mechanisms

and institutions to materialize emancipatory and innovative solutions coming out of fruitful deliberations? What if they are not?

It follows a systematic search for answers to the above questions by looking at an actual situation within the specific political, cultural, economic and social context of the Greek society. The example under consideration is the water problem in the small Aegean island of Leros. This particular case is serving as a test for judging legitimacy and hypothetical application of consensus building processes for environmental policy-making in Greece. The next paragraphs examine the appropriateness and feasibility of consensus building as a reliable path towards water policy formulation and implementation.

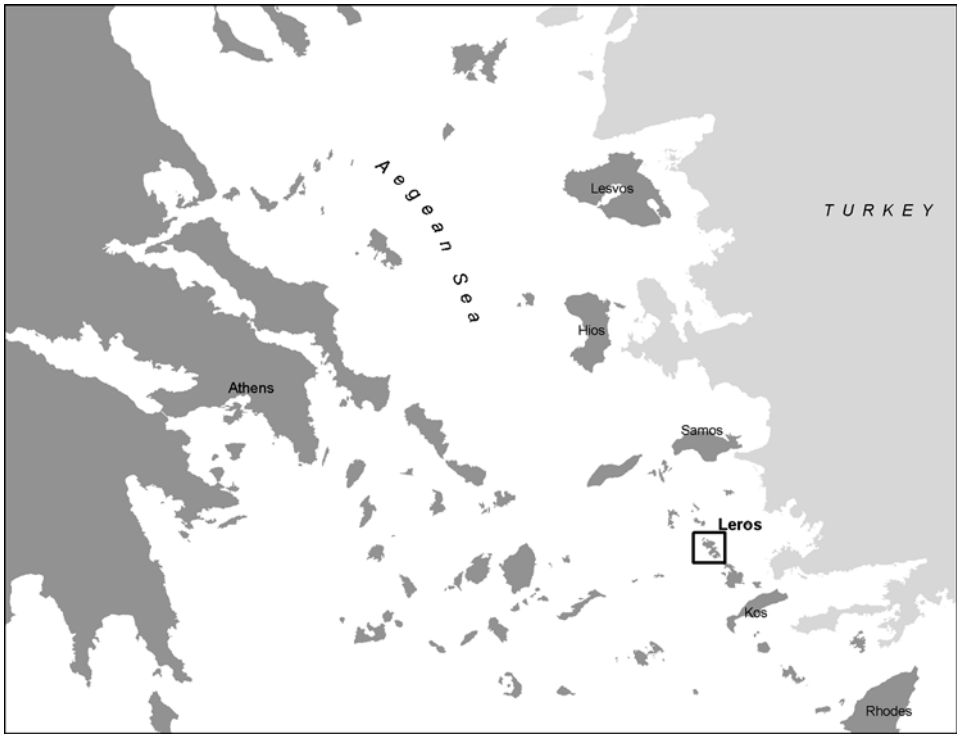
4. The water problem in the island of Leros and the rights of the public

Access to a natural resource of vital importance, such as water, is part of the broader issue of access to environmental resources in general. Public participation is at the heart of the ''right of environment'' which emerged for the first time in the 1972 Stockholm Conference and in particular in the first principle of its declaration. Since then, in the case of environmental problems and policies, four fields or courses of public participation, corresponding to the four perspectives of the ''environmental right'', won wide acceptance:

- The right of access to relevant environmental information.
- The need to build problem awareness.
- The right to participate in policy decisions and actions.
- The right to complain, appeal and sue.

The island of Leros is a small East Aegean island belonging to the group of the Northern Dodecanese (map 1). Its population (7818 in 2001) and territory (53 km^2) make it the second largest island in the group. The basic land uses of the island are indicated in the table following (Table I). The island with its smooth natural relief and the visible architectural and urban remnants of its Italian occupation has acquired a bad, and largely unfair, reputation, because of its mental asylum, which has now shrunk to a small, regional mental hospital. In the context of the present work however, the emphasis is put on another long-lasting problem of Leros that of water shortage, a problem which besieges not only to the community of Leros but other Dodecanese island communities as well, causing considerable hardship.

The problem of water resource shortage in the island of Leros becomes apparent in a number of ways and affects adversely all aspects of daily life and economic activity. The island territory is continuously and repeatedly



Map 1: Leros Island location.

bored for water, either legally or illegally. Altogether legal and illegal drillings are numbered more than 60 (DEYAL, 2000).[1] Several of these drilling efforts prove ineffectual or cause adverse environmental effects, since the relevant licenses, whenever they exist, are issued by remote administrative departments disregarding local water resource data or by local authorities yielding to the pressures of their electoral clientèle.[2] Underground aquifers are constantly being lowered and salinization leads gradually to deterioration of water quality. Several cultivations suffer damage due to irregular irrigation and salinized water.[3] Settlements and developments on higher ground experience, during the summer, water supply interruptions and there

Table I. The basic land uses of Leros island, 1991.

	km^2	%
Total area	74.2	7.41
Cultivated land and fallowing land	40.0	53.91
Pasture land (public and private)	23.6	31.80
Forest land	3.5	4.72
Water surfaces	0.1	0.13
Settlements	1.5	2.03
Other land uses	–	–

Source: National Statistical Service, 1991.

are acute problems of unequal distribution of water supply.[4] There are risks of water contamination in the case of unauthorized wells drilled next to sewage tanks (NTUA, 2000). Water pipes and electric household appliances are eroded by salinized water.[5] It appears, that there are significant water losses because of pipe leakages, due to poor maintenance. Pipes burst frequently due to abrupt pressure changes when summer vacationers make their mass exodus from the island (NTUA, 2001).

Furthermore, the competent authorities and agencies for water resource management are not able or lack the means to monitor water consumption, because of unauthorized abstractions, hence they cannot formulate well-documented, reliable policies. There is a waste of public money and effort on oversized dams and tanks, either currently malfunctioning or which were never actually used.[6] One suspects in addition the existence of illegal deals for the procurement of a water connection. Finally and above all there is an obvious lack of co-ordination between the many competent agencies for water protection and management (Figure 1).

Having in mind the public's environmental rights in the case of the water shortage problem of such a small local community, one could put forward a series of public participation objectives and tasks:

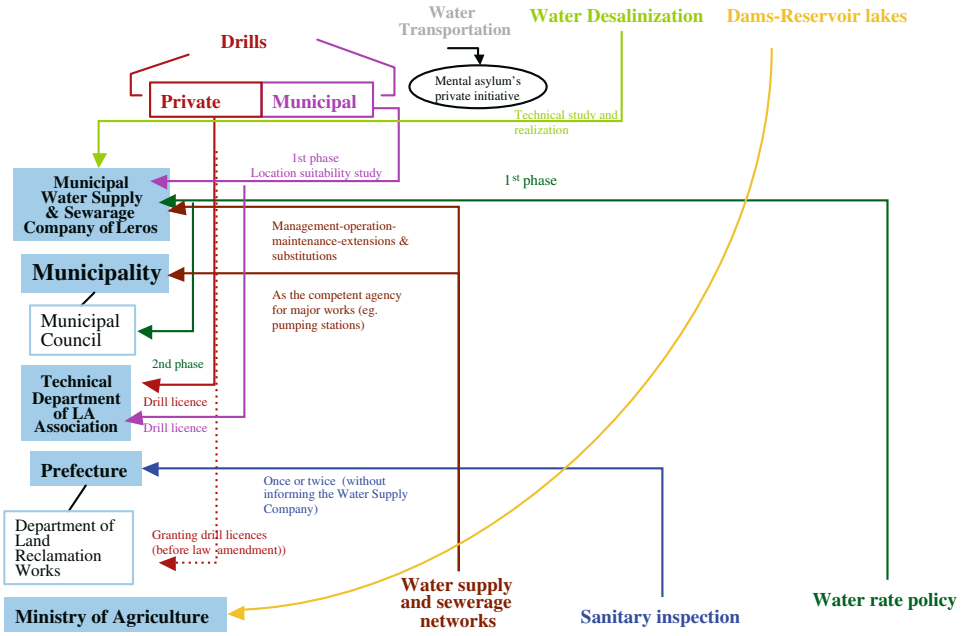


Figure 1. Water abstraction and water supply in the case of Leros: administrative competences referring to the study, construction, operation, maintenance, utilization, cost estimate of technical infrastructure and water rate formulation.

- Public sensitization on the problems and issues of water exhaustion, pollution, wastage and scarcity.
- Public education/information on the causal factors of the ongoing degradation and of the underlying forces inhibiting policy success.
- Public dialogue, conflict resolution and consensus-building on a new or reformed water protection and management policy package.

Actually the first two tasks are prerequisites of the third which is the potential consensus building process. "Informatization" of the local community at large and the stakeholder groups in particular is the basis for an informed dialogue and for building collective knowledge and consensual solutions. Essential agents (and key theoretical concepts) for carrying into effect these participation processes are the so-called policy actors on the one hand and the stakeholder groups on the other. These fundamental sociopolitical bodies are standard elements of consensus building processes. The first are agents releasing knowledge or exercising power or constructing chains of persuasion and influence. The second are multiple interest bodies affected by, responding to or resisting policy processes. We argue that in the case of small Mediterranean island communities the prevailing environmental ethics and the familiar (historically formulated) patterns of exercising and/or resisting political power actually obliterate the prospects of success in public awareness. These ethics and patterns also undermine the appropriateness and legitimacy of consensus-building as a reliable path for environmental policy formulation and implementation. The networks and the channels for illegal water procurement play a catalytic role; they erode and warp the mentality of stakeholder groups and they disorient and split the administrative and political structures.

4.1. Stakeholder Groups and Interest Splits Caused by Illegal Practices

The water shortage problem and that of the best policy to cope with it affects the resident household consumers, the households of the holidaymakers, the tourism entrepreneurs and the farmers engaged in open or greenhouse cultivations (mostly citrus fruit and garden vegetables), who depend on the availability of irrigation water. These are the stakeholder groups. The resident households complain of poor water quality, water supply inequalities and interruptions and disproportionately high water costs. Low quantity consumers (consuming less than 10 m^3 per bimester), although responsible for less than 8% of total annual consumption are charged with 30% of total water costs (Municipal Water Supply and Sewerage Company of Leros, 2000). Horticulturalists suffer from low agricultural income and reduced competitiveness, because of the adverse effects of irregular irrigation and salinized water on the roots of cucumber and tomato plants (NTUA, 2000). At the same time, farmers drawing water from boreholes and pumping out

underground waters for irrigation purposes may be held responsible for the deterioration of the quality of water needed for domestic purposes, since they all draw from the same underground aquifer. Tourism entrepreneurs and vacationers are equally discontented with water supply services. In the long run, water shortages affect the flow of tourists and holiday-makers and the tourism sector of the island economy as a whole. However, seasonal fluctuations of consumption (with high peaks in the summer months), generated by vacation homes and hotels opening in June and closing in September, restrict water availability for the resident population, which is prevented from maintaining a small vegetable garden in the summer months. In addition, intensive use of water in the summer months may cause major damages in the water mains. Finally, water demand fluctuations raise excessively the costs of water infrastructure and increase the expenditure charged on the local community.

While the interests of each of the above discrete stakeholder groups and the corresponding water consumption patterns appear at first sight compatible, the fact is that opportunities for preferential, or outright illegal, satisfaction of the demand of certain consumers (tourist firms, agricultural holdings or households) drive deep wedges within these stakeholder groups and create antagonistic sub-groups of opposing interests. For instance, when a hotelkeeper makes a private unauthorized drill he gets cheap water, indirectly raising the share of costs of other water consumers and harming public water quality. To get another example, unlicensed drillers or water suppliers help to turn their clients against the interests of their own consumer group.

These networks of ''backdoor'' water supply involve drillers, water carriers or even local government officials, who in a sense speculate on water resource shortages. Their clients belong to any one of the stakeholder groups. Consequently, no group speaks with a single voice. As a result, conflict resolution and consensus-building on resource allocation and reasonable use of limited reserves are virtually meaningless. The dividing line which conflict resolution should address is that separating legal users from those breaking the law or those who are trapped in a condition of illegality, because of great need. Those guilty of law infringement are not likely to even comprehend what conflict resolution is all about. Such an outcome may put an end to their business or, at the very least, disturb their convenient arrangement.

It is obvious that certain stakeholder groups and the discrete economic and social interests are not pronounced and easily distinguishable. Illegal water providers have both supporters and enemies among the farmers' group, the tourism entrepreneurs' group and the resident population. Who are then the stakeholder groups? Water providers are among them? The legal or the illegal ones and how to separate the first from the second?

The farmers utilizing legal, yet low quality water resources will ever accept to sit around a table or form an indivisible grouping with those suspected for private unauthorized drills? Furthermore, what would be the ultimate objective of a possible consensus building process? If this objective is an agreement between legal and illegal water providers or the legal and illegal users of water, would ever such an agreement satisfy the principles of social justice and political and environmental ethics? A process ''leading to yes'' from the side of the lawful part of the community towards the side of the unlawful part can ever be rational and ethical?

It is obvious that the socio-political situation in Leros undermines the very foundation of the consensus building process, namely its objective and the conditions ensuring its epistemological and ethical legitimacy:

- All key-stakeholders are not specifiable or not willing to engage in the dialogue.
- Participants associated with illegal water procurement methods tend to be double-tongued that is insincere, their intentions do not fit to the legal context and their business does not much up to claims based on acceptable reasons.

4.2. How Multiple ''Scientific Views'' Undermine Reliable Public Information and Awareness

Sustainable water management presupposes a wide range of coordinated measures. The most conventional ones relate to planning, construction, operation, maintenance and utilization of technical infrastructure for the abstraction, supply and distribution of water resources. In less frequent cases they concern desalination plants. In addition, water management requires chemical analysis and sanitary inspection of drinkable water, control of water polluting activities, the purchase and transportation of imported water and calculations of fair water rates. These activities are mutually dependent and should constitute an integrated policy package, founded on the assessment of social, economic and environmental impacts. The problem in Leros is the multiplicity of unco-ordinated policy and implementation agencies, not necessarily located in the island, with fragmented responsibilities and conflicting competencies, management tasks and powers (Figure 1).

The competent agencies vary according to the water issue involved. One agency (the local Water Supply and Sewerage Company) is responsible for the management, operation, maintenance, technical improvement and expansion of the water and sewerage pipes; another, a municipal department, for the determination of water rates and the construction of pumping stations; a third one (the Prefectoral Department of Land Reclamation

Works), located on the distant island of Rhodes, for private drilling licenses; finally, a fourth one (the Ministry of Agriculture) for planning and constructing major infrastructure works for rain water collection (such as dams, artificial reservoirs etc.).

Each one of the above policy-making departments has its own expert "scientific view" about the nature of the problem and the appropriate solution. The central Ministry of Agriculture supports and probably exaggerates the potential contribution of dams and reservoir-lakes to the supply side of the water balance. Their insistence on this policy option is to some extent due to the pressing necessity to justify and absorb European structural funds destined for environmental infrastructure and also to pressures from public works contractors (Municipal Department of Engineering Services, 2000). The local Municipal Services and the Water Supply Company are very critical of oversized works, which cause irreparable environmental damages. They have repeatedly protested and they have instead advocated water saving and the imposition of constraints on demand, through stiffer pricing policies, which, in addition, can be more profitable. The local water policy agency, i.e. the municipal authority, subscribes to the policy of tapping new reserves, an attitude satisfying the pressing multiple demands of private individuals. Finally, the Dodecanese Prefecture has adopted a "generous" and wasteful policy of granting numerous drill licenses.

There are therefore three policy actors on the scene, each with his own "scientific version" of the problem, its ultimate cause and the respective solution; each one competing with, and opposing the arguments of, the other actors. This produces a chaotic situation, involving the formulation and development of mutually conflicting "partial knowledges" which emerge from the separate factions or sections of the governmental structure (central, regional and local). As it has been argued in the relevant literature (Grindle and Thomas, 1991; Hill, 1993) what different categories of actors believe and do about an environmental problem and a policy question is a reflection of their own interests.

In the case of the water shortage problem in Leros, poor monitoring, ignorance of water cycle data and the lack of reliable scientific studies exacerbate the problem of knowledge confusion. The very existence of the above partial and contradicting knowledges about water issues creates a confidence crisis. People simply mistrust official views and statements. The lack of faith in expert judgements and policy institutions, which claim to possess scientific authority, undermines the roles of these institutions as agents of society sensitization. With the widening of the confidence gap, individuals and groups place their confidence in their own intuitive "science", develop their own methodologies and/or enter into partnerships with real experts or simple speculators, who proclaim

themselves as experts. This is a seriously negative development, because it reinforces dubious and suspect networks with power and influence over the local community. The case of Leros contrasts with the positive findings reported elsewhere (Brown and Mikkelson, 1990; Fischer and Forester, 1993; Irwin and Wynn, 1996), where activistic assumption of responsibility for developing scientific partnerships with experts produced notable successes. An impressive example was a case in which epidemiological surveys of disease profiles around toxic waste sites were carried out and the resulting proposals were fed into public policy and put into effect.

The above findings in Leros reveal a complication with respect to what we normally consider as ''scientific information'' or ''knowledge'' which is an essential input of a consensus dialogue. The example of Leros indicated that this information is not always cohesive and unambiguous. It contains prepositions or prejudices arising from interests and partial experiences. It seems that science leaves room for such prejudices and partialities especially when scientific scenarios are based on unconfirmed suppositions. Hence, the stakeholders cannot be equally and objectively informed; they have no other possibility but being supporters of one or the other antagonistic scientific knowledges. It follows then, that whatever the potential consensus building dialogue it will lack unequivocal and reliable scientific information input. Nothing in this dialogue will look definitely right or wrong even to the scientists and policy-makers. Everything can be perpetually disputed and the dialogue will turn to be endless and fruitless. In the end intuitive knowledge will take the upper hand and the participants of the dialogue will turn to irrational, individualized solutions and abandon the dialogue and collective action.

One can only conclude that the super-structure of illegality or semi-illegality versus legality may overshadow and even dissolve the dividing lines between scientists, policy-makers and lay public (Agrawal, 1995), because the super-structure intersects with and penetrates all other socio-political formations. This should not be considered the sign of a pluralist society incorporating partial positions, which must be negotiated in the context of wider political interests. It is rather a sign of traditional, clientelistic fragmentation in a local community. It is also an indication of the prevailing individualistic method of solving one's own problem, by bypassing legitimate channels and ultimately undermining collective solutions. However, the case of Leros highlights also the risks involved when scientific knowledge is coupled with intuitive or interest-oriented knowledge. The potential results may be either consensus or depreciation of science and collective action and elevation of the individualized intuitive knowledge and action.

5. Conclusions

Participatory planning grows in popularity and academic acceptance throughout the 1980s and 1990s. Its gradual preponderance over conventional forms of planning keeps pace with the progress in popularization and acceptance of sustainability principles. This is because sustainability without meaningful participation is both impossible and almost a contradiction in terms. It has been widely recognized that people-centered approaches to sustainable development strategies are needed. Participation of stakeholder groups is critical for decision-making and for all tasks of strategy cycle, taking different forms for each task.

The latest versions of participatory planning, namely communicative and collaborative planning signify major changes in planning terminology, in the perception and use of information in planning, in the identity of decision-making bodies and the criteria for evaluating planning outcomes. It seems that the new planning philosophy stems from underlying contemplations: to reduce areas of social conflict, to conciliate private with public interests, to commit private agencies to the issue of environmental and social ethics, to involve private individuals in the implementation of public policies and to upgrade the image of planning as a collective will to administer justice.

From the 1990s onwards consensus building among stakeholders obtains general recognition as the most systematic, integrated and sophisticated version of collaborative, communicative planning. It is considered to epitomize all the above advantages. Consensus building is usually defined as a dialogue that engages all those with differing interests around a task or a problem to deliver and interchange various kinds of information and knowledge that is, scientifically grounded knowledge, knowledge grounded in experience and intuitive knowledge. The ultimate target of consensus building is mutual-gain solutions and agreements. Nevertheless, such processes produce collateral outcomes, namely ''collective knowledge'', ''collective intelligence'', new ''intellectual, social and political capital'' which may turn to be the primary outcomes.

The present work attempted to prove that consensus building and probably other forms of collaborative planning cannot easily be embedded in all various socio-political and cultural contexts. Furthermore, it attempted to show that the theory backing consensus building processes for planning purposes is featured by gaps and inconsistencies. These generate risks in practice and do not allow for generalization of the new planning paradigm.

Some of the difficulties of participation and consensus building in the context of Greek small island communities have been presented, albeit in broad outline. Someone could argue that these difficulties are just the evidence of a substratum of a culture which is still hostile to planning, is not

used to take collective action towards common goals and does not yet espouse, indeed appreciate, the values of sustainable development.

More precisely, public participation in support of sustainability policies seems to be both an ineffective procedure and an unattainable target in the case of Greek small communities (and not alone). At first sight, this is due to the predominant culture of individualism, lack of confidence in policy-makers and personalization of problems' perception and the proper solutions and actions to be taken, let they be through unauthorized channels. The various policy-agents tend towards introversion; they can only view their own narrow policy-domain. Furthermore, the stakeholder groups themselves are multiply split into antagonistic subgroups of opposing interests due to delinquent behaviors and the super-structures of illegality or semi-illegality penetrating even the most cohesive social formations. To the extent that stakeholder groups do not speak with a single voice their representatives are not recognized as conveyors of a collective consciousness. The mentality of individualism gains ground, all the more when the community has poor sense of collectivity and weak reflexes of resistance.

It seems then that the new planning philosophy and in particular the theory backing consensus building processes does not match up to the socio-political and cultural context of Leros. It has been explained already why realizing the model of consensus building to solve the problem of water shortage in Leros might result in unwelcome, irrational, unfair and unethical convictions and policy doctrines. To get an example probable reconciliation of the community with illegal methods for water procurement or approval of intuition-oriented drilling efforts is of course a backward turn. It has also been illustrated why the epistemological preconditions of the process cannot be secured in the socio-political and cultural context of Leros. Some key-stakeholders are kept behind the scenes, remain elusive or they cannot raise claims based on acceptable reasons. Hence, they either eschew or break the rule of sincerity. In both cases the process strays from the right path.

Finally it has been demonstrated that scientific knowledge and data are not always at hand. In the absence of undeniable scientific data, experts' views may be manipulated to serve political or economic interests. It may also happen that non-scientific, biased, interest-oriented or intuitive views are disguised as scientific ones. Within such a context and as the rules of communicative process equate scientific information with intuitive information, stakeholders find it easy to disdain the scientific aspects of environmental and development problems. Under the circumstances and because each one of us carries intuitive knowledge, scientific information, collective knowledge and consensus become useless. Why then not to pursue individualized, intuitive solutions and practices?

It may be true that participatory planning and consensus building processes fit some societies better than others. It may also be true that the

Greek society and especially small isolated communities are faced with numerous cultural and other obstacles when pursuing collective decisions and attitudes to resolve environmental and sustainability problems: preference of individualistic methods when solving one's own problem, shortsightedness, scientific fuzziness, confusion of priorities and so on.

Nevertheless, the theory and practice of participatory planning and communicative processes are far from embracing all cultural and sociopolitical particularities. The assumption that dialogue participants leave behind them the cultural perceptions and preferences arising from the established power relations in order to build a new collective micro-culture through dialogue is a risky assumption. The main conclusion from the forerunning analysis is that there is a need for further elaboration of the normative and ethical framework of communicative practices to be appropriate for planning purposes. Further work is also needed with respect to the metamorphoses and transformations of information. Let us not forget that nowadays competition and antagonisms for information are actually struggles for power.

Notes

1. The Municipal Water Supply and Sewerage Company (DEYAL).
2. The majority of drillings (90%) are illegal and take place just before elections. One method is through permits for absorbent sewage tanks. After the issuing of tank permit it follows excavation down to the depth of 10 m. The water found there is exploited and if it is considered inadequate excavation goes further down. Other illegal means are the so called experimental drillings to the account of the Municipality which grants the necessary license. In cases drilling efforts come by to water reserves these are jointly exploited by the Municipality and the private agency.

   The legal process includes excavation permit as well as water exploitation license. The Prefectoral Department of Land Reclamation Works prescribes the explorable water quantity (e.g. 10 m^3per month) and issues the relevant permits and licenses. A water counter is then installed and the permit and license are regularly renewed.

   In any case both legal and illegal drillings have not been based on scientific data about location and quality of underground aquifers. The sites for drillings have rather been determined by factors such as accessibility, availability of electricity supply, etc. (DEYAL, 2000).
3. Irregular irrigation causes black spots and snips to tomatoes. Cucumbers and peppers take a bitter taste due to salinized water. In general plants cannot absorb the needed water quantities due to the accumulation of salts at their roots (NTUA, 2000).
4. The residents of Xerokampos heights in Leros reported that in summer periods they experience water supply interruptions lasting up to 15 days (NTUA, 2000).
5. The island's dump is full of scrapped household appliances – water heaters and washing machines (NTUA, 2000).
6. According to the views of the head of the Municipal Department of Engineering Services.

Reference

Agrawal, A.: 1995, 'Dismantling the divide between indigenous and scientific knowledge', *Development and Change* 26, 413–439.

Baker, S.: 2000, 'The European Union: Integration, competition, growth and sustainability', in W.M. Lafferty and J. Meadowcroft (eds.), *Implementing Sustainable Development,* Oxford, Oxford University Press, pp. 303–336.

Brown, P. and Mikkelson E.: 1990, *No Safe Place: Toxic waste, Leukemia and Community Action,* Berkeley, University of California Press.
Buttimer, A.: 1972, 'Community', in M. Stewart (ed.), *The City: Problems of Planning,* Harmondsworth, Penguin, pp. 195–216.
Campbell, S. and S. Fainstein (eds.): 1996, *Readings in Planning Theory*, Oxford, Blackwell.
Carew-Reid, J. et al.: 1994, *Strategies for National Sustainable Development*, London, Earthscan Publications.
Carpenter, S.L. and Kennedy W.J.D.: 1991, *Managing Public Disputes: A Practical Guide to Handling Conflict and Reaching Agreements,* Jossey-Bass Management Series, San Francisco, Jossey-Bass.
Cockburn, C.: 1977, *The Local State*, London, Pluto Press.
Council of European Communities: 1993, 'Towards Sustainability: A European Community programme of policy and action in relation to the environment and sustainable development', *Official Journal of the European Communities*, NoC138/17.5.1993.
Craven, E.: 1978, 'Issues on representation', in R. Davies, and P. Hall (eds.), *Issues in Urban Society,* Harmondsworth, Penguin, pp. 242–267.
Darke, R.: 2000, 'Public participation, equal opportunities, planning policies and decisions', in P. Allmendinger et al. (eds.), *Introduction to Planning Practice,* Wiley, Chichester, pp. 385–412.
Eddison, P.A.: 1972, 'Comprehensive planning for local government', in M. Stewart (ed.), *The City: Problems of Planning,* Harmondsworth, Penguin, pp. 409–424.
Fagence, M.: 1977, *Citizen Participation in Planning*, Oxford, Pergamon Press.
Fischer, F. and J. Forester (eds.): 1993, *The Argumentative Turn in Policy Analysis and Planning,* NC and London, Duke University Press.
Friedland, R.: 1982, *Power and Crisis in the City*, London, Macmillan.
Gans, H.J.: 1972, *People and Plans*, Harmondsworth, Penguin.
Gibson, M.S. and Langstaff M.J.: 1982, *An Introduction to Urban Renewal*, London, Hutchinson.
Grindle, M. and Thomas J.: 1991, *Public Choices and Policy Change,* Baltimore, Johns Hopkins University Press.
Habermas, J.: 1981, *The Theory of Communicative Action: Reason and the Rationalization of Society* (T. McCarthy, Trans.), Boston, Beacon Press.
Habermas, J.: 1984, *The Theory of Communicative Action,* Boston, Beacon Press.
Habermas, J.: 1989, *The Theory of Communicative Action. Lifeworld and System: A Critique of Functionalist Reason* (T. McCarthy, Trans.), Boston, Beacon Press.
Harter, P.J.: 1997, 'Fear of commitment: an affliction of adolescents', *Duke Law Journal* **46**, 1389–1428.
Haughton, G.: 1999, 'Environmental justice and the sustainable city', in D. Satterthwaite (ed.), *The Earthscan Reader in Sustainable Cities*, London, Earthscan Publications, pp. 62–79.
Hill, M. (ed.): 1993, *The Policy Process: A Reader,* Hemel Hempstead, Harvester Wheatsheaf.
Innes, J.E.: 1990, *Knowledge and Public Policy: The Search for Meaningful Indicators,* 2nd ed., New Brunswick, NJ, Rutgers [Transaction Books, Introduction].
Innes, J.E. and Booher D.E.: 1999, 'Consensus Building and Complex Adaptive Systems – A Framework for Evaluating Collaborative Planning', *Journal of the American Planning Association* **65** (4), 412–423.
Innes, J.E.: 1998, 'Information in Communicative Planning', *Journal of the American Planning Association* **64**, 52–63.
Irwin, A. and Wynne B. (eds.): 1996, *Misunderstanding Science? The Public Reconstruction of Science and technology,* Cambridge, Cambridge University Press.
McKay, D.H. and Cox A.W.: 1979, *The Politics of Urban Change*, London, Croom Helm.
Moore, Ch.W.: 1987, *The Mediation Process: Practical Strategies for Resolving Conflict,* 1st ed. Jossey-Bass Social and Behavioral Science Series, no. 1, San Francisco, Jossey-Bass.
Municipal Water Supply and Sewerage Company of Leros: 2000, *Statistical data on water consumption.*
NTUA (National Technical University of Athens): 2001, *A Spatial Plan for the Sustainable Management of Water Resources in Northern Dodecanese,* Report of a research project, INTERREG IIC, Ministry for the Economy and Finance, Athens.
Ostrom, E.: 1990, *Governing the Commons: The Evolution of Institutions for Collective Action,* Cambridge, Cambridge University Press.
Rein, M.: 1972, 'Social planning: The search for legitimacy', in M. Stewart (ed.), *The City: Problems of Planning,* Harmondsworth, Penguin, pp. 425–452.
Saunders, P.: 1983, *Urban Politics: A Sociological Interpretation*, London, Hutchinson.

Susskind, L. and Cruikshank J.: 1987, *Breaking the Impasse: Consensual Approaches to Resolving Public Disputes,* New York, Basic Books.

Susskind, L. and Field P.: 1996, *Dealing with An Angry Public: The Mutual Gains Approach to Resolving Disputes,* New York, The Free Press.

Wassenhoven, L.: 2002, 'Is there still a theory of spatial planning?', in *Proceedings of the 10th Panhellenic Architectural Conference*: *Architecture and the Greek City in the 21st Century*, Technical Chamber of Greece, pp. 393–399 (in Greek).