

Local Perspectives Report:

1. URBAN POLICY IN CYPRUS
2. CYPRUS INDICATOR STATUS REVIEW
3. CONCLUSIONS AND GEO-SPATIAL
CONSIDERATIONS FOR URBANGUARD

This report covers deliverables for Task 2 concerning "Report on current development policies and goals" and "Report on currently used indicators and assessment and reporting methods."

1. URBAN POLICY IN CYPRUS

The planning system and its administrative framework

A brief overview of the planning system

Economic and regional development policy in Cyprus is based on indicative planning, exercised through the Planning Bureau, an independent directorate under the authority of the Minister of Finance, which formulates long-term development policy at the strategic level and exercises control over its implementation through the state budget. On the other hand, responsibility for spatial planning and urban policy rests with the Minister of Interior, who has delegated certain of his responsibilities to the larger Municipalities, the Department of Town Planning and Housing, as well as the Planning Board, an independent body with advisory power over large areas of planning policy.

The three-tier hierarchy of Development Plans introduced by the 1972 Town and Country Planning Law is based on the concepts of the "Island Plan," which refers to the national territory and the regional distribution of resources and development opportunities; the "Local Plan," which refers to major urban areas, areas of exceptional importance or areas undergoing intensive development pressures and rapid physical development; and the "Area Scheme," at the lower end of the hierarchy, which in general refers to areas of a smaller scale and is more detailed and specifically project oriented. For all territory where neither a Local plan nor an Area Scheme is in force, an additional type of development plan was introduced to the planning system in 1982, the "Policy Statement for the Countryside" (PSC), a legally binding document in the form of an adapted regional plan for the control of development and the protection of the environment in villages and rural areas. Along with this document, a series of zoning plans have been published for the majority of rural settlements, while areas of outstanding natural value, selected coastlines and nature protection areas, as well as areas of protected landscapes are all delineated on a detailed cadastral inventory which complements the guidelines of the PSC.

The Island Plan and the Policy Statement for the Countryside

The Island Plan is a statement of the broad national strategy in the area of regional spatial planning with strong links to overall national economic and social policy. It signifies the Government's intentions in respect to the efficient and sustainable use of land throughout the island and refers especially to the population's regional distribution, regional-level spatial policies in relation to industry, commerce, tourism and other major sectors of the economy, the designation of areas of special social, historic, architectural or cultural interest, the designation of areas of special natural and environmental value, as

well as the pattern of regional transportation networks and other public services.

Nevertheless, with the 1974 Turkish invasion and subsequent military occupation of a sizeable portion of the island, the preparation of an Island Plan was no longer feasible. Therefore, the House of Representatives had to amend the Planning Law, removing the mandatory obligation for its publication and, as a result, the planning system has been deprived of its island-wide regional context. The inability to formulate an Island Plan due to the forced division of Cyprus has led the Government to prepare and publish the Policy Statement for the Countryside (PSC), which refers to all government-controlled territory, except areas where a Development Plan is already in place. In certain cases, areas with a high development momentum, such as some of the most intensively developed tourist resorts, are also covered by the PSC. The PSC, however, is not a regional development plan, in the sense that say, a Local Plan is. It rather defines land use zones for most rural settlements and communities and areas of special or exceptional natural or environmental value. It also specifies a framework of location policies for a wide spectrum of development types, including residential, commercial, tourist, industrial, agricultural etc.

Recognising that a document as general as the PSC has shortcomings in terms of responsiveness to specific local circumstances and characteristics, the general objective is to proceed with the preparation of detailed Area Schemes for particular settlements, or Local Plans for larger territories and settlement groups, an effort already under way through the cooperation of the public and private sectors. However, the PSC has proven its use and merits in the sense that, since 1990 it has provided the general policy framework and development guidelines in areas where planning considerations could not previously be taken into account in the development decision-making process.

Public participation

The 1972 Town and Country Planning Law does not clearly specify procedures for promoting active public participation in the planning process. However, it specifies how the public may influence the provisions of a Local Plan or Area Scheme at two stages. In the first instance, the public is involved at the plan-making stage. Stakeholders include representatives of the Local Authorities involved, government agencies and public bodies whose policies are affected by the plans under consideration, organised citizens' groups and NGO's with an interest in the area under study, as well as persons of special knowledge or expertise in relation to the study area. This process is essentially consultative and its main objective is to inform the Minister on opinions and suggestions in relation to a Development Plan's current or proposed policies.

After its approval by the Planning Board, a Development Plan is published and put on deposit for the public's inspection. Local Authorities, NGOs, or any interested body or individual may thereafter submit objections against any of the plan's provisions. The Minister examines any objections, submits his suggestions and remarks to the Council of Ministers for considerations and decisions, and eventually publishes the Approved Development Plan, which remains in force until its following amendment. Through these processes, in many instances local *ad hoc* pressure groups and NGOs have raised issues and questions, which directly relate to spatial planning policy. Political pressure has thus had considerable effects on the implementation of several provisions of published Development Plans.

Administration of urban policy at the national level

The Department of Town Planning and Housing is a Government department under the Ministry of the Interior; its main scope of operation concerns urban and spatial planning, while an important part of its mission is the implementation of the 1972 Town and Country Planning Law. The Department is made up of three major Sections, those of Housing, Planning and Development Control. The Housing Section undertakes the planning, design, construction and management of public housing, at present almost exclusively serving refugees displaced by the 1974 Turkish invasion.

The Development Control Section functions as the higher central Planning Authority of the country; it includes the Sectors of Plan Implementation and Planning Enforcement, and provides the administrative umbrella for five of the nation's nine independent Local Planning Authorities (District Offices). Competent Planning Authorities are responsible for granting planning permissions, ensuring the rational location of various types of development, prohibiting the implementation of development projects, which are deemed detrimental to accepted qualities and norms, monitoring conformance to standards and regulations prescribed by the planning system and the conditions laid in the permissions granted, and enforcing their implementation in cases of non-compliance.

The Planning Section consists of various policy and project-oriented Sectors, such as those of Regional and Transportation Planning. Development Plans prepared by this Section contain a broad range of urban policy measures and provisions, which refer to land use, development types, infrastructure networks, development standards, quantitative limitations and development intensities. In addition, the Department includes the Sector of Preservation and the Sector of Planning Schemes, as well as supporting administration, while it also provides personnel and advice to the Nicosia Master Plan, a bi-communal ground breaking institution involving both the Greek-Cypriot and Turkish-Cypriot communities of the divided capital.

Urban policy and local authorities

There are two types of local authorities; Communities are the local structure for generally rural settlements of less than 5,000 inhabitants, while Municipalities cover towns and larger settlements, mostly in urban areas. The nine municipalities under Turkish military occupation since 1974 continue to maintain their legal status, although their Mayors and Councils have temporarily been displaced to government-controlled areas, as have the great majority of their constituents.

According to the provisions of the Municipalities legislation, directly elected Mayors act as executive authorities, while Municipal Councils function as the local policy-making bodies, with responsibilities including street construction, maintenance and lighting, waste collection, disposal and treatment, the provision of public open spaces, the protection and improvement of the environment and public health, along with additional activities in social services, education, the arts and sport. Moreover, larger municipalities have been delegated as competent Planning Authorities, responsible for granting planning permissions, ensuring the sustainable distribution of land uses, prohibiting the implementation of projects detrimental to public welfare and quality of life, monitoring conformance to planning system standards and conditions laid in granted permissions, and enforcing their implementation in cases of non-compliance.

The Union of Cyprus Municipalities was established in 1981 bringing together in a voluntary association all 33 municipalities of the Republic. Its main objectives include presenting urban issues and developing local government autonomy, whereas its decision-making power is vested in its General Assembly, the decisions of which are implemented by an Executive Committee.

Monitoring of policy results

During the past decade, the efficacy of the planning system has been monitored very closely to determine the need for the introduction of any modifications. As a result, it has been demonstrated that there is a need to re-evaluate the scope for the preparation of the Island Plan, according to the provisions of the planning legislation. Indeed, the void at the high end of the Development Plan hierarchy affects the relevance of spatial policy in general and all subordinate plans in particular, both directly and adversely, as well as the validity of social and economic projections upon which Local Plans are based. The scope, nature and contents of the Island Plan should therefore be re-evaluated, in order to define a type of regional plan, which will accommodate current and future spatial planning needs, as well as become an instrument for bridging regional disparities in terms of development and employment opportunities, infrastructure and provision of services.

At a more specifically technical level concerning the monitoring of policy results, the Department of Town Planning and Housing is the beneficiary of a new EU LIFE Project, under the acronym URBANGUARD, through

which work is currently under way on capacity building for the incorporation of urban sustainability parameters in spatial planning policy through the use of indicators.

The prospects for sustainable spatial planning

To promote the sustainability of urban policy, Local Plans are currently being enriched and strengthened through the introduction of more detailed provisions that specify the manner of implementation of their strategies and policies. Phasing and investment programmes are indispensable tools for promoting sustainability and enabling the implementation of policy measures according to the provisions of published Local Plans. Their scope is therefore being widened beyond the control of development initiatives by the private sector, linking urban policy to the Annual Development Budget through the implementation of Planning Schemes and the provision of various types of incentives.

In addition, planning and development control procedures allowing for and encouraging more effective and meaningful public participation are being elaborated. To achieve this, planning agencies must work towards the enrichment of the general public's planning perception and further promote awareness and information dissemination. Moreover, the strengthening of existing enforcement procedures and mechanisms, as well as the reallocation and redistribution of planning competencies between Central Government and Local Authorities are all issues under examination and evaluation, with the scope of achieving a more sustainable spatial planning system. Finally, with the implementation of the European *acquis* over the recent years, priority has been given to the introduction of more stringent environmental considerations into urban policy. This process is currently being incorporated within all Development Plans.

Identification and evaluation of urban problems and planning tools devised to resolve them

Main spatial problems identified in the urban agglomerations of Cyprus

- Up to the mid 1980s, a scattering of subdivided plots and isolated residential units marked the outskirts of Cypriot towns. However, prevailing economic conditions, real estate market trends, and social perceptions contributed to the continuous deterioration of this trend so that, prior to the enactment of the Town and Country Planning Law in 1990, it had become characteristic of the urban landscape. Moreover, land fragmentation remained a substantial obstacle to the planning and implementation of comprehensive projects, while the existence of private water supply systems up to 1982 continued to facilitate development outside designated areas.

- Whereas the relatively slow development of towns prior to the 1940s had ensured the concentration of administrative, commercial and cultural activities within central areas, the post-war economic boom, especially in the case of Nicosia, and the sudden economic expansion that followed the influx of refugees in the aftermath of the Turkish invasion, especially in coastal towns, created centrifugal tendencies that manifested themselves through the location of important urban uses along main road arteries away from the centre and into the burgeoning suburbs. The absence of planning legislation and an ineffective development control system permitted the mixing of incompatible uses and activities, giving rise to conditions that still downgrade the quality of life in most urban areas.
- The initial concentration of services, commerce, administration and other basic activities in urban centres had encouraged the development of radial (in the case of Nicosia) or fan-shaped (in the case of some coastal towns) street patterns, as a result of the predominance of a single employment centre. The subsequent scattering of employment opportunities and residential areas over the wider urban region occurred mainly along these transportation corridors, greatly restricting their carrying capacity and giving rise to significant congestion problems, since it was not accompanied by the necessary road infrastructure improvements.
- The Turkish invasion of 1974 and the continuing military occupation of a substantial portion of the country brought about a sudden and intense deterioration of these urban problems and accelerated existing tendencies. In many urban areas populations increased by about 30% almost overnight with far-reaching consequences. The location of most refugee housing estates (set up through public housing programmes and self-housing schemes in the outskirts of urban areas where cheap land was readily available) created a new planning reality that further contributed to urban sprawl.
- The lack of effective planning legislation up to 1990, coupled with a high demand for investment in real estate and the withholding of land for either future use or purely speculative reasons, have created conditions which contribute to the degradation of the quality of life for large proportions of the urban population through the prevalence of urban sprawl, the presence of large proportions of vacant plots in central areas and the mixing of incompatible uses. High prices of land withheld within Development Areas have caused lower income groups to search for residential land further a field, thus contributing again to urban sprawl.
- Existing patterns of economic activity often cause land use conflicts, giving rise to traffic, environmental and amenity problems, especially in residential areas. In addition, workshop, retail and office space constructed for speculative reasons remains to a great extent vacant or underused, thus exacerbating existing problems.

- The provision of grossly lagging public transportation services, partly due to the prevalence of radial routes from suburban areas to town centres that ignore lateral connections between peripheral areas, sets up a vicious circle where insufficient numbers of users are attracted for the services to be sustained and upgraded. This in turn contributes to the prevalence of the private automobile with negative consequences on road congestion.
- The inadequacy of public open spaces is evident in all urban areas, in terms of area, distribution and management. Older residential neighbour-hoods also lack children's playgrounds and local parks, although more recent actions taken since the early 1990s towards the improvement of this situation through relevant policy measures have begun to bear fruit.

Major urban policy constraints

- The delay in the enactment of the 1972 Town and Country Planning Law until 1990 and the absence of a substantial planning control legislative framework that could address accumulated problems critical to the future sustainability of urban areas, has brought about a number of insurmountable obstacles that render their effective control challenging, even fourteen years into the implementation of planning legislation.
- The behaviour of the real estate market has proven the need for the introduction of fiscal and other measures to adjust the shortcomings of the free market. Both the particular emotional attachment of Cypriot owners to their property and, more importantly, the prospects of investment, speculation and lifetime savings security associated with the real estate market, create artificial rather than real needs and contribute to increased public reaction against the implementation of a number of planning, spatial and fiscal measures, thus hindering the ability of public institutions to effectively intervene in real estate market mechanisms.
- The high protection afforded by the Constitution with regard to personal property rights stipulates the provision of adequate compensation at current market prices in cases where the implementation of planning measures and limitations substantially diminishes the value of real estate. The high cost of possible compensations thus becomes a considerable factor that discourages effective planning and policy implementation, as well as, mainly, the adequate provision of infrastructure and services.
- The significant number of commitments concerning development opportunities, land use distribution and road networks accumulated over the years has become a factor substantially restricting opportunities for effective intervention to upgrade the structure and operation of urban areas.
- Within currently designated Development Areas, future development potential is much greater than long-term projected needs, as evidenced by large numbers of vacant plots, undivided land, and existing development in densities lower than those

actually permitted. Moreover, the large spatial distribution of this potential precludes the attainment of sustainable compact development within the current horizon of most adopted spatial plans.

- The promotion and encouragement of comprehensive development projects, a more sustainable alternative to extensive disassociated small-scale development, is severely obstructed by high real estate prices, a tendency to withhold land with immediate development potential for speculative reasons, as well as an ownership pattern characterised by land fragmentation and multiple ownership due to inheritance practices.
- In the case of the capital city of Nicosia in particular, the division of the island creates enormous development problems for large tracts of urban land located in the vicinity of the demarcation line, including the historic urban core. The situation aggravates pressures for the continuous unbalanced southward expansion of the greater Nicosia urban complex in hilly land towards the island's main coastal towns and tourist resorts in the government-controlled areas, and away from the central plains and the UN Buffer Zone, where its natural expansion should occur.

Guiding principles for urban policy implementation

To overcome the problems and constraints outlined above, the following guiding principles have been adopted:

- Adjustment of the real estate market to the laws of supply and demand.
- More efficient planning of the spatial distribution of various economic activities, basic urban functions and their interactions.
- Improved quality of life in well planned residential areas, provided with necessary community infrastructure and services.
- Effective planning for traffic and public transportation.
- Achievement of sustainability objectives through the safeguarding and management of the natural and built environment.

Planning tools to support urban policy implementation

The character of each development area is essentially defined through the following tools, with the ultimate objective of promoting over the medium term horizon, the concentration of urban population and employment opportunities within its limits:

- Designation of Development Areas where land uses can be assigned according to the provisions of Development Plans.
- Gradation of appropriate development intensities according to land use type within designated Development Areas.
- Indication of the desirable degree of land use and activity mixing within designated Development Areas.
- Planning of infrastructure distribution (main road and utility networks, location of public services such as health and education facilities etc.) within designated Development Areas.

- Implementation of additional policy measures, including the planning and execution of Planning Schemes and Priority Projects, to ensure the quality of the urban environment over and above the quality assured by the tools above.

Urban policy areas and their horizontal integration

Main urban policy goals, as stated in Development Plans

The goals listed below are indicative of the main orientation of current spatial policy in urbanised areas. The list is limited to a brief statement of the general concepts that reflect concerns on the subject. Within each of the adopted Development Plans,¹ similar goals are further elaborated, depending on the needs of each area and the concerns of its citizens, while additional area-specific goals and objectives address more localised problems.

- Viable distribution of land uses, including the separation of incompatible uses and the promotion of a balanced mix of compatible ones.
- Sustainable use of natural resources and judicious management of the natural environment.
- Functional integration of multi-centred urban complexes. In the case of Nicosia, this is further elaborated with the stated objective of safeguarding the feasibility of spatial and functional reintegration of the divided city into one whole, at such a time when the Buffer Zone will have been abolished.
- Flexibility and adaptability of adopted policy measures, to facilitate responsiveness to unforeseen situations.
- Efficient and effective use of land designated for development, especially with regard to the timely provision of adequate infrastructure and services.
- Steady improvement of amenities, quality of life and service provision for the entire urban population.
- Promotion of comprehensive and integrated urban development through the implementation of relevant provisions and the adoption of incentives for its encouragement within designated areas.
- Promotion of the concentration of spatial development, as well as social and economic activities, within designated Development Areas.
- Organisation of residential areas in such a way as to achieve a functional balance between population distribution, employment opportunities and service provision.

¹ These include Local Plans for the greater urban complexes of Nicosia, Limassol, Larnaca and Paphos, the rural municipalities of Polis, Levkara, Athienou, Derynia and Ayia Napa, as well as Area Schemes for Central Limassol and Walled Nicosia. An additional number of plans are in various stages of completion.

- Creation of conditions that will permit residential development of such types and intensities to fulfil the needs and requirements of all income groups, through both public and private sector investments, as well as the encouragement of integrated residential development.
- Adoption of innovative measures to resolve long standing operational and other problems in specific urban areas.
- Implementation of forward-looking integrated transportation policies to address present and future needs of urban complexes and their populations.
- Implementation of policy measures to safeguard and upgrade the critical role of urban civic centres as focal points of the four conurbations and their surrounding districts, especially in the capital city of Nicosia.
- Balanced distribution of commercial activity and uses at strategic nodes of the urban fabric and the hierarchical organisation of commercial cores according to the size of the population served.
- Conservation of elements and areas of special or outstanding natural, historic, cultural and architectural value, in parallel with the adoption of area-specific conservation, rehabilitation and revitalisation programmes.
- Protection and improvement of the natural environment, recognising its importance to the quality of life and the balance of local ecosystems.
- Adequate provision of a hierarchy of public open spaces to strengthen the availability of recreation opportunities for the entire population.

The integration of national policies into spatial planning

These general goals are expressed through thematic policies, a sampling of which is provided below.

Housing Policy: As evidenced both through the problems and constraints analysis and the list of stated goals, housing issues are at the core of spatial policy considerations. Some of the main provisions of urban housing policy address the designation of areas for residential development, their differentiation according to development densities, building heights and floor areas permitted, the elaboration of parameters concerning non-residential uses considered compatible with residential ones and the requirements under which such uses may be permitted, as well as the provision of incentives to promote specific housing policy objectives, such as the encouragement of integrated residential development, or in the case of the Nicosia greater urban area, the encouragement of housing development in areas adversely affected by the city's division and the presence of the UN Buffer Zone.

Transportation Policy: This is formulated in cooperation with other competent Government agencies, including the Public Works Department and other services of the Ministry of Communications and Works, partly through the deliberations of a national *ad hoc* umbrella committee for the examination of traffic problems. This has become

necessary since transportation networks at the national, regional and local levels fall under the jurisdiction of various authorities. Thus, transportation policies formulated within Development Plans have become an invaluable tool for the coordination and integration of all relevant policies at local and conurbation levels. Transportation spatial policy is expressed through the designation and publication of a hierarchy of primary, secondary and tertiary road networks to which several other spatial policies correspond, the formulation and implementation of traffic management and public transport policies, as well as through the designation of adequate parking, pedestrian and bicycle routes.

Commercial Policy: Considering the predominance of the tertiary sector in the economy, commercial spatial policy is directed towards two main objectives: On one hand, the efficient allocation of commercial activity in a multi-centred urban system based on market dynamics, and on the other hand, the protection of public amenities and the image of the urban environment from the negative impacts of commercial development. Specific policy measures and provisions are in place for the Central Business District in each of the main towns, several designated Regional Retail Centres in every conurbation, three distinct types of Activity Corridors (classed according to their role within the transportation network and the types of activity permitted), Local Retail Centres and historic urban cores in satellite towns, as well as the organisation and location of specialised retail development, in particular that of department stores, commercial complexes and hypermarkets. Moreover, this policy contains measures and provisions that address the infiltration of retail uses in non-commercial areas, the location of convenience stores at the neighbourhood level, the organisation and location of office space, the location of petrol stations etc.

Industrial Policy: With the gradually diminishing economic importance of the secondary sector and in view of its inherent structural weaknesses, industrial spatial policy expresses not only the need for the protection of public amenities and the environment, but also the priorities and objectives of the government Strategic Development Plan, the current industrial policy of which is based on the attraction and development of high technology industries, the restructuring and support of existing industries, the improvement of productivity, and the attraction of foreign investment. To this effect, measures and provisions have recently been introduced in relation to Research and Development Centres and enterprise incubators, through the designation of Mixed Zones of Industrial and Commercial Activities. Industrial development is already categorised according to its environmental impact and is constrained, where indicated, within designated Industrial Areas. Specific sets of additional provisions cover workshops, warehouses and high-tech development, while measures are stipulated for the upgrading of the urban environment within existing Industrial Areas and the protection of adjacent non-industrial uses.

Agricultural Policy: Clearly, agricultural policy does not feature prominently within spatial plans for the main urban areas, although there are specific and stringent provisions for the location of animal and poultry farms, abattoirs etc. On the contrary, in spatial plans for quasi-rural municipalities surrounded by large agricultural areas, as well as in the Policy Statement for the Countryside, relevant spatial policy integrates the agricultural policies of the Ministry of Agriculture, Natural Resources and the Environment, concentrating on the protection of prime agricultural land and irrigation resources.

Tourism Policy: Due to the significance of the tourism sector to the economy of Cyprus, tourism spatial policy expresses not only the need to control the undesirable side-effects of mass tourism development, but also the priorities and objectives of the government Strategic Tourism Plan, prepared by the Cyprus Tourism Organisation in consultation with a wide spectrum of stakeholders, the objectives and priorities of which are based on the attraction of quality tourism with longer stays and higher spending, the increase of tourist arrivals, the improvement of seasonality and the diversification of the tourist product, including further development of special interest tourism. Consequently, apart from basic functional and organisation concerns for tourist establishments, tourism spatial policy provisions address the control of intensity and quality of tourist development, the integration of amenities in tourist area design considerations and the improved integration of these areas into the overall urban fabric, as well as the encouragement of tourist product diversification through the promotion of a healthy mix of uses in tourist areas. Relevant measures and provisions also cover the designation of tourist zoning in coastal areas, the conditions for the mix of uses, location and organisation requirements for mixed-use destination resorts, conditions for the tourist use of architectural heritage, conditions for the permission of retail, recreation and entertainment development within tourist areas etc. Tourism development is governed by specifically formulated basic design parameters and is bound by a set of published approval and implementation procedures with the involvement of the Cyprus Tourism Organisation at various stages.

Education Policy: Educational spatial policy is formulated in cooperation with the Ministry of Education and Culture. Its main objectives include the timely earmarking and setting aside of adequate land for the future needs of the education system, the enforcement of a set of minimum requirements concerning school grounds and facilities, and the appropriate consideration of the interaction between school sites and transportation networks. Measures and provisions of this policy address location requirements for different types of public and private educational establishments, permitted school-building densities, the encouragement of multiple uses for public school-buildings, as well as general requirements for educational establishments, including standards on facility provision, safe and efficient access and accessibility, design quality etc.

Health and Welfare Policy: Health and welfare spatial policy is formulated in cooperation with the Ministry of Health and the Ministry of Work and Social Insurance. Spatial ramifications of relevant Government policies concentrate on the provision of adequate transportation infrastructure around the new public General Hospitals in each conurbation, the integration of health and welfare centres at the local level, and the adoption of sets of measures and provisions concerning the location and other characteristics of private clinics, health services etc.

Environmental Policy: National policy concerning the environment is formulated and implemented by the Environment Service of the Ministry of Agriculture, Natural Resources and the Environment, although other government agencies may be responsible for specific areas, such as the Department of Forests, and the Fisheries Department within the same Ministry, the Game Fund Service within the Ministry of the Interior, the Department of Work Inspection for air quality etc. Spatial ramifications of environmental policy are expressed through both the designation of protected natural areas, as well as through control procedures in place for the approval of various types of development, including industrial and large-scale commercial, mines and quarries and so forth, in order to meet environmental quality objectives. Thus, all such development is bound by published approval and implementation procedures to establish its possible impact on the environment, involving consultation with competent authorities as indicated. To assess the impact of urban policy itself on the environment, the precepts of Strategic Environmental Assessment are currently being incorporated into the planning system.

Conservation Policy: Conserving the island's architectural heritage is one of the most important missions of the Department of Town Planning and Housing. In addition to the formulation of area-specific integrated conservation policies within each Development Plan, often accompanied by sets of restoration and intervention guidelines according to local parameters, the Department independently promotes an active programme of incentive provision for the rehabilitation of listed buildings and structures by the private sector. Based on the provisions of the 1972 Town and Country Planning Law, as well as legislation concerning the establishment of a Special Conservation Fund, the package of incentives currently available to owners includes, in addition to direct grants that cover up to 50% of the acknowledged restoration cost, generous tax deductions, such as exemption of restoration costs and rents obtained thereupon from income tax, refund of property transfer fees and exemption from the property tax, as well as transfer of development rights, that is of the remaining unused permitted plot ratio of listed properties within urban regions to specified commercial and tourist areas.

Landscape Policy: This is the newest in a spectrum of thematic policies addressing issues of natural and cultural heritage. Although a landscape protection policy had been included in the Policy Statement for the Countryside (PSC) since the early 1990s, an updated policy on

the protection, management and planning of landscapes, based on the Florence Convention, is under preparation for inclusion in the revised PSC. A similar landscape policy has already been included in the Levkara Local Plan, published in 2003 for a small town and its surrounding countryside, an area rich in cultural and natural heritage. With the forthcoming implementation of the Convention, landscape policies will gradually be included in all Development Plans.

Other Spatial Policies: In a similar manner, a wide spectrum of other spatial policies is integrated within Development Plans, where appropriate. Such policies concern sports and recreation, cultural infrastructure, antiquities and archaeological sites, public utilities, public works, mines and quarries, specialised development, development outside designated areas and so forth. In addition, area-specific urban policies address, for example, historic settlements and traditional urban neighbourhoods, selected civic functions and urban centres, new fast-developing areas or other strategic locations, such as the southern “gateway” to the greater Nicosia conurbation. Additional thematic spatial policies covering issues such as development densities, parking requirements, advertisements and motorway billboards, wind power generators and parks, energy and telecommunications infrastructure and networks etc have been formulated or are under study. All such policies may be published, according to the provisions of the 1972 Town and Country Planning Law, within specific Development Plans, as appendices to these – with countrywide application, or as Minister’s Orders or Directions.

Strategic Development Policy: More recently, a series of new urban policies have been introduced in order to integrate the goals and objectives of the current Strategic Development Plan into the spatial planning system. These include the designation of Strategic Areas for the location of large-scale comprehensive development in health and education, sports and recreation, research and development, culture and media, business parks etc., and provide category-specific measures and provisions, in addition to basic requirements concerning construction quality, safety and access, as well as a statement on the desirability of mixed uses, including housing and landscape planning. Such development is governed by specifically formulated basic design parameters and is bound by a set of published approval and implementation procedures.

2. CYPRUS INDICATOR STATUS REVIEW

Based on consultations with competent authorities, the following data and work relevant to indicators was identified to be available in Cyprus:

1. Geo-spatial grid

Possible subdivisions of urban areas (DTPH and CYPSTAT):

- By Environmental Area
- By Quarter
- By Municipality
- By urban agglomeration
- By Survey Area

2. Population data

Population censuses are undertaken every ten years (most recently in 2002). Data are stored by Survey Area, informal subdivisions used only by the Cyprus Statistical Service (CYPSTAT). The main criterion for defining Survey Areas is the size of the population that a surveyor can handle in a given survey. Survey Areas thus have varying sizes depending on population density and tend to have rather irregular shapes. In principle, Survey Areas can be used as building blocks for Environmental Areas or other formal spatial subdivisions. Existing data can be manipulated to provide the following:

- Population by Survey Area, Environmental Area, quarter, municipality, urban agglomeration (greater Nicosia, Limassol, Larnaca and Paphos areas)
- Population density by Survey Area, Environmental Area, quarter, municipality, urban agglomeration

3. Land use

Designated land uses by type are indicated on maps published for Development Plans. Actual land use data may be available from surveys carried out by DTPH or local authorities and are also available from CYPSTAT from publications including:

- Industrial units by type of activity
- Commercial units by type of activity

In addition, it is possible to obtain data regarding the spatial distribution of development. However, these are not published or readily available and may only be provided by CYPSTAT upon request.

4. Nature Protection

Area proposed for protection/ total area can in theory be calculated from available maps. Unfortunately, many of these maps are not yet fully digitised, even in some urban areas.

5. Transport

Available information includes:

Freight Transport

- Volume of freight transport relative to GDP
- Modal split of freight transport (100% road)
- Vehicle kilometres travelled by type of transport

Passenger transport

- Fleet: 2-3% buses
- There are currently no data available on passenger transport or total passenger vehicle miles. However, as this is a parameter required by the EEA efforts are made to evaluate it; it may therefore be available in the coming years.
- Traffic volumes are available at selected locations; percentage saturation of selected intersections may also be calculated based on traffic volumes.

Transport Infrastructure

- Length of public roads by authority and district
- Motorway data by district

Although illegal parking may be another key issue to consider, it was found that no such systematic data currently exist.

6. Energy

Available information includes:

- Energy intensity: Total energy consumption/ GDP
- Percentage of energy produced by renewable sources
- Total Greenhouse gas emissions
- Energy consumption/ inhabitant

7. Waste

Available information on solid waste includes:

- Production of industrial waste separated in categories: A pilot programme for systematic reporting has started in June 2004. Subsequently, annual reporting will be required from all industries.
- Domestic (municipal) waste will be weighed and reported systematically with the responsibility of municipalities.
- Percentage of waste land-filled and incinerated

Concerning liquid waste, through the newly implemented law on granting disposal permits, each company subject to this law is required to report relevant data (volumes, quality and disposal location). Such information is therefore gradually expected to build up.

8. Air quality

Air quality is systematically monitored in major urban agglomerations but not at an adequately dense network to produce concentration contour maps. One study conducted on behalf of the Department of Labour Inspection (DLI) is underway for the evaluation of air quality at national scale. However, population exposures are not being calculated. Both long term monitoring and the aforementioned study include ozone and particulate matter data.

9. Noise

A project undertaken by the Environment Service includes the evaluation of noise levels (L_{day} , L_{eve} , L_{night} , L_{DEN}) from road traffic in Nicosia and Limassol and from air traffic in Larnaca. Pilot noise

contour maps will also be constructed. It is expected that results can be used to estimate existing noise levels from typical land use categories in urban areas. The study also includes a large number of questionnaires which may be used to evaluate the number of negatively affected people. Results will be available by the beginning of 2005.

10. Other data

The following data can be available directly or after processing:

- National forest or park area/ total area (can be calculated from maps)
- Housing zone area/ total area
- Industrial area/ total area
- Areas for the protection of cultural heritage
- Protected buildings

the following can Probably also be calculated through processing available data and maps:

- Open /park area per inhabitant
- Open /park area per total area
- Open space / park density or average distance from park/open area

Finally, the following might be difficult to calculate on account of logistical difficulties:

- Average size of residential units
- Average area of residential units per inhabitant

These observations were based on consultations with competent authorities in the period between March and May 2004, as follows:

Statistical Service – CYSTAT (*Ioanna Tsiappa and Maro Christodoulidou, 12 and 26 April 2004*)

At the first meeting, after an introduction to the CYSTAT's mission and competencies, the discussion concentrated on population data collection. This is separated geographically in Survey Areas, whose boundaries generally follow main road arteries. Thus, the Survey Area constitutes the smallest practical geographic parcel within which data are available. Further, there is the potential for analysis by road as the survey questionnaires contain this piece of information. However, this datum is not at present processed. At the second meeting, maps of the Survey Areas were presented and different methods of obtaining and processing information were discussed. Other types of data were also discussed, including information concerning industrial and commercial development, as well as freight and communications.

Public Works Department (*Heracles Pasades, 13 April 2004*)

Current work on indicators as well as other data collection and processing activities were discussed. Mr Pasades referred to work done by the Public Works Department (PWD) in cooperation with CYSTAT for the collection of transport data both for internal use as well as for reporting to Eurostat. He also described traffic flow measurements and modelling activities of the PWD, and said that the

Department is preparing a GIS-based model of the road network of greater Nicosia.

Municipality of Strovolos (*Georgios Tsiakkas, 19 April 2004*)

It was reiterated that the Municipality is interested to cooperate with the URBANGUARD project as a pilot study area. Strovolos is in the process of producing an ecological map. It was stated that data and maps available at the Municipality will be made available to the project. However, it was also stated that at present no digital data or maps are ready yet, while it should be considered unlikely that such processing will be made early enough for use within the project timeframe. It was therefore concluded that, should Strovolos Municipality be finally selected as the pilot area, all necessary processing for the purposes of the pilot implementation will be undertaken by the project team.

Department of Labour Inspection (*Savvas Kleanthous, 3 May 2004*)

The following issues were discussed:

- Ambient air quality monitoring; the monitoring network and results format was described
- Sources of air pollutants in urban areas; plans for future monitoring and control
- Data gaps and problems in the processing of results, especially in population exposure estimates

Environment Service (*Christina Pantazi, 4 May 2004*)

In the presence of Marilena Kythreotou from CYSTAT and Phaedon Enotiades from the DTPH, current work on indicators was presented by Ms Pantazi, such as

- Indicators prepared for submission to Plan Bleu
- Indicators prepared through the project TERM
- Data collected in accordance with environmental legislation
- Other environmental data available from CYSTAT
- Problems and gaps in data collection

It was stated that the majority of data had not yet been verified at the time of the meeting. A follow up contact was therefore made with Ms Kythreotou on 1 November 2004. A newer list of indicators was then provided which including sets of verified data.

3. CONCLUSIONS AND GEOSPATIAL CONSIDERATIONS

The Local Plans for the main urban areas of Cyprus, which form a specific tier of the island's legally defined spatial Development Plan hierarchy, were first published in 1990 and have since then been reviewed and revised at approximately five year intervals. The general framework of policies and goals of all the Local Plans is based on the principles has been described in the first part of this report. This framework is further refined and adjusted to the particular character of each urban agglomeration, depending on parameters such as its area and population size, urban structure and role in the national urban hierarchy, local economic orientations and market dynamics, as well as geographic, environmental, cultural, historic and other factors. Through the various revisions and reviews of the Local Plans, this framework has been developed and adapted to reflect both local citizens' and stakeholder groups' views and expectations, as well as universal and EU concerns on local economic development, policy-related sustainability issues and the protection of natural and cultural heritage.

These urban policies and planning goals were thoroughly discussed by the task team in several project meetings, so as to develop a good understanding of current urban policy. This exercise was both necessary and crucial as the ultimate set of chosen sustainability indicators must be appropriate for the evaluation of these policies and form the basis for their environmental audit during the review stage.

A main characteristic of the planning approach taken by the Local Plans examined is the adoption of a general policy for the consolidation of development. All these Local Plans comprise a set of policies promoting strong Central Business Districts and lower grade suburban centres. The main identified spatial structural elements of urban agglomeration Local Plans are:

- The viable distribution of land uses, striving at the same time to achieve a healthy mix of urban activities and safeguarding quality of life through the separation of incompatible uses
- The delineation of a precise development boundary within which major development is promoted, while discouraged outside it
- The promotion of an efficient and effective distribution of activity nodes (commercial centres, education and community services, urban green areas etc), for the provision of local services through the implementation of the spatial neighbourhood concept of "Environmental Areas"
- The provision of transport networks to serve and define these Environmental Areas
- The stated goal of achieving sustainable development with respect to environmental quality, economic growth, social cohesion and cultural identity

The main structure and form of the cities in Cyprus is defined by the primary road network and the environmental areas that form urban neighbourhood cells surrounded by primary roads. Most of the Cyprus cities have a grid primary road configuration. The environmental areas are the grid's imperfect squares that form the "cells" of the grid road system and consequently the cells of the city itself. In principle, the environmental areas must be areas of good environment-urban rooms- where people can live, work, shop, look about, and move around on foot in reasonable freedom from the hazards of traffic, and there must be a complementary network of roads-urban corridors – for effecting the primary distribution of traffic to the environmental areas. These areas are not free of traffic but their design should ensure that their traffic is related in character and volume to the environmental conditions being sought. With this concept, the town takes on a cellular structure consisting of environmental areas set within an interlacing network of primary roads.

Cross-referenced with the matrix of policies and goals (**Appendix 3**), the spatial planning concept implemented in the four main urban areas in Cyprus described above, formed the basis for the selection of sustainability indicators. On the other hand, the main geo-reference characteristics on which the described policies are based, have determined the spatial scales to which the selected indicators will have to be evaluated. These characteristics can be summed as follows:

- The surface extent (km²) of each Environmental Area
- The distance of the Environmental Area from the urban agglomeration's Central Business District (CBD)
- The distribution of land uses and its relationship with the size and distribution of Environmental Areas
- Development occurring within and outside Development Boundaries
- Distance travelled by various modes, mainly on foot, to various community service uses (schools, commercial centres etc)
- Distance of major land uses from the urban agglomeration's Central Business District (CBD)
- Length of roads within Environmental Areas
- Surface area of various amenities and community services within each Environmental Area

In addition to spatial planning policy-driven parameters, data availability, as described in the second part of this Report (Cyprus Indicator Status Review), is also a decisive factor for the selection of indicators. Fortunately, most of the vital planning statistics are available at least at the Environmental Area scale. Population data availability is a key parameter, which was seriously considered. These data are readily available at the CYSTAT Survey Area grid system. The size of each Survey Area is selected such that the population within a survey area ranges from 500–1000 persons; it therefore varies widely in geographical area. It is also noted that statistical Survey Areas constitute building blocks of spatial planning

Environmental Areas. Moreover, the following spatial scales were identified as appropriate for data collection:

- Localised issues such as noise, traffic density etc are best assessed at road section level
- Population exposures are best assessed at Survey Area or Environmental Area scales
- General Planning policy issues are best assessed at Environmental Area scale
- Urban-scale and cohesion related indicators are best assessed at Environmental Area scale, as well as through predefined ring zones based on distance from agglomeration CBDs.

The scale and distribution of spatial grids in which indicators will be monitored and evaluated are therefore based on the size, land use and distribution of the spatial planning Environmental Areas described in the Local Perspectives Report and the statistical Survey Areas used by CYPSTAT. The additional geographic grid of predefined ring zones based on distance from agglomeration CBDs was structured by the project team to address mainly indicators that concern development sprawl issues. It basically consists of concentric rings around the heart of each agglomeration, each with an approximate width of 1 km.