

Auroville Outreach

A newsletter from Auroville international township

January 2001

Asia Urbs - linking Auroville with Europe

In 1998 two Aurovilians working independently in Brussels - capital of the European Union (EU) - linked up their energies to explore the possibility of obtaining EU support for the development of Auroville. That was the beginning of a long and complex process, which has finally resulted in a collaboration agreement involving the cities of Venice (Italy) and Cologne (Germany) with Auroville under a programme called Asia Urbs.

What is Asia Urbs? Essentially, it is a programme designed to encourage Asian and European cities to work together on urban pilot projects, with the overall aims of promoting cooperation and assisting the cities involved to strengthen their urban management capacity. In Auroville's case, the programme will commence with the creation, for the first time, of a proper municipal management facility consisting of a building with general and specific office space (the latter for the various municipal services in Auroville, such as the Water Service, Electricity Service, etc), a conference room, a multimedia centre - cum -

library, and a resource facility for documentation on town planning and urban challenges in Asia and elsewhere. Overall the building plus equipment and support staff will be dedicated to the integration, coordination and enhancement of all the services needed for sustainable development and building of the Auroville township. The planned space is 600 sq.meters, out of some 5,000 sq.meters anticipated for a future 'Town Hall' complex.

This part of the project has a 2-year time scale, the first year being devoted to construction of the building complex, and the second to a series of workshops and conferences - on water management, alternative transport, traffic management, and energy planning, saving and renewable energy diffusion. A fifth workshop will be held in Cologne on waste management. The Auroville workshops will be specially addressed to district and civic officers from



Mr. Dattatri, former Chief Town Planner for the state of Tamil Nadu, working with Auroville town planners

Auroville is an international township in Tamil Nadu, South India, founded in 1968.

Inspired by the vision of Sri Aurobindo and The Mother, about 1,500 people from India and some 30 other nations are building a township dedicated to an experiment in human unity, with the eventual hope of contributing to international understanding and the evolution of human consciousness. Nearly 5,000 of the 40,000-plus local people living in the dozen-or-more villages that comprise the Auroville bio-region are also involved in the project, providing their skills and labour.

The township, projected for 50,000 people, will radiate out from the central Matrimandir and its surrounding gardens in 4 zones, the International, Cultural, Residential and Industrial. A large forested area, the Green Belt, will eventually surround the entire township area.

Present activities in Auroville include wasteland reclamation and reforestation, organic farming, village development, education, health care, renewable energy, appropriate building technology, arts and culture, handicrafts and small-scale industries, architecture and town planning.

As described by its founder, Auroville aspires to be "a universal town where men and women of all countries are able to live in peace and progressive harmony, above all creeds, all politics and all nationalities."

For more general information visit the website: www.auroville.org

Tamil Nadu and Pondicherry, and attended by experts from Cologne and Venice, plus a few others.

In addition to the above workshop activities, the new centre will provide facilities and documentation for individual research by Indian and foreign students on topics related to urbanisation, sustainable growth of cities and the diffusion of appropriate technologies in city development. There will also be funding for: a thesis to be prepared by an Indian student on matters related to urban sustainable development and appropriate technologies; for an exhibition on Auroville to be prepared and sent for display in Venice; and for a number of booklets, brochures and pamphlets to be produced in support of the workshops and other activities.

Meanwhile, with financial help from the EU and input from the two other participating cities (Venice primarily in the fields of architecture, town planning and civil engineering; Cologne primarily in the fields of water, energy, transport and environment), a number of other things will be happening under the overall headings of town planning, coordination and upgrading of municipal services. To be more specific, these can be grouped under the following sub-headings.

Town planning

The Auroville Master Plan will be worked on in greater detail and elaborated with the help of experts deputed from Venice and Cologne. Indian town planners and architects will also be hired for the duration of the programme, with Mr. Dattatri - former Chief Town Planner for Tamil Nadu and Consultant to the World Bank - acting as advisor/coordinator for the Indian input.

Energy

A full municipal energy plan for a population of 50,000 people will be prepared, to include a master

plan for future installation of low and high tension electricity lines, and a study will be made on the feasibility of setting up an electrical sub-station. At the same time, the Auroville Electrical Service will receive funding over a 2-year period for 10 young people each year from the surrounding villages to be trained up as qualified electricians.

Solar service

The present equipment of the AV Solar Service will be upgraded, and displays/demos mounted in various centres, the local villages, and in public buildings such as schools, mini health centres, libraries and Panchayat offices. There will also be 10 training programmes of one month duration for 10 students each time (a total of 100), the students being drawn from the local area and various organisations around India.

Water

A pre-feasibility study on Auroville watershed management - including the lake around Matrimandir - will be prepared in collaboration with international consultants, together with a plan for the installation of various decentralised wastewater treatment plants. The laboratory of Auroville's Water Service will also be upgraded with some 20 lakhs rupees (approx US\$ 44,500) worth of specialised equipment for testing water, soil and food contamination. Of particular importance in this latter context will be the ability to monitor water quality in the wells throughout the 120 sq.km bio-region, which directly affect the living standards of some 70,000 people. (One likely outcome of all this work, carried out with global positioning system (GPS) rover equipment for precisely locating test sites, will be the preparation of a sophisticated 'water resources and contaminants' map for the area, which could be ahead of anything else available throughout Asia.)

Urban greenwork

Work will include the integration of buildings, roads and infrastructure with the creation of 13 acres of parks, 9 acres of green corridors and 4.5 kms of avenue trees in the city area; the development of the landscape, including 3,000 sq.metres of catchment ponds, 10 kms of bunding and 700 cu.metres of check-dams to minimise water run-off throughout the township area; the setting up of a 'green city' service nursery with horticultural equipment and personnel for the development of green areas in the city and bio-region; and the training of 15 people each year for 2 years (total 30) in gardening and urban landscaping skills.

All in all, we are talking about a massive programme with considerable costs involved. The way this will be financed is that the EU will meet two-thirds of the cost, and the balance one-third will be split between the three participating township/cities, to be paid by way of locally funded wages, material costs, etc. The whole programme has been officially sanctioned by the EU, and the final contract will be signed in February 2001 for release of funds in April.

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Auroville hosts international and national workshops

(from an article in Auroville Today)

Most people these days are fully aware of the "ozone hole" over the arctic, and know that it results largely from long years of using chloroflourocarbons (CFCs) as refrigerator coolant gases and aerosol spray propellants, and their escape into the atmosphere. They also know that mankind is in process worldwide of trying to eliminate them.

Today there are two substitute gases available in place of CFCs, namely hydrofluorocarbons (HFCs) and hydrocarbons (HCs). It is cheaper to convert to HFCs, which also have fewer safety requirements than HCs, but unlike HCs they are greenhouse gases (contributing to global warming) and are likely to be banned in future under the Kyoto Protocol. The US has gone for HFCs; most European countries have gone for HCs; the Indian government has gone for neither, and continues to leave it up to individual manufacturers to choose for themselves, a situation which is causing much confusion in the industry, and considerable concern among global environmentalists.

Today the refrigeration sector is responsible for something like 60% of the CFC use in India. With 20 million fridges in the country, and an additional 2 million being added each year, it is vital that India takes a stand to speed up elimination of CFCs. One important initiative towards this has come from IT Power India (ITPI), consultants in renewable and intermediate technology based in Pondicherry. ITPI has a contract with the World Health Organisation (WHO) to train technicians who service vaccine fridges in 10 South Asian

countries in new post-CFC technologies, and has proposed Auroville's Centre for Scientific Research (CSR) as an ideal venue. The result is that CSR is now one of only 3 centres in the world where these special WHO workshops are taking place.

ITPI was aware, however, that the WHO training sessions didn't address the urgent need to assist India in its transition to post CFC technologies. As a result, with funding from the Swiss Agency for Development and Cooperation, they have developed and are co-managing with the NGO SwissContact another programme called HIDECOR (Human and Institutional Development for Ecological Refrigeration) which aims to retrain people who work in the small scale 'roadside' fridge servicing sector. This sector, which undertakes approx two-thirds of all the servicing in India, is poorly organised and often lacks information about CFC alternatives and how to use them. They are also poorly trained in CFC technologies, with the result that the gases are often released into the atmosphere during servicing work.



Workshop in progress at CSR

India, the ITPI/SwissContact team plans to train 5,500 of them in 6 states over the next 4 years in the correct servicing of not only HFC and HC fridges, but also of CFC fridges. Three such workshops have now taken place in Auroville (in addition to the 3 for WHO).

This recognition of CSR as a suitable environmentally-conscious place to hold the workshops reflects well on Auroville as a whole.

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Spirulina: a food for the future

Anyone innocently visiting Auroville's 'Aurospirul' unit down near the beach might be excused for thinking the slimy green scum being netted off the surface of a series of concrete tanks is an unwanted pollutant, but in fact it is one of the world's most nutritious foodstuffs, an ancient blue-green spiral-shaped microalgae called spirulina.

Spirulina, or spi (pronounced "spee") as it's known by its fans, is believed to be one of the first forms of plant life on earth, found naturally in a number of alkaline lakes around the world, including Lake Lonar in Maharashtra. It appears to be the ultimate source of nutrition available



Pondicherry roadside technicians

In awareness that there are some 150,000 such roadside technicians in

to mankind today. Even NASA has said that “1 kg of spi is equivalent in nutrient value to 1,000 kgs of assorted vegetables.”

To give some idea of spi's nutrient value, just 10 grams provides as much iron as 72 grams of whole wheat, 450 grams of spinach or 90 grams of veal liver, and as much vitamin A as 14 eggs, 156 grams of carrot or 4.5 litres of cow's milk. Its vitamin B12 content (by far the most difficult vitamin to obtain in a meatless diet) cannot be over-emphasised: spi is 4 times richer than raw liver, traditionally considered the best source of this vitamin.

When it comes to protein, spirulina also excels. Not only is it packed with 65% cholesterol-free and highly assimilable protein itself, but it also beats all other major sources for the economics and practicality of production in terms of water and land needed to produce 1 kilogram, as follows:

	Water (litres)	Land (sq.mtrs)
Spirulina	2,100	0.6
Soybeans	9,000	16
Corn	12,500	22
Grain-fed feedlot beef	105,000	190

What's more, spirulina can be grown in brackish water and on unfertile land, whereas the other sources listed all need fresh water and fertile land.

The United Nations in its World Food Conference in 1974, noting the above facts, and that the human body ingests the proteins, vitamins and minerals in spirulina better than those contained in meat and dairy products, declared spirulina “the best food for tomorrow.”

With all this in mind, it's not surprising that health conscious



Spirulina culture tanks at 'Simplicity'

Aurovilians took up the idea of producing their own spirulina, and in October 1997 a farm was started. It's a deliberately small venture, begun with just 2 lakhs rupees (approx US\$ 4,500) investment, and consisting of only seven 30 sq.metre concrete tanks set out in the full sun. Tended by 5 local village women, these tanks produced some 500 kg of dried/processed spirulina in 1999 valued at Rs.4.5 lakhs (over US\$ 10,000). Obviously a bigger farm would be more profitable, but Aurospirul's management has deliberately kept the project small and simple, without even electricity for pumping water (which is done via solar pumps), so that it can act as a model for NGOs interested in introducing similar projects to rural populations elsewhere in India, and to developing countries around the world.

The actual production process is extremely simple. The tanks are fed daily with a mixture of minerals and salts and then stirred 6 times during sunlight hours and 3 times at night, using wooden paddles. Once a day the top layer of spirulina is harvested

using fine filter cloth (28 microns). This is then spread out to dry on plastic sheets, after which it is crumbled up into flake or powder form. The final product is sold in boxes of 100 bubble-packed capsules, and bags of 50 grams of powder or 100 grams of flake. Quality control for purity is currently maintained via a laboratory in Madurai, though this will later be done on site. Sales are made in Kerala, Delhi and Madras as well as in Auroville and Pondicherry.

Finally, it is worth mentioning that Auroville's Village Action Group has taken up the cause of spirulina. Training has been received in how to set up small farms and run them, and it is hoped this will lead to the establishment of a number of similar projects in Auroville's bio-region. In other words, it looks as though spi, “the food for tomorrow”, is on its way towards becoming a food for today, a point which Aurospirul is keen to promote.

**For more information e-mail:
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Enquiries or feedback relating to this newsletter and its contents are always welcome, and can be communicated to:
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