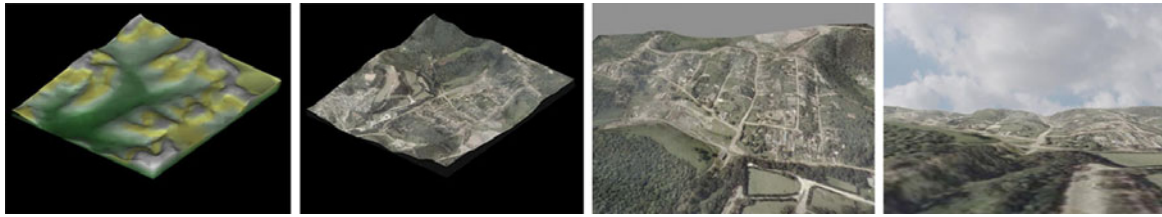
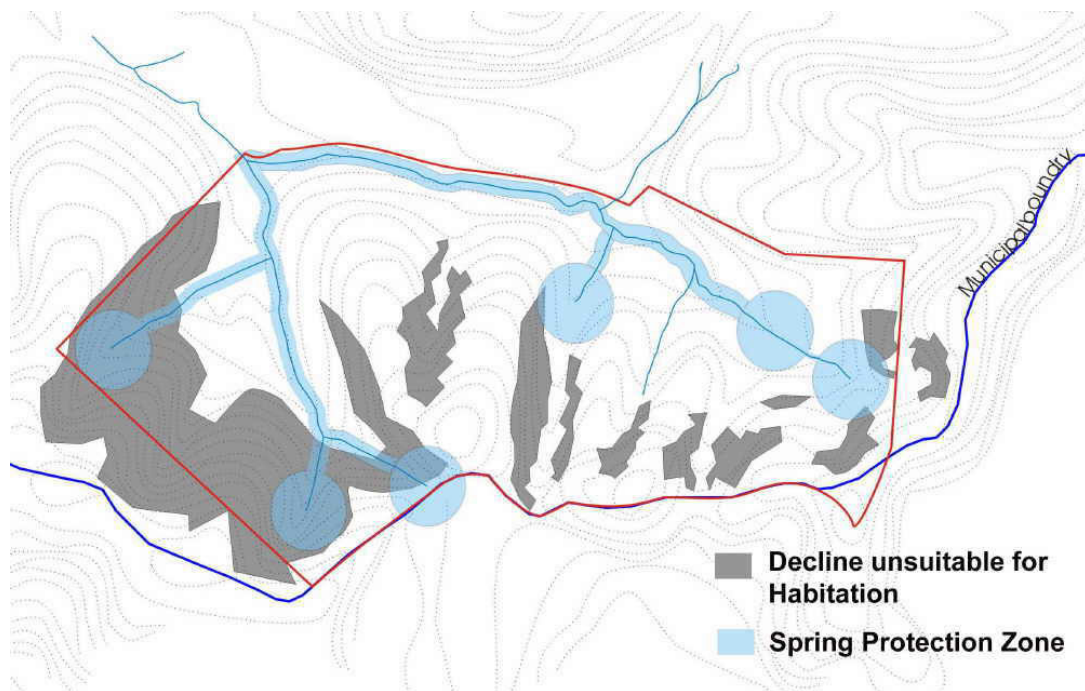


An ecological development concept for a former landfill fringed settlement



The example of Sitio Joantina, Brazil



AREA of the chosen environmental catchment = approx. 390596m²

Goals of an ecological development in Sitio Joaninha

1. To protect the environment so that it can continue to (again) be the source for sustainable human existence.

1.1 Water

- 1.1.1 To hold and use the rain and storm water on the site to help raise the groundwater level and furthermore use it to grow plants in order to prevent further erosion and vegetables in order to feed the people of Sitio Joaninha.
- 1.1.2 To preserve and regain the other water sources, i.e. the springs and wells of the village.
- 1.1.3 To avoid water source pollution through uncontrolled or inefficient sewerage of grey and black-water.
- 1.1.4 To isolate the landfill in order to avoid rainwater infiltration and therefore ground water pollution and an aggravation of the water quality in the Billings reservoir

1.2 Matter (nutrients)

- 1.2.1 To avoid the discharge of natural resources through uncontrolled waste management and neglected erosion prevention. All organic matter should be transformed and used on the land.
- 1.2.2 To control the recycling process of matter in order to make maximum use of it.

1.3 Energy

- 1.3.1 To use the natural and anthropogenic energy sources available on the site.
- 1.3.2 To use the methane gas created by the decomposition process on the landfill for cooking and electricity and to make this energy available to the citizens of Sitio Joaninha at a special rate.
- 1.3.3 To use solar energy through simple collector techniques in order to create warm water.
- 1.3.4 On a long term, to use wind energy to create electricity.

2. To preserve and create a human ecology, where the ecological and social awareness is raised.

2.1 Living

- 2.1.1 To create simple low budget houses out of ecological material, like clay, recycled construction material (roof tiles out of cement and organic fibres, etc.)
- 2.1.2 To create cells of dwellings at a cul-de-sac, which have one common infrastructure and social network.
- 2.1.3 To create a village centre with school (reunion hall), medical centre, commerce, church and administration (guard, social workers)
- 2.1.4 To keep the population at a somehow stable number with the tendency to decrease.

2.2 Working

- 2.2.1 To create work opportunities in the field of recycling (construction material, plastics) agriculture (wet rise fields, tea), manufacturing (shoes with tyre soles) and construction (application of recycled building material).
- 2.2.2 To create work networks. (Construction crews, manufacturing and distribution)
- 2.2.3 Raising the consciousness of working together.
- 2.2.4 To create workshops for cooperatives and individuals.

2.3 Education

- 2.3.1 To create a crèche for the small children, which is run by mothers (or fathers)
- 2.3.2 To run a primary school which besides teaching the regular curriculum has to involve the children already in community work as for example the control of water quality, the observation of species (green classroom) and the basic techniques of ecological agriculture.
- 2.3.3 To use the school for adult education in the afternoons.
- 2.3.4 Adult education has to focus on the training for job qualifications especially with an ecological approach. (Ecological agriculture, permaculture, ecological building methods, house economies, environmental awareness) Furthermore, a network of social responsibilities and contracts has to be created to help a sense of community to grow. As there will be many common areas the idea of them not belonging to anybody has to change into the concept of belonging to everybody.

3. To secure the achievements in the future

- 3.1 To get national and international attention and help.
- 3.2 To have the project been coached for a period of at least 5 years by at least 3 social workers. Within this period, they have to enable the villagers to administrate their village by themselves.
- 3.3 To disseminate the model character of Sitio Joaninha
- 3.4 To legalize the settlement, in order to up value the people and the land.
- 3.5 To build up a framework of mutual contracts between the villagers, as everybody is responsible for the quality of their common environment.
- 3.6 To have environmental guards recruited amongst the citizens who control any further land invasion and who can enforce the law