

THE URBAN ECOSYSTEM AS A FRAMEWORK FOR ENVIRONMENTAL EDUCATION



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The Traditional approach of Environmental Education

On
The
environment

Take your students
to nature

In
The
environment

Teach them to
know it

For
The environment

So they will
develop empathy

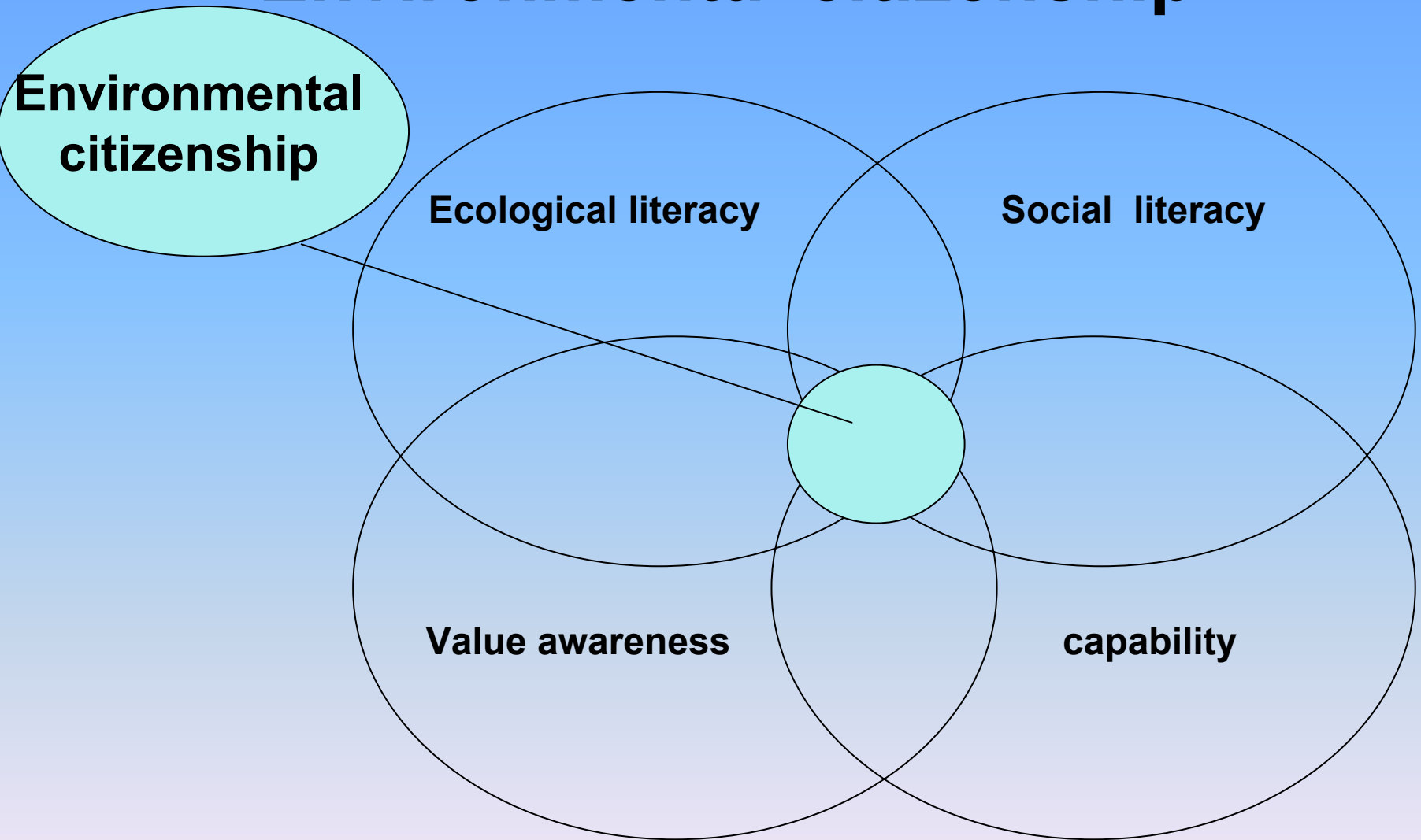
And willing to
protect it

Lucas, A. M. (1980)

Criticism of the Traditional approach

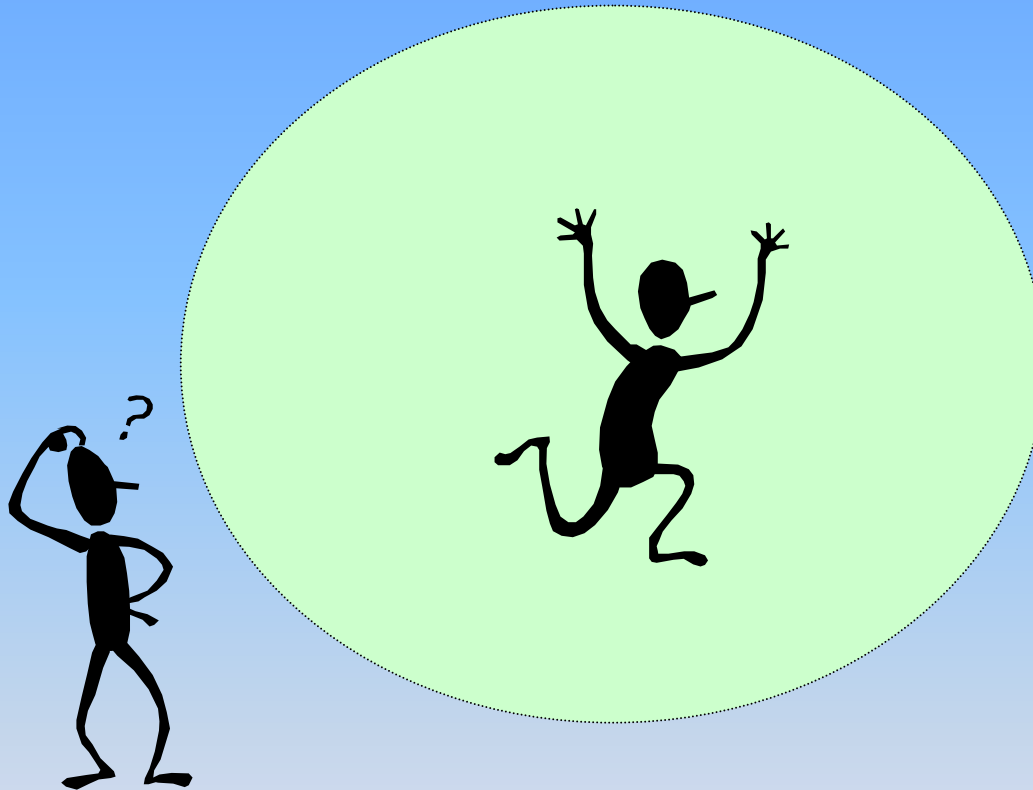
- addresses only student with pre-existing ecological or scientific attitudes.
- Has a deterministic characteristics.
- Creates difficulties in developing the concept of 'being part of the ecosystem'.
- Natural systems are less available for most of the students.

Development of Environmental citizenship



Berkowitz, A., Ford, M. and Brewer, C. (2005).

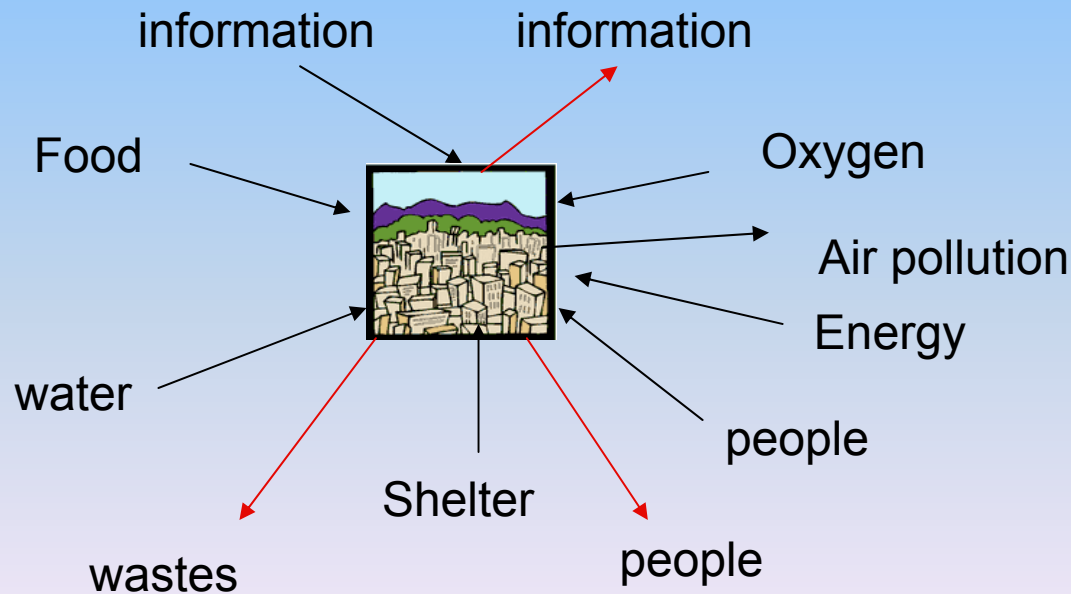
New ecological paradigm



Man is part of the ecological system while, at the same time, is an observer who has the ability to analyze and understand his involvement and to plan in advance for establishing sustainable environment

City as an Ecosystem

The interaction of the social, biological, and physical components of the city, and the interaction between this system and distance ecosystems that support its existence or that are subjective of its impact.



Urban Ecosystem as an Arena of Environmental Education



Education for...

- **Understanding the city as an ecosystem**
- **Seeing man as an integral part of the system.**
- **Understanding the dependence of the city on long-distance ecosystems.**
- **Knowing the ecology of these ecosystems.**
- **System thinking**
- **Interdisciplinary thinking**
- **Spatial thinking**
- **Temporal thinking**

Development of system thinking
through
Study of **sub-systems** within the
urban ecosystem

And

Seeing man as an integral part
of the system

Standard designing or fitted building



How to solve the problem of youth boredom

A city in the desert!

You certainly ask yourselves what is it?

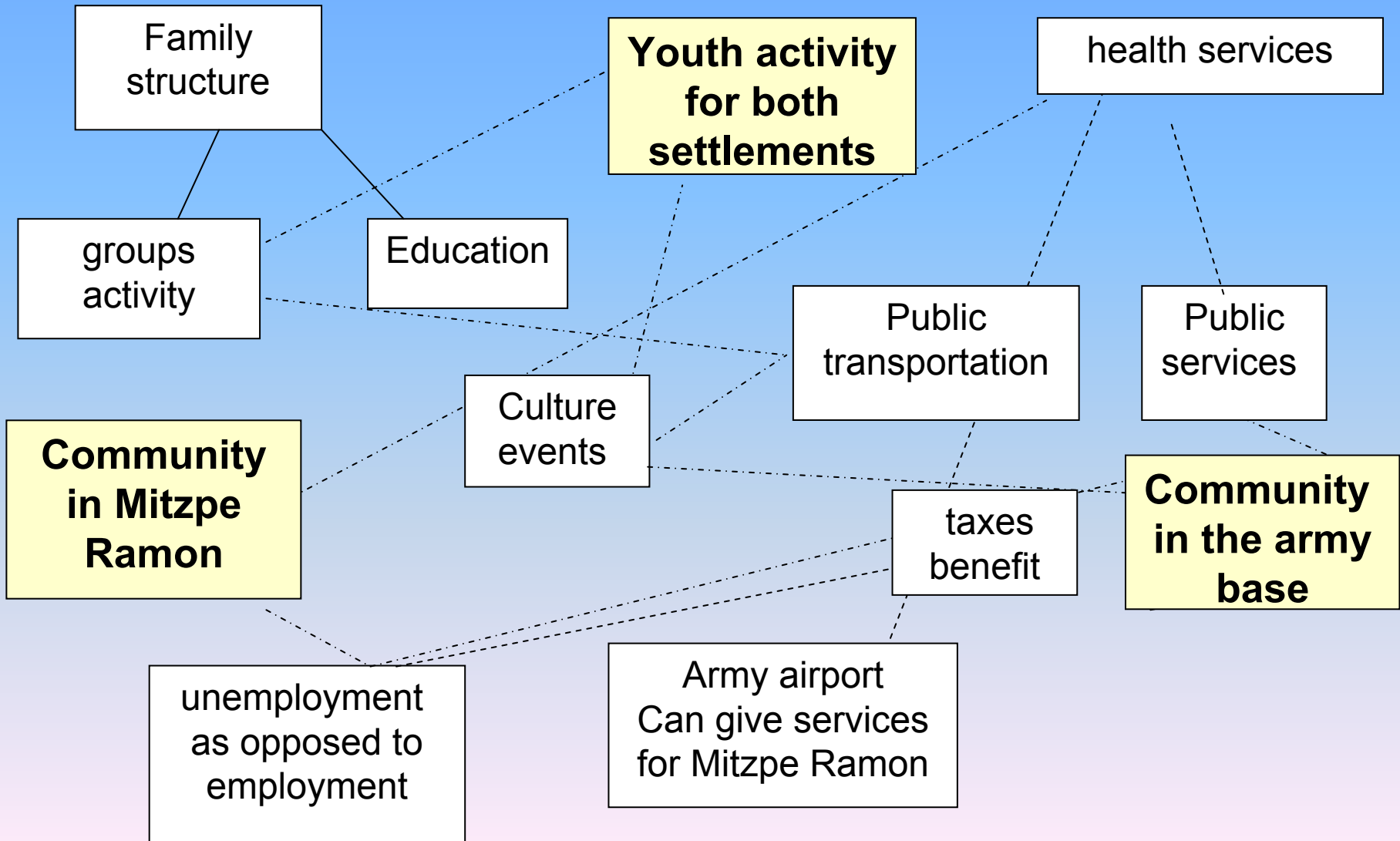
So I will tell you what is it. It is a terrible place with nothing in it. Only landscape and landscape. In short, It is not a place for youth, only for old people



They feel that...Hell This place!! I want to leave it!! After army service, like our older brothers, we will run away from here. We can go to Tel-Aviv, all the world is open, we won't be stuck in this small place.

(Teachers. Oct. 1999)

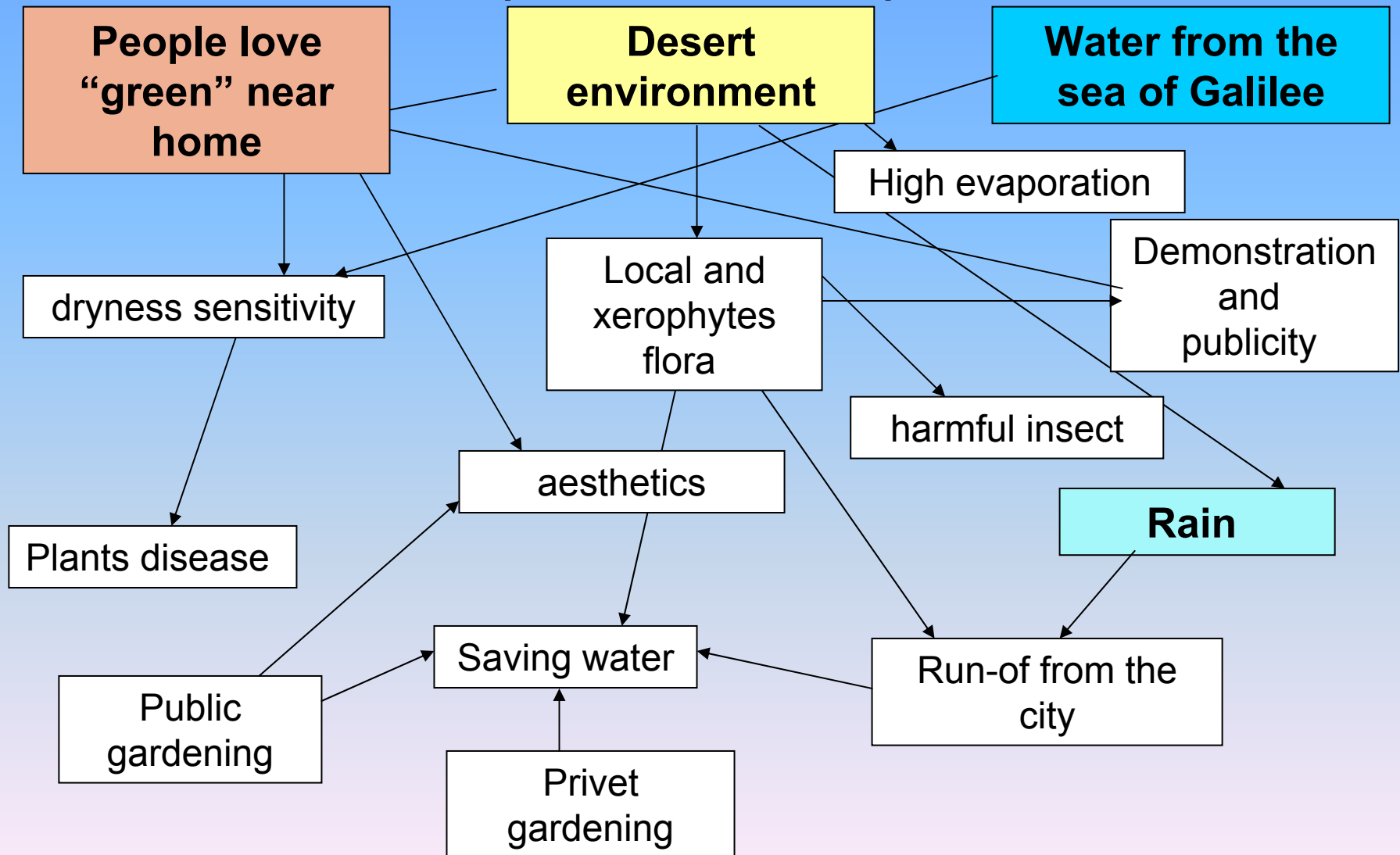
Connecting tow small settlements (Jan.2001)



Desert gardening or standard and wasteful gardening



Desert gardening in Mitzpe Ramon (Jan. 2001)



From sub-systems

To

Urban ecosystem

Teacher: I want to ask you as the delegate of the **ran-of group**, can you help the group of “optimal design”?

Student: I don't know... this is a city, not an open space... maybe we can recommend on suitable plants...they can also catch the rain.

Student (optimal designing): we can use the Wadi within the neighborhood.

Student (Desert gardening): maybe we can design the streets in a way that the ran-of will irrigate the gardens...

(Students, 17.01.01)



**Understanding the dependence of
the city on
long- distance ecosystems**

On the track of Mitzpe ramon
water supply

A camp near the Sea of Galilee

Teacher: *An Indian takes care for his environment, but what is his environment? The water came from the nearest river, the food from the forest... what is the environment of Mitzpe Ramon? From where we take our resources?*

Student: *water from the Sea of Galilee.*

Student: *food from all over the world.*

Student: *article of clothing from China.*

Some students together: *that is to say that our environment is the entire globe.*

(Students, 30.08.01, sea of Gallile)

summing up

- The concept of Urban Ecosystem Have the potential for development of Environmental Citizenship
- System thinking.
- Interdisciplinary thinking.
- Spatial thinking.
- Temporal thinking.
- Seeing man as an integral part of the system.
- Understanding the dependence of the city on long- distance ecosystems.
- Understanding the ecological base of the human existence.
- Knowing the ecology of long distance ecosystems.

Also...

we need to develop suitable tools for
evaluate the development of
“Environmental citizenship” in all its
dimensions.

We are at a turning point in history

Our planetary environment is severely damaged

Desertification is spreading, the globe is warming

Entire ecosystems are under threat

And the city is at the center of the storm of destruction

But that is the key!

We must cease seeing the city as a problem

We must see the city as the solution

For the city is our home

It is what we make it to be

It is where we live

If we fail to seize the future

We will be consumed by the past

The future begins NOW!

(From the Charter of Calcutta, 20th, November, 1990)