

# **Ecological Sanitation in Yuvientosa – Amazonian Region of Ecuador**

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# Location

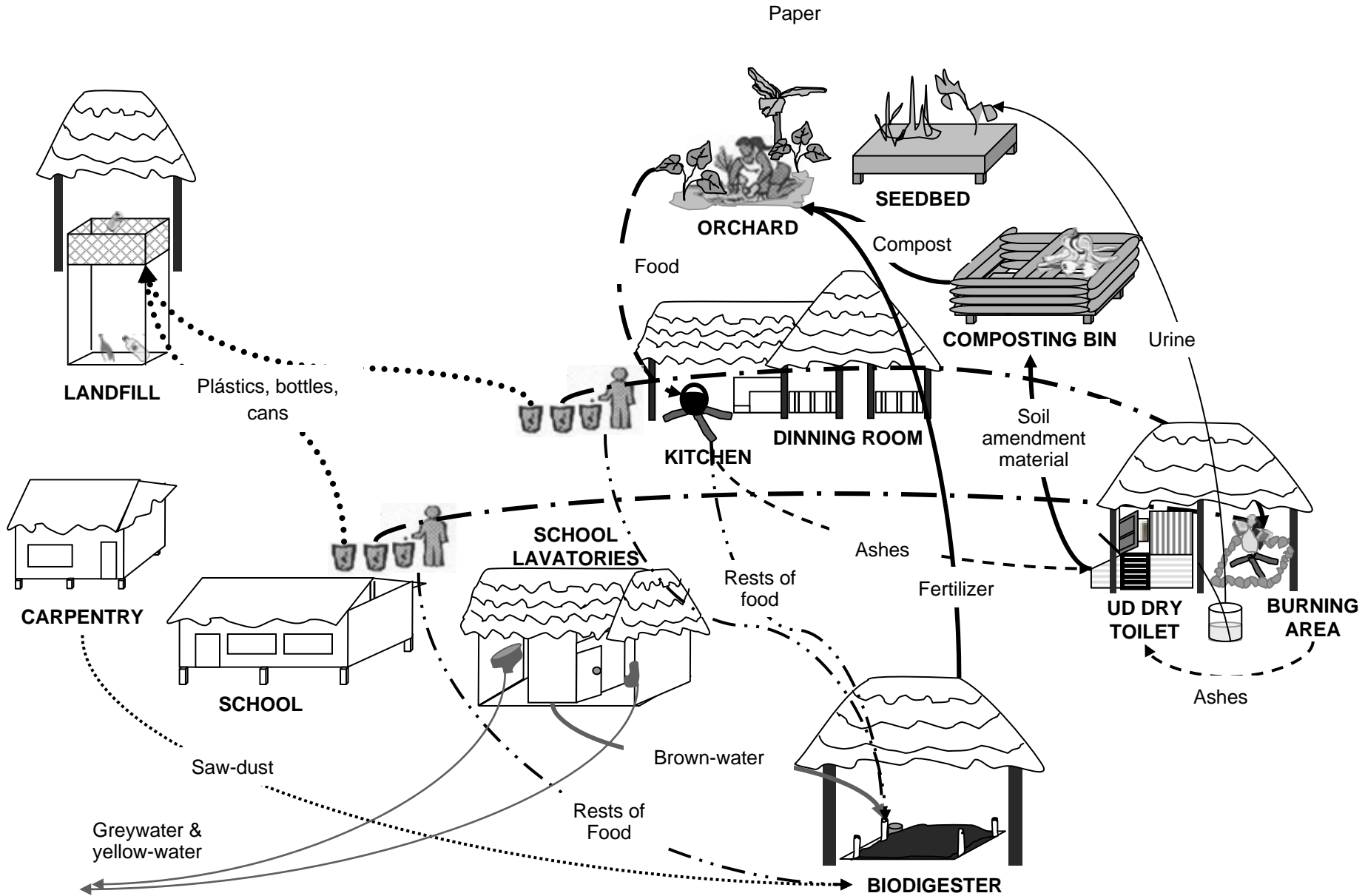




## The Community



# The Concept – Clean Community



# The Importance of Managing Residues



Grupo 2

- **Plásticos** - residuos de plástico
- **Papel** - residuos de papel
- **Residuos orgánicos** - residuos de comida, frutas, verduras, etc.
- **Residuos inorgánicos** - residuos de vidrio, metal, etc.
- **Residuos peligrosos** - residuos de productos químicos, medicamentos, etc.

# Solid Residues – Sorting at the Source



## Separación de Residuos Sólidos



AMAZONICA





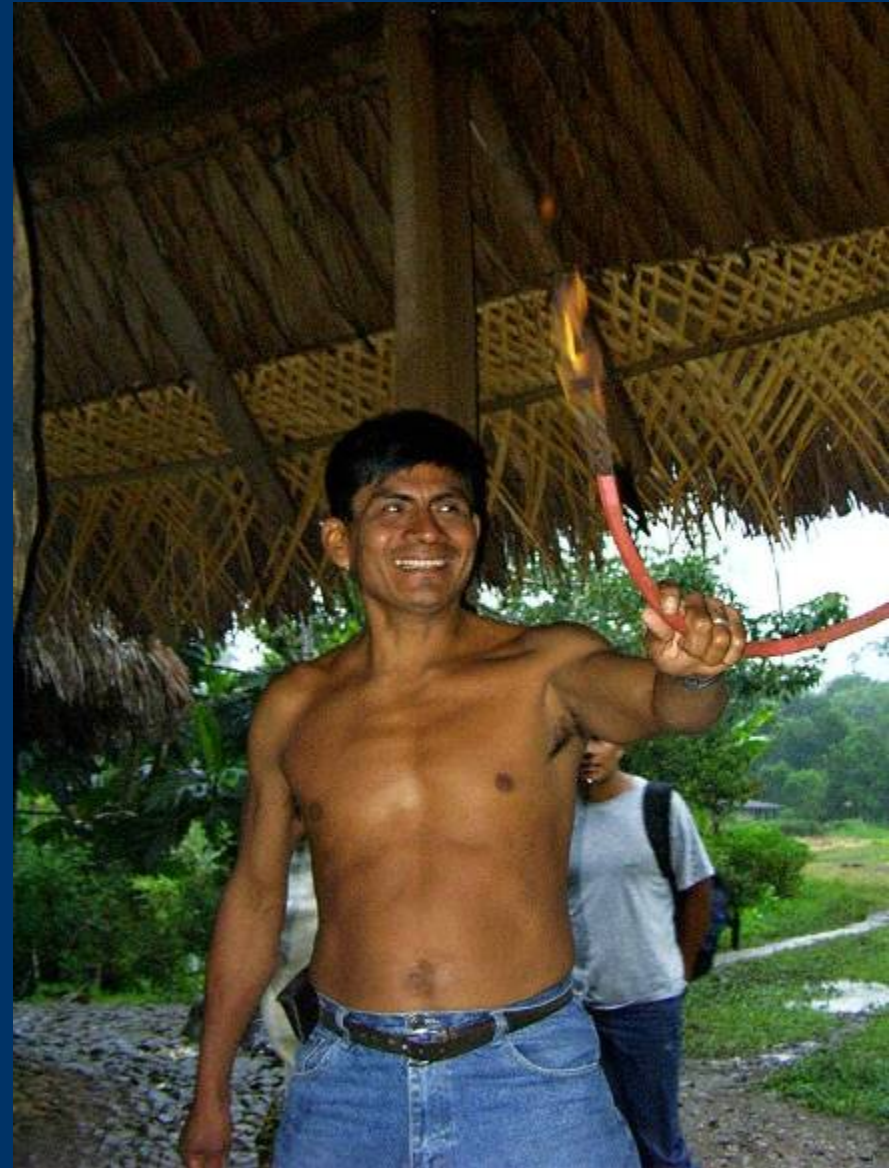
# Biodigester

Construction / Operation



# Biodigester

## Operation





# Composting Organic Residues



# Composting Organic Residues



## COMPOSTERA

Materiales

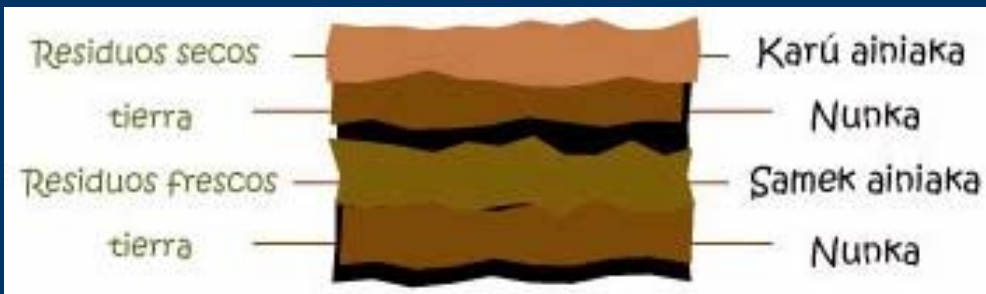
|                     |         |
|---------------------|---------|
| Árboles             | = 8 u.  |
| Cajas de 8 ft.      | = 50 u. |
| Pedra de 30 x 2 ft. | = 25 u. |
| Pedra de 30 x 1 ft. | = 80 u. |
| Pedra de 60 ft.     | = 8 u.  |
| Tablas 0.25 x 2 ft. | = 8 u.  |
| Tablas 0.25 x 2 ft. | = 8 u.  |

TAPA DE MADERA

Basado en El Arte de Compostar, Escuela Cultural de Innovación Tecnológica S.C., 1990.

## COMO COMPOSTAR

AMAZONICA



## Ellos trabajan en la composta

Yurunar takakmainiwai composta (Yamaram nunkan)

## Problemas Y Soluciones Itiurchat Tura Iwiaratin

| Problemas Itiurchat                                   | Causa Najanul                                             | Soluciones Iufarein                              |
|-------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------|
| Huele mal<br>Wash<br>Wash                             | Demasiado residuos frescos<br>Tura ti tura tura           | Poner residuos secos<br>Wash                     |
| Huele a huevo podrido<br>Wash<br>Wash                 | Falta aire<br>Wash                                        | Voltear durante varios días<br>Wash<br>Wash      |
| El centro está seco<br>Tiene hormigas<br>Wash<br>Wash | Falta agua<br>Wash                                        | Poner agua<br>Wash                               |
| NO se calienta<br>Wash                                | Faltan residuos frescos<br>Tura tura tura                 | Poner residuos frescos<br>Tura tura tura         |
| Tiene moscas<br>Wash                                  | Los residuos frescos no están cubiertos<br>Tura tura tura | Cubrir los residuos con tierra<br>Tura tura tura |

# Urine-diverting Dry Toilet



# Hand-washing devices



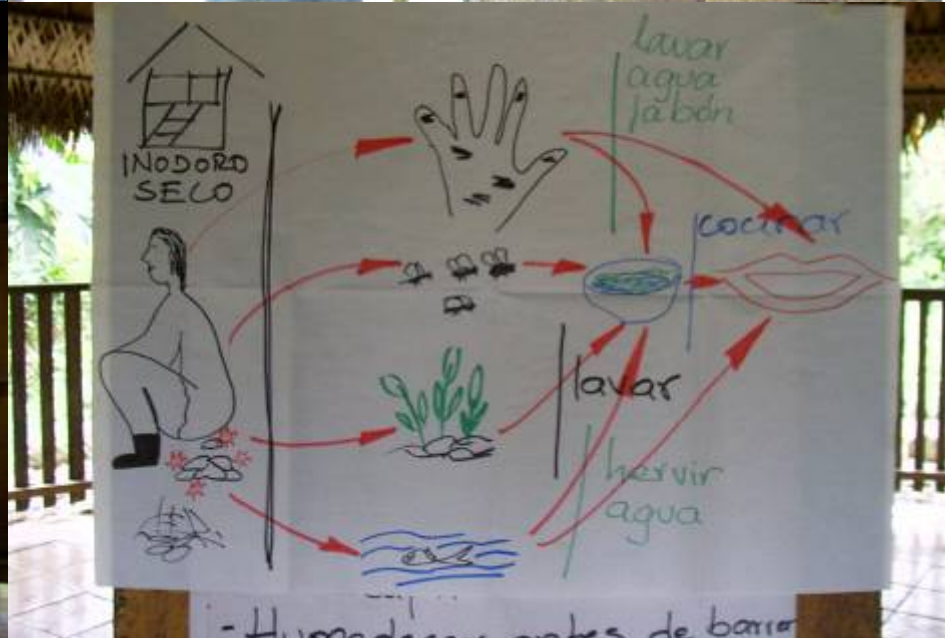
# Fertilizing Seedbeds with Urine



# Applying Faeces Soil Conditioner into Fruit Trees



# Health vs. Sanitation



# Environmental Education – Resources Constraints

The image shows a collection of hand-drawn diagrams and sticky notes on a wall, detailing resource constraints for a community event. Two circular diagrams at the top are labeled '1' and '2'. Below them are numerous sticky notes with handwritten text in Spanish, many of which are circled in red. The notes describe various issues such as lack of food, insufficient staff, and poor timing.

**Diagram 1:** A circle with a vertical line through the center and a small circle at the top.

**Diagram 2:** A circle with a vertical line through the center and a small circle at the top, similar to Diagram 1.

**Sticky Notes:**

- La Cesta - ver más
- Fue un poco Recelo de Comer
- Comiendo triste
- No había carne
- Se miraban al otro grupo
- 1. Falta de papachina.
- 2. No tenían aceite.
- 3. La comida sabía
- 4. Faltó la carne para combinar en la asada.
- Falta Carne Para un borracho.
- La chicha era fermentada no había como tomar.
- La comida debe ser caliente
- Un día - Falta la comida todos tomaron poca chicha
- Reselo momento Comer.
- Conversa y chiste.
- Faltó chicha
- Lugar incómodo
- no me llené quise más yuca etc.
- Me faltó carne comimos papachina
- Falta Comida Caliente.
- Mucha gente poca comida
- Faltó comida
- Comimos contento X.q. Somos bastante
- no me dejaron de comer bien
- tomamos chicha en un solo pitche.
- Unos no le dieron la mano - Falta sal y así





# Recycling



# Results

- ✓ **Cleaner community,**
- ✓ **Healthy community,**
- ✓ **Improved standard of live,**
- ✓ **3Rs concept is understood and applied,**
- ✓ **Cleaner production – use of organic fertilizers,**
- ✓ **Better yield of crops,**
- ✓ **Transferring of knowledge to other communities.**

# Conclusions

- ✓ To ensure a project success it has to be planned with the community and correspond culturally to its necessities and habits.
- ✓ Habit changes can be achieved if people understand the importance of that or see a direct effect in their lives.
- ✓ Training local people to support the project ensures its sustainability.
- ✓ A project should be focused on the main concern of the community.
- ✓ The sustainability of the project is guaranteed by a constant monitoring of the implementation phase and after it.
- ✓ Required changes should be done during the implementation phase.
- ✓ The use of various participatory methodologies and didactic materials contributed to keep participants' interested on the project.

Thanks

Gracias