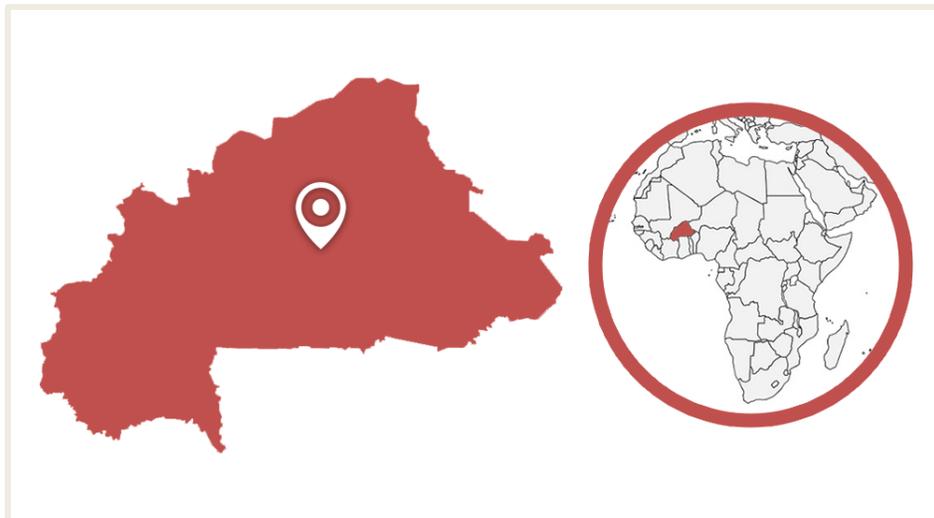


## ECOLOGICAL SANITATION WITH AGRONOMIC VALUE

*EcoSan latrines, a model for using human excreta as fertilizers in peasant agriculture*

### OVERVIEW

- Organization data:
  - ✓ Name: **Koassanga**
  - ✓ Organization type: **French association – law 1901**
  - ✓ Year of foundation: **2007**
- Beneficiaries : **20,000 people self-sufficient in food**
- Donors and financing: **Corsica Mediterranea Rhone Water Agency, Belfort Territory, Belfort City, Grand Belfort, Burgundy Franche Comté Region, Besançon City, Grand Besançon, Canéjan Steering Committee**
- Location: **Ziniaré, Oubritenga province, Burkina Faso**
- Beginning date: **2011**
- Motivations: **To improve the living conditions of rural inhabitants, and enable them to achieve food security while protecting the environment**



### CONTEXT AND ACTION

**Summary** | The Koassanga association was founded by people mobilized by Samuel Kalaydjian. Indeed, this French national was solicited by the Koassanga village populations, in the commune of Ziniaré, to help them face their difficulties in accessing food and health. The association has thus initiated the project to set up ECOSAN latrines in the commune of Ziniaré, to provide the population with sanitation adapted to the rural context. The installation of EcoSan latrines meets sanitation, food security and environmental objectives.

These ecological family latrines are built in a residential area with 1 or 2 households, for optimal use. The village's public places are also equipped. These dry-type toilets operate on the principle of separating urine and faeces, with the aim of subsequently enhancing these two types of excreta. After an appropriate storage time, the 2 types of hygienized excreta are used as amendments in agriculture by households. In the first year, the amount of fertilizer produced by a family allows it to be self-sufficient in food after the first agricultural season, i.e. 18 to 24 months after the construction of the latrine. Indeed, the yields induced by EcoSan practices are much higher than those obtained by traditional farming practices and conventional practices using chemical fertilizers.

The valorization of human excreta in crops is an effective approach to agriculture that is consistent with the natural cycle of soil enrichment. Indeed, this practice is based on the functioning of agrosystems: thanks to the mineralization of faeces and urine by microorganisms present in the soil, these excreta are no longer considered as waste and a circular economy can emerge. Thanks to the positive results obtained, this project has expanded to other regions and is now national in scope.

**Local challenges |**

- Combat food and social insecurity due to poverty;
- Reduce hygienic risks due to the lack of sanitary facilities;
- Improve access to safe drinking water;
- Improve agricultural yields. Farming practices offer such low agricultural yields that they do not allow families to avoid extreme poverty: the majority of the population depends on agriculture and is unable to meet their basic needs or generate income from it;
- Deal with climatic hazards that increasingly impact people's living conditions, particularly drought.

**Local responses |**

- Development dynamics around ecological sanitation: installation of dry latrines with urine separation and urine-hygienization centre;
- Village's organization on a community basis: the inhabitants are the main actors of development;
- Valuation of latrine by-products (urine and faeces) for agriculture;
- Household training in ecological agriculture and Integrated Soil Fertility Management (ISFM);
- Raising awareness and training of the population on the added value of sanitary installations.

**BENEFITS**

**Environmental |** The use of EcoSan latrine by-products has many positive impacts on the environment. Indeed, this practice makes it possible not to use mineral inputs or pesticides. This preserves water quality and improves soil conditions. This approach also contributes to improving rainwater infiltration into the soil, enhancing water security and reducing water supply to agricultural plots.

**Social |** This project contributes to the fight against rural exodus through the development of profitable family farming and a more suitable environment for agriculture. Rural development and the use of local resources are stimulated. There is an improvement in the health of farmers and consumers, food safety is guaranteed and nutrition is improved.

**Economic |** Agricultural yields allow families to generate higher incomes than in the past (+300 to 500% for cereals, +200 to 300% for pulses and +100 to 250% for market gardening), in a sustainable way, and thus to have access to basic care, energy and schooling.

**SUCCESS FACTORS**

- "Credit financing" of family latrines without risk of over-indebtedness of households;
- Project based on the community approach: the community is able to pursue its own development without any external support, the association no longer intervenes in the village Koassanga since 2015;
- Involvement of the whole community in the implementation of activities without favoring one group over the others.

**OBSTACLES**

- Difficult adherence to the excreta recovery project by populations: culture of excretion outside an anchored structure;
- Search for the status quo in the social level, few possible prospects for development;
- High latrine costs that are difficult for households to afford: need for financing.



*« Before, in the village, you couldn't find 5 oxen, or 10 sheep, or 10 goats. But now in every court there is at least one buffalo. The activities have become profitable. »*

**Jean-Claude BONKOUNGOU**  
**GOMZOUDOU, Chef of**  
**Koassanga village**

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