

**“Ecological Model  
Population Based-  
Approach to Achieve  
Equity, Solidarity and  
Gender Sensitivity  
for the Population  
Living in  
Southwestern Bateyes  
of the Dominican  
Republic.”**

**Eddy Perez-Then**

**Children and HIV/AIDS:  
Action Now, Action How**

**Friday, August 1st, 2008**

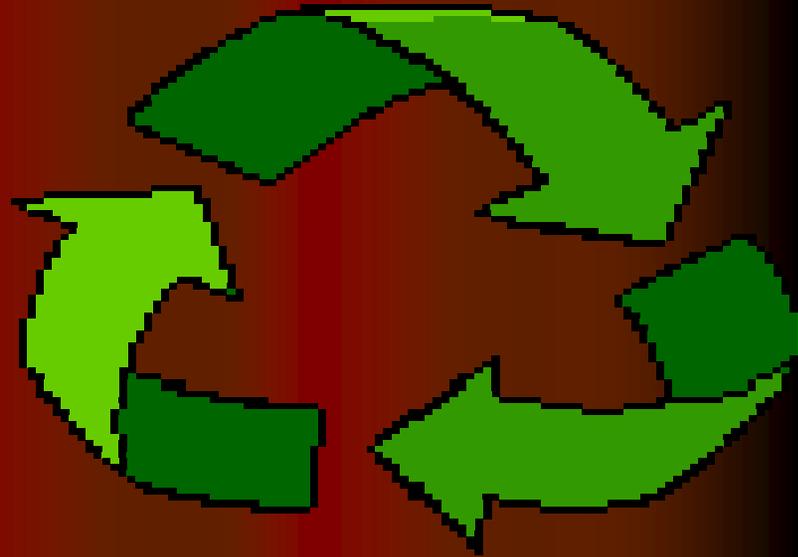
**Mexico City**

# HUMAN ECOLOGY MODEL

- In society, physical structure and cultural characteristics are parts of one complex.
- The spatial and sustenance relations in which human beings are organized are ever in process of change in response to the operation of a complex of environmental and cultural forces.

# ECOLOGICAL MODEL

- Holistic
  - Environmental
  - Political Will
  - Solidarity
  - Gender sensitivity
  - Human Rights
    - Cultural Issues
    - Individual respect
  - Empowerment



# Geography vs Human Ecology

- Geography = Place
- Ecology = Process
  - Position in a spatial grouping of interacting human beings or of interrelated humans institutions

# BATEYES

- Isolated rural areas attached to the old sugar cane plantations of the Dominican Republic (n = 300).
- They are populated almost exclusively by Haitian migrant workers and/or descendents of Haitian migrant workers.
- At this time, the majority of the Bateyes populations lack access to hospitals/clinics, basic healthcare, basic hygiene, clean water and sanitation, and do not demonstrate the progress in health transition observed in recent years in the rest of the Dominican Republic



# BATEYES

- As industry in the Dominican Republic has shifted away from sugar cane towards a tourism driven economy, the situation in the Bateyes has become increasingly desperate.
- Currently, infant mortality rates are much higher in the Bateyes than in the rest of the country, due mainly to lack of prenatal care. Infants and children often suffer from parasitic diseases and malnutrition.



Canario J, Perez-Then E, De Moya A et al. A Rapid Assessment Process for Establishing a Baseline on the Situation of Selected Bateyes from the Provinces of Baoruco and Barahona, Dominican Republic. Boletin CENISMI 2006.

# BATEYES

- Diarrhea remains one of the main causes of infant deaths, most frequently in children under 2 and only slightly less in children under 5. Less than 30% of the children in the Bateyes receive any type of immunizations.



\* Canario J, Perez-Then E, De Moya A et al. A Rapid Assessment Process for Establishing a Baseline on the Situation of Selected Bateyes from the Provinces of Baoruco and Barahona, Dominican Republic. Boletín CENISMI, 2006.

\*\* CESDEM/USAID/CERSS/COPRESIDA/Macro Internacional, Inc. Encuesta Sociodemográfica y sobre VIH/SIDA en los bateyes estatales de la República Dominicana 2002.

# BATEYES

- Women, in particular, face extreme hardships in the Bateyes. Reports of domestic and sexual abuse are high, and, the women of the Bateyes have no legal course of action (HIV infection-vertical transmission).
- It is estimated that the Bateyes have higher rates of HIV infection than the rest of the country (5% vs 1%).
- Structural violence and susceptibility to infectious diseases contribute to human insecurity in these locations.

\* Canario J, Perez-Then E, de Moya A et al. A Rapid Assessment Process for Establishing a Baseline on the Situation of Selected Bateyes from the Provinces of Baoruco and Barahona, Dominican Republic. Boletín CENISMI, 2006.

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# BATEYES



- **The implementation of an ecological model has the potential to improve living conditions and enhance participation of the community in the identification and resolution of its own problems.**

# Specific Aims

- **Specific Aim 1** - To determine the impact of a community-based intervention (household visits by trained Community Workers) on antenatal care, immunization rates, and prevention of morbid events (i.e. diarrhea, respiratory infections, tuberculosis, malaria and dengue) in families living in Bateyes.

# Specific Aims

- **Specific Aim 2** – To determine the impact of a community-based intervention (monthly household visits by a trained Community Worker) on HIV awareness, knowledge of preventable diseases, and gender sensitivity in families living in Bateyes.

# Research Design and Methods

## ● Study Design

- A Quasi-Experimental, pretest posttest control group longitudinal study design in which all households living in Batey Algodon (Experimental Condition), who consent to participate in the study, received monthly household visits by a trained Community Worker.
- The control group is the population living in Batey #1 who not received the household visits.

# Description of the Project

- The project is being implemented in three phases
- Training and Baseline measurements
- Implementation of the “ecological” model.
- Evaluation of the interventions at: 6th and 12th months after the initiation of the project (evaluation includes a cost-benefit analysis).



# Description of the Project

- The interventionists or Community Workers were selected from the Bateyes based on their ability to read and write in Spanish and their spoken fluency in both Spanish and Creole.
- Community Workers were trained in HIV prevention, infectious disease control, food preparation, breastfeeding, as well as in environmental health related aspects of disease control.
- There is a continuous interaction with Ministry of Health staff (HIV, TB, Malaria, dengue) responsible for supervising and taking care of the population living in the two selected Bateyes.

# Assessment visits

- After the HIV explanatory session, the interventionist trained the family in:
- food preparation,
- water sanitation,
- infectious diseases prevention, namely, diarrhea (water sanitation, use of latrines),
- respiratory infections (environmental education),
- HIV (condom use/ accessibility),
- malaria (bed nets),
- dengue (covering water tanks with lid, use of Clorox),
- tuberculosis (persistent cough for 2 weeks),
- breastfeeding and vaccine administration.



# Outcomes

- Number of antenatal care visits, immunization rates, and prevention of morbid events (i.e. diarrhea, respiratory infections, tuberculosis, malaria and dengue).
- Knowledge gained about prevention of HIV and other infectious diseases (condom use, water sanitation, breastfeeding, bed nets, etc),
- Importance of vaccine administration
- Gender Sensitivity (Male involvement).
- Outcomes measurements were determined at 6<sup>th</sup> month and will be evaluated at 12th month after the initiation of the project.

# Sample Size

- Batey Algodon
  - 100 families (Estimation)
  - 61 families (At baseline)
- Batey #1
  - 160 families (Estimation)
  - 209 (at baseline)



# Current Status of the Project

Visits	Batey Algodon	Batey #1
A	61	209
1	60	202
2	58	208
3	60	206
4	57	208
5	56	196
B	57	203
C		

¿Has a member of the family suffered from (or had) acute diarrhea illness in the past month?

Visits	Batey Algodon	Batey #1
1	0 (0%)	26 (21%)
2	4 (14.3%)	25 (20.3%)
3	5 (17.9%)	26 (21.1%)
4	8 (28.6%)	25 (20.3%)
5	5 (17.9%)	21 (17.1%)

Has a member of the family suffered from  
(or had) acute respiratory infections in the  
past month?

Visits	Batey Algodon	Batey #1
1	0 (0%)	39 (18.6%)
2	7 (20.6%)	45 (21.4%)
3	8 (23.5%)	51 (24.3%)
4	7 (20.6%)	34 (16.2%)
5	5 (14.7%)	41 (19.5%)

¿Has a family member suffered from (or have) HIV/AIDS in the past month?

Visits	Batey Algodon	Batey #1
1	0 (0%)	0 (0%)
2	0 (0%)	0 (0%)
3	0 (0%)	0 (0%)
4	0 (0%)	0 (0%)
5	0 (0%)	0 (0%)

## Exclusive Breastfeeding in the past month?

Visits	Batey Algodon	Batey #1
3	1 (100%)	0 (0%)
4	1 (100%)	1 (50%)
5	3 (50%)	1 (50%)

# Has your child been vaccinated in the past month ?

Visits	Batey Algodon	Batey #1
2	5 (100 %)	0 (0%)
3	6 (100%)	0 (0%)
4	2 (50%)	2 (50%)
5	1 (100%)	1 (0%)

# Potential benefits of the ecological model to the subjects and others

- Six Community Workers were selected from within the Bateyes to increase community involvement and ownership, build local capacity, and strengthen the relationship between the community and health care researchers.



# Potential benefits of the ecological model to the subjects and others

- The ultimate goal of the project is to initiate specific community strategies that will strengthen health and wellbeing, as well as demonstrate cost-benefits of the model to the Ministry of Health.
- Data from this study could also have a beneficial impact for refugee and internal displaced populations in developing countries who share the social and structural violence observed in bateyes of the Dominican Republic.



# QUESTIONS

