



EVALUATION DESIGN

Integrated Population and Coastal Resources
Management (IPOPCORM) Initiative

The David and Lucile Packard Foundation



PATH Foundation Philippines, Inc.

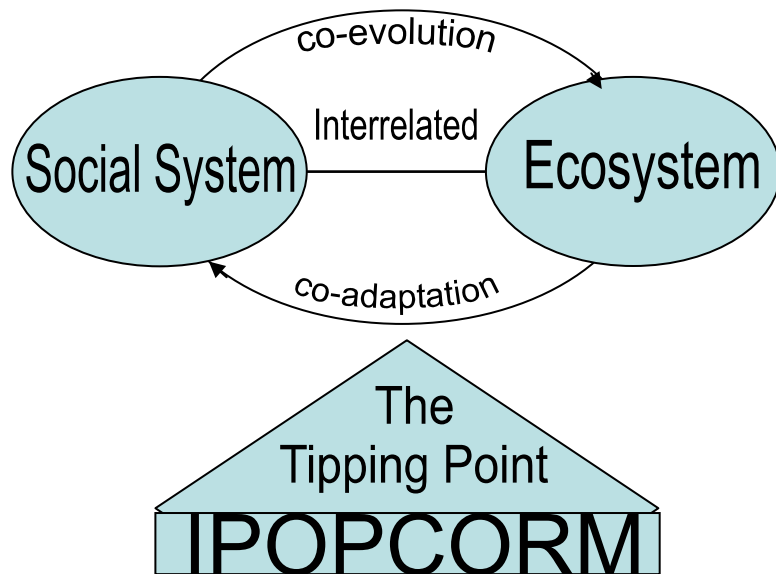


Synergistic Approach

PATH Foundation Philippines views population management as an integral component of the “best management practices” for coastal resource management, and IPOPCORM as the optimum approach to obtain synergies that will maximize their impact



Linked Eco-Social System



- Ecosystems and human social systems form a unified whole, and whatever effects one affects the other.
- Improvements in social and ecological systems reinforce one another, to turn around both systems from degradation to health





Evaluation Plan

3 levels of evaluation

1. Evaluation of the integrated Population and CRM approach;
2. Impact evaluation of the IPOPCORM Project; and
3. Process evaluation of the IPOPCORM Project.



Level 1 Evaluation

Intervention	Province	Hotspot	Conservation Priority Rank	Municipality
Integrated CRM-RH	Palawan	Calamianes	Extremely High	Culion
RH-only	Palawan	Calamianes	Extremely High	Busuanga
CRM-only	Palawan	Cuyo Islands	Very High	Cuyo
Control	Palawan	El Nido-Ulugan	Extremely High	Dumaran Agutaya

Evaluation of Integrated Approach

Central Hypothesis:

“There will be a significant improvement in coastal resources management outcomes and reproductive health/family planning outcomes by delivering these services in an integrated fashion as opposed to delivering either intervention in isolation.”





Level 1 Evaluation Design

A quasi-experimental design using baseline and post-project measurement of dependent variables is being used to test this hypothesis.



Quasi Experimental Design

3 Intervention Groups

	Identifier	Description of the Intervention
Intervention 1	X_1	The complete IPOPCORM intervention
Intervention 2	X_2	The POP/RH intervention only
Intervention 3	X_3	The CRM intervention only
Control Group	C	No intervention

Quasi Experimental Design

Complete IPOPCORM	O_1	X_1	O_2
POP/RH	O_1	X_2	O_2
CRM	O_1	X_3	O_2
Control Group	O_1	C	O_2

Where O_1 = pre-project baseline measurement of dependent variables
 O_2 = post-project measurement of dependent variables
 X_1 = Complete IPOPCORM
 X_2 = POP/RH
 X_3 = CRM
C = Control Group

Impact of Each Intervention

Impact of Intervention 1: $IX_1 = (X_{1O2} - X_{1O1}) - (CO_2 - CO_1)$

Where X_{1O2} = post-project measurement of dependent variables for Intervention 1

X_{1O1} = baseline measurement of dependent variables for Intervention 1

CO_2 = post-project measurement of dependent variables for control group

CO_1 = baseline measurement of dependent variables for control group

Impact of Intervention 2: $IX_2 = (X_{2O2} - X_{2O1}) - (CO_2 - CO_1)$

Impact of Intervention 3: $IX_3 = (X_{3O2} - X_{3O1}) - (CO_2 - CO_1)$

Dependent Variables for P/RH and CRM to Measured

In X1, $\Delta P/RH1$, $\Delta CRM1$

In X2, $\Delta P/RH2$, $\Delta CRM2$

In X3, $\Delta P/RH3$, $\Delta CRM3$



Indicators for POP/RH Dependent Variables

- Unmet demand for family planning services among WRA (15-49 years)
- Contraceptive prevalence among WRA – any method
- Percent of sexually active young females (15-24 year) giving birth in past 12 months (recent youth fertility)
- Percent of WRA giving birth in past 12 months
- Percent of households with malnourished child under 3 years of age (weight-age)



Indicators CRM Dependent Variables

- Live coral coverage, dead coral/algae coverage
- Coral diversity
- Reef fish biomass and density
- Reef fish species diversity, trophic diversity
- Mangrove/seagrass coverage and productivity
- % of households with full-time fishers (fishing effort)
- % fishers using sustainable fishing methods e.g., hook and line
- % respondents who know someone personally that engages in illegal fishing e.g., use of dynamite





Evaluation Partners

Population/RH Assessment

- Demographic Research and Development Foundation (DRDF) – University of the Philippines Population Institute (UPPI)

Resource and Ecological Assessment

- Marine Environment and Resource Foundation (MERF) – University of the Philippines Marine Science Institute (UPMSI)





2001 Baseline Findings

Malnutrition (weight-for-age) in preschool children (under-threes) was observed in areas where ecosystems were degraded and fisheries over-exploited (“Malthusian overfishing”.) Children in fisher HH are twice as likely to be under-weight as children in HH with parents engaged in other occupations. Children of mothers not currently using FP are 3.3 times more likely to be malnourished as children of mothers who are current users.





Trends observed in 2004 Follow-on Survey

Food Security Indicators

- ↓ % HH with underweight preschoolers (35.3% to 32.1%)
- ↓ % HH reporting “sometimes not enough food” (29.8% to 15.2%)
- ↑ % HH with average monthly income \geq P5000 (35.3% to 41.2%)
- ↑ % HH perceive themselves as “better off now compared to 5 yrs ago”

RH Indicators

- ↓ % WRA reporting unmet FP need (51.6% to 48.2%)
 - ↑ CPR for all methods (27.5% to 33.30%)
 - ↑ % males who support FP (88.5% to 92.2%)
 - ↓ % WRA who had birth in past year (16.3% to 15.8%)
 - ↓ TFR among WRA (from 3.42 to 3.07)
- In 2004, less abortion was reported in sites where community-based FP interventions are being implemented (17%-24%) compared to those with no CBFP (26-39%)



2004 Follow-on Survey

CRM Indicators

↓ % HH with fulltime fishers (32.9% to 20.7%)

↓ % HH members > 10 yrs into full-time fishing (18.4% to 10.0%)

↑ % family members raising small livestock (from 54% to 73%)

↑ % family members that “always help to guard fish/mangrove sanctuary”

↑ % family members that “always participate in barangay council meetings”



Comparative Analysis Impact on RH Indicators



Youth 15-24 years in coastal Philippines

“ It is with youth (age 15-24) that the IPOPCORM approach produced more positive outcomes than those yielded by the stand-alone programs.”

“ Adult samples “non equivalent” further analysis needed



IPOPCORM youth camp activities

Indicators showing positive changes with significant difference of difference that support IPOPCORM's hypothesis:

- **Proportion of "single sexually active males"**
- **Proportion of young females "giving birth in past year"**
- **Proportion of married female youth "using any FP method during first sex"**
- **Proportion of young married males who "ever got someone pregnant"**



Impact on CRM indicators



“The number, density and biomass of coral reef fish (target and commercially important species) did not change significantly over time”

“Interventions appear to be helping to maintain the productivity and diversity of ecosystems”

Management interventions should be continued to determine if the Integrated approach is generating Higher impact compared to single Sector strategies



Next Step

- Hypothesis test using correspondence analysis and multi- dimensional scaling
- Dissemination of results in peer-review journals and conferences
- Advocacy efforts to scale-up the integrated approach