MIRA Smartphone APP
Monitoring, Investigation & Risk Application
MIRA History

• The App development started in 2012 with the team at Eberswalde University for Sustainable Development/ Germany.

• The development was made possible by funding of [WWF – UK](https://www.wwf.org.uk) as part of their ‘Innovation fund’. Furthermore funding was provided by the [Business Promotion Bank of the Federal State of Brandenburg](https://www.ebre.brandenburg.de) within the „e-learning and e-knowledge“ program.
Currently, a team of practitioners, programmers and interface designers are further developing the APP.

The APP is part as an initiative under the Conservation Measures Partnership (CMP).

The APP is based on MIRADI the corresponding software for the Open Standards.

The APP is currently piloted in Guatemala, Ukraine and Kenya. There are plans to pilot the APP as well in Chile and Mexico.
What was the problem?

Case study Guatemala

- Monitoring structure for the field was not according to the already existing planning documents

-> extra work to sort the data afterwards into their right columns/boxes (if this ever happened)
What was the problem?

Case study Guatemala

- Difficulties to organize the data in the office
  Where? Who? How? And with what frequency should the data be stored and managed?

- Reasons for this: data input is time consuming, complicated, no visible consequences from the monitoring efforts

1-5 years old project files (MIRADI)
What was the problem?

Case study Guatemala

- Missing and not prepared devices to record data in the field (GPS device, Camera, Monitoring sheet – Note block)
MIRA data flow

1. IMPORT to APP from MIRADI
2. Field measurements
3. EXPORT from APP data to MIRADI/Server/EXCEL
4. Intermediate Result

- Target
- Direct Threat
- Key Contributing Factors
- Strategies and activities

Process steps:
1. Import data from MIRADI to the APP.
2. Field measurements are input into the APP.
3. Data is exported from the APP to MIRADI/Server/EXCEL.
4. Intermediate results are stored in the MIRADI data flow system.
MIRA software components

(1) Mobile APP

(2) Engine
Data base as
Offline alternative
and MIRADI interface

Desktop

(3) Server APP

Online Data base

Personalized Excel
'data base' and
Reports

MIRADI Data
(Planning data)
MIRA software component / Engine

Sync With App: Make sure your Smartphone is connected via WIFI!
Sync With MiraServer: Make sure you have a internet connection!

Synchronizing Canceled

MiraServer Actions
- Sync Now: [sync project]
- Import New Project: [import project]
- Sync Automatically: [checkbox]
- Mira Server: [URL]

Sync [button]  Setup [button]  Summary [button]
MIRA software component / APP

Situation Analysis
from the Conceptual Model for Strategic Planning
MIRADI Software
MIRA software component / APP

Adjustable APP features (more than MIRADI provides) such as “attributes” for an indicator, patrolling team and tailor made maps
MIRA software component / APP

Evaluation on the Smartphone Device
- Motivation and learning experience for the field staff
- Improving accuracy of field staff
MIRA software component / Server

Overview of data with several filter functions

-> A) Export to Excel

---

<table>
<thead>
<tr>
<th>Date</th>
<th>Factor</th>
<th>Indicator</th>
<th>Location</th>
<th>Value</th>
<th>Risk / Opportunity</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014/02/18</td>
<td>Sea turtles</td>
<td># of eggs in one nest</td>
<td>Rubu Island (-1.855, 41.423)</td>
<td>131 Green turtle</td>
<td>nest no 14/ku14,mongoshari...</td>
<td>Hassan Swaraniukau</td>
</tr>
<tr>
<td>2014/02/20</td>
<td>Sea turtles</td>
<td># of eggs in one nest</td>
<td>Rubu Island (-1.855, 41.423)</td>
<td>120 Green turtle</td>
<td>nest no 11/ku14,mongoshari...</td>
<td>Hassan Swaraniukau</td>
</tr>
<tr>
<td>2014/02/20</td>
<td>Sea turtles</td>
<td># of eggs in one nest</td>
<td>Rubu Island (-1.855, 41.423)</td>
<td>150 Green turtle</td>
<td>nest no 55/ku14,mongoshari...</td>
<td>Hassan Swaraniukau</td>
</tr>
<tr>
<td>2014/02/20</td>
<td>Sea turtles</td>
<td># of eggs in one nest</td>
<td>Rubu Island (-1.855, 41.423)</td>
<td>151 Green turtle</td>
<td>nest no 85/ku14,mongoshari...</td>
<td>Hassan Swaraniukau</td>
</tr>
<tr>
<td>2014/02/20</td>
<td>Sea turtles</td>
<td># of eggs in one nest</td>
<td>Rubu Island (-1.855, 41.423)</td>
<td>160 Green turtle</td>
<td>nest no 15/ku14,mongoshari...</td>
<td>Hassan Swaraniukau</td>
</tr>
<tr>
<td>2014/02/20</td>
<td>Sea turtles</td>
<td># of eggs in one nest</td>
<td>Rubu Island (-1.855, 41.423)</td>
<td>150 Green turtle</td>
<td>nest no 20/ku14,mongogo boas...</td>
<td>Hassan Swaraniukau</td>
</tr>
<tr>
<td>2014/02/20</td>
<td>Sea turtles</td>
<td># of eggs in one nest</td>
<td>Rubu Island (-1.855, 41.423)</td>
<td>105 Green turtle</td>
<td>nest no 20/ku14,mongogo boas...</td>
<td>Hassan Swaraniukau</td>
</tr>
<tr>
<td>2014/02/28</td>
<td>Sea turtles</td>
<td># of eggs in one nest</td>
<td>Rubu Island (-1.855, 41.423)</td>
<td>127 Green turtle</td>
<td>nest no 15/ku14,mongoshari...</td>
<td>Hassan Swaraniukau</td>
</tr>
<tr>
<td>2014/03/11</td>
<td>Sea turtles</td>
<td># of eggs in one nest</td>
<td>Chundwari (-1.073, 41.305)</td>
<td>nest no 44/ku14,khanga ki...</td>
<td>Hassan Swaraniukau</td>
<td></td>
</tr>
<tr>
<td>2014/03/15</td>
<td>Sea turtles</td>
<td># of eggs in one nest</td>
<td>Chundwari (-1.073, 41.305)</td>
<td>nest no 12/ku14,khanga ki...</td>
<td>Hassan Swaraniukau</td>
<td></td>
</tr>
</tbody>
</table>
MIRA software component / Server

-> B) data displayed in maps
MIRA software component / Server

-> C) data displayed as graphs
More alignment with the OS?
KEY FEATURES „Theory of Change“ – Results Chains

**Measurable Goal:**
By **2025**, there will be a 10% increase in the survival of leatherback and green turtles into the GoC compared to 2005 levels.

**Indicator:** Abundance Index
**Method:** Counting of nesting turtles
**Date:** Every three years, starting in 2007
**Responsible Entity:** Turtle camps personnel
**Place:** Baja California Sur and Michoacán turtle camps

**Test and promote circle hooks to reduce turtle bycatch**
- Collaborate with academia and fishing authorities
- Develop protocol to test circle hooks

**Effectiveness of circle hooks is demonstrated**

**Fishers recognize advantages of circle hooks**

**Fishermen accept and use circle hooks**

**Bycatch mortality in hook lines reduced**

**Provide a hook exchange program**
More alignment with the OS?
KEY FEATURES „Theory of Change“ – Results Chains

**Measurable Objective:**
By 2009, we will have a proven method (circular hooks) to significantly reduce marine turtle bycatch from the artisanal longline fleets from 12 locations on the Mexican Pacific.

**Indicator:** Circular hooks bycatch rate for marine turtle

**Measurable Objective:**
By 2012, 90% of the Gulf’s artisanal longliner fleet will operate with circle hooks.

**Indicator:** Percentage of boats using circle hooks

**Measurable Objective:**
By 2009, we will have a proven method (circular hooks) to significantly reduce marine turtle bycatch from the artisanal longline fleets from 12 locations on the Mexican Pacific.

**Indicator:** Circular hooks bycatch rate for marine turtle

**Measurable Objective:**
By 2010, at least 220,000 circular hooks will have been exchanged for the same number of type “J” hooks in the artisanal longliner fleet in the GoC.

**Indicator:** Number of “J” hooks exchanged for circular hooks
Thank you very much!
Please get in contact:
Laura Geiger
info@monitoringapp.net