Syria: Hit by Syriari shelling; Bombed by Turkey; Syrian rebel-controlled border.
A different type of geography
A Map Tour of the Catholic Church

Catholic Hierarchy

- Episcopal Conferences
- Provinces
- Dioceses

Parishes by Diocese

Esr, FAO, NOAA | Catholic GIS Center, Goodlands, Catholic Hierarchy
Implications of mapping religion
1. Governance
Density of Tree Cover Loss Alerts by Diocese
Density of Tree Cover Loss Alerts by Diocese

Active Hurricanes and Dioceses
1. Governance

FORMA is a near real-time tree cover loss alert system for humid tropical forests at 500 meter resolution. Full details here: [Global Forest Watch FORMA Alerts](#).

**Meta-State**

Density of Tree Cover Loss Alerts by Diocese

FORMA alerts in 2015 divided by Area (SqKm)

- > 0.08
- 0.0157
- < 0

FORMA Alerts in 2015: 23,076

FORMA Alerts by Year

- 20,000
- 10,000
- 0
2. Engage partnerships
Recent Earthquakes
Change in Growing Days by 2100 (RPC 8.5)
Global Warming

Future Impact of Heatwaves on Roman Catholic Dioceses
2. Engage partnerships

- Regenerative Land-Use
- Resource Allocation
- Climate Adaption
- Migration Planning
3. HR Planning
Priests per Diocese

- >1000
- 1200
- 800
- 100
- <10
4. Inspiration
5. Unknown
Approach
Operational Strategy

- Coherence from the parcel scale to the global
- Top-Down Planning, Bottom-Up Community Involvement
- Connecting existing networks to get from analysis to action
- Transference
- Accessibility
Catholic GeoHub (SDI)

Maintenance, governance, policy, and security structures to ensure that our data is collected, stored, and shared efficiently and respectfully.

Systems of Records + systems of engagement

Parcel - GoodLands Link

connect and coordinate groups to lease, share, manage and sell land.

Global Mapping and Analysis

Reveals global trends at the scale of Catholic jurisdictions
Most relevant to Church leaders and Catholic Aid organizations that operate globally

Diocesan/Provincial Planning

Increase understanding of environmental and social context of land
Manage these landholdings based on triple bottom line to address a myriad of issues
Working Across Scales

Global analysis helps direct local analyses

Global analyses directly provide information to dioceses

Regionally generated and gathered data feeds into global analysis

Communication as education

Parcel and regional information make up diocesan analyses

Information through communication

Catholic GeoHub (SDI)
1. How should the study area be delineated?
2. How does the study area operate?
3. How will the study area be altered?
4. What differences might the changes call for?
5. How could the study area be changed?
The planning process can be broken down into six key components:

- **Step 1: Assessment**
- **Step 2: Baseline Knowledge of Available Resources**
- **Step 3: Goal-Oriented Analysis**
- **Step 4: Community-Driven Design**
- **Step 5: Action Plan**
- **Step 6: Tracking Impact and Creating Accountability**
ARTICULATE

Assess

Understanding values and needs of a community helps translate these into simple actionable goals.
THEORY OF CHANGE: 
TRANFORMING LAND INTO A POWERFUL FORCE FOR GOOD

ARTICULATE

ASSES

Understanding values and needs of a community helps translate these into simple actionable goals.

UNDERSTAND

SuNey

A survey allows us to understand existing landholdings and their current usage and values for a community.

Analyze and Understand

Analysis of existing landholdings allows us to reveal opportunities for high impact land-use changes.

A cloud-based data platform provides a way to interact with data and a system of L. ___J records for land that can be easily managed and updated by clients.
Design

Cloud-based data platform allows for multiple stakeholders in various locations to be remotely involved in the design process. Creating a plan ownership grounded in analyses allows landholders to make practical final decisions about land-use that is relevant to their ideas and existing holdings and their current old and current sage and values

Cloud-based data platform provides a way to interact and maintain a system of records for land that can be easily managed and planned for. This helps make planning more socially sustainable by reducing or eliminating stakeholder conflict over final land-use decisions. 

Community-driven design provides a platform needed to bring together multiple stakeholders and make tough decisions about land. This helps make planning more socially sustainable by reducing or eliminating stakeholder conflict over final land-use decisions. 

A cloud-based data platform allows for multiple stakeholders in various locations to be remotely involved in the design process.
Understanding existing land holdings and heir apparent values and holdings are so severe opportunities that high impact land-use changes.

A cloud-based data platform provides a way to interact with a system of managed and updated by clients.

Cloud-based data platform provides intraactive plan(s) and schedule.

Cloud-driven design provides the platform needed to bring together multiple stakeholders and make tough decisions about land. This helps make a plan more socially sustainable by reducing or eliminates stakeholder conflict over land use decisions.

Create Plan Ownership

Community-driven design provides the platform needed to bring together multiple stakeholders and make tough decisions about land. This helps make a plan more socially sustainable by reducing or eliminates stakeholder conflict over land use decisions.

Co-abate and Nego ate

Set a Clear Path Forward

Final planning report defines a clear action plan.

Create Plan Ownership

Cloud-driven design provides the platform needed to bring together multiple stakeholders and make tough decisions about land. This helps make a plan more socially sustainable by reducing or eliminates stakeholder conflict over land use decisions.

Community-driven design provides the platform needed to bring together multiple stakeholders and make tough decisions about land. This helps make a plan more socially sustainable by reducing or eliminates stakeholder conflict over land use decisions.

Set a Clear Path Forward

Final planning report defines a clear action plan.
Cloud-based data platform allows all individuals involved with project implementation to accountably track progress towards reaching goals and to identify unique outliers in successful approaches to implementation that can be replicated and improved. It keeps community on track and allows them to adjust as needed and improve their approach.
A cloud-based data platform provides a way to interact with a system of records for land that can be easily managed and updated by community members.

Cloud-based data platform allows all individuals involved with project implementation to accountably track progress towards reaching goals and to identify unique outliers in successful approaches to implementation that can be replicated and improved. It keeps community on track and allows them to adjust as needed and improve their approach.

Cloud-based data platform allows for multiple stakeholders to be evaluated in the design process.
MAP MAKING
- Data curation
- Analysis
- Cartography

DATA SYSTEMS
- Platform Development
- Systems of Records
- Systems of Engagement

PLANNING
- Assess
- Design
- Implement
- Track
SERVICE MAPMAKING

Would you like a map?

Yes

No

Do you have a high-quality digital image or map that we can work with?

Yes

No

Would you like to order maps?

Yes

No

Would you like to order maps?

Yes

No
Would you like a map?

Yes

Do you have a high-quality geodatabases or digital maps to start with?

Yes

Do you need mapping analysis?

Yes

No

Data curation

No

Are you interested in other services that Goodland can offer?

Yes

Cartography

No

Do you need mapping analysis?
Do you need mapping analysis?

Yes → Analysis → Cartography

No → Cartography

Yes → Analysis → Cartography → Web Map(s) → Products

No → Cartography → Print Map(s)
ASSESSMENT:
1. DATA: HOW SHOULD THE LANDSCAPE BE DESCRIBED? (REPRESENTATION MODELS)
2. INFORMATION: HOW DOES THE LANDSCAPE OPERATE? (PROCESS MODELS)
3. KNOWLEDGE: IS THE LANDSCAPE WORKING WELL? (EVALUATION MODELS)

ASSESSMENT:
- DATA: HOW SHOULD THE LANDSCAPE BE DESCRIBED?
  - How should the landscape be described? (representation models)

ASSESSMENT:
- INFORMATION: HOW DOES THE LANDSCAPE OPERATE?
  - How does the landscape operate? (process models)

ASSESSMENT:
- KNOWLEDGE: IS THE LANDSCAPE WORKING WELL?
  - Is the landscape working well? (evaluation models)
INTERVENTION:
1. DATA: HOW MIGHT THE LANDSCAPE BE ALTERED? (CHANGE MODELS)
2. INFORMATION: WHAT DIFFERENCES MIGHT THE CHANGES CAUSE? (IMPACT MODELS)
3. KNOWLEDGE: SHOULD THE LANDSCAPE BE CHANGED? (DECISION MODELS)

IMPLEMENTATION:
1. DATA: HOW ARE LANDSCAPES REACTING TO PROPOSED CHANGE? (CHANGE SENSING)
2. INFORMATION: WHAT DIFFERENCES ARE THE CHANGES CAUSING? (CHANGE ANALYSIS)
3. KNOWLEDGE: SHOULD WE PROCEED ADAPT PLANS? (WHAT IS WORKING BEST WHERE AND CAN'T BE REPLICATED IN SIMILAR AREAS?) (DECISION MODELS)
INTERVENTION:
1. Data - How might the landscape be altered? (Change Models)
2. Information - What differences might the changes cause? (Impact Models)
3. Knowledge - Should the landscape be changed? (Decision Models)

IMPLEMENTATION:
1. Data - How are landscapes reacting to proposed change? (Change Sensing)
2. Information - What differences are the changes causing? (Change Analysis)
3. Knowledge - Should we proceed or adapt plans? What is working best where and can it be replicated in similar areas? (Decision Models)

DESIGN

PRODUCTS

Planning and SDI

PROJECTS

Web Maps

Impact Models/GeoPlanner

Understanding models

IMPACT

PRODUCTS

Land use plan

IMPACT

Models/systems

Tool to account for implementation

Tool to track impact

Tool to measure impact and project success
INTRODUCTION
1. DATA - HOW MIGHT THE LANDSCAPE BE ALTERED? [CHANGE MODELS]
2. INFORMATION - WHAT DIFFERENCES MIGHT THE CHANGES CAUSE? [IMPACT MODELS]
3. KNOWLEDGE - SHOULD THE LANDSCAPE BE CHANGED? [DECISION MODELS]

IMPLEMENTATION
1. DATA - HOW ARE LANDSCAPES REACTING TO PROPOSED CHANGE? [CHANGE MODELS]
2. INFORMATION - WHAT DIFFERENCES ARE THE CHANGES CAUSING? [IMPACT MODELS]
3. KNOWLEDGE - SHOULD WE PROCEED OR ADAPT PLANS? WHAT IS WORKING BEST CAN IT BE REPLICATED IN SIMILAR AREAS? [DECISION MODELS]
In Action
Projects

Vincentian Family
U.S.C.C.B.-Wide Green Infrastructure
GoodLand Link
Mapping for Tenderness
Activating a religious order to end homelessness
“The Vincentian Family comprises organizations inspired by the life and work of St. Vincent de Paul, a 17th-century priest who "transformed the face of France."
It’s a big family

Vincentian Family – Statistics

*International Association of Charities or AIC (1617):* 250,000+, 52 countries
*Congregation of the Mission (1625):* 3,500+ priests and brothers, 85 countries
*Daughters of Charity (1625):* 18,000+, 94 countries
*Sisters of Charity of SVP Strasbourg Federation (1734):* 13 congregations, 3,600 members, 8 countries
*Sisters of Charity of St. Jeanne Antide Thouret (1799):* 2,800 in 27 countries
*Brothers of Charity (1807):* 600 members, 70 associates, 15,000 lay volunteers, 25 countries
*Society of St. Vincent de Paul (1833):* 750,000+, 150 countries
*Brothers of Our Lady Mother of Mercy (1844):* 325 brothers, 5 countries
*Religious of St. Vincent (1845):* 236, 6 countries
*Vincentian Marian Youth (1847):* 123,000+, 64 countries
*Association of the Miraculous Medal (1909):* 1,000,000+, 55 countries
*Vincentian Lay Missionaries or MISEVI (1999):* 50+, 13 countries
*Sisters of Charity Federation North America (1947):* 12 congregations, 3,400 Sisters, 600 lay affiliates, 26 countries
*Sisters of Charity of Our Lady Mother of Mercy ( ):* 750 sisters, 7 countries
???
Highlights: Vincentian Family

Congregation Headquarters

- CANADA
- UNITED STATES
- SINGAPORE
- COLOMBIA
- PERU - AMAZON BASIN
- INDONESIA
- MILLIONS
- UGANDA
- AFRICA
- ASIA

Legend

- ReligOUSGCMmi;
- uL
- 000

Map:

- DG_MB_OBOti

Scale: 1:500,000

0 km
100 km
200 km
300 km
400 km
500 km
Highlights: Vincentian Family
Maps were shown in Rome to receive leadership approval for Phase II.

Working with politics of religious inst.

Congregation HQs nearest to major refugee routes
Stakeholder Engagement:

Client Request, Driving Use and Development
Creating a tool to help religious communities and landholders plan their properties based on social, environmental and financial values.
USCCB Green Infrastructure
Goodlands Link matches religious and diocesan land owners with new and experienced environmental mgmt., public service and religious groups eager to find properties for their operations.

We help lease, sell, or develop land use agreements that serve the financial needs and missions and goals of each client.
Goodlands Link

Like linked-in for Catholic Land

Starting as website, but have proprietary code for app development.

Inspired by Farm Link programs in United States.
Stakeholder Engagement:

Building the tool + platform for engagement, then bringing clients to it
Mapping for Tenderness
Client Goals

“I want the Pope’s face seen everywhere on earth.”
I want the Pope’s face seen everywhere on earth. = Increase + Improve telecommunications infrastructure
Revealing how Catholic Infrastructure can partner with ISP provider to provide internet access to the Continent of Africa, understanding population access through market and cultural data.

VATC + Soc Partners: Facebook, Twitter, Vodafone
Stakeholder Engagement:

It’s complicated.
Synod on Youth Exhibit

Stand-up Cartography Center in Vatican

Exhibit for Oct. 2018

In process of securing
Is it possible to geoenable the largest nongovernmental network of health, education and land in the world for good?
Thank you

GoodLands
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