Farmer apps with a two way communication platform

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How can we collect more ground reference data

- Get data from existing archives both visual interpretation and ground data
- Harmonization and standards play an important role, e.g. protocols
- Some ground data exists but is fragmented GOFC-GOLD – validation, Geo-wiki points, Earth collect, Laco-wiki (Geo-wiki)
- Tap into data from companies e.g. GODAN
- Companies evolve making money with services for farmers e.g. Geotraceability, insurances, Landmap

Crowdsource the data, build tools for visual interpretation and direct ground data collection – demo tools/apps (Seca-wiki, Cimmyt app, Prosopis app) and LandSense project
Became a partner and help support global efforts to make agricultural and nutritionally relevant data globally available and unrestricted.
Citizen based Environmental Data collection

Technology
- Mobile Phones
- Mobile Money

In-Situ
- Interested Citizens
- Existing Communities

Value Added
- Improved Land Cover data
- Reliable statistics
- Land-use change
How can we make optimal use of the crowd?
1. Laco-wiki Logging in / Languages
Validation Session Details

Basic Information
Owner: geolms (you)
Validation Session Name: Sample for Comparison
Associated Dataset: Kenya CLC2015
Associated Sample: Main sample Kenya CLC2015
Created: Friday, April 21, 2017 6:52 AM
Validation Method: Blind

Validation Session Description
This is sample so we can look at the images

Reports based on this validation session
You haven't created any reports based on this validation session yet. You can create a new report here.

Sharing
Shared validation sessions can be validated and used by other users to create reports.
Share with users or groups...

Validation Progress
499 of 500 samples have been validated.
Progress: 99.8%

Validation Download
Download your validations.
- ESRI Shapefile
- KMZ File
Overview

- Upload
- Sampling
- Validation
- Reporting
Accuracy Assessment

- Raw data / confusion matrix
- Overall accuracy / errors of omission and commission
- Kappa
- Average Mutual Information (AMI)
- Quantitative and Allocation Disagreement (Pontius and Millones, 2011)
- We can add others based on user needs
In-situ component – LACO-Wiki Mobile
Based on the idea of FotoQuestGo
2. SECA-wiki app for

- Centro Nacional de Monitoramento e Alertas de Desastres Naturais
Seca-Wiki Smartphone Application
App details and data

Users take pictures geo-tagged, showing compass direction and tilt of the phone. The user can enter further information such as the crop type.
Users can enter detailed information on the cultivation and harvest dates, field size, fertilizer and soil preparation, plant and seed information as well as information on pests and diseases.
Seca-Wiki Warning Dispatcher

Administrators of the website can use the warning dispatcher to issue warnings for impending events. These warnings are issued on a regional level. The users of the smartphone application can choose for which regions they want to receive warnings for. Once subscribed to the service the user will be notified of any warnings for the chosen regions also when they don’t open the app.
Warning Dispatcher and map view

The map in the warning dispatcher shows the region for which the warning will be issued. Every user which chose to receive warnings for the selected region will receive the information on the smartphone also when the app is not opened.
3. CIMMYT collaboration project
Sustainable intensification in Mexico through crowdsourcing
IIASA supports the efforts that CIMMYT is currently undertaking in Mexico to promote agricultural sustainable intensification by building a farmers’ crowdsourcing app.
App details and data

- The app allows a farmer to log agronomically relevant information such as crop management practices and yield performance.
- It uses geo-location to provide information on parcel location.
App details and data

Farmers have in return access to benchmarking local information based on previous performance of nearby parcels or areas with similar conditions extracted from CIMMYT database.
App details and data

Additionally, farmers get local historical weather information and forecasts as well as timely agronomical recommendations (windows of opportunity) e.g. fertilizer/pesticide application optimal time
Future plans

Local EPIC model recommendations: Updated crop model simulations using accurate parameters based on local measurements.

Financial and market benchmarking: Local prices and recommended opportunities using market information to aid decision making.
App 4. Prospis app
Scaling up the detection of Prosopis Juliflora invasive species in Somalia through Crowdsourcing

From

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