Drones for Agriculture in Africa

FAO-ITU Regional Training on the use of drones, satellite imagery and GIS for agriculture

Asian Institute of Technology Campus, Thailand
4-8 June 2018
WHAT IS CTA?

- Technical Centre for Agricultural and Rural Cooperation ACP-EU
- Joint institution of EU and African, Caribbean and Pacific Group of States
- Founded in 1984
- Focus on information and communication for agricultural and rural development
- Funded by EU under the European Development Fund
## Current CTA ICT4Ag priority areas of intervention

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<thead>
<tr>
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<th>Priority Area</th>
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<tr>
<td>1</td>
<td>Youth entrepreneurship</td>
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<tr>
<td>2</td>
<td>Precision Agriculture</td>
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<td>3</td>
<td>Market linkages</td>
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[Innovation, digital literacy and KM]

Photo credit: Able Aerial Imaging
Challenges for UAS adoption in Africa
### Challenges for the upscaling UAS services in agriculture in Africa

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Details</th>
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<tr>
<td>Absence of UAV regulations in many developing countries</td>
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<td>Presence of disabling regulations for would-be drone operators</td>
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<td>Lack of licensed drone pilot schools except for South Africa</td>
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<td>Non recognition of drone pilot licenses across national borders</td>
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<td>Small-scale mixed cropping &amp; the need to focus on smallholders growing the same crop on contiguous areas</td>
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<td>Lack of evidence of positive Return to Investment for smallholders</td>
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<td>Insufficient awareness</td>
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<td>Slow and expensive access to the Internet</td>
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<td>Challenges for UAV operators to scale up</td>
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</table>
Small drones are unmistakably different from aircraft in so many ways yet they are considered as full-fledged aircraft in most of the countries.

Disabling or Enabling?
Status of drone regulations in Africa

Source: www.droneregulations.info
A new technology and the regulatory bottleneck

**Uganda** has no regulations in place and drones are confiscated from travellers at the airport of Entebbe. A few operators have a provisional license.

**South Africa** (regulations effective 1 July 2015). As of February 2018 only 21 companies licensed to operate, with a back log of over 400 applications

**Rwanda** (regulations effective 16 May 2016). Only one licensed commercial operator so far.

**Ghana** (regulations as of June 2016). Commercial operators need to obtain written permission from regional or local police stations before operating drones.

In **Nigeria** (regulations as of May 2017). 1st operator licensed in June 2017.

In **Zambia** (regulations as of July 2016). 1st commercial UAV operator obtained a ROC (RPAS Operation Certificate) in April 2018.

In **Spain** (regulations as of Oct 2014). 2200 registered drone operators (as of 31 May 17) plus 200 training organisations in place.

In the **United Kingdom**, as of the 26 April 2018, Small Unmanned Aircraft (SUA) (<20 kg) operators holding a valid CAA permission: 4,055 (Source CAA, UK)
https://kadata.kadaster.nl/dronekaart/
Opportunities
Use of Drones for Agriculture - A perception survey (Nov. 2017)

Drones in Agriculture in Africa and other ACP countries
A Survey on Perceptions and Applications
Denise Soesilo and Giacomo Rambaldi

Series: ICTs for agriculture

Opinion on the deployment of drones for agriculture

<table>
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<tr>
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<th>English</th>
<th>French</th>
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<tbody>
<tr>
<td>Favorable</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Neutral</td>
<td>10%</td>
<td></td>
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<tr>
<td>Unfavorable</td>
<td>0%</td>
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## Trends and opportunities

<table>
<thead>
<tr>
<th>African Union’s support for drone-based technology</th>
<th>Youth Agriculture &amp; ICTs</th>
<th>Real time data gathering and processing</th>
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<tr>
<td>● By issuing Decision EX CL/Dec. 986-1007(XXXII) (26/1/18) the Executive Council of the African Union requested the AU and Member States to build on drone technology for precision agriculture</td>
<td>● Increased engagement of youth in agricultural value chains through innovative ICTs</td>
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<td></td>
<td>● “ICTs make Agriculture sexy” (Hon. Agnes Kalibata, MINAGRI, 2013)</td>
<td>● Agriculture may transform into a high-tech industry, with decisions being based on real-time gathering and processing of data</td>
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Drones on the horizon: Transforming Africa’s agriculture

To be launched at the Africa Innovation Summit, Kigali, 6-8 June, 2018
CTA & sUAS
CTA supported UAS Operators - 2017
Transforming Africa’s agriculture

Eyes in the Sky - Smart Techs on the Ground
CTA supported Eye in the Sky UAS operators
Communities of Practice
Twitter: @uav4ag (30K)
Facebook: @uav4ag (136K)
DGroups: www.uav4ag.org (1K)

~ 170K
Impact studies & impact stories

Case studies & Working papers

Lessons learned – Guidebooks and training kits

Celebrating failure
PARTNERSHIPS WITH PRIVATE SECTOR
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Thank you

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