2015

SWAC/CRC
INTER-REGIONAL WORKSHOP FOR
DESERT LOCUST INFORMATION OFFICERS

No. 7

22-25 February 2015

Hurghada, Egypt

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CRC/SWAC Inter-regional Workshop

for Desert Locust Information Officers

22-25 February 2015 (Hurghada, Egypt)

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Rome, 2015

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SWAC/CRC Inter-regional Workshop for Desert Locust Information Officers

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1. Introduction

The FAO Commissions for Controlling the Desert Locust in the Central Region (CRC) and South-West Asia (SWAC) sponsored an inter-regional workshop for Desert Locust Information Officers in frontline countries of the Central Region and South-West Asia. The CRC staff organized the workshop and the Department for Locust & Agro-aviation Affairs (Ministry of Agriculture, Egypt) provided logistics and support. The FAO Senior Locust Forecasting Officer, Keith Cressman, conducted the workshop, assisted by two resource persons, Hichem Dridi (FAO/CLCPRO) and Mehdi Ghaemian (RAMSESv4 developer). The workshop, which is normally held at the FAO Regional Office for the Near East (RNE) in Cairo, was organized in Hurghada this year so that those Desert Locust information officers (DLIOs) who participated in a CRC Contingency Planning workshop the previous week could attend the DLIO workshop.

This year's workshop was the seventh annual DLIO workshop since 2008. A total of 14 DLIOs from three countries in SWAC, six countries in CRC, and the Desert Locust Control Organization for Eastern Africa (DLCO-EA) attended the workshop as well as two Master Trainers from Egypt and three observers from Egypt and FAO/CRC (Annex 1). Unfortunately, Oman could not participate in the workshop. The involvement of the resource persons was critical as they assisted in the training and provided much needed personalized technical assistance in solving individual problems as they arose during the workshop. The workshop would not have been possible with the resource persons.

2. Programme

Similar to previous workshops, participants indicated what problems and difficulties they faced in their daily work as DLIOs and what they would like to gain from this year's workshop. This information was used to refine the workshop programme to meet the needs of the participants. The main emphasis of this year's workshop was RAMSESv4 and eLocust3D. The programme consisted mainly of hands-on practical exercises and demonstrations in the classroom and outdoors, supplemented by participatory discussions and a few presentations (Annex 2). The hours of the four-day workshop were from 8:30 to 5:00 PM.

2.1 Participant expectations and difficulties

All of the participants wished to learn more how to use all aspects of the latest version of RAMSESv4, how to use eLocust3D Desktop App and how to solve every day problems that eLocust3 users face when in the field. Some users indicated that they required further assistance in managing files on their PC, downloading remote sensing imagery and updating Java. In general, participants wished to use the new tools developed by DLIS and others more effectively and efficiently.

2.2 File management

A standard filing structure was proposed to participants as a means of improving the organization and access of data on their computers (Annex 3). This should make it easier and faster to find files as well as facilitate regular backups. The participants were encouraged to adopt the proposal and to adhere to a strict file naming scheme and organizational structure. A well-organized standard filing system will also aid FAO in providing better technical assistance remotely and facilitate dialogue during country-to-country support.

2.3 eLocust3

On 1 January 2015, eLocust3 began use on an operational basis in all countries. Although each country was informed on a regular basis for the previous six months that eLocust2 could no longer be used after 31 December 2014, a few field officers in Egypt, Eritrea and Saudi Arabia continued to use eLocust2 in early January. This disrupted the operational data flow and caused billing problems in January. Fortunately, eLocust2 usage ceased after mid-January in all countries.

As with the introduction of any new technology, there is an initial period of minor problems and difficulties that often occur due to inexperience or poor training. The main problems associated with eLocust3 during the first six weeks of 2015 were:

(1) Missing coordinates – users would press *Save&Sent* without confirming that the latitude/longitude coordinates are indicated at the top of Report Page;
(2) Area to be treated coordinates indicated when control is not required – users would indicate one or more coordinates (*Get coordinates*) of the Area to be treated when either locusts were absent or there was no requirement for control. Users may have thought that mistakenly the *Get coordinates* button is a means of obtaining the coordinates of the survey location;
(3) Missing reports – any reports that are not transmitted on the same day will not be received by email; however, they will appear on the GeoFlex platform. Therefore, users should ensure that all reports have been transmitted before the end of the day by checking that the Queue = 0 in the footer of eLocust3; otherwise, the data will not be entered into RAMSESv4;
(4) Data quality – although there are many data integrity checks built into eLocust3, users must be careful and make a diligent effort to enter sensible data in order to avoid the "garbage in, garbage out" syndrome;
(5) Report ID – users should never change the User in the Settings Page on eLocust3 because this has been pre-set to correspond to the tablet name and antenna ID.

All of the above problems can be resolved with proper and regular training of eLocust3 users in each country (Annex 4).

During the workshop, participants were shown how to take photos with eLocust3, transfer photos from the tablet's micro SDHC memory card to the PC, and upload photos to the GeoFlex platform. Photos can only be updated if the associated Report has already been transmitted by eLocust3. Refresher training was also provided on how to use GeoFlex for monitoring teams and displaying survey and control results.

In general, the participants noted that they as well as the users in the field are extremely satisfied with eLocust3 and its new functionality, specifically the extra data that can be recorded, the reduction in cables, ability to take photos, the maps, references, videos, tri-lingual software, ruggedness of the hardware and general ease of use. eLocust3 represents a substantial improvement over its predecessor and it is a very important tool to be used by every survey and control team.

2.4 RAMSESv4

The workshop participants were trained in all aspects of using the latest version of RAMSESv4. A logical, sequential approach was presented, starting with downloading and installing the latest software update. This was followed by the management of eLocust3 data: downloading and saving the 24-hour CSV data file received from Novacom in the national eLocust gmail account, decompressing the file, opening it in RAMSESv4, checking and correcting the data and importing it into the database. DLIOs were taught how to enter data manually and practiced this by making up data and entering several examples of both detailed and vague reports representative of what they might receive from field officers who use the *FAO Desert Locust Standard Survey/Control Form* and from travellers or locals. Once data had been entered into the database, then users were shown how to retrieve it through queries, edit the data directly in the database if necessary, plot it on a map, prepare maps for national bulletins, and export the data for FAO DLIS.

A number of individual problems concerning RAMSESv4 were resolved on the spot by the resource persons (Annex 5).

Participants were also shown how to download current remote sensing imagery (MODIS, NDVI, EVI, greenness maps, IRI rainfall), rename each file according to a strict standard protocol, and then re-index the external HDD so that the RAMSESv4 application can find the image and display it (Annex 6). The annual workshops are an opportunity to update each of the country's external HDDs with a complete set of the previous year's imagery. These files are too large to send by email and often take a long time to download due to poor Internet connections in some countries. This year, 30 HDDs were updated with the 2014 dynamic data as well as other new files (Annex 7). Each HDD took approximately two hours to be updated.

2.5 eLocust3D

The workshop participants were introduced to eLocust3D and shown how to use the eLocust3D Desktop App on the PC to prepare packages that can be used on the tablet in eLocust3 (Annex 8). A package consists of selecting the Area of Interest, normally about 6-9 square degrees, where a team will be conducting a survey, and then selecting the relevant static data (Landsat, TPC, elevation, boundary) and the latest decadal rainfall and greenness maps. Once the eLocust3D Desktop App has prepared the package, the compressed file is copied onto the micro SDHC memory card and inserted into the tablet for use.

Within eLocust3, the user can open eLocust3D and see his current position in the field compared to recent rainfall or green vegetation displayed on a Landsat or TPC map in 3D. As the user moves in the field, the position is updated. Field officers use their fingers to zoom in/out, rotate and tilt the maps. In this way, ground teams can locate green vegetation and potential locust infestations more easily that, in turn, improves the survey efficiency and

costs. eLocust3D does not require an Internet connection. It has received several awards and international recognition for its innovative and practical approach[1].

The DLIOs practiced preparing packages by using the eLocust3D Desktop App, managing the micro SDHC memory cards and using eLocust3D on the tablet.

3. Lessons learned

This year's workshop was mainly a training course on using RAMSESv4 and eLocust3D Desktop App. Each participant brought his own laptop PC. This was essential so that each person could practice the new concepts, so-called "learning by doing". This was far more effective than passively watching PowerPoint presentations. However, this approach requires a sufficient number of resources persons who can personally address the large variety of wide-ranging individual hardware and software problems that occur during the workshop. There were two resource persons and one main primary trainer at this year's workshop; in other words, roughly one resource person for every 5-8 participants. This is nearly not enough as ideally there should be a resource person for every 3-4 participants if sufficient attention is to be given to participants so that they learn all of the material adequately. This shortcoming was partially overcome by relying on the more advanced and experienced participants who could help their colleagues. This strengthens so-called horizontal technical support, that is country-to-country, rather than relying solely on vertical support, e.g. FAO-to-country. It is hoped that the continuation of annual workshops will strengthen the horizontal support component. Based on the availability of suitable resource persons, the number of participants in future workshops should be kept to approximately 16 and no more than 20.

The workshop timetable was designed to break up the intensive training sessions with rest periods of a half hour in the morning and again in the afternoon, supplemented by an hour-long break at midday. Buffet snacks and drinks were provided during each break period. All efforts were made to finish the day at 1700h so that participants had sufficient time to rest in the evening and practice what they learned. This schedule also assisted the trainers and resource persons in maintaining the intensive pace throughout the workshop. This arrangement worked very well and should be applied to future workshops.

A fast, reliable Internet connection for every participant during each day of the workshop is absolutely essential. This was not possible during this year's workshop and, as result, it constrained some of the teaching and participants could not take full advantage of the training. Normally, the annual DLIO workshop is held at FAO/RNE in Cairo where there is good Internet and reliable power. It would be desirable to continue this practice in the future.

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[1] Nominations, special awards and international recognition from:
NASA World Wind Europa Challenge (http://eurochallenge.como.polimi.it/projects2014)
Geospatial World 2015 (http://www.geospatialworldforum.org/award.htm)
World Summit on the Information Society / WSIS Project Prizes
(http://groups.itu.int/stocktaking/WSISProjectPrizes.aspx#nominated-projects - page 13)
ESA Big Data from Space (http://congrexprojects.com/2014-events/BigDatafromSpace)
Panasonic Australia (https://blogs.panasonic.com.au/business/2015/01/28/panasonic-toughpad-rugged-android-power-the-u-n-s-locust-watch-project/)
RAI Italian TV (http://www.rai.tv/dl/RaiTV/programmi/media/ContentItem-c8d21158-cd54-4781-9f02-f0cbc3ff8178.html#p=0)

During the 2014 workshop, specific eLocust gmail accounts were established for eLocust3 data in each country. The benefits of this decision have become more apparent this year when countries started using eLocust3. It has allowed users to manage eLocust3 data easier and more reliably while facilitating testing, troubleshooting and problem solving by FAO DLIS.

Participants must come to the workshop prepared and ready to raise problems and difficulties they face in using new tools and technologies in their daily work as DLIOs. Only DLIOs should participate in the workshops. Organizers should send the workshop programme and associated exercises in advance so that participants can practice before arriving at the workshop. Participants should ensure that their laptop has sufficient RAM memory and is working correctly, that the latest version of RAMSESv4 is installed and functioning properly. The latest virus definitions should be installed and each computer scanned and cleaned of any existing virus. If participants bring laptops that are outdated, not working properly or infected with virus, this will slow down the workshop and divert the resource persons to resolving such problems.

4. Conclusion

The DLIOs expressed the need to continue to update RAMSESv4. The latest version contains basic functionality for data management and display but lacks sufficient tools for data summary and analysis (Annex 9). It is hoped that this work can be achieved during the 12 months so that the DLIO workshop in 2016 can concentrate on presenting these new tools and training participants in their use.

The participants were pleased with the organization, contents and facilities of the workshop except for the poor Internet access (Annex 10). They reaffirmed the importance of and the need to continue to organize the CRC/SWAC inter-regional workshop for Desert Locust Information Officers on an annual basis. The workshop offers the only opportunity for DLIOs from locust-affected countries in the two regions to get together to exchange experiences and share knowledge, and to receive important training and feedback from DLIS. Therefore, it is critical that all front-line countries allow their nationally designated DLIO to participate in this activity. The workshop contributes directly to the strengthening of the Desert Locust early warning system, which is the basis for preventive control in order to reduce the frequency, duration and intensity of Desert Locust plagues.

Annexes

Annex 1. Workshop participants

Region - Country	Desert Locust Information Officers
CRC	
Egypt	Khaled Ibrahim Kelany
	Mohamed Reyad Tony
	Osama Rabie Mahmoud Moustafa
	Tamer AbdelHamied (*)
	Emad Kamell (*)
Eritrea	Tedros Siam
Ethiopia	Delege Mekonnen
Saudi Arabia	Saeed Turkistani
	Marzouk Ali AlBarakati
Sudan	Hussien Osman Abaker
Yemen	Saeed Al-Mamaari
DLCO-EA	Felege Elias
SWAC	
India	Pramod Gour
	Chandra Sharma
Iran	Mahmoud Chalaki
Pakistan	Shahbaz

Organization	Resource Persons
FAO HQ	Keith Cressman
FAO/CLCPRO	Hichem Dridi
Iran PPO	Mehdi Ghaemian

Organization	Observers
FAO/CRC	Mamoon Al Sarai Al Alawi
	Essam Khalifah
Egypt	Yehia Lashen

(*) designated Master Trainer

Annex 2. Workshop programme

	Topic	Details
22 February (Sunday)		
0830 -1000, 1030-1230	**Opening** • Participant introduction and expectations • Workshop objectives and programme • eL3 and Rv4 problems and difficulties	Al-Alawi, Cressman Card method
	File management on the PC	Presentation, discussion
	eL3 • Taking photos	Outdoor practical
1330-1500, 1530-1700	**eL3 (cont.)** • Photo transfer to PC and GeoFlex • Using GeoFlex platform	Presentation, practical
	Rv4 • Downloading eL3 data with Gmail	Practical
23 February (Monday)		
0830 -1000, 1030-1230	**Rv4 (cont.)** • Updating • Re-indexing the external HDD • eL3 data management	Practicals
1330-1500, 1530-1700	**Rv4 (cont.)** • Manual data entry	Practicals
24 February (Tuesday)		
0830 -1000, 1030-1230	**Rv4 (cont.)** • Query and plotting • Database edits • Raster and vector maps • DLIS export • Preparing maps for bulletins • Renaming remote sensing files	Practicals
1330-1700	**Group reflexion and cohesion**	Excursion
25 February (Wednesday)		
0830 -1000, 1030-1230	**eLocust3D** • Desktop app • Preparing a package • Usage on the tablet	Practicals
1330-1500, 1530-1700	**Troubleshooting and problem solving**	Practicals
	Rv4 improvements	Participatory list
	Closing • Workshop evaluation • 2016 workshop	Discussion

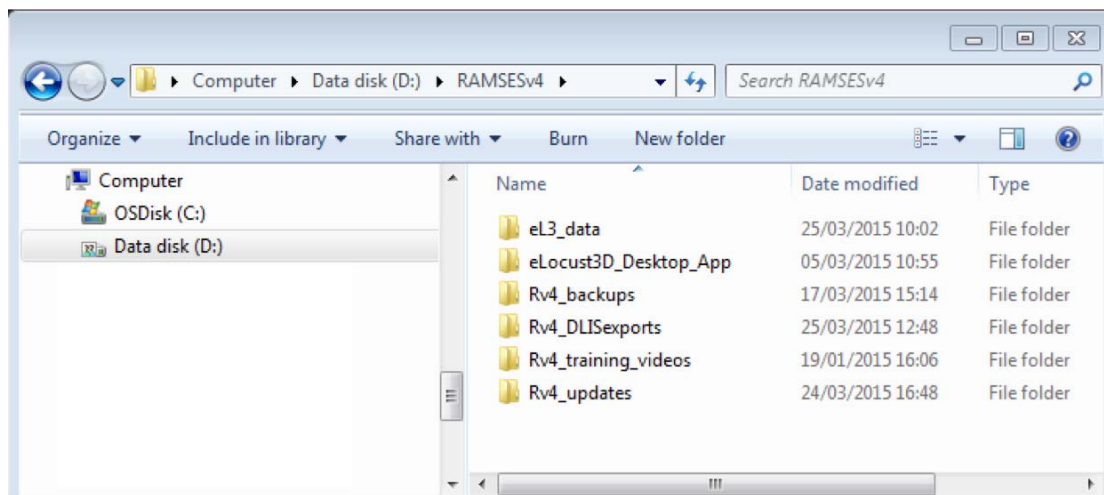**Annex 3. Proposed standard file management**

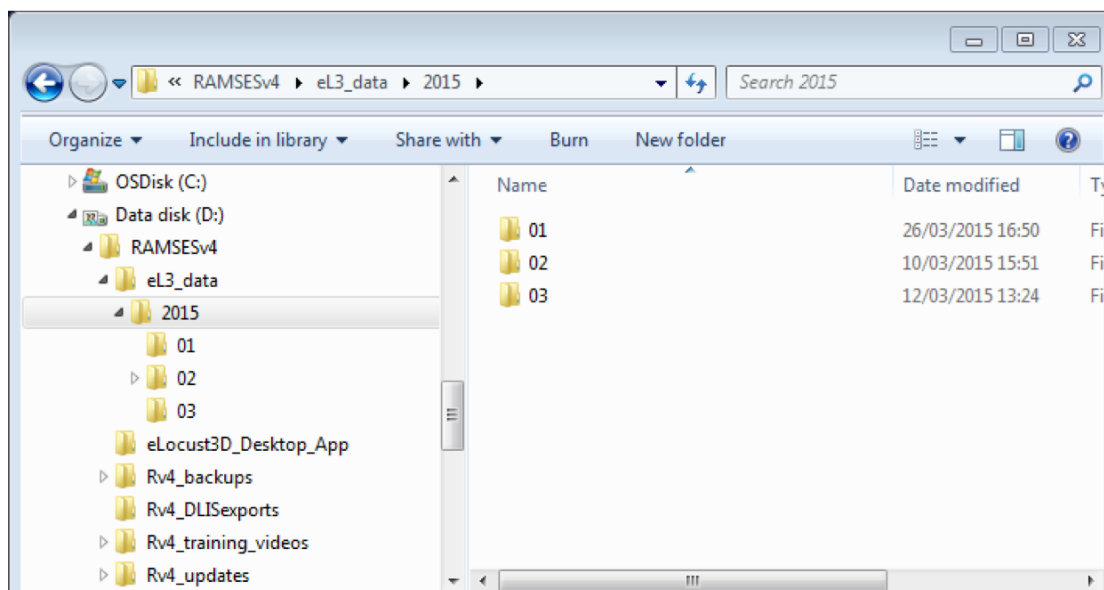Figure 1. Proposed general file management organization for d:\RAMSESv4 folder.

Figure 2. Proposed file management organization for annual and monthly eLocust3 data in d:\RAMSESv4\eL3_data folder.

NB. File and folder names should be written exactly as indicated in the above figures.

Annex 4. eLocust3 problems, solutions and tips

Problem	Solutions & Tips
Missing coordinates	• Wait for GPS coordinates to appear on Report Page before pressing *Save&Send* • Go to Dashboard and turn off/on GPS • Use Android GPS Test App to confirm the tablet's GPS is working ok
Area to be treated – coordinates	• Only press *Get Coordinates* if there is an Area to be treated • If there is no Area to be treated, do **not** press *Get Coordinates*
Cannot delete Area to be treated coordinates	• Cancel the report and start a New Report
Cannot send report	• Make sure all mandatory fields have been completed then press *Save&Send*
Cannot transmit report by satellite	• Check cable/cigarette lighter connection • Check antenna/cable connection • Change position of antenna • Change position of vehicle • Use a different cable • Go to Dashboard and turn off/on Bluetooth • Press *Synchronize* button to retransmit immediately
Data is not sensible	• Users should take care and enter correct observations and complete data
Not all transmitted reports are received by DLIO	• Make sure to send all reports **before** the end of every day • Check that Queue = 0
Tablet and antenna IDs do not match	• Users should **not** change the User name in the Settings Page
The time indicated in the eLocust3 footer and the tablet footer are different	• Field users should inform their DLIO • DLIOs should check and correct this before distributing tablets to the field

Annex 5. RAMSESv4 problems, solutions and tips

Problem	Solutions & Tips
Installation is not successful	• Turn-off anti-virus temporarily • Follow Uninstall instructions (see doc on HDD) • Manually uninstall if necessary • Confirm that Java Advanced Imaging and Java have been completely removed (reinstall and then uninstall if necessary)
Rv4 does not start – *"Could not create the Java Virtual Machine"*	• Go to Control Panel – System – Advanced – Environmental Variables – Add (Name: JAVAOPTIONS, Value: -Xmx512M) and restart PC
Rv4 does not start – Cannot find Java	• Correct the Java paths (see SetJavaPath instructions on HDD)
Remote sensing imagery does not display	• Make sure the external HDD is connected to your PC • Re-index the external HDD (must always be done after adding a new file) • Make sure to follow the exact naming scheme (see Annex 6) • Make sure the files are saved in the correctly name folder and hierarchy on the external HDD
Cannot connect to database	• Make sure all Rv4 updates have been installed and you are using the latest version • Start Rv4 as Administrator • Confirm that PostgreSQL is installed on your PC • Completely uninstall/reinstall Rv4
Cannot open eL3 data	• Decompress the CSV file before trying to open
Symbols do not appear on the map	• Make sure all Rv4 updates have been installed and you are using the latest version

Annex 6. Standard file names for remote sensing imagery

If you want to view new remote sensing imagery in Rv4:

1. download the desired GeoTiff file(s) from:
   http://iridl.ldeo.columbia.edu/maproom/Food_Security/Locusts/
2. save the file(s) in the correct folder(s) on the HDD attached to your PC
3. change the name(s) to the correct format – this must be very precise; no mistakes!
4. reindex the HDD in Rv4 (Layer – Raster Data – Global import – import)

HDD data\raster_data\dynamic

File name	Description
iri	
pYYMMDDdt.tif	daily rainfall estimate
pYYMMDDk1.tif	decade 1 rainfall estimate
pYYMMDDk2.tif	decade 2 rainfall estimate
pYYMMDDk3.tif	decade 3 rainfall estimate
pYYMMDDma.tif	monthly aggregate rainfall estimate
modis\composite	
mYYMMDDMMDDc1.tif	reflectance West Africa
mYYMMDDMMDDc2.tif	reflectance East Africa
mYYMMDDMMDDc3.tif	reflectance Southwest Asia
modis\evi	
eYYMMDDMMDDc1.tif	EVI West Africa
eYYMMDDMMDDc2.tif	EVI East Africa
eYYMMDDMMDDc3.tif	EVI Southwest Asia
modis\greening	
gYYMMDDMMDDk1.tif	decade 1 greenness
gYYMMDDMMDDk2.tif	decade 2 greenness
gYYMMDDMMDDk3.tif	decade 3 greenness
modis\ndvi	
nYYMMDDMMDDc1.tif	NDVI West Africa
nYYMMDDMMDDc2.tif	NDVI East Africa
nYYMMDDMMDDc3.tif	NDVI Southwest Asia
YY= year DD=month DD=day	

Notes
1. Only change YY, MM and DD values; do not change the other characters
2. When there are two sets of MM and second DD, this is the From / To dates
3. Always include .tif in the name

Annex 7. External portable hard disk drives (HDD)

The original 2TB HDDs that contain the RAMSESv4 installation and data files were updated and additional updated HDDs were distributed to participating countries at the workshop.

CRC and SWAC countries currently have a total of 30 HDDs as follows:

Country	Number	HDDs
DLCO-EA	2	DLC, DLC/KEN
Egypt	4	EGY, EGY2, EGY3, EGY4
Eritrea	2	ERI1, ERI2
Ethiopia	2	ETH, ETH2
India	4	IND, IND2, IND3, IND4
Iran	3	IRN, IRN2*, IRN3
Oman	2	OMN, OMN2
Pakistan	2	PAK, PAK2**
Saudi Arabia	3	SAU, SAU2, SAU3
Sudan	3	SUD, SUD2, SUD3
Yemen	3	YEM, YEM2, YEM3

*   *was not brought to the workshop so it could not be updated*
**   *contained virus*

Workshop participants were requested to bring all of their HDDs with them so they could be updated during the workshop. The workshop coordinator updated each HDD with the complete 2014 remote sensing imagery data (IRI, MODIS, NDVI, EVI, greenness), and Landsat geotif, eLocust3, eLocust3D and video files. Each update took approximately one hour to complete.

After the update, each HDD now contains:
- data – static and dynamic raster data
- docs – installation, uninstallation and training guides for XP and Windows 7
- eLocust3 – apps, references, screenshots (Arabic, English, French), videos (15)
- eLocust3D_DesktopApp_v140707
- installation_sequence – installation files including country specific files
- updates – eLocust2Importer
- videos – Rv4 instruction videos (6)
- WD SES Device Driver – driver for the HDD

Approximately 1TB of free space remains on each HDD. This is expected to last nearly one decade at the current rate of usage.

Annex 8. eLocust3D Desktop App
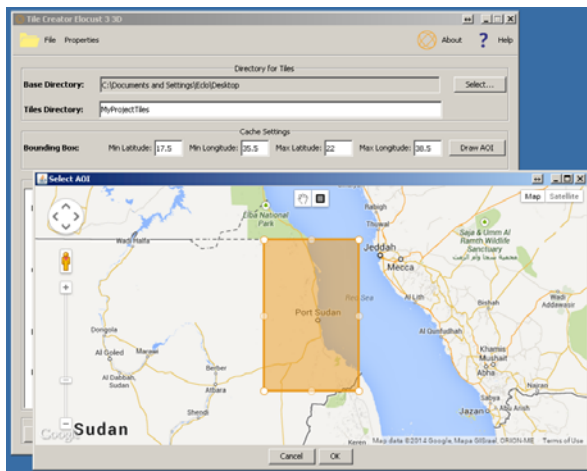
Step 1. Use the map (you must have an Internet connection) to indicate the Area of Interest for making the package to be used on the tablet
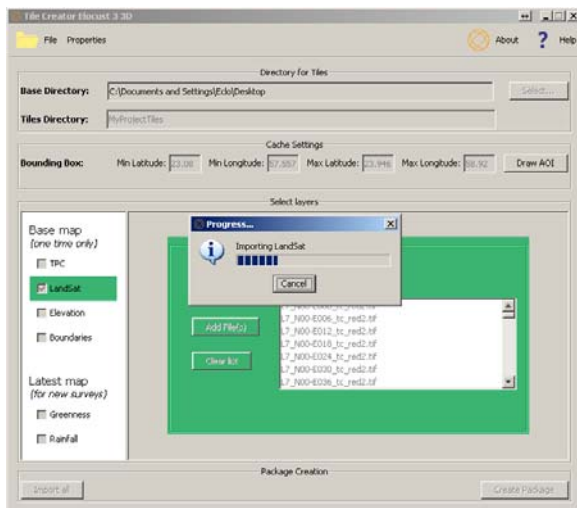
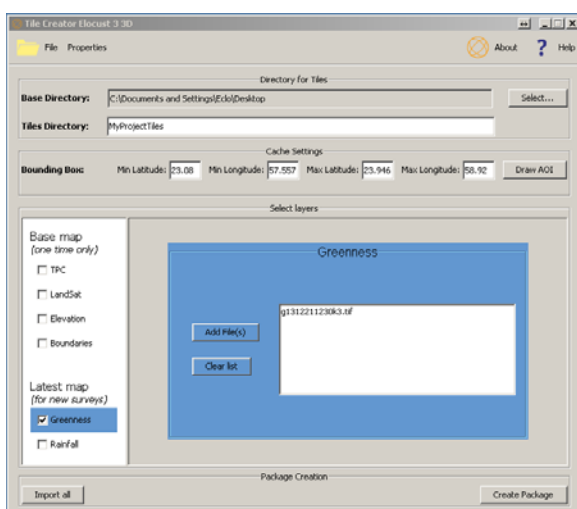**Step 2 (do this only once!).** Add the relevant base maps (TPC, Landsat, Elevation, Boundaries)

Step 3. Add the latest greenness and rainfall maps

Step 4. Create Package

Annex 9. RAMSESv4 improvements

A. Summary and analysis functions

1. One click by State:
   - table: area surveyed, infested (Desert Locust, adults, hoppers, swarms, bands, laying, hatching, solitarious/gregarious, rains, vegetation), treated
   - map: color-coded state fills
   - compare month by month, year by year (ex. summer 2012 surveys vs. summer 2011 surveys by state)

2. Desert Locust
   - graph: evolution of situation - changes in numbers (reports/day)
   - table: area surveyed, infested, area treated, number of bands, swarms by entire sub-region over time 1
   - table: do above for time 2, subtract from time 1 to show increase, decrease, no change
   - table: area surveyed, infested, treated by region by day/month/year by region over time 1 and time 2
   - table: area treated hoppers vs. adults
   - map: frequency of Desert Locust presence/0.25 sq.deg and /region by month, year
   - table: proportion that is solitarious, transiens, gregarious
   - table: proportion that is different maturation stages (hoppers, adults)
   - map: DL presence and altitude
   - graph: locust maturity, locust density, survey, area infested, area treated, by entire country or sub-region over time 1 and time 2
   - map: show breeding adults in places greening up in last week returns a map with colored pixels

3. Ecology
   - summarize red pixels of greenness map in user-selected area to determine total area favorable
   - plot: 1-5 stages as colors, summarize %/region
   - plot: plant species vs. Desert Locust to see which species has most Desert Locust
   - estimate % drying by region
   - graph: vegetation density by entire country or sub-region over time 1 and time 2
   - map: Desert Locust presence and soil type

4. Control
   - table: summary area treated, litres used by control type for country
   - table: summary area treated, litres used by control type sub-region
   - map: mortality after X hours
   - plot: phytotoxicity and zootoxicity
   - plot: treatment blocks
   - graph: control, area treated, pesticide used, by entire country or sub-region over time 1 and time 2

5. Field operations (depends on all teams having eLocust3)
   - table: active days/team/month
   - table: number of teams/region/period of time

6. Data comparison in 4 windows
- compare time periods of same data (ex. Desert Locust in June-Sep) and different data (ex. Desert Locust, veg, rain, control) in 4 map windows.

B. Plug-ins

1. Desert Locust Egg and Hopper Development model – run model on selected data set (by mouse) and display results on a map and table
2. Western Region Stocks System – import geo-referenced export file to query/display data
3. Manual data entry – via eLocust3 simulator
4. DL trajectory model (depends on meteo data availability)

C. Other improvements

1. Country specific international, sub1 and sub2 boundaries (in addition to contours, roads, wadis) in Locust Menu (with asterisk)
2. The map of country should be displayed without the other countries, or have the possibility to choose which map will be displayed (with or without neighboring countries)
3. Add Haliab triangle (Egypt/Sudan) static vector maps
4. Ability to synchronize more than one database used in the same country
5. Clarify the need to update the index file after new raster imagery are added
6. Select language
7. eL3 management module
8. photo management and display
9. automated updates
10. 4D !!!

Annex 10. Workshop evaluation

Ten participants completed the evaluation. They were satisfied with the arrangements, organization, trainers, presentations, technical content and workshop facilities except for the Internet. There may have been insufficient time devoted to eLocust3D. It was preferred that the 2016 workshop be held in Sharm Esh Sheikh or Cairo for five days with Internet access the entire time. Two DLIOs per country should attend. There were mixed feelings about including Locust Heads. The same topics should be covered but File Management could be reduced. Data analysis, map overlays, buffer zones, extracting map layers and case studies could be presented as new topics.

1 = very unsatisfied   2= unsatisfied   3 = no opinion   4 = satisfied   5 = very satisfied

Please rate the 2015 workshop as follows:	1	2	3	4	5
Workshop location				3	7
Workshop dates		1		4	5
Workshop organization				3	6
Workshop participants				4	6
Workshop room			1	3	6
Workshop hours				5	7
Workshop breaks				1	8
Workshop internet availability	3	5	2		
Workshop internet speed	4	4	1	1	
Workshop length		2	2	5	1
Workshop trainers			1	2	7
Workshop presentations by projector				3	7
Workshop card method on boards				3	7
Workshop flip charts				6	4
Workshop topics – overall				3	7
Workshop subject: eLocust3				3	7
Workshop subject: eLocust3 photos				5	5
Workshop subject: Novacom platform				6	4
Workshop subject: file management				3	7
Workshop subject: remote sensing				8	2
Workshop subject: RAMSESv4				6	4
Workshop subject: eLocust3D		1	2	5	2
Sea adventure excursion			1	1	8

Please indicate specific suggestions and improvements for the 2016 workshop	
Location – where?	**Sharm (4), Cairo (3),** Hurghada (1), Jeddah (1)
How many days?	**5 days (7),** 6 days (2), 10 days (1)
Internet for how many days?	**Every day (9),** 2-3 days (1)
How many DLIOs / country?	**2 (9),** 1 (1)
Include Locust Heads?	**No (3), Yes (3),** on last 2 days (1)

What topics to cover in 2016 *(indicate with **X** in the column to the right)*					
eLocust3	9	File management	4	Rv4 map making	10
eLocust3D Desktop App	8	Remote sensing	9	Rv4 data entry	7
eLocust3D Tablet App	9	Rv4 general use	8	Rv4 DLIS export	6
Novacom platform	6	Rv4 backup & sync	8	Rv4 data analysis	9

Indicate any other suggestions:

Data analysis, map overlays, buffer zones, extracting map layers, case study