2012

REGIONAL WORKSHOP FOR DESERT LOCUST INFORMATION OFFICERS IN THE WESTERN REGION

No. 4

16-18 July 2012

Dakar, Senegal

Commission for Controlling the Desert Locust in the Western Region (CLCPRO)
Desert Locust Information Service (DLIS)

EMPRES-WR/CLCPRO
Workshop for Desert Locust Information Officers in the Western Region

16-18 July 2012 (Dakar, Senegal)

Introduction

The FAO Locust Officer (M. Lemine Ouldamedou) and Senior Locust Forecasting Officer (K. Cressman) conducted a three-day regional workshop for Desert Locust Information Officers in the Western Region. The FAO Commission for Controlling the Desert Locust in the Western Region (CLCPRO) sponsored the workshop, which followed similar workshops in 2011 (Mali), 2009 (Algeria) and 2007 (Morocco). Nationally designated Desert Locust information officers (DLIO) from eight countries attended the workshop as well as resource persons from FAO[1].

Programme

Similar to previous workshops, the Open Space technology was used to organize and conduct the meeting[2]. Accordingly, there was no detailed agenda developed in advance; instead, participants identified topics to discuss after sharing their own requirements and expectations of the workshop. The results of an online questionnaire that was completed by participants prior to the workshop were also used to develop the workshop programme.

Results of DLIS/DLIO questionnaire

DLIS disseminated an online SurveyMonkey questionnaire as a means to obtain feedback from DLIOs regarding the usefulness of DLIS and the various tools that have been developed for use by DLIOs.

The results indicated that improvements were required in the following area:

- DLIS visits to Niger and Mali;
- More staff needed in DLIS;
- More training and use in the following software: TeamViewer (remote access), Skype (remote access, communications), MS Access (database), DelSoft (eLocust2updates);
- More training and use in the following tools: eLocust2 (field data recording and transmission), eLocust2Mapper (eLocust2 data correction), RAMSES (GIS), Novacom Geo-flex (eLocust2 data online), MODIS and greenness maps interpretation (green vegetation imagery);
- The following improvements are suggested for a new version of eLocust3: allow more data to be entered (i.e. from CLCPRO form), stronger cable, USB connection, maps, easier installation and updating;
- The following improvements are suggested for a new version of RAMSES (v4): improved installation, updates, query, data summary, imagery and photo management, and functionality;
- Concerns were raised about the delay in the operational delivery of the rainfall estimate, MODIS and greenness map products;
- Two new remote sensing products were suggested: a dynamic dryness map to show areas where vegetation was starting to dry out, and a soil moisture map to show areas that may be suitable for egg-laying.

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[1] Algeria (Hamid Bensaad), Chad (Seth Akodmon Bang-ne) Mali (Bouraima Kone), Mauritania (Ahmed Salem Benahi), Morocco (Jamal Chihrane), Niger (Idrissa Yacouba), Senegal (Abdulay Danfa), Tunisia (Mouna Mhafdhi)
FAO: Keith Cressman, Mohamed Lemine Ouldamedou, Hichem Dridi

[2] see http://intouch.fao.org/renewal/teamwork/tools_and_methods/running_teams/, http://www.kstoolkit.org/Open+Space, http://www.openspaceworld.org/.

The complete results of the questionnaire are presented in Annex 1.

Workshop topics

The following topics were covered during the workshop:

Data collection and correction
- eLocust2 / Novacom
- eLocust2Mapper

Data management, analysis and reporting
- RAMSES v3
- Remote sensing
- National locust bulletins

Future improvement of tools
- Internet/PC issues
- eLocust3
- RAMSESv4
- Other items

A participant facilitated the discussion for each topic.

Suggestions for improved use of DLIO tools

Based on the workshop discussions, several improvements were suggested for each of the tools used by the DLIOs.

1. Data collection and correction

eLocust2
eLocust2 is a handheld data logger used by national survey and control officers in the field to enter observations and transmit them in real time by satellite to their national locust centre.
- Field officers should continue to complete the survey form as well as entering data into eLocust2 because the former acts as a backup of the data;
- Infested area was clarified as the area that contains locusts; it is not necessarily the area that requires treatment;
- DLIOs should provide additional training to field officers so that they do not disconnect eLocust2 before data transmission has been completed;
- It is not necessary for the field team to wait at the survey or control site until the data transmission is complete; instead, the team can leave after the SEND button has been pressed;
- It is the responsibility of the DLIO to maintain an updated list of the eLocust2 units for his/her country; an updated list for every country is available on the FAODLIS Google Site;
- DLIOs should send an email to Keith Cressman, not to ECLO, for the activation and deactivation of units, bearing in mind that requests should be made before the end of the month;
- FAO DLIS should order extra cables to meet country requirements, and send a mains transformer to Chad and Niger;
- Logic checking should be improved, for example, if locusts are indicated as Absent, details of locusts can still be entered;
- It is desirable that additional data, beyond the basic standard data, could be entered into eLocust2;
- A special administrative account was established for the DLIO in Morocco that resolves access problems that occur after five unsuccessful password attempts.

eLocust2Mapper

eLocust2Mapper is a custom application that DLIOs use to check and correct eLocust2 data before importing it into the RAMSES GIS.

- DLIOs should use the single data file containing the previous 24 hours of data that is automatically received every morning, rather than the data downloaded directly from the Novacom geoflex platform;
- The file that is received every morning is compressed as a .gz file, so WinZip must be used to uncompress the file before opening it eLocust2Mapper; this was demonstrated to the Niger DLIO;
- The latest version of eLocust2Mapper (v1.13) should be able to correct coordinates;

2. Data management, analysis and reporting

RAMSES

RAMSES is a custom geographic information system (GIS) application used by DLIOs to manage and analyze ecology, weather, locust and control data.

- DLIOs should ensure that the latest version is installed;
- DLIOs should enter all unconfirmed data and make every attempt to estimate their location based on the distance and direction of the location from well-known main towns. Participants were shown how to use RAMSES for this purpose;
- DLIOs should always check and correct the data before sending it to DLIS. This is most easily done using the Excel file or in eLocust2Mapper rather than correcting data directly in the RAMSES database;
- RAMSES can be used to make national maps as well as maps of a particular area of interest that can be used in national locust bulletins;
- During periods of increased locust activity, it is important that RAMSES data and a brief summary are sent to DLIS every three days.

Remote Sensing

DLIOs use three remote sensing products: rainfall estimates, MODIS imagery to identify green vegetation, and dynamic greenness maps to indicate how long vegetation has been green.

- DLIOs should overlay the greenness maps on MODIS imagery and RAMSES data in order to identify areas that are becoming green;
- DLIOs were shown how to display rainfall estimates and MODIS imagery in Google Earth[3].

National locust bulletins

DLIOs produce Desert Locust situation bulletins on a decadal and/or monthly basis that are distributed within the country as well as to other countries and readers.

- Only the area treated should be indicated, not the area surveyed or infested because these estimates are not statistically valid;
- It is essential to use RAMSES and its data to write the bulletin so that the bulletin text reflects the field data and associated analysis from RAMSES;
- The weather and ecology sections should be combined into one section because they are intrinsically linked;
- The FAO Desert Locust Egg & Hopper Development model should be used to estimate laying, hatching and fledging dates, which can become part of the situation analysis and forecast;
- Maps should be used to summarize and explain the information provided in the bulletin;
- Maps should (a) not contain too many symbols, (b) first be zoomed in RAMSES then annotated with place names so that the font size does not become too large, (c)

[3] After the image is selected to display in Google Earth, four corner points must be entered as reference points, starting in the southwest corner and working counter-clockwise. For the rainfall estimate of the Desert Locust recession area, the points are 20W/4S, 95E/4S, 95E/40N, 20W/40N.

contain legends, (d) a caption indicating what the map shows, (e) be referred to in the bulletin text, and (f) be informative so the DLIO should decide in advance what the map should show;
- If the reporting period is one that consists of locust movements, several maps may be required, for example, one per decade or two per month;
- Indicate the number of field teams and their locations as another way to explain the current situation.

3. Future improvement of tools

Internet / PC issues

- Internet connection is very slow in Mali due to poor service provider, there is no Internet connection at the National Locust Centre in Abeche (Chad), and there is unstable electricity at the National Locust Centre in Niamey (Niger);
- Emergency funds should be used to procure a suitable generator or solar power to ensure an electrical supply at the National Locust Centre in Niamey (Niger);
- The VSAT antenna for Internet connection should be installed at the National Locust Centre in Abeche (Chad);
- DLIOs should make daily incremental backups of the most important data (i.e. RAMSES database, documents and reports); it is not necessary to make up applications or remote sensing imagery;
- More countries should take advantage of TeamViewer and Skype for remote access and support provided by CLCPRO and DLIS.

eLocust3 – suggestions for a future version

- More data (CLCPRO form) – it may not be possible to send all in real time by satellite because it could be too expensive; if so, then the data will need to be divided into basic essential data (to be sent in real time by satellite), non-essential but required data (sent later), and unused data (to omit). DLIOs should provide this information to DLIS by 31 July 2012;
- Stronger cables
- Keyboard to insert comments
- USB access
- Ability to calculate hopper density per ha (hoppers/tuft (or m^2) x tuft density)
- Maps and integrated GPS for navigation
- Can be used to take photos and videos
- Easy install and update of software
- Activation status indicator
- Store data and send later when antenna is broken and then repaired or replaced (perhaps via an auto/manual check to see if any archived data has not been sent)
- Hardware must be rugged and protected for use in harsh conditions (high temperature and dust)

RAMSESv4 – suggestions for a future version

- Remote sensing imagery management via automatic downloading and archiving – high priority
- Statistic and summary totals in tables, graphs and maps – high priority
- Incorporate FAO Desert Locust Egg & Hopper Development model
- Distribution or access of database via Internet (i.e. web-server) within a country – low priority
- DLIOs to inform K. Cressman of other suggestions

Other items

- The participants emphasized the importance of regular visits by the DLIS to their country; for example, Niger was last visited in 2005;

- CLCPRO should organize exchange visits that allow a DLIO to visit a DLIO in another country for one to two weeks of training and experience; for example, Mali, Niger and Tunisia to Algeria and/or Mauritania;
- The next EMPRES-WR/CLCPRO Regional Workshop for Desert Locust Information Officers should be organized in February 2013 and concentrate on using RAMSESv4;
- Skype/TeamViewer conferences with DLIOs should be scheduled by the CLCPRO resource person (H. Dridi) to solve information management and PC problems faced by DLIOs through remote access.

Conclusion

Similar to conclusions of previous workshops in this and other regions, the utility and usefulness of this activity cannot be underestimated. The workshop is a forum for nationally designated DLIOs to exchange their experiences, difficulties, tips and solutions in using tools developed by FAO DLIS in their daily work. Despite cultural, national, religious, administrative, linguistic and work ethic differences between locust-affected countries, these officers have the same terms of references and responsibilities, and use the same tools. Consequently, they face the same problems and are therefore a source of valuable knowledge and experience that can be used to resolve problems that each face rather than depending solely on CLCPRO and DLIS. The encouragement and strengthening of this horizontal exchange of experience is one of the primary themes and objectives of the workshop.

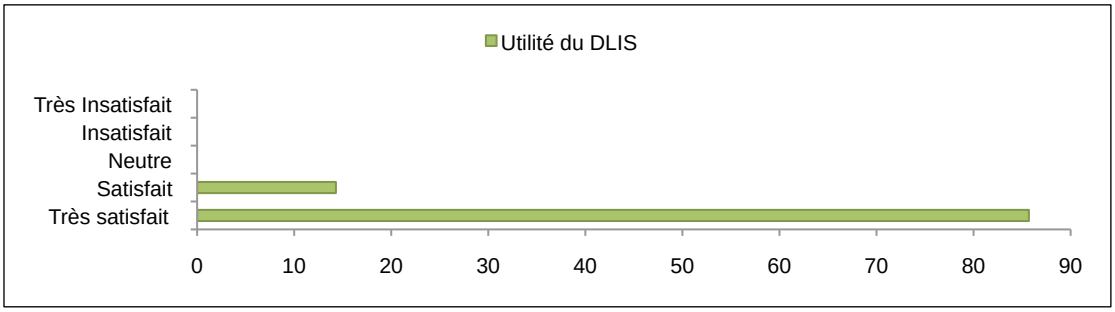
It is becoming increasing apparent that DLIOs in the Western, Central and Eastern regions are more and more proficient in the use of the tools and new technologies that they use in their daily work. Previously, this was not the case and a large portion of earlier workshops was devoted to on-the-job training and problem solving.

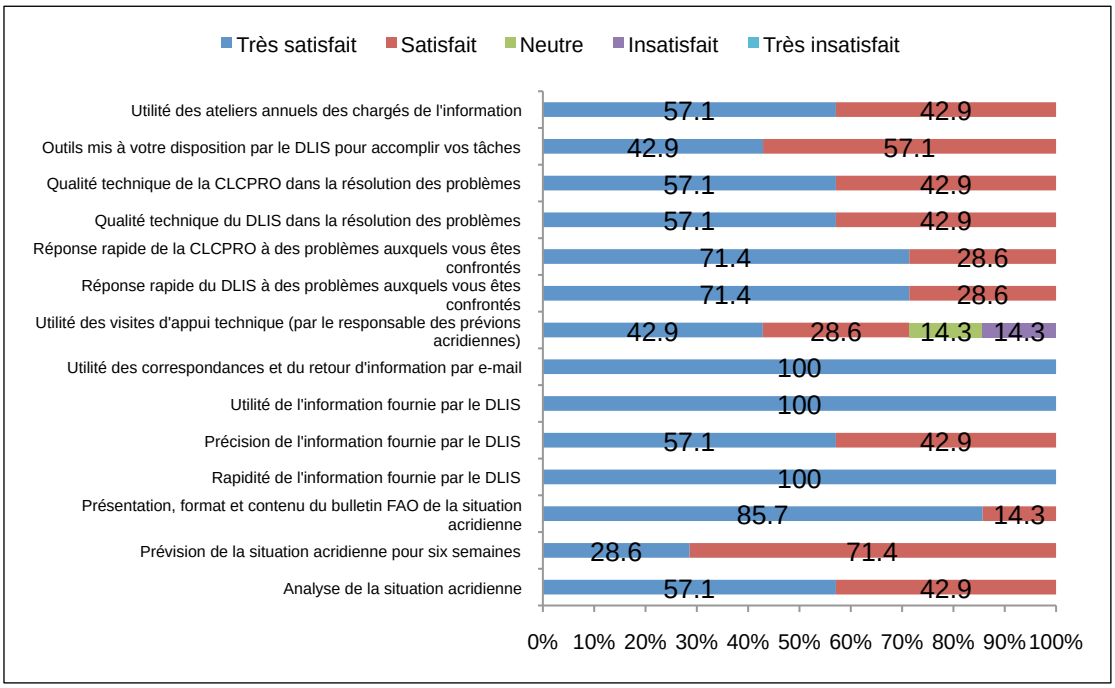
The new challenges between now and the next workshop are to (a) use GIS technology more for analysis and forecasting, (b) nominate and maintain at least two DLIOs per country, (c) strengthen the connection and collaboration between DLIOs and their directors, the head of the national locust centre, and (d) make the transition from RAMSESv3 to RAMSESv4.

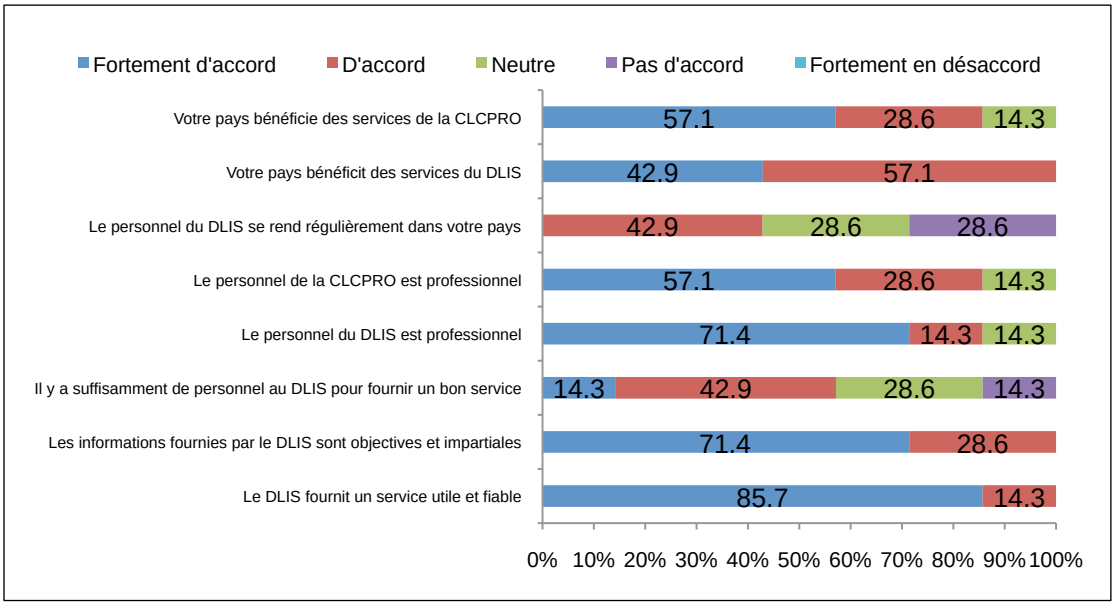
Annex 1. Questionnaire results

The questionnaire was sent to 12 recipients of whom 7 DLIOs responded from Algeria, Chad (2), Mali, Morocco, Niger and Tunisia. No responses were received from Libya, Mauritania and Senegal. A summary of the responses and comments is presented in this Annex.

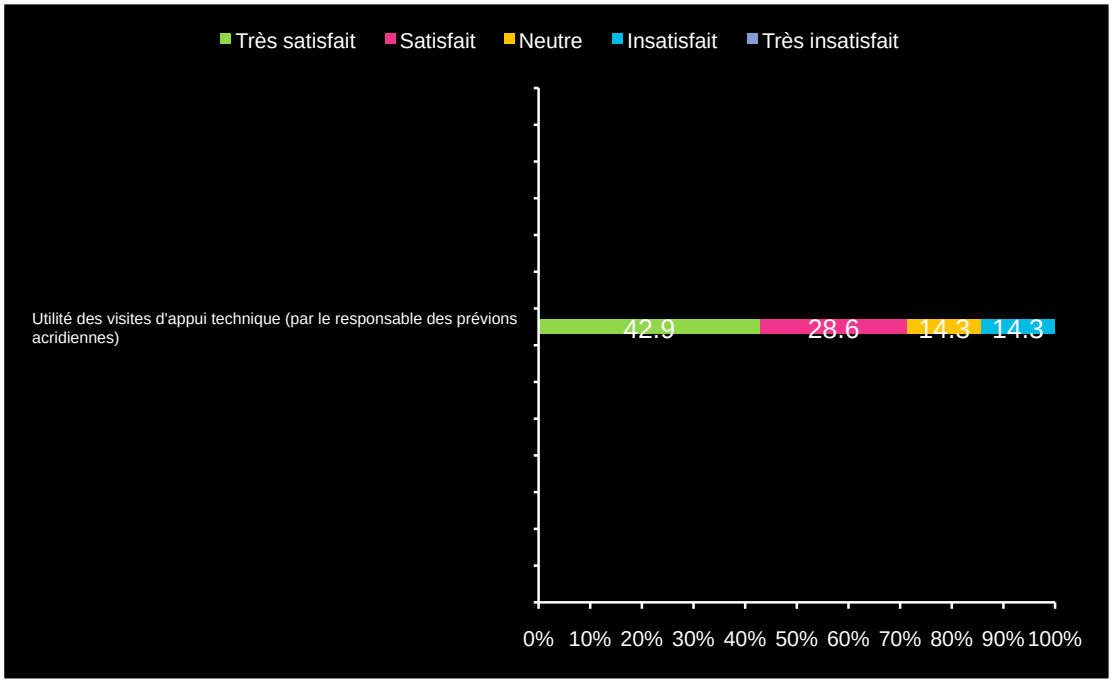
(a) DLIS – how satisfied are you with the following DLIS and CLCPRO services and do you agree with the following statements

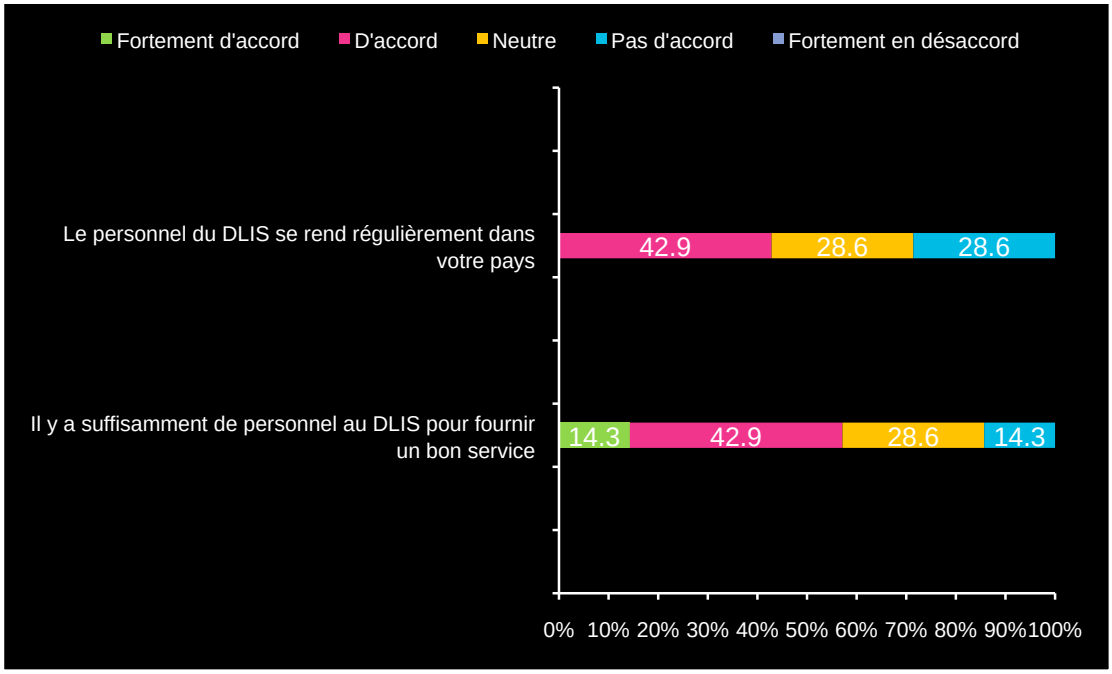




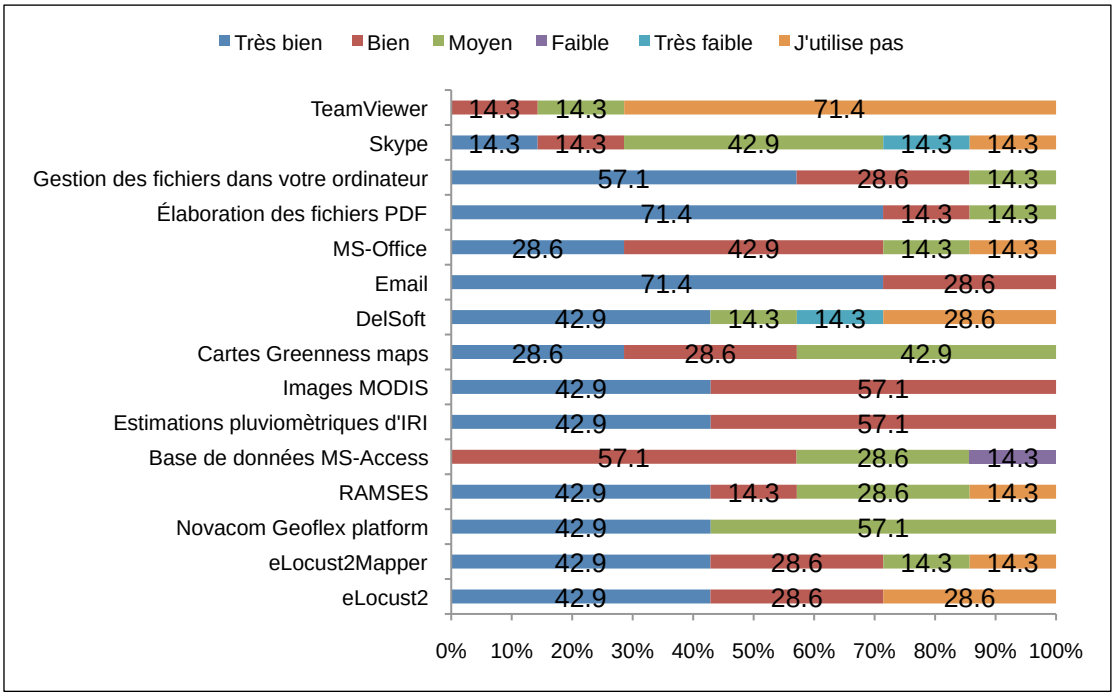


Analysis of critical responses

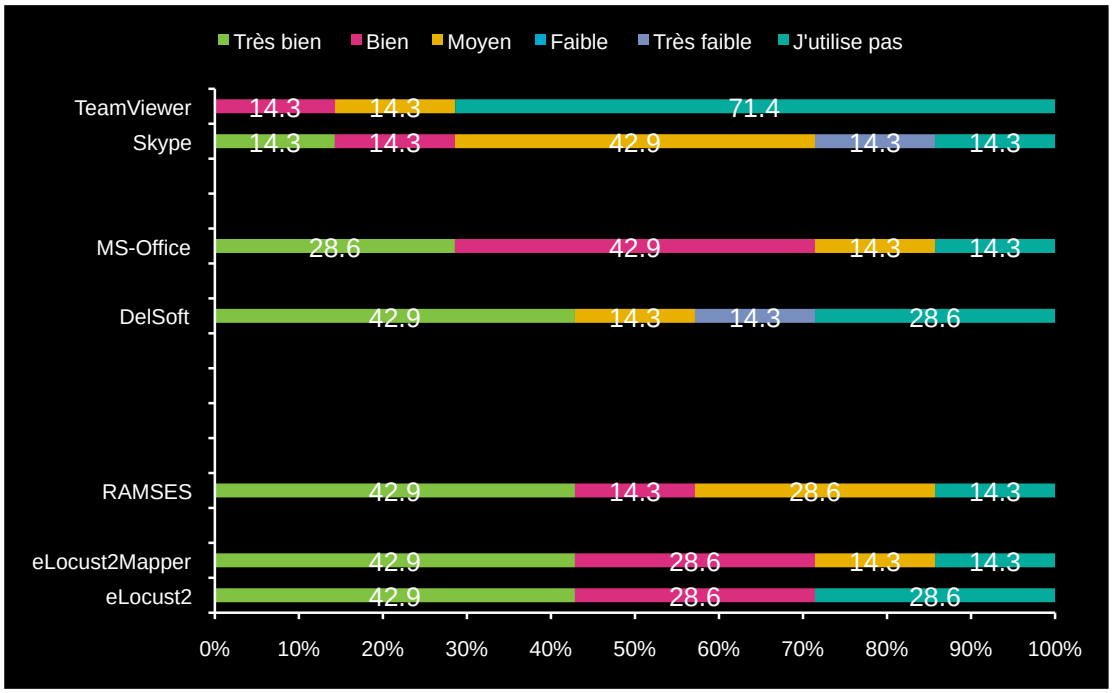




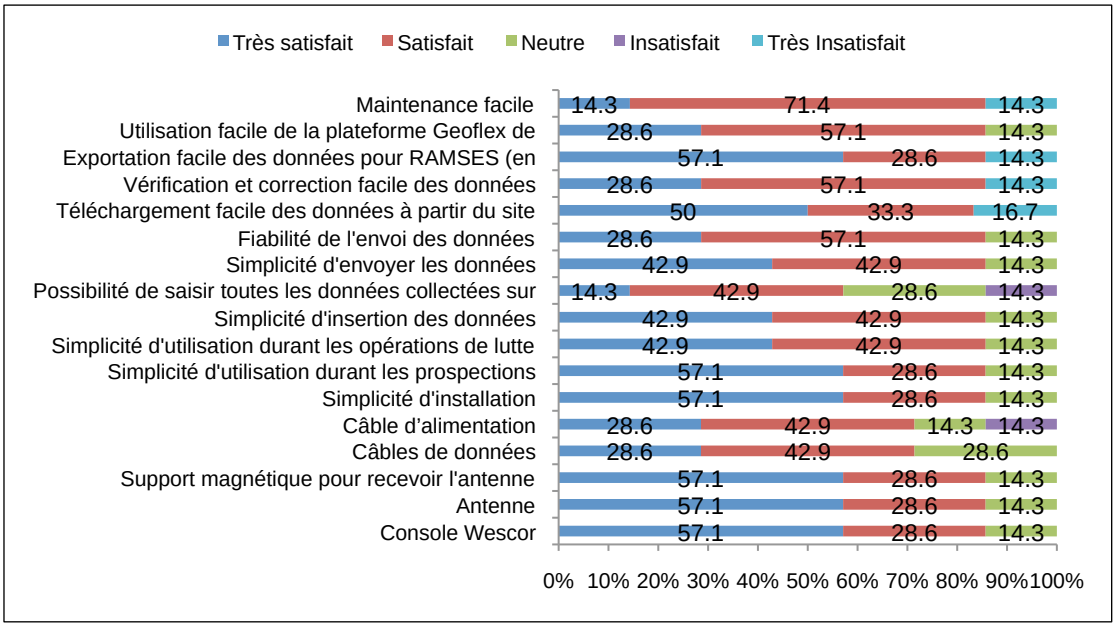
(b) DLIO tools – how confident are you in using the following tools



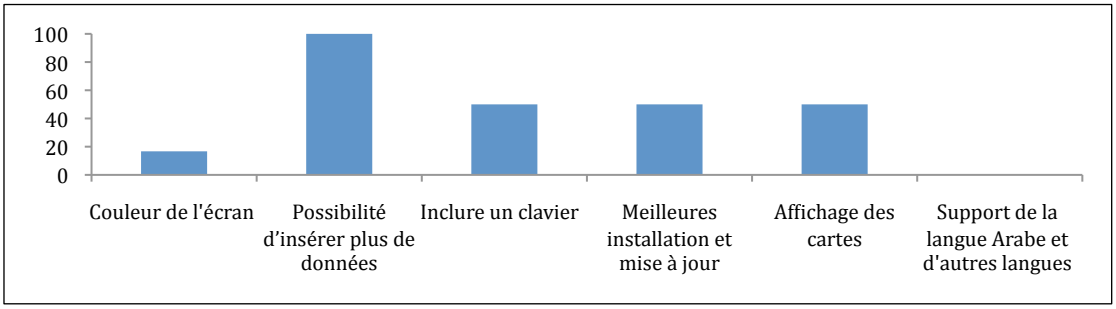
Analysis of critical responses



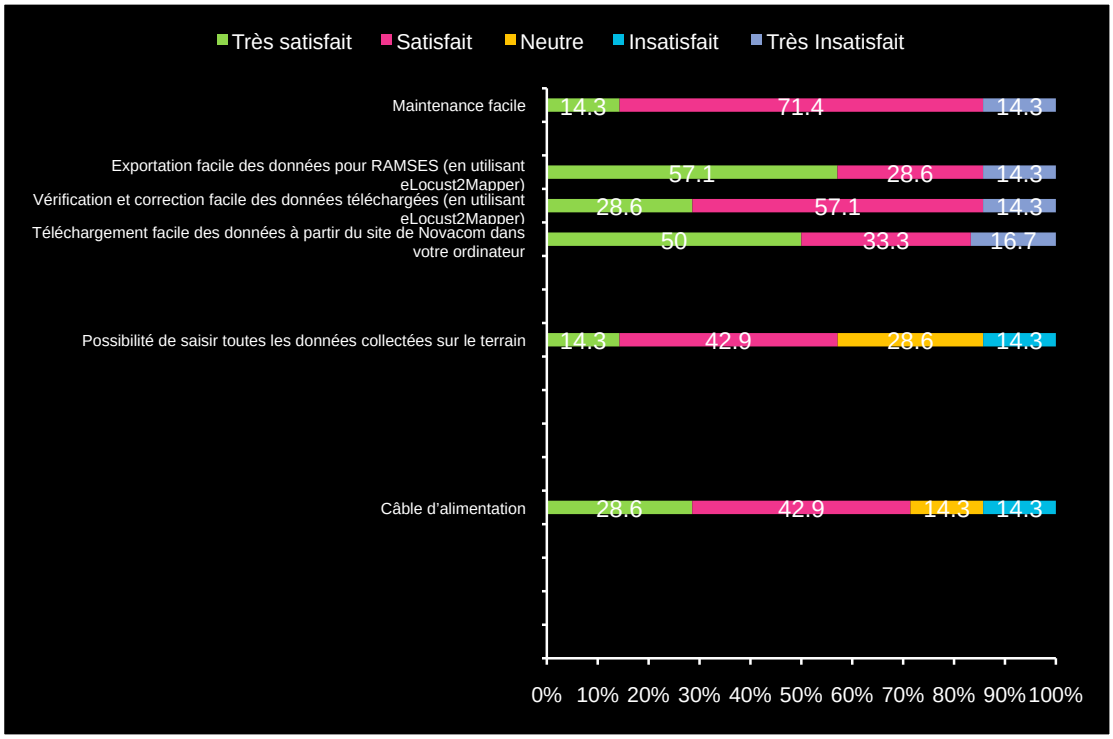
(c) eLocust2



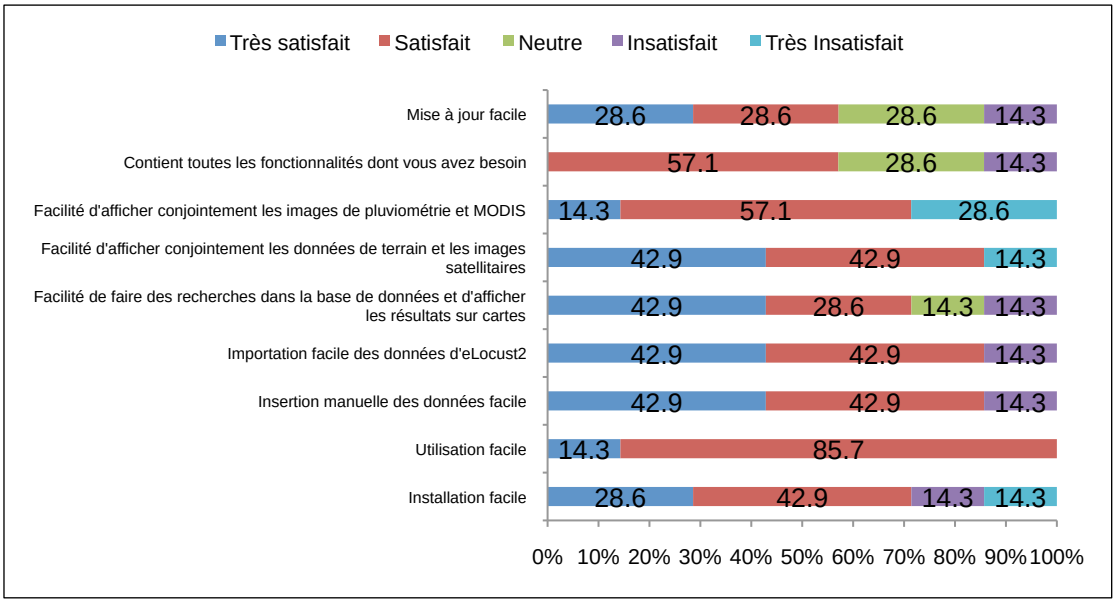
Improvements to eLocust2



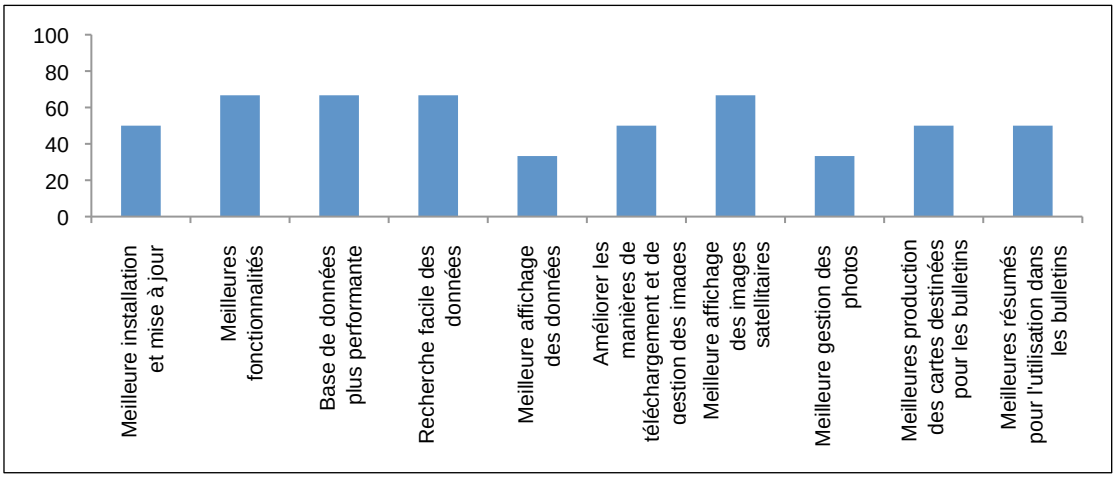
Analysis of critical responses



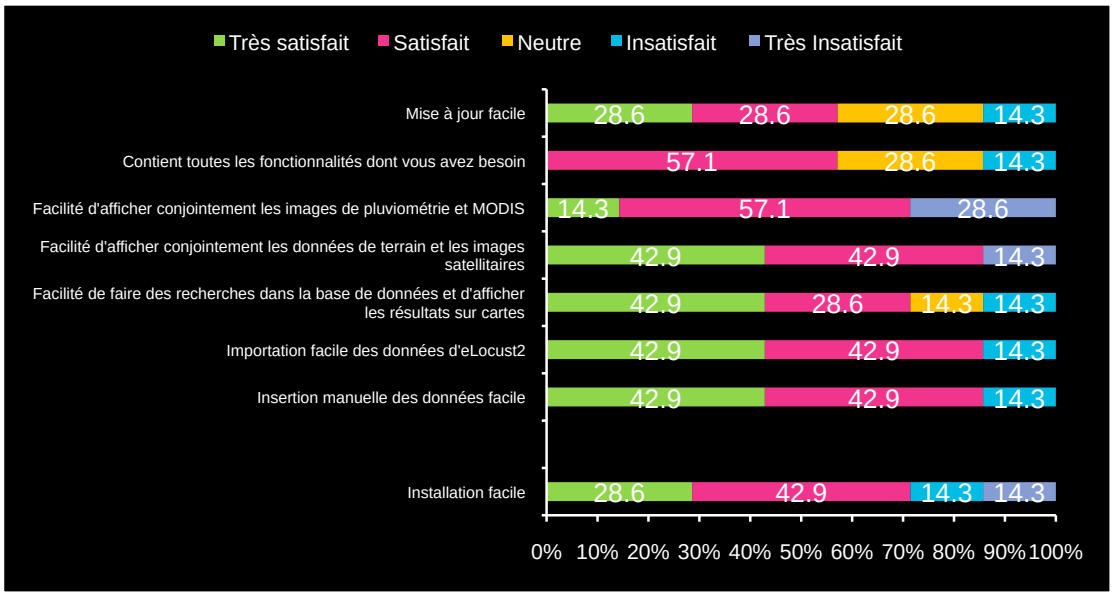
(d) RAMSES



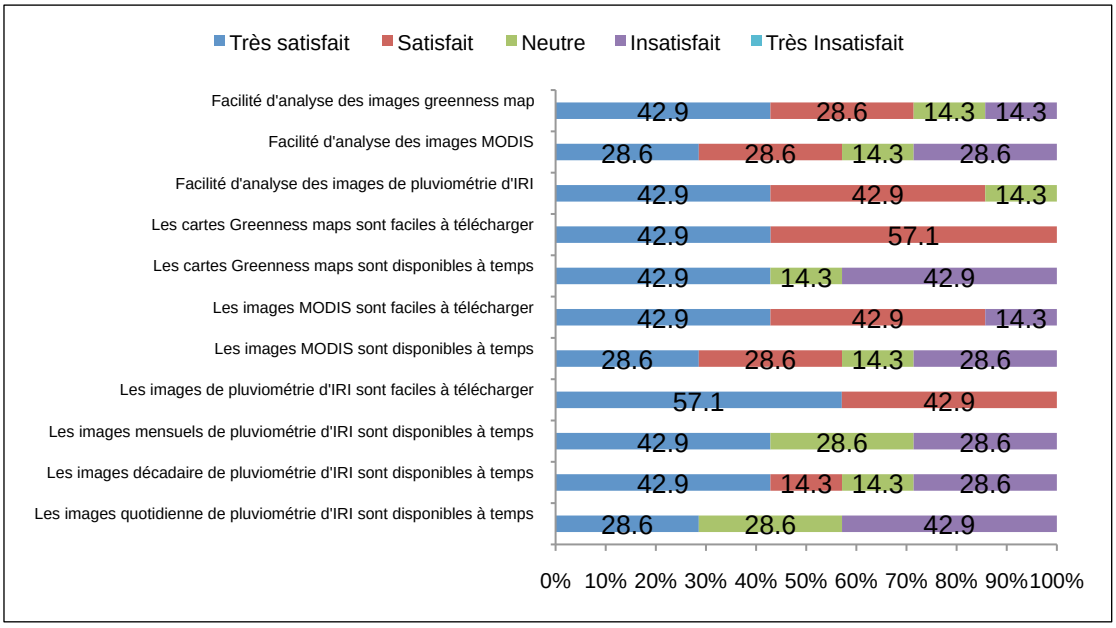
Improvements to RAMSES (v4)



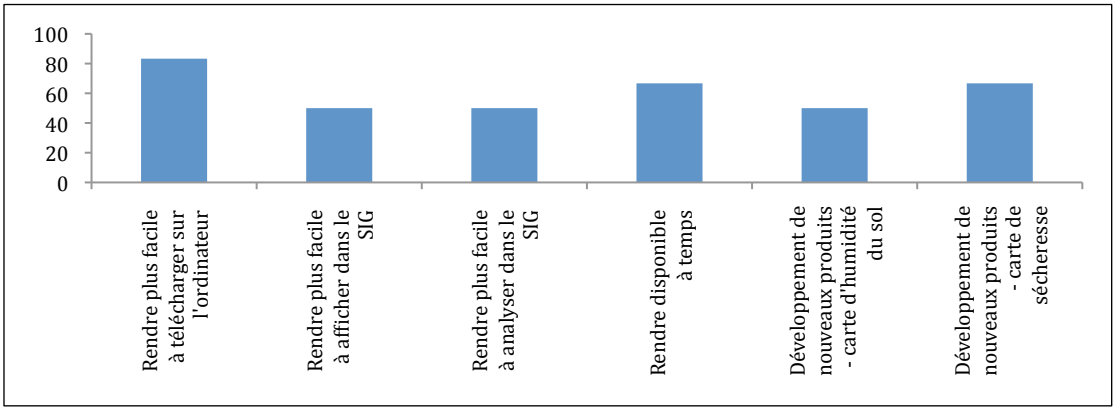
Analysis of critical responses



(e) Remote sensing



Improvements



Analysis of critical responses