GIS Analysis of the Lord’s Resistance Army 2009-2011

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Figure 1. Africa is a huge landmass that could easily contain much of the rest of the world’s land areas with room left over. http://african-dawn.blogspot.com/2010/10/africa-according-to-worldand-in.html
Figure 2. Africa is a huge landmass. The large red box above depicts an area that could contain the lower 48 states of the US. The smaller red box is the area of our analysis and is the Area of Operations (AO) of the LRA. For comparative purposes the total area of California is 158,706 square miles. The AO as depicted is approximately 125,000 square miles, or roughly 80% the size of the state of California. The blue arrows represent traditional trade and smuggling routes. If it’s hard to get goods thru or to an area, it’s hard to get help, aid and assistance in. This contributes directly to the longevity of the LRA since these routes bypass their AO.
Figure 3. Range of the ethnic language group of the Azande – the primary group in the tri-border region and the main targets of the LRA – currently. From http://llmap.org/languages/zne/static_map.html accessed on 21Aug2011.
Figure 4. Point Analysis performed on 3 years worth of event data. No visible pattern can be ascertained on LRA attacks due to the size of the data and the fact that the LRA over this period broke into smaller groups.
Figure 5. KDE analysis of the tri-border region and Possible Courses of Action (COAs). The bulk of the 2009-2011 attacks were collocated near roads and near protected conservation areas. Combined, these two features provide quick access to populated areas, such as Garamba National Park, on the border with South Sudan. It provides ample areas for cover and concealment after an attack has taken place. The COAs are 1) staying put, 2) going into South Sudan or 3) going back into northern Uganda. COA 2 (movement into South Sudan and CAR) was viewed as the most likely COA.
Figure 6. HF radio network being implemented by the Catholic church in NE DRC. From https://salsa.democracyinaction.org/o/2241/images/FINAL_From%20Promise%20to%20Peace_Resolve%20Publication.pdf . Accessed on 26Aug2011. Locations of the stations is not available online – an example of data being held at the local level or by NGOs with no central repository. Availability of data and coordination of efforts would greatly enhance counter LRA efforts.
Figure 7. Typical vegetation – triple canopy jungle in NE DRC. The thickness of the canopy provides cover and concealment for movement on the ground without any risk of being detected from overhead. Perhaps some type of remote sensing – foliage penetrating radar (FOPEN) combined with LIDAR could be used to detect ground movement of personnel, but even so, getting security forces to the area and thru the canopy from the air would still prove problematic.
Figure 8. Hotspot analysis available online of activities of the LRA in Central Africa. Basic resources and Cyberspace have provided a source of real time Intel previously unavailable. Accessed on 6Nov2011 from http://www.lracrisistracker.com.