

--->

(62) 2016 Annual Meeting, San Francisco, California

[Annual Meeting Home](#)[AAG Home](#)[Contact Us](#)[RSS](#)

AAG Annual Meeting

[Problems logging in?](#)[Get Help](#)[Register to Attend](#)[About the Meeting](#)[Schedule & Program](#)[Jobs Center](#)[Call for Papers](#)[Grants & Awards](#)[Get Involved](#)[For Exhibitors & Sponsors](#)**Abstract Title:*****Development of Decadal National Land Cover Database for Jordan*****is part of the Paper Session:****[Mapping Land Cover/Land Use Change](#)****scheduled on Thursday, 3/31/2016 at 17:20 PM.****Author(s):**

Rana N Jawarneh, Dr* - Yarmouk University
 Chandrashekhar Biradar, PhD - ICARDA
 Badreh Hayajneh - Yarmouk University
 Nehal Talafha - Yarmouk University

Abstract:

The main objective of this study is to introduce the first consistent long-term land cover database for Jordan. The Jordan National Land Cover Database (JNLCD) consists of four land cover maps for the years 1984, 1991, 1998, and 2014 that were developed at 30m resolution using a total of 11 Landsat TM/OLI satellite scenes. We primarily applied ISODATA classification method and rule-based method for refining misclassified classes. The overall accuracy achieved for the 1984 land cover map was 88% and for the 2014 land cover map was 93%. Results showed that Rangelands underwent the most change in Jordan with dramatic decrease from 12,262 km² in 1984 to 1,972 km² in 2014. The net loss of the Rangelands was 9%. This loss is attributed to the expansion of Rainfed Croplands which increased from 1,737 km² in 1984 to 3,082 km² in 2014. Further, Irrigated agriculture increased from 288 km² in 1984 to 1,039 km² in 2014. Built-up areas increased from 128 km² in 1984 to 1,148 km² in 2014. Over a 30-y period, 19% of the land cover types changed from one type to another once, 6% changed twice, and 1% changed three times. Our JNLCD allows moving beyond simple small-scale change detection to complex monitoring and assessment programs at the national level. JNLCD will contribute substantially to the advancement of landscape-based research in the country and allow for carrying out robust studies on, but not limited to, land degradation, carbon flux, and ecosystem services.

Keywords:

[decadal Land cover maps](#), [JNLCD](#), [Land degradation](#), [Jordan](#), [Rangelands](#), [Rule-based classification](#)

[New Query](#)