



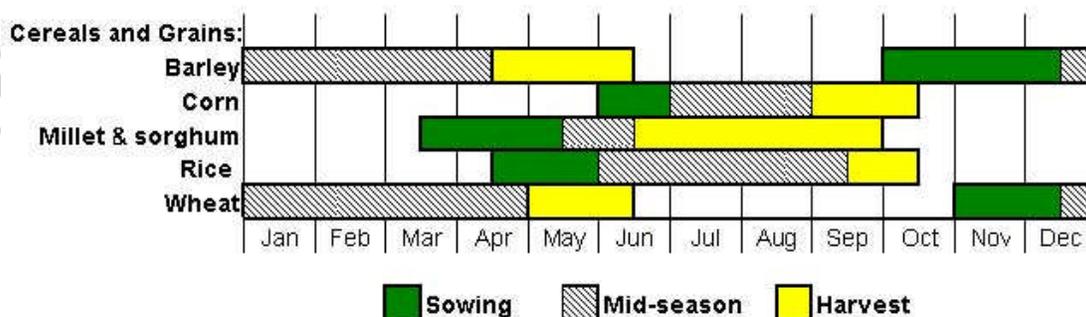
December Report – Week 3

December 19th, 2008

1. Winter grains sowing season typically ends by mid-December. The next few months will represent crop dormancy followed by emergence. The sowing season was marked by two significant rain events that occurred during the end of both October and November (Figure 1). The month of December has been relatively dry (Figure 2). These initial rain events elevated seasonal cumulative precipitation well above normal and were adequate enough to have initiated planting of the rainfed crop, but the month long period of dryness in between events may have depleted critical soil moisture reserves needed for healthy crop establishment (Figure 3). Remote sensing analysis during the crop emergence stage will provide a quantitative measurement of how well the rainfed winter grain was initially established, especially compared to the previous crop season.

2. The first collection of AWiFS IRS-P6 imagery for MY 2009/10 were acquired on December 8th, 2008 (Figure 4). Acquisitions will continue throughout the winter grains season until the harvest period in May 2009. Image and NDVI comparisons between October 2008 and December 2008 showed that most of the summer crop in the mixed irrigated agricultural land of At Ta'min had been harvested except for some remnant fields located between the city centers of Al Qasad and Tall 'Ali; the unharvested fields are evidenced by the high resolution Quickbird imagery collected over the region on December 4th, 2008 (Figure 5).

Crop Calendar of Iraq



CMORPH Cumulative Precipitation: October vs. November

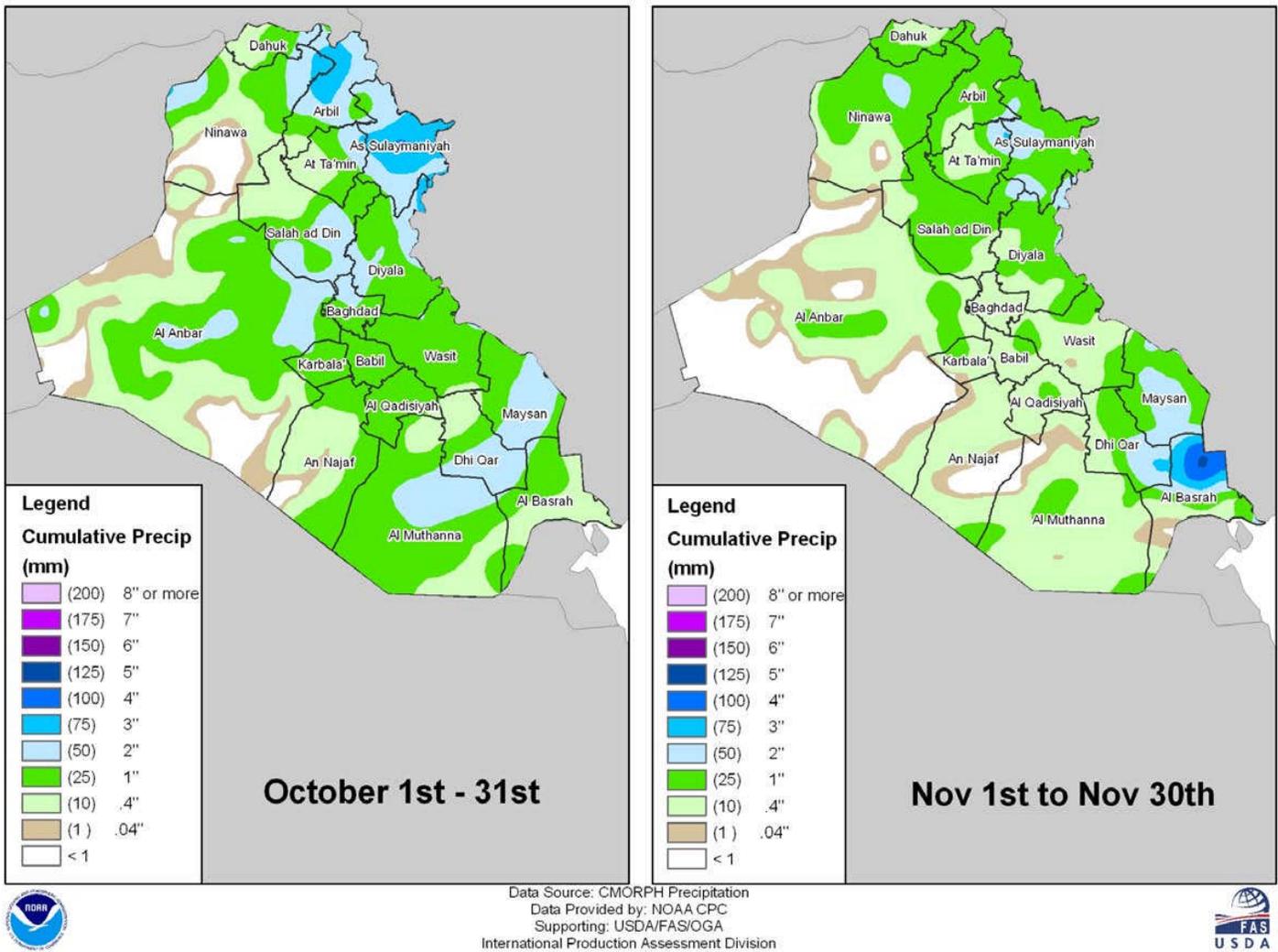


Figure 1: CMORPH cumulative precipitation for the months of October 2008 and November 2008.

CMORPH and Forecasted Precipitation for December

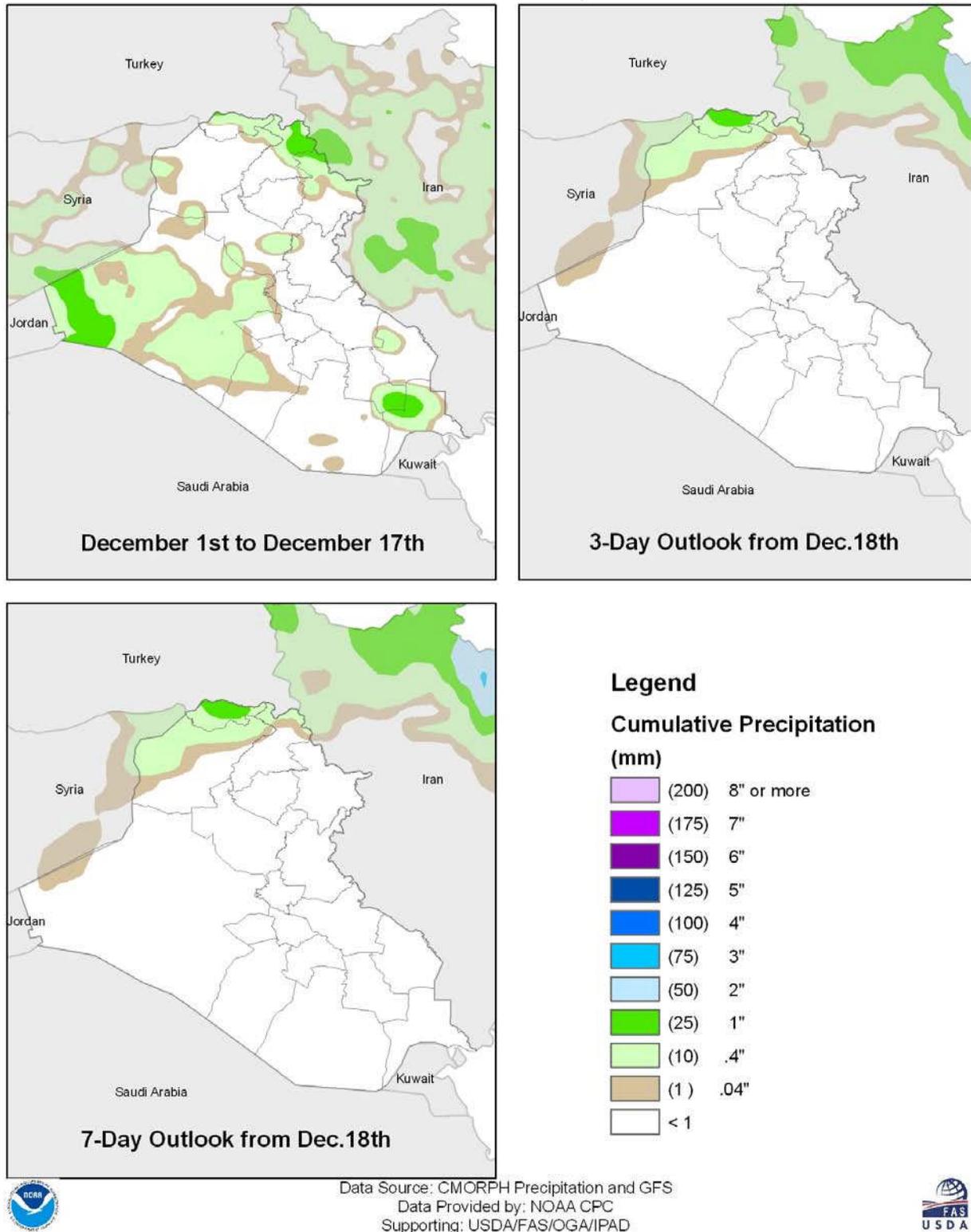


Figure 2: CMORPH decadal cumulative precipitation and global forecast system for the month of November.

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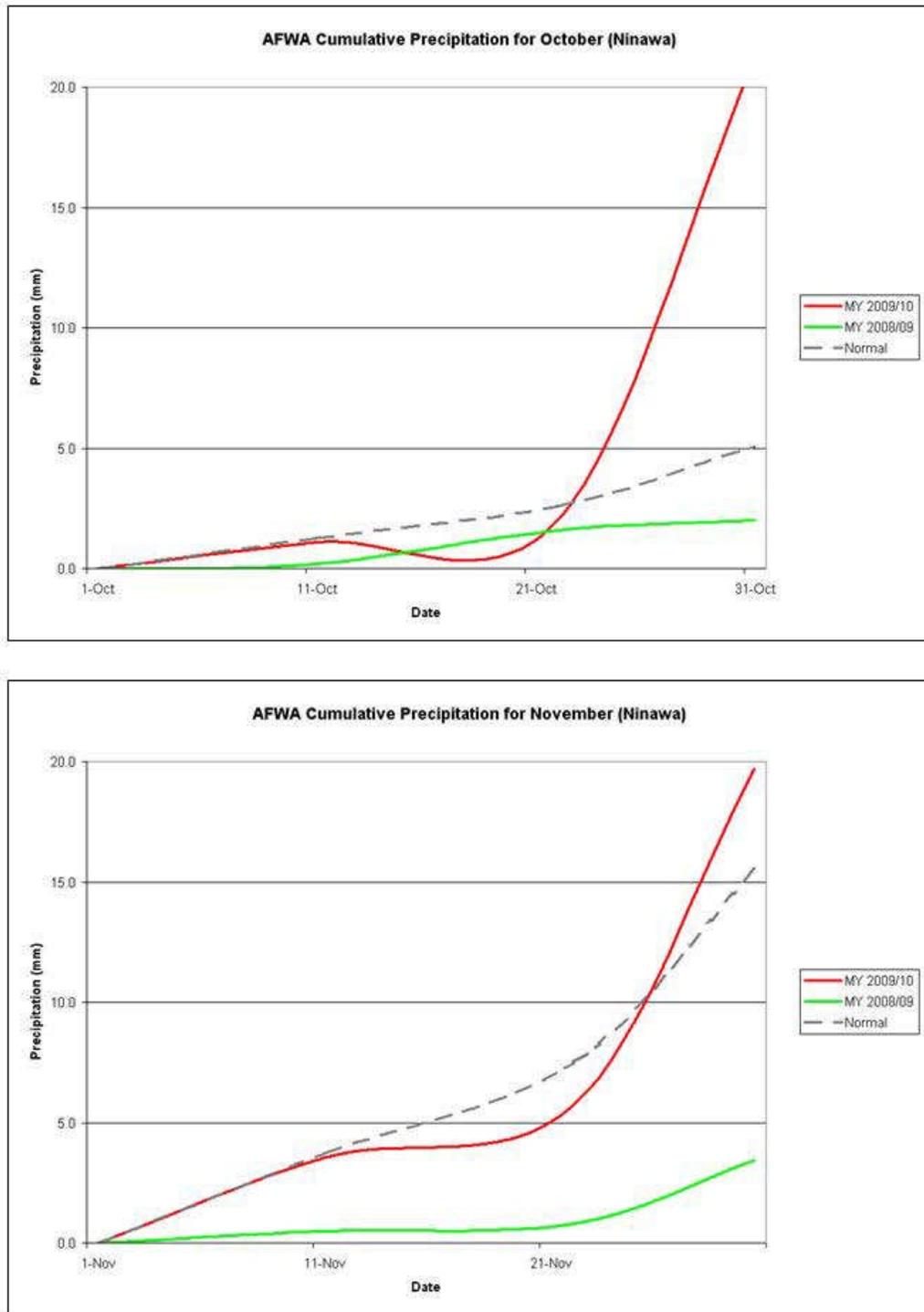


Figure 3: MY 2009/10 cumulative precipitation compared to previous year and normal: October and November.

Image and NDVI Comparison: October 2008 and December 2008

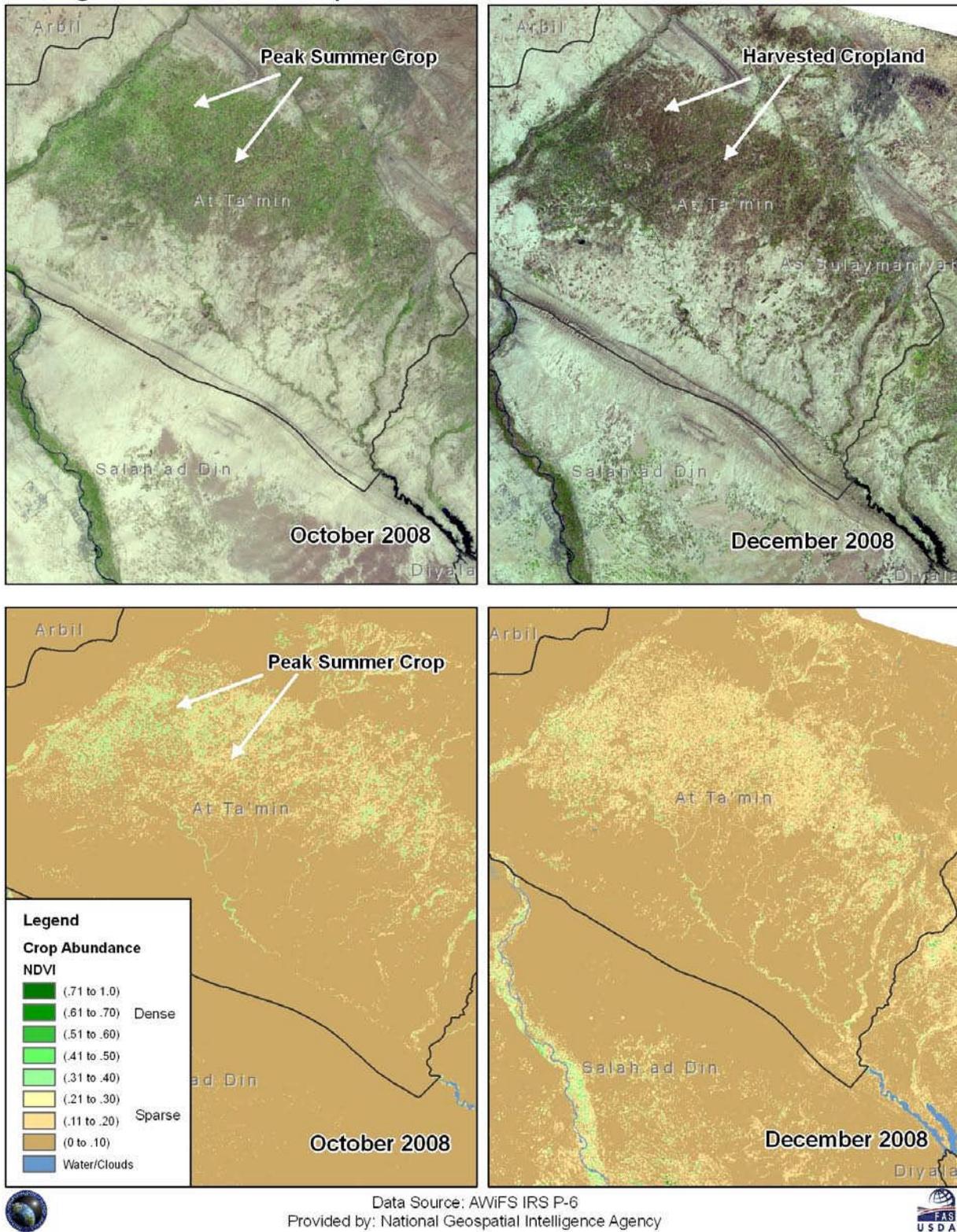
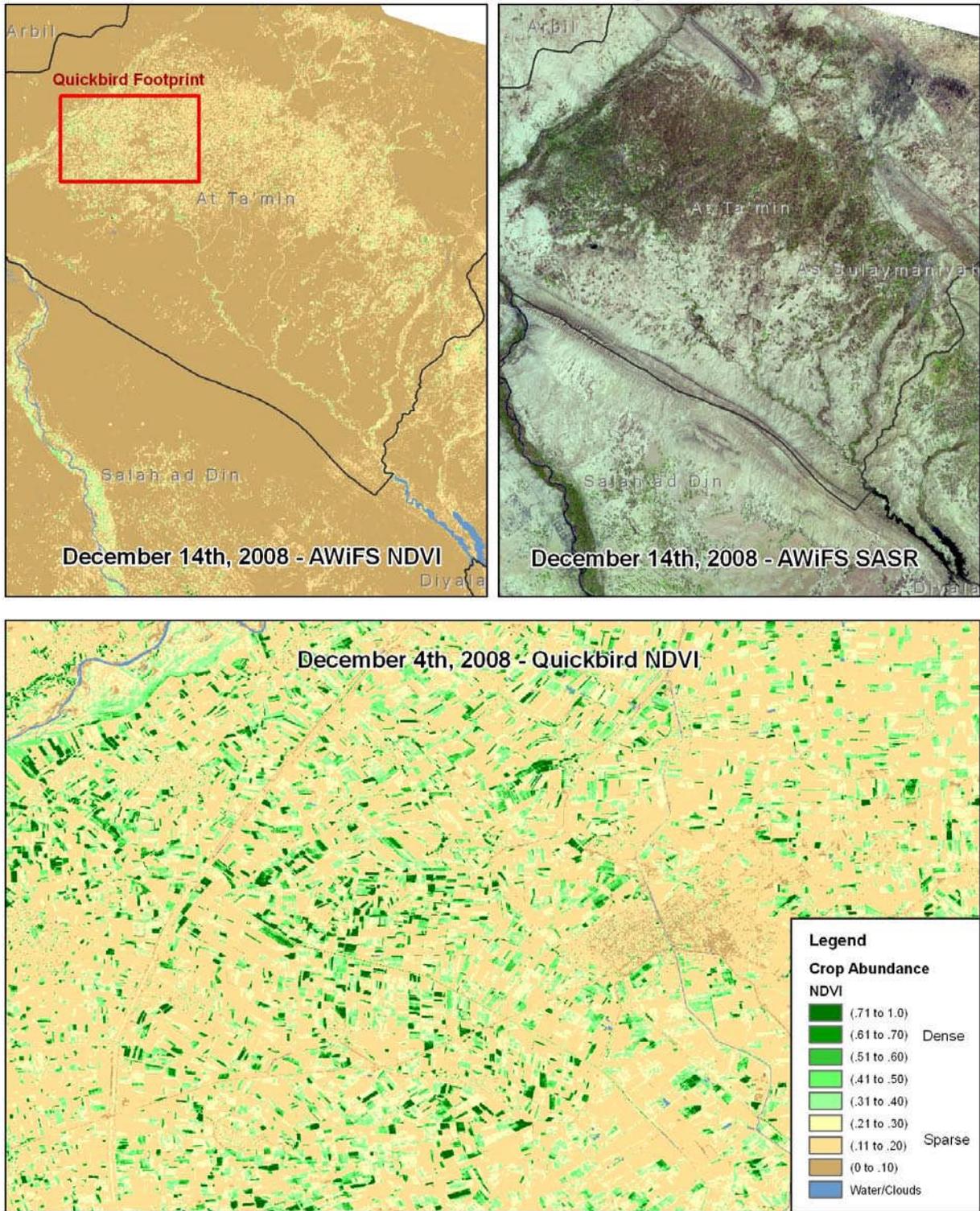


Figure 4: AWiFS IRS P-6 image and NDVI comparison between October 2008 and December 2008.

AWiFS and Quickbird "Ground-Truthing": December 2008



Data Source: AWiFS IRS P-6
 Provided by: National Geospatial Intelligence Agency

Figure 5: Quickbird image-based 'ground truthing' confirming high NDVI signatures as crop in AWiFS imagery.

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