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USE AND APPLICATION OF PHOTOGRAMMETRY SOFTWARE TO DEVELOP GEOSPATIAL PRODUCTS.

CASE STUDY: TARCOLES RIVER BASIN, COSTA RICA

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Abstract:

Photogrammetric specialized programs facilitate information processing with digital aerial photographs, due to increased geometric accuracy and ease of data processing. The objective of this study was to develop a Tárcoles River basin ortho-mosaic (10^0.68 N, S 9^0.68, -83^0.61 E,-84^0.70 W), the aerial photographs were of 1997-1998 TERRA project (1:40 000 scale, of 2 meters/ pixel resolution), the Agisoft software was used for data processing. The basin area is 2 164 km^2, being the largest recipient of pollutants and crosses through major cities: San José, Heredia y Alajuela. The use of this technique is groundbreaking in GIS Costa Rican community since it improves processing times, up to 60%, from one hour thirty minutes to thirty minutes per image. The Tárcoles River basin ortho-mosaic was compared with a 2005 Gran Área Metropolitana ortho-mosaic (1:25 000 scale, 60cm/ pixel resolution), as a result an average displacement of 30 meters was obtained.