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**APPLICATIONS OF MULTISPECTRAL PHOTOGRAPHY TO WATER RESOURCES DEVELOPMENT PLANNING IN THE LOWER MEKONG BASIN (KHMER REPUBLIC, LAOS, THAILAND AND VIET-NAM)**

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**ABSTRACT**

The use of ERTS photography for water resources planning in the lower Mekong basin relates to three major issues:

- it complements data from areas, which have been inaccessible in the past because of security; this concerns mainly forest cover of the watersheds.
- it refines ground surveys; this concerns mainly land forms, and soils of existing and planned irrigation perimeters.
- it provides new information, which would be almost or entirely impossible to detect with ground surveys or conventional photography; this concerns the mechanism of flooding and drainage of the delta; siltation of the Great Lake and mapping of acidity, possibly also of salinity, in the lower delta.

Examples are given of all these major issues.

There are also other uses, not directly related to water resources planning, but still of prime importance to the holistic concept of river basin planning. These relate to the delimitation of national reserves and to the identification of antiquities. Examples of these are given too.

The satellite data are particularly valuable also because their repetitive coverage gives an insight in the gradual transformation of changing features such as the extent of flooding and moisture retention in various soil types. Furthermore the availability of satellite imagery is most timely as it fills gaps in basic data necessary for completion of development plans for the Mekong basin. These, in turn, are urgently needed, in order to finalize a realistic post-war development program for the Basin.