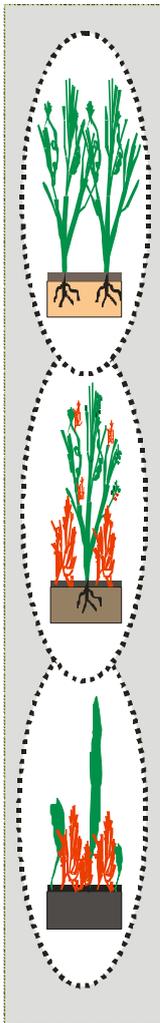




National Agricultural Research Foundation
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Transitional states in transitional & coastal waters

Identifying mechanisms & developing indicators of habitat or water quality shifts



Kavala, Greece, June 1st-2nd, 2006

Programme, Abstracts

Workshop on

**Transitional states in transitional & coastal waters:
*Identifying mechanisms & developing indicators of habitat or
water quality shifts***

Programme, Abstracts

Kavala, Greece June 1st- 2nd, 2006

Το Συμπόσιο οργανώνεται υπό την αιγίδα της: Νομαρχίας Καβάλας, του Γεωτεχνικού Επιμελητηρίου-Παράρτημα Ανατολικής Μακεδονίας, του Δήμου Κεραμωτής και του Αγροτικού Αλιευτικού Συνεταιρισμού Ιχθυοτροφείων Νομού Καβάλας

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DECOMPOSITION PROCESSES OF REED LEAVES IN TRANSITIONAL WATERS: A LARGE SCALE STUDY CASE

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Decomposition processes are an important aspect of ecosystem functioning. In aquatic ecosystems, abiotic factors affect litter decomposition processes by influencing the relationships between biotic ecosystem characteristics and litter breakdown. Although the relationships between litter decomposition and abiotic and biotic ecosystem characteristics have been widely debated for aquatic ecosystems, few studies have investigated the relationships between ecosystem structure and litter decomposition processes on a multiple-ecosystem scale.

Here, we present an experimental work carried out in fifteen lagoons and river mouths in the Eastern Mediterranean and Black Sea region, designed to investigate the role of abiotic ecosystem characteristics in litter breakdown in transitional aquatic ecosystems with different habitat typologies.

Detritus decomposition processes were analyzed by means of a field experiment carried out in one seasonal period, *i.e.* spring, looking at differences among various substrate typologies and within homogenous substrates. Detritus processing was studied in leaves of *Phragmites australis* (Cav) Trin. ex Steudel, using the litter bag technique (3.000±0.005g of leaves per bag). Two or more substrate typologies were selected per lagoon and two stations were sampled per typology; after 30 days from the beginning of the experiment, five replicate leaf bag samples were collected per station. The ash free dry weight of each sample was determined in the laboratory. The ecosystems' main physiographic and hydrological features, as well as the abiotic water characteristics (*e.g.*, bottom organic matter, dissolved oxygen, pH, salinity and temperature) were also measured at each field station.

We will describe the variation of litter breakdown on different spatial scales, *inter-* and *intra-*ecosystem; moreover, the significance of *habitat* typology and abiotic ecosystem features will be analysed by performing a multivariate analysis on decomposition data and ecosystem abiotic data.