TEACHING STATISTICS IN ENVIRONMENTAL SCIENCES

<u>Carmen Capilla</u> and Amparo Montesinos, Deparment of Statistics and Operations Research, Polytechnic University of Valencia, Spain

The Environmental Science studies at the Polytechnic University of Valencia were

approved in January 1997 as a four semester specialization course to get the Bachelor degree. Although they are assigned to the Civil Engineering School, Graduate students from other Diploma, Engineering or Bachelor degrees may sign on for this specialization. This implies a wide range of students' backgrounds and professional status. Approximately 120 students have been involved in this course during the 97/98 academic year. Around 55% of them work in private companies or for the administration, and are already involved at their working places with real problems related to environment issues (engineering, research, management, etc..). This is an unusual situation at the undergraduate studies in Spanish universities. Therefore it has been the most critical factor during the semester. This type of student demands an applied methodology as well as real problems at the classroom. The statistics subject has been organized to attain to develop students' practical skills, to emphasize the importance of working cooperatively (Garfield, 1995) and to convince students of the great value of these methods as tools for data analysis and decision-making in real problems which may arise in their professional work (Barnett et al, 1995). The only way to succeed in this is through the formulation and solution of real, or at least realistic, problems of direct interest to them, some of them are presented in this poster.

REFERENCES

Barnett, V. and Riley, J. (1995). Statistics for Environmental Change. *Experimental Agriculture*, 31, 117-130.

Capilla, C. and Montesinos, A. (1998). A Case Study of Teaching Statistics in Environmental Science Studies. (To be presented at ICOTS-5).

Garfield, J. (1995). How Students Learn Statistics. *International Statistical Review*, 63(1), 25-34.