Optimizing the Selection of Conservation Projects

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Demand for environmental services is generally coordinated by governmental agencies and non-profit organizations that seek to invest public funds into conservation projects. Unfortunately, the methods used by these groups have yielded suboptimal levels of public and environmental benefits, as these groups have favored selecting the "best" available projects regardless of project cost. However, in most environmental markets, such as those for water quality, wetland mitigation, open space protection, and carbon, there is an ample supply of high-quality investment opportunities that can be less expensive. By focusing solely on investing in the "best" projects instead of the "best buy" projects, public monies can be spent inefficiently and desired environmental outcomes may not be reached. This presentation demonstrates the flaws of the current selection processes and uses results from several cast studies in a variety of conservation contexts to illustrate how the use of mathematical programming techniques can dramatically improve the efficiency and effectiveness of the conservation efforts.