Public Understanding: Applying Models to Solving Real Problems

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Abstract: St. Louis Children's Aquarium was founded as a not-for-profit organization in 1971. In 1989, it organized its heretofore egalitarian efforts to build an aquarium and provide education, research and conservation programming as a response to an assessment-based identified need in the community. This instrument pointed to various instructional needs from pre-K to graduate level, from hands-on learning to library resources to actual research, and professional opportunities to instruct the various publics involved in the aquatic sciences. By 1993, over 300,000 people were served directly through outreach educational activities, and decisively, research practices were devised to apply scientific efforts to solving real environmental issues.

St. Louis Children's Aquarium has focused applied scientific activities on aquaculture as an environmentally safe methodology to increase food availability, mariculture techniques to understand coral metabolism, and agricultural processes to reduce feedlot effluent deleterious effects on regional aquatic ecosystems.

St. Louis Children's Aquarium began its efforts as coordinator of the Amazon River basin in 1999 culminating in a publication involving multi-stakeholder representatives outlining their goals of collaboration. The Aquarium has also begun coordinating the upper Mississippi and upper and lower Missouri Rivers as a hydrologic basin. The specific projects are being designed and implemented towards modeling and predicting capacity of river analysis, economic input, and biological diversity. This basin provides approximately 70% of the water resources to the continental United States. Even though it has been over 200 years since wide exploration of this basin system was first begun with Lewis & Clark's Voyage of Discovery, much is still unknown and the river resources have been inconsistently regulated with regards to the tremendous biological, geological, and chemical assets contained.

By bringing together producers, consumers, governmental entities, scientists, and educators, St. Louis Children's Aquarium has found that public understanding can involve multiple levels of communities and, with encouragement, adoption of best practice efforts can take place. This model can lead to better understanding of the aquatic environmental phenomena. We have seen a trend toward improvement of the aquaculture production capacity while not negatively affecting the surrounding ecosystems. We hope that by using these model systems as demonstration, other institutions can adopt these best practices opportunities. We will encourage other institutions that have already adopted these best practices to become part of the World Ocean Network effort and further encourage those who have not done so to join us.

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