Essential Elements for Successful Community Oyster Restoration

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Fundamental Assumption for Successful Program: Every effort to increase the number of oysters in Bay waters must be supported, regardless of the kind of oyster added (diploid or triploid) or the organization doing the planting (small and large-scale aquaculture operators, watermen, federal and state agencies, waterfront property owners, environmental organizations, and community groups).

Benefits of Community Restoration Programs:

Environmental

- Improves local water quality by increasing the number of oysters to remove or sequester excess nutrients.
- Creates habitat for many other marine organisms.
- Increases production of oyster larvae for both expansion of reefs and spat set for "wild" harvest.

Political

- Generates broad political support for all oyster programs.
- Increases citizen support for improving Bay water quality.
- Increases citizen support for (1) more rigorous enforcement of environmental regulations and (2) deterrence and punishment of poachers.
- Creates a broader framework for increasing the Bay's oyster population.
- Gives waterfront residents and businesses incentives to support local restoration efforts.
- Can improve political cooperation between restoration advocates and watermen/aquaculture operators.

Economic

- Enhances the cost effectiveness of tax-funded restoration programs by creating incentives for residents and businesses to contribute funds to increase oyster populations.
- Funds contributed to restoration programs can increase income for watermen and aquaculture operators.
- Augments infrastructure for aquaculture.
- Encourages innovations that can improve cost-effectiveness of oyster programs.

Educational

- Creates incentives for communities to take advantage of local conditions to develop unique, innovative programs tailored to their resources.
- Educates school children about the environmental benefits of oysters in Bay waters.
- Participants in local restoration activities develop better understanding of and commitment to reducing pollution in Bay waters.
- Displays at public events enhance message to protect oyster populations by reducing pollution in Bay.

Key Elements for Successful Community Restoration

Government

Incentives

Public Policy: Public officials must formulate policies committed to broad restoration efforts. Technical Support: In initial phases of new community programs, government officials must make expert advisors available to guide startup efforts.

- *Tax benefits:* In Maryland, a \$500 tax credit per person (\$1,000 for a married couple) for oyster floats created a strong incentive for waterfront residents to raise spat at their docks.
- Protection of Community Reefs: Public officials must give communities confidence that the oysters they restore will be protected in either sanctuaries or leases and that poachers will be prosecuted.
- Encourage Direct Benefit to Participants: One strong incentive for waterfront residents to participate in the SMOCS program was the SMOCS "Small Waters Strategy" where property owners who raised oysters at their docks were told that their oysters would be planted as close as possible.

Clear Policy Guidelines

Regulations: Community restoration planners must be provided a clear set of regulations and guidelines when they are first setting up their programs so that they know what they can and cannot do before they recruit volunteers and commit resources.

Consistent, Transparent Regulatory Actions

- Promises Must Be Kept: Promises to community organizers must be kept to avoid frustration and resentment. Failure to keep promises seen as "bad faith." In 2009, the Maryland General Assembly enacted authority to create "Demonstration Leases" that would protect oysters planted by community groups. It not only took the Maryland Department of Natural Resources six years to write the implementing regulations, they made them so restrictive that very few organizations were able to qualify.
- Consistent Enforcement: Regulatory officials must be consistent in the application of regulations.

 Arbitrary changes alienate community members who have little tolerance for disruptive changes in programs.
- Treat Participants with Respect: When public officials justify significant policy changes with flimsy justifications that essentially boil down to "because I say so," they alienate participants.

Scientific/Academic Support

Provide a Best Management Practices Guide: Most participants in community oyster restoration are not knowledgeable about the parameters that will provide optimum oyster survival when they first begin. Providing them a "guide" listing the parameters (depth, current, hard bottom, cultch) for good husbandry reassures them that they are "doing the right thing."

Technical Training: Provide participants basic scientific training on oyster anatomy and physiology. *Master Oyster Gardener Program*: Enhancing this ongoing program would be an effective way for scientists to provide technical guidance.

Partnerships between Restoration and Environmental Groups

Organizations Can Provide Mutual Benefits: Chesapeake Bay Foundation provided key support for the SMOCS start-up. SMOCS provided volunteers at CBF spat distribution events and secure locations to plant excess spat.

$\begin{array}{c} \textbf{Partnerships between Restoration Groups and Aquaculture Operators/ Watermen} \\ \underline{\textbf{Coordination}} \end{array}$

Big Potential Mutual Benefits: Partnerships between community groups and aquaculture operators and watermen can enhance reciprocal support for operations. SMOCS worked with aquaculture operators for technical guidance and for spat and cultch. Other community groups worked closely with watermen to plant oysters. Commercial operators received substantial payments. Community groups received needed technical support. In both instances, this cooperation improved knowledge of and support of the other party's activities.

Community Support

Broader Support of Oyster Cultivation: When communities support oyster cultivation, more residents are likely to support watermen and aquaculture operations when a few residents oppose oyster operations.