

REGIONAL ECONOMIC DEVELOPMENT STRATEGY FOR RESOURCE-BASED INDUSTRIES ON MARYLAND'S UPPER EASTERN SHORE

Report prepared for the

EASTERN SHORE LAND CONSERVANCY

by

AMERICAN FARMLAND TRUST

with funding from the

MARYLAND CENTER FOR AGRO-ECOLOGY, INC.

JANUARY 2005

ACKNOWLEDGMENTS

The Eastern Shore Land Conservancy initiated this regional economic development strategy for resource-based industries on Maryland's Upper Eastern Shore with funding provided by the Maryland Center for Agro-Ecology, Inc.

Thanks to the members of the Working Landscapes Task Force (Appendix A) for their guidance and input throughout the process of developing this strategy and for their comments on many drafts of the white paper and final report. Thanks also to all focus group participants (Appendix E) for sharing their thoughts and views, and to the Maryland Department of Agriculture's Farm Sense program for providing facilitation services for the task force meetings and focus groups.

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Eastern Shore Land Conservancy (ESLC) is a private, nonprofit land conservation organization dedicated to the preservation of farmland and habitat on the Eastern Shore. A 32-member volunteer board of directors, chaired by former Governor Harry Hughes, includes a diverse group of Eastern Shore landowners representing the agricultural and business communities as well as local governments.

Since its inception in 1990, ESLC, funded by member contributions, has helped landowners to protect more than 35,000 acres of farmland and important habitat on 182 properties on the Eastern Shore.

American Farmland Trust (AFT) is a private, nonprofit conservation organization founded in 1980 to protect our nation's strategic agricultural resources. AFT works to stop the loss of productive farmland and to promote farming practices that lead to a healthy environment. Toward this end, AFT staff provide a variety of services to landowners, land trusts, public officials, planners, agricultural agencies and others. Services include agricultural and community planning, Cost of Community Services studies, task force facilitation and coordination, workshops, professional development and training, farmland protection program development and agricultural economic analysis.



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EXECUTIVE SUMMARY

Maryland's Eastern shore encompasses the northwest sector of the Delmarva Peninsula. Comprised of portions of Delaware, Maryland and Virginia, the Delmarva is generally considered the largest contiguous block of farmland between Virginia and Maine. Historically, agriculture, forestry and fisheries have been the foundation of the economy of its six Upper Shore counties, which include Cecil, Kent, Queen Anne's, Talbot, Caroline and Dorchester. At the turn of the 21st century these "natural resource-based industries" accounted for 22 percent—or more than \$2 billion of the Upper Shore's economic activity.

Poultry dominates agriculture in the Delmarva, and the Upper Shore region provides poultry products and feed grains used for poultry feed. Poultry and eggs, feed grains and soybeans account for 69 percent of farm-gate value in the Upper Shore. Other significant resource-based industries include greenhouse and nursery, forestry, dairy, vegetables and commercial fishing.

The Upper Shore's landscape is defined by farm fields, forests and waterways. Beyond sustaining the local economy, these working lands have shaped the region's cultural identity and heritage, distinguishing it from others. However, increasing development pressure and decreasing profitability, combined with a multitude of smaller yet significant factors, jeopardize the future of the Upper Shore's resource-based industries and the spectacular working landscape upon which they depend.

The Eastern Shore Land Conservancy (ESLC) proposed *Eastern Shore 2010: A Regional Vision (ES 2010)* in 2002. *ES 2010* is a proactive, inter-county land use agreement that unites Maryland's six Upper Shore counties together to achieve land protection, economic development, growth management and regional transportation goals. All six counties have signed on to work cooperatively to ensure a bright future for the region's working landscapes and communities.

To advance *ES 2010*'s second goal, ESLC initiated this project with a grant from the Maryland Center for Agro-Ecology, Inc. Its objective was to identify the key challenges facing agriculture, forestry and fisheries and to develop an economic development strategy to address those challenges. ESLC convened a Working Landscapes Task Force of local leaders to serve as project advisors and to advance the regional strategy. Then ESLC hired American Farmland Trust (AFT) to facilitate the process.

With oversight of the task force, AFT conducted background research, prepared a white paper, organized focus groups to elicit community input, and drafted this report. Based on this effort, the task force identified three overarching challenges:

1. **Lack of public awareness and understanding of resource-based industries.**
According to the Maryland Department of Planning, between 1985 and 1997 each year an average of 2,717 acres were converted to development in the Upper Shore region—

for a total of 32,606 acres. Much of this has occurred in rural areas. While new residents generally appreciate the region's scenic beauty, many are unfamiliar with what it takes to economically sustain these landscapes. As a result, they complain about the practical, day-to-day realities of resource-based industries: odors and dust, slow moving vehicles, manure spreading, clear cutting, boat engine noise early in the morning, and so on. Sometimes complaints lead to litigation. Maryland's governmental leaders reflect their urban and suburban electorate. As a result, the impacts of policies and regulations on resource-based industries often are not well understood by the people who are crafting them—especially at the state level where Maryland's increasingly complex environmental regulations can be counterproductive and costly. Farmers report spending 10 percent of their time today on new regulations that did not exist 10 years ago.

2. **Insufficient support for the economic development of agriculture, forestry and fisheries.** Economic development is needed for resource-based industries to adapt to global competition, which is weakening prices for Upper Shore commodities. Given that this trend is likely to continue, coupled with declining public support for U.S. commodity programs, local producers will remain vulnerable to stagnant and falling prices. New crops, markets and approaches are needed first to stabilize, and then to expand, economic opportunities for farming, forestry and fisheries.
3. **Competition for land.** Between 1982 and 2002, land in farms in the Upper Shore region decreased by 91,524 acres—or 12 percent of the total. Statewide, over the past 50 years, Maryland lost about 7,200 acres of forest annually, primarily due to land converted to developed uses. Farmers are finding it more and more difficult to find land to expand their operations, spread nutrients or start new enterprises. Development pressure has driven up the cost of land, and what land is available is priced out of the reach of resource-based industries

It will take collaborative action to sustain a thriving resource-based economy in the Upper Shore. Advancing effective strategies requires a regional approach. No single county has sufficient resources to address these challenges. Given the current fiscal situation, it is unlikely that state programs will be expanded in the near future. With this in mind, the Working Landscapes Task Force determined that the following three strategies would best address the challenges facing agriculture, forestry and fisheries on the Upper Shore:

1. **Bridge the gulf between rural and urban constituencies.** The Upper Shore region lies within a few hours drive of the 52 million consumers of the Mid-Atlantic states. This provides tremendous marketing opportunities—not just to improve sales but also to explain policy implications. Producers need to engage and educate the public and reach out to citizens and government officials on a regular basis. This will improve understanding of resource-based industries and of the implications of policies affecting them. It also will help keep legislators abreast of new developments. Strategies include improving consumer relations through agritourism ventures, farmers' markets and other direct marketing outlets, a "buy local" campaign, and demonstration sites to invite people to visit and learn about farming, forestry and fisheries. The Eastern Shore Land Conservancy's "Rural Heritage Day" is aimed at making this connection.

2. **Invest in economic development support for resource-based industries.** New and existing farmers, foresters and watermen need to understand the full range of existing and alternative business opportunities available to strengthen and diversify their operations. They need professional assistance to develop new enterprises, crops and products and to find more lucrative markets. Technology transfer—bringing technologies developed in a research setting into the marketplace—offers many promising opportunities and can help producers reduce harmful environmental impacts of conventional production practices. It would help the region to hire a representative to promote resource-based industries, develop new markets, explore alternative production systems, coordinate regional activities and work with state and local regulatory agencies.
3. **Implement agricultural land preservation strategies at the county level.** The Maryland Agricultural Land Preservation Foundation (MALPF) has been very effective in preserving farmland throughout its history. As of the end of 2003, it had spent \$230 million to protect 232,767 acres. However, funding levels for this program are down and not expected to rebound soon. Upper Shore counties need to devise strategic land protection programs that could include purchase of development rights (PDR), transfer of development rights (TDR), local incentives for gift easements, and some form of effective agricultural zoning. These programs could help stem the tide of land conversion and preserve a critical mass of agricultural and forest land.

The report that follows describes the process used to identify these challenges and suggest solutions. The strategy is a blueprint of how farmers, foresters and watermen can work together to achieve a sustainable working landscape. It emphasizes affordable, achievable actions that could have a significant influence on the future of the Upper Shore and which might be repeated in other regions of Maryland.

INTRODUCTION

Eastern Shore 2010: A Regional Vision (ES 2010) is an inter-county land use agreement that unites Maryland's Upper Shore counties of Cecil, Kent, Queen Anne's, Talbot, Caroline and Dorchester together to achieve land protection and growth management goals. The Eastern Shore Land Conservancy (ESLC) proposed *ES 2010* in 2002 to reflect the region's heritage and to keep its land open, its town centers vibrant and its working landscapes viable and productive. *ES 2010*'s four goals are to:

1. Protect from development through the use of voluntary preservation programs 50 percent of Eastern Shore land outside of locally designated growth areas by 2010.
2. Recognize the resource-based economy as a key part of the Eastern Shore heritage and future by integrating agriculture, fisheries and forestry into each county's economic development plan by 2005.
3. Work with existing communities to guide at least 50 percent of new annual development into locally designated growth areas by 2005.
4. Develop a regional transportation plan that integrates the use of public transportation and alternative modes of transport within and among communities by 2010.

Maryland's Eastern Shore encompasses the northwest sector of the Delmarva Peninsula. Comprised of portions of Delaware, Maryland and Virginia, the Delmarva generally is considered the largest block of contiguous farmland between Virginia and Maine. Agriculture, forestry and fisheries always have been the backbone of the Delmarva's economy and local heritage.

Recent surveys suggest that most residents of the Eastern Shore are drawn to its high quality of life, which largely is due to its working landscape of farms, forests and fisheries. However, according to the National Resource Inventory (NRI), 82,000 acres of agricultural land on the Delmarva Peninsula were converted to developed use from 1982 to 1997. Although NRI data is not available for the six Upper Shore counties, according to the Maryland Department of Planning, 32,606 acres were converted to development in the Upper Shore in the 12 years between 1985 and 1997.¹ The 2002 Census of Agriculture shows a steady decrease in the region's land in farms. Although the census does not identify whether or not this land was developed, it does show that land in farms on the Upper Shore decreased by an average of more than 4,500 acres a year.

Resource-based industries make a significant contribution to the economy of each Upper Shore county, and the "food and fiber system" contributes 22 percent of the region's economy overall—more than \$2 billion annually—and 13 percent of its jobs. However, even with this powerful economic engine, the Upper Shore region lost 18 percent of its farms between 1982 and 2002. The sustainability of resource-based industries in the Upper Shore is threatened by increasing land costs, fragmentation of agricultural lands, consolidation of agricultural lands, flat commodity prices and international competition.

¹ Maryland Department of Planning, 2001.

Poultry and eggs, feed grains and oil-bearing crops (soybeans) account for 69 percent of farm-gate value in the Upper Shore. Other important industries include greenhouse and nursery, forestry, dairy, vegetables and commercial fishing. While the poultry-based agricultural economy is basically stable, given the dual threats of increased competition for land and global competition, it is important to identify new opportunities and potentially more lucrative markets. Recent trends suggest prospects are good for diversification with high-growth industries including vegetables, nursery and greenhouse crops, and value-added enterprises such as organic poultry and direct marketing. Also, while food grains are a minor player today, some regional industry leaders are optimistic that growing grains for people rather than for poultry will be profitable in the future. For example, Chesapeake Fields Institute (CFI), an organization working to strengthen the profitability of traditional agricultural markets while conserving the Delmarva's natural and cultural resources, is creating new opportunities for local farmers to tap into higher value markets including food-grade soybeans used as snack foods.

In 2003, ESLC formed the Working Landscapes Task Force of local economic development officials and representatives from the region's farming, forestry and fishing industries, including county economic development officers, extension agents, Farm Bureau leaders, Farm Credit officers and representatives from CFI, the Mid-Shore Regional Council and Vision Forestry. The task force's role was to advise on how to achieve *ES 2010*'s second goal to identify key challenges facing farming, forestry and fisheries, and to develop recommendations to address those challenges. ESLC hired American Farmland Trust (AFT) to convene the task force, conduct background research, prepare a white paper to address Goal 2 of *ES 2010* and then to more broadly address the issue of the regional economic development strategy.

ESLC's goal for the project was to identify economic development opportunities and to develop a blueprint for action to ensure the future viability of resource-based industries on the Upper Shore. ESLC also wanted to design a process that might be repeated in other regions in Maryland. This report summarizes the outcomes of each of AFT's tasks and outlines the regional strategy in an effort to address both goals.

Several key themes emerged from this project:

Lack of Public Awareness

- Farmers, foresters, watermen and associated industry representatives describe a serious cultural gap, between rural culture and an increasingly urban/suburban electorate.
- Even though people move to the Upper Shore because they appreciate the quality of life provided by the working landscape, they do not understand the commercial realities of managing that landscape.
- This cultural gap contributes to tensions between new neighbors of working landscapes.
- The increasingly urban/suburban electorate creates an unfavorable policy climate on the state and county levels.

Need for Economic Development

- Upper Shore agriculture is economically dependent upon the Delmarva's poultry industry. While recent growth in niche markets and nursery and greenhouse products is strong, in the near future it will not replace the demand for grains created by the poultry industry. Therefore, it is important to bolster poultry production while also diversifying into new enterprises.
- Because local factory jobs typically pay higher wages than farming, forestry or fisheries, resource-based industries face a serious shortage of labor, a trend that is likely to continue or worsen as the economy recovers.
- No single entity provides comprehensive economic development support for resource-based industries. Instead, individual counties, agencies and organizations work independently, mostly on a project-by-project basis. This causes confusion among producers about where to go for resources.
- The region's location gives it a significant marketing advantage. The nearby metropolitan areas of Philadelphia, Baltimore and Washington offer market opportunities that have largely been untapped.

Competition for Land

- Decreasing access to land to buy and rent for commercial production seriously challenges the future viability of agriculture and forestry.
- Much of the land that remains available is no longer affordable to farming and forestry and/or is increasingly fragmented by residential development.

REPORT ORGANIZATION

This report is organized into three sections. The first describes the process undertaken to arrive at the regional strategy including key findings from each step along the way: outcomes of the task force meetings, background research on the current state of resource-based industries and results of focus groups. The second section presents the regional strategy, which contains three initiatives:

1. Bridging the gulf between rural and urban constituencies;
2. Investing in economic development support for resource-based industries; and
3. Implementing county agricultural land preservation strategies.

Achievable action steps, including potential lead roles and partnerships for agencies and organizations currently working on these issues, are found in the third section. Appendices that provide additional detail, background information and references follow the body of the report.

PROCESS FOR DEVELOPING THE STRATEGY

In August 2003, ESLC organized a Working Landscapes Task Force to involve leaders of resource-based industries and county economic development officials in developing a regional economic development strategy. ESLC invited each county's Farm Bureau president to participate or to name a representative to the task force and each county to name one or several representatives as well as key industry leaders. As the project progressed, ESLC invited several others who had been identified by task force members. In all, 17 representatives participated (see Appendix A). ESLC hired AFT to facilitate the project.

The process to develop the regional economic development strategy consisted of:

1. Working Landscapes Task Force
2. Research on the current state of resource-based industries
3. White paper
4. Focus groups

This section of the report summarizes the outcomes of the four parts of this process.

1. WORKING LANDSCAPES TASK FORCE

The task force met four times from September 2003 to April 2004. In the first meeting, AFT and ESLC provided an overview of the project and facilitated a discussion of the economic development needs of agriculture, forestry and fisheries. At the second meeting, AFT researchers summarized economic impact and trends data to provide the task force with relevant background information. Between the second and third meetings, AFT distributed a white paper of options to increase economic development support for resource-based industries. At the third meeting, the task force gave feedback on the white paper and brainstormed the key strengths, weaknesses, opportunities and threats of farming, forestry and fisheries in the Upper Shore.

In its advisory capacity, the task force recommended conducting industry-specific focus groups to increase community involvement and input. Members felt it was important to include the perspectives of farmers, foresters, watermen and others to inform the development of the regional strategy. AFT organized focus groups, and task force members identified most of the participants. Additional participants were suggested by those already invited and by ESLC. AFT convened eight focus groups and informed task force members of the results, including key themes.

In the final meeting, the task force developed the strategy. Each member was asked to suggest ideas on the key elements that should be included. Task force members then prioritized the list by voting on the individual ideas (see Appendix G). AFT grouped the prioritized list into common themes, which resulted in the three overarching initiatives that comprise the regional strategy. AFT also used the list to generate action items to accomplish these initiatives.

2. STATE OF RESOURCE-BASED INDUSTRIES

AFT conducted background research to acquire a basic understanding of the current situation facing agriculture, forestry and fisheries in the Upper Shore region. It analyzed economic data to describe the contribution of resource-based industries to the local economy and land use data to show some of the pressures these industries are facing. AFT also researched food consumption trends to identify potential new opportunities for the region.

Trends in Resource-Based Industries

The six Upper Shore counties comprise the northwest sector of the Delmarva Peninsula. The Delmarva is a critical body of land often considered the largest contiguous block of farmland on the eastern seaboard from Virginia to Maine. Agriculture, forestry and fisheries always have been the foundation of the economy here and remain the top industrial sector, accounting for about one-third of the sector's economic activity across the entire peninsula.

Resource-based industries in the Upper Shore contribute a substantial portion of each county's economy. Farming, forestry, fisheries and mining account for 22 percent of the region's total value of production—or economic output²—more than \$2 billion annually. Direct output, which includes shipments and net additions to inventory, was nearly \$1.3 billion in 1999 (see Table 1).

County	Direct Output³	Indirect Output⁴	Induced Output⁵	Total Output, Resource-Based Industries (RBI)	Total Output, All Industries	RBI⁶ % of total
Cecil	\$240,277,650	\$62,976,272	\$75,830,170	\$379,084,095	\$2,784,840,000	14
Kent	\$122,608,814	\$32,378,223	\$30,357,023	\$185,344,057	\$820,596,000	23
Queen Anne's	\$194,315,254	\$66,456,012	\$57,336,800	\$318,108,064	\$1,291,180,000	25
Caroline	\$124,081,398	\$28,359,941	\$24,905,640	\$177,346,979	\$1,075,540,000	16
Talbot	\$207,423,188	\$81,094,230	\$100,450,926	\$388,968,342	\$2,076,547,000	19
Dorchester	\$398,893,764	\$134,360,662	\$71,545,577	\$604,799,996	\$1,206,540,000	50
Totals	\$1,287,600,068	\$405,625,340	\$360,426,136	\$2,053,651,533	\$5,649,807,000	22

Source: Business, Economic, and Community Outreach Network at Salisbury University, IMPLAN, 1999.

Agriculture is a major employer on the Upper Shore. Thirteen percent of the region's jobs are provided by the "food and farming system": agriculture, food processors and related services (see Table 2.)

² Total economic output includes sales and inventory.

³ Direct output is total industry production for a given year. It is equal to shipments plus net additions to inventory.

⁴ Indirect output effects describe the interaction of resource-based industries purchasing from other local industries.

⁵ Induced output effects are the interaction of institutions—typically household spending from income generated by resource-based industries.

⁶ Resource-based industries include agriculture, forestry, fisheries and mining.

Table 2. Agricultural and Related Employment, Upper Shore Counties

County	Direct Employment	Indirect Employment	Induced Employment	Total Employment, Agriculture	Total Employment, All Industries	% of Total
Cecil	1,350	448	620	2,418	31,634	8
Kent	1,109	286	319	1,714	10,756	16
Queen Anne's	1,318	588	563	2,469	16,761	15
Caroline	1,025	383	366	1,774	12,876	14
Talbot	1,798	844	1,014	3,656	27,074	14
Dorchester	1,595	805	805	3,205	15,129	21
Totals	8,195	3,354	3,687	15,236	113,230	13

Source: Business, Economic, and Community Outreach Network at Salisbury University, IMPLAN, 1999.

Resource-based industries have significant “multiplier effects”—the circulation of goods and services throughout the local economy. Primary product values (farm-gate or dockside values) only accounted for \$492,725,048 (Table 3) or 23 percent of the total economic impact of the region’s resource-based industries. The additional economic impact was created by secondary processing and manufacturing, support services, related service industries and associated household spending.

Table 3. Primary Product Value, Upper Shore Counties

Primary Product	Direct Output	% of Total
Poultry and eggs	\$187,733,000	38
Feed grains	\$57,225,000	12
Greenhouse and nursery products	\$41,119,000	8
Forestry	\$39,658,000	8
Oil bearing crops (soybeans)	\$34,410,000	7
Dairy farm products	\$31,877,000	6
Vegetables	\$27,696,487	6
Commercial fishing	\$27,557,561	6
Miscellaneous livestock	\$14,491,000	3
Food grains	\$13,897,000	3
Hay and pasture	\$9,741,000	2
Forest products	\$3,149,000	1
Fruits	\$1,511,000	0.3
Hogs, pigs and swine	\$1,255,000	0.3
Cattle	\$1,229,000	0.3
Sheep, lambs and goats	\$176,000	0.04
Totals	\$492,725,048	100

Source: IMPLAN, 1999, Maryland Department of Natural Resources Fisheries Service.

Poultry represents the majority of the region’s economic activity. While much of the value of the Delmarva’s poultry industry lies in Maryland’s three Lower Shore counties and southern Delaware, the value from the Upper Shore consists mostly of poultry products and feed grains used for poultry feed. Additionally, Delmarva farmers receive a premium on grain sales due to local demand for use in poultry feed. This “stepped-up” basis allows grain farmers to remain profitable in an otherwise high-cost area.

Poultry and eggs, feed grains and oil-bearing crops (primarily soybeans) account for 69 percent of farm-gate value in the Upper Shore. Other industries with a market share of greater than 5 percent include greenhouse and nursery products at 9 percent, forestry products at 8 percent, dairy farm products at 7 percent and vegetables and commercial fishing, both at 6 percent. Of these, nursery and greenhouse crops and vegetables have shown the most significant growth recently and may represent the best opportunities for diversification, (see Emerging Market Opportunities, Appendix C). Also, while food grains only account for 3 percent of the total market value today, some industry leaders are optimistic that growing grains for people rather than for poultry will be profitable in the future.

Food Consumption Trends

New market opportunities for agricultural products are continuously created as food consumption patterns change. Americans now consume more food, bigger portions, more snacks and more calories than they did in 1970. As of 1997, Americans were consuming 50 percent more grain products, 25 percent more fruits and vegetables, eating leaner meats and drinking lower-fat milk than they did in 1970 (Putnam 1999). They also are consuming 92 percent more poultry, a trend that bodes well for the Upper Shore. Table 4 provides further details on consumption changes between 1970 and 1997.

Table 4. Changes in U.S per capita food consumption, 1970–1997	
Food Item	% Change 1970 to 1997
Cheese	146
Carbonated soft drinks	118
Poultry	92
Flour and cereal products	48
Caloric sweeteners	26
Fats and oils	25
Fruits and vegetables	24
Fish	24
Alcoholic beverages	17
Red meat	-16
Eggs	-23
Beverage milk	-23
Coffee	-32

Source: Judith Jones Putnam and Jane E. Allshouse, *Food Consumption, Prices and Expenditures, 1970-97*. Statistical Bulletin No. 965. USDA: ERS, Food and Rural Economics Division, April 1999.

Americans are also spending less on food. In 1997, they spent less than 11 percent of their income on food, compared to nearly 14 percent in 1970. However, consumers are spending more on higher value, processed foods: in 1997, 45 percent of total food spending was on away-from-home meals and snacks compared to only 34 percent in 1970.

Several factors have changed food consumption patterns since 1970. The food industry now caters to busier life styles with convenience products and away-from-home meals. Social and demographic factors include an aging population, increasing ethnic diversity, one-parent households, two-income households, smaller households and low-income food assistance. Consumers have better access to research and information about the relationship between diet and health, and an increased interest in nutrition. Among a multitude of smaller factors, nutrition labels and federal nutrition guidelines also have shaped food consumption and marketing trends.

Land Use Trends

Competition for land has become one of the key challenges to the resource-based industries of the Upper Shore. Residential development continues to expand, consuming farm and forest lands and waterfront properties. Between 1985 and 1997, a total of 32,606 acres were converted to development in the Upper Shore.⁷

Table 5. Land in Farms and Number of Farms, Upper Shore Counties		
Year	Land in Farms	Number of Farms
1982	787,508	2,886
1987	757,900	2,627
1992	736,722	2,371
1997	715,001	2,259
1997 (adjusted)⁸	717,212	2,393
2002	695,984	2,374
Net Decrease	91,524 (12%)	512 (18%)

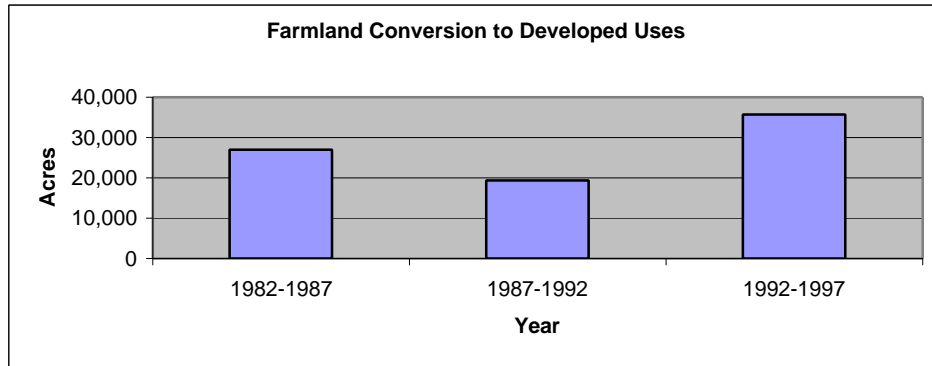
Source: USDA, Census of Agriculture, 1982, 1987, 1992, 1997 and 2002.

For the entire Delmarva Peninsula, 81,900 acres of agricultural land were converted to developed uses between 1982 and 1997 and their agricultural use permanently lost (see Figure 1). In the Upper Shore region there has been a steady decrease in the number of farms and the amount of land in farms (see Table 5). On average, land in farms decreased by 4,576 acres and 25 farms were lost every year between 1982 and 2002 in the Upper Shore.

⁷ Maryland Department of Planning

⁸ This data was released as a part of the 2002 Census of Agriculture. For the first time, the National Agricultural Statistics Service (NASS) adjusted the data to account for farms missed or misclassified during the previous census. NASS measured the incompleteness of the census mailing list (CML) by interviewing each producer identified on randomly selected sample tracts and comparing this information to the CML. Census data were then weighted to approximate data for operations that were not included. As a result of "coverage adjustment" there was an apparent increase in the number of farms, farmers and land in farms from the figures reported in the 1997 Census of Agriculture. More importantly, adjusted figures may not be comparable to the old data. NASS adjusted the 1997 data and presented it alongside the original 1997 data in the Historical Highlights tables for purposes of comparison between the two methodologies. In all other places, 1997 data published in the 2002 Census of Agriculture has been adjusted.

Figure 1. Farmland Conversion, Delmarva Peninsula, 1982 to 1997



Source: USDA, National Resource Inventory, 1982, 1987, 1992 and 1997.

While the overall number of farms decreased, the number of farms in some size categories actually increased, or decreased at a lower rate than the average. Average farm size is increasing from 289 to 341 acres. This suggests that farms are consolidating and becoming larger and fewer in number.

Farm Size (Acres)	1982	1987	1992	997	1997 (adjusted)	2002	Change 1982 to 1997	% Change 1982 to 1997
1 to 9	226	216	192	176	199	183	-43	-19
10 to 49	626	560	531	552	632	740	+114	+18
50 to 179	838	754	641	619	658	624	-114	-26
180 to 499	750	653	567	491	488	422	-328	-44
500 to 999	296	268	265	236	230	207	-89	-30
1000 plus	150	176	175	185	186	198	+48	+32
Totals	2,886	2,632	2,380	2,294	2,396	2,339	-512	-21

Source: USDA Census of Agriculture, 1982, 1987, 1992 and 1997.

There is an increasing number of the largest farms and a dramatic decrease among traditional, mid-sized farms (180 to 499 acres). Conversely, the smallest farms—often owned by new residents—are not declining as rapidly, and those between 10 and 49 acres actually are increasing. These smaller farms typically only provide a side income for the owner, where as the largest farms, or several medium size farms being worked by one farmer, provide full-time employment (see Table 6). These data point toward diverging trends: increasing farm size among large-scale grain farmers, substantial decreases among mid-size farmers and slight gains among small agricultural holdings.

**Table 7. Farms by Sales Volume,
Upper Shore Counties, 1982 to 2002**

Farms by Sales Volume	1982	1987	1992	1997	1997 (adjusted)	2002	Change 1982 to 2002	% Change 1982 to 2002
Less than \$5,000	672	749	545	541	646	1,028	+356	+53
\$5,000 to \$249,000	1,906	1,586	1,420	1,236	1,237	935	-971	-51
\$250,000 plus	308	292	406	482	510	411	+103	+51
Totals	2,886	2,627	2,371	2,259	2393	2374	-512	-18

Source: USDA Census of Agriculture, 1982, 1987, 1992, 1997 and 2002.

Business and Economic Resources Available to Resource-Based Industries

Another important component of the background research was to identify business resources currently available to agriculture, forestry and fisheries. A number of resources were located, including support on the local, state and federal levels (see Appendix B).

Local

County offices of the University of Maryland Cooperative Extension have long supported agricultural economic development in the region. Extension has worked to help local growers tap into new markets and products, including wine and grapes, organic products, greenhouses and for-fee hunting. County economic development and tourism offices have recently turned their attention toward economic development of resource-based industries, as several have developed agritourism brochures and Cecil County has hired an agricultural coordinator in the Office of Economic Development.

Chesapeake Fields Institute (CFI), a non-profit organization in Chestertown, Md., was founded in 2000 to address the profitability of farmers on the Eastern Shore and Delmarva Peninsula. CFI is working to identify more profitable crops for the region's farmers. The Mid-Atlantic Biofuels Group is conducting research to determine whether a \$30 million ethanol production plant that uses barley would be successful on the Eastern Shore. These initiatives, and others like them, are critical efforts to sustain these industries by finding profitable new opportunities for agriculture, forestry and fisheries.

State

The Maryland Department of Agriculture (MDA) offers numerous marketing programs to encourage the purchase and consumption of Maryland products as well as to help entrepreneurs start or expand agriculture-related businesses. For example, it developed the "Maryland's Best" label to promote the state's agricultural products, and developed the Shore-to-Shore program to link Eastern Shore farmers to supermarkets. The state's National Marketing and Agribusiness Development program helps farmers market their products directly to consumers or to

supermarkets, restaurants and other large wholesale buyers (see Appendix B). MDA's Seafood and Aquaculture Development program is working to expand the aquaculture industry. The Seafood Marketing Program promotes the sale and consumption of Maryland seafood through advertising, exhibits and trade shows throughout the East Coast. In 2004, the Maryland Department of Business and Economic Development and the Maryland Department of Agriculture cooperated to allow primarily young and beginning poultry farmers access to loan guarantees through the Maryland Industrial Development Financing Authority (MIDFA). This access to capital guarantees will help the poultry industry stay competitive with other growing regions by allowing growth of new, efficient production facilities and upgrades to existing facilities needing modernization.

Federal

Programs that benefit agriculture and forestry primarily are administered through the United States Department of Agriculture (USDA.) The Rural Business-Cooperative Service offers four types of rural development and business enterprise grants, ranging from \$30,000 to \$500,000. The Cooperative State Research Education and Extension Service (CREES) has six different programs, including Community Food Project grants for agricultural research. Funding for these ranges from \$4,000 to more than \$4 million. The National Resources Conservation Service (NRCS) administers seven conservation programs for which landowners in the Upper Shore region may be eligible. The Forest Service has two grant funds, one for technology marketing and the other for rural development, forestry and communities. All of the programs listed in Appendix B (with the exception of some of the conservation programs) are available to businesses, regional entities, cooperatives, not-for-profit organizations, individuals or a combination thereof.

3. WHITE PAPER

The third component of the regional strategy was the white paper addressing Goal 2 of *ES 2010*. The goal of the white paper was to provide county councils and commissioners with a menu of options for increasing economic development support for agriculture, forestry and fisheries. In order to accomplish this, AFT conducted a nationwide search for economic development plans and strategies pertaining to agriculture, forestry and fisheries. Staff identified more than 30 reports and programs ranging from state, county and regional level initiatives to nonprofit activities. The ideas most applicable to the Upper Shore were pulled from the body of this information and included in the white paper. Task Force members helped identify which ideas were most urgently needed in the region and would work best on the Upper Shore. The resulting white paper is a collection of these examples grouped under the four themes of business development assistance, marketing assistance, labor programs, and increased access to capital (see Appendix D).

4. FOCUS GROUPS

The task force recommended that AFT organize focus groups in order to best understand the issues most pressing among farmers, foresters, watermen and resource-based industry representatives. In all, input from about 40 participants in eight focus groups helped inform the strategy.

1. Poultry
2. Grains

3. Dairy and livestock
4. Forestry
5. Fisheries and aquaculture
6. Entering farmers
7. Farmers growing for niche and specialty markets
8. Nursery and greenhouse

The format for the focus groups was a two-hour, facilitated, roundtable discussion with four to eight participants per group. Questions were scripted in advance to elicit discussion on key issues and to ensure consistency among the groups (see Appendix E).

The discussions of the focus groups are summarized below. An expanded description of these discussions is included in Appendix E.

All the groups agreed on five themes, which we call “consensus themes”:

1. Economic development agencies should be more supportive of resource-based industries;
2. An increasingly urban public does not understand what it takes to earn a living in a resource-based industry;
3. Government is out of touch with the needs of resource-based industries;
4. Agriculture, forestry and fisheries need to be proactive in educating government and the general public about resource-based industries;
5. Concern over the rate and extent of development and its impact on the availability of land.

Other key issues emerged in several groups. These “common themes” included concerns over time spent dealing with new environmental regulations, Maryland’s unfavorable business climate and labor shortages, as well as opportunities, such as working together to save the Chesapeake Bay, growth in tourism and the need to capture more of the consumer dollar. Needs were identified, such as investing in secondary processing and manufacturing, strengthening right-to-farm laws, and developing a local or regional food system. Farmers also were concerned about land transfer issues and opportunities for the next generation of farmers.

Finally, individual industries have their own specific issues. These are detailed in Appendix E.

Consensus Themes

1. **Economic development should provide more support to resource-based industries.** Economic development efforts tend to focus on hi-tech, manufacturing and other industries that create more jobs. Farmers felt strongly that agriculture needs to be recognized as a legitimate business. Economic development in rural areas should work with the agricultural community to develop profitable new business enterprises, assist with marketing, provide more access to capital for expanding or starting new operations, and help address labor issues.
2. **General public does not understand resource-based industries.** Focus group participants expressed frustration that new residents do not understand or appreciate what

it takes to make a living off the land or water. New residents complain about spraying and manure smells.

3. **Government is out of touch with resource-based industries.** Each group suggested that government officials largely do not understand the issues of resource-based industries. Most elected leaders in Maryland represent urban or suburban constituencies where agriculture, forestry and fisheries do not play a large role. Focus group participants suggest that these officials are not aware of all the impacts that new policies have on their industries, many of which are unnecessarily detrimental.
4. **Educating the general public and government officials about resource-based industries.** Most felt that this is best accomplished by making agriculture a larger part of people's lives and inviting them to share in the experience. Several groups suggested developing a local or regional foods campaign to bring awareness to how important agriculture is and to reinforce the connection between food and farmland. Some suggested that agritourism could engage the general public and encourage more interaction between farmer and consumer, while allowing people to experience farm life firsthand. There was also discussion about how to inform elected officials about important issues.
5. **Development concerns.** Farmers and industry representatives from every focus group expressed concern over the rate and extent of suburban development encroaching on farmland. Fisheries representatives expressed concern over development of waterfront property encroaching on commercial fishing operations. Farmland is viewed as being too expensive for farming, making it next to impossible for new farmers to get established in the region. Several suggestions were made on how to tailor the state farmland protection program, Maryland Agricultural Land Preservation Foundation (MALPF), to benefit working farmers and areas where agriculture is still viable. An assessment of the MALPF program was completed in 2004, and recommendations for changes will be presented in the 2005 Maryland General Assembly session.

Common Themes

Much discussion revolved around the difficult regulatory environment in Maryland and how it adversely affects businesses but fails to meet its own goals. Most groups commented on how they want to save the Chesapeake Bay as much as anyone else and are doing all they know how. Most groups discussed the shortage of reliable labor. Farmers felt that they should be capturing more of the consumer dollar through different marketing techniques and value-added processing. Concern over the strength of right-to-farm laws was the subject of several conversations. Many felt the area should have more secondary processing and manufacturing facilities to support existing resource-based operations. Most were concerned about the next generation of farmers and who would be farming here in 50 years.

Industry-Specific Issues

It is important to note, that differences between groups exist and these concerns were considered in developing the strategy. For example, dairy and livestock producers are facing the most difficult situation with milk prices down, land unavailable and strict nutrient management laws.

On the other hand, the nursery and greenhouse industry reported that “things couldn’t be better” with a surging demand for nursery products that is expected to continue. Poultry is dependent on the local grains industry for feed, and grains are dependent on poultry for income. This is an important relationship that needs to be well understood. Poultry is also dependent on a healthy forestry industry, particularly to provide milling by-products for bedding in chicken houses. As less land is available for saw timber, however, the forestry industry is contracting. Those in the industry are hoping that green energy can provide an economic stimulus by creating a market for by-products. New farmers to the region are primarily involved in niche market operations such as vegetables, fruits and nuts, small-scale livestock, greenhouses, beekeeping, and other such practices. They are optimistic about tapping into underserved markets and marketing directly to consumers. Fisheries and aquaculture representatives are dealing with a larger scope of issues more closely tied to management of Bay resources. This group brought up the importance and potential of aquaculture to Maryland and how, if supported, it could be a considerable economic stimulus to the region.

REGIONAL ECONOMIC DEVELOPMENT STRATEGY FOR AGRICULTURE, FORESTRY AND FISHERIES

As key themes emerged and became clearer throughout the course of the project, so too did potential solutions. Each of the eight focus groups offered input on how its issues could be best addressed. The task force was engaged for seven months with the information generated through this project and spent its final meeting working through recommendations to guide the strategy. AFT helped develop the strategy by grouping similar ideas together under one of three primary issue areas: public outreach and education, economic development support and land preservation.

Nearly everyone involved with this project recognized that the general public has become increasingly divorced from the working landscape and agreed they needed to join together to foster greater public understanding of agriculture, forestry and fisheries in the region and state. Today, most schoolchildren cannot visit a relative's farm. Most people neither understand how their food is produced or where it comes from. This lack of knowledge has a strong impact on the formation of regulations and public policy and on people's perception of what resource-based industries are—and what they should or should not be. Most of the suggestions given through this project involve actively engaging the public. For example, agritourism invites consumers to the farm to meet the farmer and experience farm life. Community food systems promote the consumption of locally produced foods and encourage direct marketing links between farmer and consumer.

This regional strategy is based on the premise that natural resource-based industries need to be recognized as unique and legitimate businesses. Economic research has shown that they have a significant impact on rural economies. Collectively they are one of the largest industry sectors in rural Maryland. Governments also need to understand that maintaining cultural values and quality of life are as important to the region as the economic contributions these industries provide. Preserving these cultural values and scenic landscapes, wildlife corridors and waterways means supporting the industries that maintain them. Environmental regulations can achieve their intended goals while still allowing a profitable resource based industry sector. It will take the collective action of key institutions and the farmers, foresters, watermen and other industry representatives to develop a thriving resource-based economy.

- **Bridge the gulf between rural and urban constituencies.** Outreach to citizens and government officials must occur on a regular basis so that they understand the implications of existing and proposed policies, and are kept abreast of new developments. Strategies suggested to address this recommendation are to develop consumer-friendly agriculture opportunities such as agritourism, farmers' markets and other direct marketing outlets; a "buy local" campaign; "pizza farm" or other demonstration sites to engage and educate the public about resource-based industries. The Eastern Shore Land Conservancy's "Rural Heritage Day" is aimed at making this connection.
- **Improve economic development support for resource-based industries.** The Upper Shore region lies within a few hours drive of 70 million consumers. This provides a tremendous opportunity for growth by identifying new market opportunities. New and

existing farmers, foresters and watermen need to understand the full and expanding range of existing and alternative business opportunities available to strengthen and diversify their operations. They need professional assistance to develop new enterprises, crops and products and to find more lucrative markets. Technology transfer—bringing technologies developed in the university and federal research settings into the marketplace—offers many promising opportunities for local entrepreneurs and can help reduce any harmful environmental impacts of conventional production practices. One of the first steps identified in this process is to fund a staff person to coordinate regional activities, work on behalf of all resource-based industries and interface with state and local regulatory agencies.

- **Counties implement agricultural land preservation strategies.** Increasingly, land is being priced out of reach for new and existing farmers. Forestland continues to be converted to development. Watermen find it more and more difficult to access the water because of waterfront development. New neighborhoods fragment agriculture and forestry zones. Counties need to ramp-up land preservation strategies to deal with these issues. The Maryland Agricultural Land Preservation Foundation (MALPF) has been very effective in preserving farmland throughout its history. However, funding levels for this program are down and not expected to rebound anytime soon. Upper Shore counties need to devise strategic land protection programs that could include purchase of development rights (PDR), transfer of development rights (TDR), local incentives for gift easements and effective agricultural zoning (see Appendix H for more detail). These programs would work to stem the tide of land conversion and sustain agriculture and forest industries.

The regional economic development strategy, along with action steps on how to achieve it, is presented in greater detail below. Potential lead agencies, partners, and costs are described in the “Regional Strategy Matrix” (page 24).

ACTION STEPS/IMPLEMENTATION

REGIONAL ECONOMIC DEVELOPMENT STRATEGY

New capacity in economic development is needed to address business development among the resource-based industries of the Upper Shore. To achieve this, several things must occur.

The Working Landscapes Task Force should continue the momentum developed through this project and meet on a quarterly basis to further refine and execute the regional strategy. A chairperson should be responsible for setting the meeting agenda and dates, coordinating meeting space, inviting/reminding participants about the meetings and sending out agendas/meeting notes.

Second, an “Eastern Shore Agricultural and Natural Resource Business Coalition” should be established either by expanding an existing organization or creating a new one to coordinate efforts of all agricultural, forestry, and fisheries groups; address economic development needs; and conduct public outreach and education and targeted outreach and advocacy to legislators (as detailed below). This umbrella organization could seek funding for a staff person to follow through on activities (funding options detailed below).

Working with established agencies such as Cooperative Extension and county economic development offices, this new organization could pursue the economic activities identified through this project, including:

1. Bridge the gulf between urban and rural constituencies by promoting local agriculture, forestry and fisheries.

The strategy is to educate the general public and government officials about agriculture, forestry and fisheries. This should involve a broad, far-reaching public awareness campaign about the need for a community food system, which would involve more market opportunities for local consumers to purchase locally grown products and more farmers growing these products.

Eastern Shore Land Conservancy’s “Rural Heritage Day” could be used to advance several of the following public awareness campaign objectives, as it will invite the public to celebrate local agriculture and its contributions to the region:

- a.) **Develop a comprehensive, yet easy to understand, problem statement about the issues facing resource-based industries.**
- b.) **Create messages that appeal to a wide audience.** Show positive messages of the relationship between people, wildlife, the environment, quality of life and working landscapes: aerial photos over time depicting how land use has changed and how much development has occurred, satellite images of the region over time showing how much light covers the night sky, or animation and other means to increase children’s understanding. Include messages about the fiscal and economic impact of resource-based industries, which account for over 20 percent of the region’s economy. Recent

research also indicates that farm, forest and open lands make a net positive contribution in revenue, costing less in services than they pay in taxes and fees.

- c.) **Organize and coordinate regular information sessions with state and local legislators and government officials** to update them on the most pressing issues facing agriculture, forestry and fisheries.
- d.) **Increase direct marketing opportunities for local products.** Local consumers are largely divorced from agriculture and in most cases don't know where their food comes from. Much of the regional farming in the Upper Shore is focused on grains and inaccessible to the general public. An important part of the regional strategy is to capture more of the consumer dollar by identifying direct-marketing opportunities to local consumers and establishing connections between farmers, consumers, and support agencies/organizations and other potential markets.
- e.) **Develop and promote agritourism.** Work with local tourism departments and Cooperative Extension to provide the resources necessary for local farms to become tourist destinations and offer school tours.
- f.) **Conduct media relations.** Develop articles discussing agriculture, forestry, and fisheries on a regular basis and submit to local and regional media outlets.

2. **Improve economic development support for resource-based industries.**

- a.) **Develop and promote low-risk, profitable alternative business models.** Local farmers, watermen and others looking to diversify their operations and income are well-poised to participate in new business models that are fundable, market-driven and use their farming, forestry, or fishing expertise.
Example: The Bell Nurseries integrator model that functions like a poultry integrator has slowly spread throughout the Mid-and Lower Shore region, allowing farmers and others to add a new enterprise to their existing farming operation.
- b.) **Identify emerging market opportunities** for new crops, such as nutraceuticals, medicinal plants and alternative grains.
Example: Chesapeake Fields Institute (CFI) has tapped into the Japanese market for high-value Natto soybeans. Eastern Shore farmers are now growing these soybeans on close to 1,000 acres.
- c.) **Promote technology transfer of agriculture and resource-based technologies.** The University of Maryland, the USDA and others are continuously developing resource-based technologies that can be transferred into the marketplace. This presents a significant potential for the Upper Shore in terms of economic output and job creation. Appropriate technologies and funding sources should be identified and brought into the region. Local entrepreneurs who are interested in investing in these technologies should be made aware of new opportunities.
Example: Feather fiber technology would create a market for chicken feathers by using them for various products such as insulation.
- d.) **Brand the region for public relations.** Many project participants called for the creation of an Eastern Shore or Delmarva brand to market the area and its products. Branding would help give producers access to higher-value markets and to new marketing opportunities in the region and in the nearby cities.
Example: "Jersey Fresh" is a branding program used to promote New Jersey farm products. In a recent survey, consumers indicated that they felt that produce labeled

as Jersey Fresh would be superior to other produce in terms of quality and freshness. Seventy-five percent said they were willing to pay a 5 percent or higher premium for Jersey Fresh products (Govindasamy 1998).

- e.) **Develop more food and fiber processors to create higher value products locally.**
Example: CFI has developed plans for a soybean and wheat processing facility that would produce soy-snack foods and artisan breads on the Eastern Shore.
- f.) **Work with county agencies to streamline and simplify the process of establishing a new resource-based business,** i.e., Planning and Zoning, Public Works, Health Department, etc. This ombudsman role would also identify overly burdensome regulations that prohibit direct marketing and small-scale processing of farm products.
- g.) **Encourage the development of an organic food products industry.** The organic market is expanding rapidly as evidenced by a 2,000 percent increase in milk cows and an 18,000 percent increase in broilers over 10 years (see Appendix C). As CFI suggests in its recent report, *Local & Organic: Bringing Maryland Organics from Farm to Table*, encouraging organic production in Maryland would work to increase profitability of Maryland farms and ensure their future viability.
- h.) **Incorporate resource-based industries into county economic development plans by 2005.** This goal was outlined in *ES 2010*, and the Economic Development Support for Resource-Based Industries White Paper (Appendix D) outlines how this can be accomplished.
- i.) **Collaborate with the Maryland Department of Agriculture to expand marketing opportunities for Upper Shore farmers.**
- j.) **Ensure funding of the Maryland Agricultural and Resource-Based Development Corporation (MARBIDCO)** (see Appendix B).

3. **Enact land preservation programs at the county level**

Without the land, agriculture and forestry cannot remain viable industries. Fragmentation caused by residential development has a significant, negative impact on agricultural zones. Adequate access to water is necessary for watermen to practice their trade. In its white paper entitled *Tools Available for Attaining the Eastern Shore 2010 Land Protection Goal*, ESLC outlines five strategies that local governments can take to preserve the land base and maintain economic viability of agriculture, forestry and fisheries (see Appendix H):

- a.) **Create of a strategic land protection plan** identifying priority areas in the county for preservation.
- b.) **Establish local (county-level) PDR programs.**
- c.) **Establish an effective TDR program** that uses the market value of TDRs and guides development into desired areas.
- d.) **Provide local incentives for gift easements** such as property tax credits.
- e.) **Establish effective agricultural zoning.**

Implementation and Funding of New Initiatives

Establish an Eastern Shore Agricultural and Natural Resource Business Coalition to advance agricultural and resource-based business economic development. This coalition would carry out the above initiatives and could be classified as a nonprofit 501(c) 3 organization. It would work with existing state and federal programs, such as those outlined below and in Appendix B, that provide funding and assistance to resource-based businesses and operations. The initial focus should be on funding it from different membership levels as indicated below. The primary sponsors will be businesses that have a stake in keeping agriculture, forestry and fisheries viable in the region. The organization's board of directors could consist of representatives from Maryland Farm Bureau, Cooperative Extension, regional councils, Chesapeake Fields Institute, Delmarva Poultry Industry, Eastern Shore Land Conservancy, and other similar organizations.

Potential Funding Structure:

a.) Membership

Founding Partner (10 @ \$1,000)	\$10,000
Corporate (5 @ \$500)	\$ 2,500
Business Partner (100 @ \$200)	\$20,000
Corporate Farm (50 @ \$100)	\$ 5,000
Individual Farm/Landowner/General Public (500 @ \$25)	\$12,500
<u>Annual Funding</u>	<u>\$50,000</u>

b.) Grant funding

Potential sources of grant funding include the following:

- United States Department of Agriculture (USDA) grant funding (see Appendix B);
- Economic Development Administration (EDA) grants;
- United States Department of Commerce grants;
- Local foundations, such as Town Creek, and
- Kellogg Foundation's new Rural Entrepreneurship Grants.

Annual Funding \$10,000 to \$50,000+

c.) Maryland Economic Development Assistance Fund

Current statutes require that these funds be used in priority growth areas.

However, Maryland Governor Robert Ehrlich has called upon DBED to support statutory exceptions to the priority-funding requirement so that these funds can be used for poultry projects. The Maryland Department of Agriculture is currently investigating how these funds can be put to use for agriculture.

Funds available – \$250,000, dollar-for-dollar matching grants. One Maryland jurisdictions (Worcester, Somerset, Dorchester, and Caroline) at 50 percent matching grant, per county.

Annual Funding TBD

d.) Maryland Agricultural and Resource-Based Development Corporation (MARBIDCO)

This new initiative will provide funding beginning in fiscal year 2006 to agricultural and resource-based businesses and individuals looking to start, convert or diversify their agricultural operations and/or make improvements or modifications in order to comply with environmental regulations (see also Appendix B).

Annual Funding TBD

e.) Delmarva Conservation Corridor (DCC)

This comprehensive five-year pilot program, which was included in the 2002 Farm Bill, aims to protect and conserve natural resources and make farming profitable, thereby preserving Delmarva's rural way of life. A major goal of the DCC is to make it easier for farmers to enroll in the various agricultural preservation programs the USDA offers through federal, state, local and private programs. Currently, these programs operate independently, but with an established DCC they could function together and farmers could go to one place to sign up for any of the available programs. Maryland's total request is \$114 million. Five million dollars is earmarked for financial support for rural development that is primarily focused on diversifying production through alternative crops and attracting new businesses.

Annual Funding TBD

Regional Strategy Matrix			
Strategy Element	Potential Lead Agency	Possible Partners	Cost
Bridge the gulf between urban and rural constituencies	Chesapeake Fields Institute, Future Harvest - CASA	Eastern Shore Land Conservancy (ESLC), American Farmland Trust (AFT), County Tourism Offices, Washington College, Cooperative Extension, Eastern Shore Heritage, Inc.	\$30,000 to \$40,000 annually
Improve economic development support for resource-based industries	Chesapeake Fields Institute, Mid and Upper Shore Regional Councils	Chesapeake Bay Region Technical Center of Excellence, County Economic Development Offices, ESLC, Cooperative Extension, Maryland Dept. of Agriculture, Maryland Dept. of Business and Economic Development	\$70,000 to \$80,000 annually
Enact county land preservation strategies	ESLC	County Planning Offices, AFT	TBD

APPENDICES

Appendix A – Working Landscapes Task Force

Appendix B – Business and Economic Resources

Appendix C – New and Emerging Market Opportunities

**Appendix D – White Paper: Economic Development Support for
Resource-Based Industries**

Appendix E – Focus Groups

Appendix F – Industry-Specific Strategies

Appendix G – Task Force Brainstorming Exercise

**Appendix H – White Paper: Tools Available for Attaining the
Eastern Shore 2010 Land Protection Goal
(Executive Summary)**

References

APPENDIX A

Working Landscapes Task Force

Members

Kenny Bounds, Mid-Atlantic Farm Credit
Jim Buckland, Maryland Department of Business and Economic Development
Bill Collier, Caroline County Farm Bureau
John General, Chesapeake Bay Region Technical Center of Excellence
Paul Gunther, Queen Anne's County Cooperative Extension
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Jim Lewis, Caroline County Cooperative Extension
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APPENDIX B

Business and Economic Resources Available to Resource-Based Industries

USDA Federal Grant Programs (available at www.12.46.245.173/cfda/cfda.html)

Farm Service Agency (FSA)

Bioenergy Program – a new program authorized in the 2002 Farm Bill that provides bioenergy producers with payments based on production.

Award range: up to \$375,000 per producer/year

Forestry Service

Technology Marketing Unit – administered under the Forest Service, this grant program assists small forest products businesses turn small diameter trees into marketable products and biomass energy.

Award range: \$5,000 to \$300,000/grant

Rural Development, Forestry, and Communities – assists rural areas assess forest resource opportunities, increase local economic potential, and diversify the local economic base.

Award range: \$1,000 to \$50,000/grant

Foreign Agricultural Service (FAS)

Emerging Markets Program – seeks to promote, enhance and expand the export of U.S. agricultural products to emerging markets overseas.

Award range: \$5,000 plus

Natural Resources Conservation Service (NRCS) - <http://www.nrcs.usda.gov/>

Farm and Ranch Lands Protection Program (FRPP) – provides funding to qualified entities to acquire conservation easements from landowners.

Award range: No more than 50 percent of the appraised fair market value of the property.

Forestry Incentives Program – works to increase the amount of non-industrial forest land under management to increase timber production, ensure adequate supplies of timber and enhance other forest resources.

Award range: \$50 to \$10,000 annually.

Conservation Reserve Program (CRP) – encourages farmers to convert highly erodible cropland or other environmentally sensitive acreage to vegetative cover, such as tame or native grasses, wildlife plantings, trees, filterstrips or riparian buffers. Farmers receive an annual payment for the term of the multi-year contract.

Award range: Up to \$50,000 annually.

Wetlands Reserve Program (WRP) – purchases easements and provides cost-sharing to producers who agree to restore wetlands on agricultural land.

Award range: An amount equal to or less than the agricultural value of the property.

Environmental Quality Incentives Program (EQIP) – promotes agricultural production and environmental quality as compatible national goals. Farmers may receive financial and technical help to install or implement structural and management practices on eligible land: 75% cost sharing or 90% if producer is a limited-resource or beginning farmer or rancher. Includes Water Conservation Program, which includes cost-sharing incentives and assistance for efforts to conserve ground and surface water — \$50 million reserved for producers in Klamath Basin.

Award range: Up to \$450,000.

Conservation Security Program (CSP) – helps owners and operators of agricultural lands maintain conservation practices and install additional practices. Producers can participate at one of three tiers: the higher the tier, the greater the conservation effort and the higher the payment.

Award range: \$20,000 to \$45,000 annually.

Wildlife Habitat Incentives Program (WHIP) – provides technical and cost-share assistance payments to help establish and improve fish and wildlife habitat.

Award range: Up to 15 percent of installation cost.

Conservation of Private Grazing Lands (CPGL) – program expanded to include sustainable grazing systems such as year-round, rotational or managed grazing.

Award range: Technical assistance program.

Rural Business-Cooperative Service

Rural Cooperative Development Grants – helps establish new cooperatives or improve existing cooperatives to improve rural economic conditions.

Award range: \$65,000 to \$200,000

Rural Business Enterprise Grants – facilitates development of small private business, industry and other related employment to improve rural economies. Television demonstration grant funds may be used for television programming that provides information on agriculture and other important issues to farmers and rural residents.

Award range: \$2,000 to \$500,000

Value-Added Producer Grants – funds planning activities and provides working capital for marketing value-added agricultural products and for farm-based renewable energy.
Award range: Up to \$500,000

Rural Business Opportunity Grants – funds the promotion of sustainable economic development in rural communities with exceptional needs. This includes economic planning, technical assistance for rural businesses or training for rural entrepreneurs or economic development officials.
Award range: \$30,000 to \$100,000

Cooperative State Research, Education, and Extension Service (CREES)

Integrated Programs – supports the facilitation and expansion of breakthroughs in food and agricultural sciences.
Award range: \$20,000 to \$2,080,000

Initiative for Future Agriculture and Food Systems – funds research, education and Extension grants to address critical and emerging agriculture issues.
Award range: \$65,000 to \$4,375,000

Small Business Innovation Research – stimulates technological innovation among the small business sector, promotes technology transfer and encourages participation by women-owned and socially disadvantaged small businesses in technological innovation.
Award range: \$46,000 to \$300,000 per grant

Grants for Agricultural Research – funds research areas including plants, animals, natural resources, environment, nutrition, food quality and health, markets, trade and rural development, and new products and processes.
Award range: \$4,000 to \$491,100

Community Food Projects – supports community food projects that meet the needs of low-income people, assists communities in providing for their own food needs and promotes comprehensive solutions to local food, farm and nutrition issues.
Award range: \$10,000 to \$250,000

Sustainable Agriculture Research and Education (SARE) – offers numerous grants to assist producers in adopting sustainable agricultural practices and promote partnerships and information exchange among farmers, agribusinesses, nonprofit organizations and public and private research and extension institutions.
Award range: \$8,000 to \$1,752,250

State Programs Offered Through the Maryland Department of Agriculture

National Marketing and Agribusiness Development

These programs assist agricultural producers in selling their products directly to supermarkets, restaurants, hotels, food service businesses, other wholesalers and consumers. Staff act as brokers between producer and buyer, making it possible for individual producers to access opportunities with large wholesale buyers.

- The Marketing division developed the quality assurance-branding program and promotional materials known as “Maryland’s Best.” This label reflects the high standards under which Maryland agricultural products are grown and can be customized for different agricultural products.
- Another program, Shore to Store, links Eastern Shore farmers directly to supermarkets with sales of \$1.3 million in 2003.
- Marketing is also working to facilitate producer access to other high-value opportunities such as restaurants, schools and garden centers. In 2002, the Marketing division received a USDA Specialty Crop Promotion grant of \$1,138,335 to do promotion and education about Maryland agricultural products and research new markets.
- This program also manages Maryland farmers’ markets. In 2002, there were 74 farmers’ markets with at least one in every county, as well as two Farmers’ Market Nutrition Programs. The Special Supplemental Nutrition Program for Women, Infants and Children (WIC) involved the participation of 60 markets and 440 farmers, who redeemed coupons totaling \$450,000. The “Senior Farmers Market Nutrition Program” offered coupon books totaling \$30 in value to seniors ages 65 and over, and partners with the Maryland Department of Transportation to place signs identifying farmers’ market locations.
- Marketing received a grant from the **USDA’s Federal-State Market Improvement Program** to assist smaller and mid-size producers in accessing large, wholesale markets.
- Marketing also works on the state level to improve the policy climate for agriculture and ensure long-term profitability of the industry. Marketing staff assisted Governor Ehrlich’s Poultry Action Issues team and are currently working with the state health department to identify regulations that impact agricultural businesses and practices. In 2003, Marketing received a \$10,000 grant to address seasonal labor issues on Maryland farms.

International Marketing promotes and markets Maryland agricultural products such as grains, livestock, semen and embryos, value-added and processed foods, and nursery products on a worldwide basis and organizes trade visits for other countries to meet Maryland producers and agribusinesses. This division makes it possible for small and medium size growers to access international markets by ensuring the necessary certificates are in place and regulations are met. International Marketing facilitates exports of Maryland products to over 35 countries, with federal funding from USDA

covering nearly 100 percent of the division's international activities. Some highlights include:

- \$40,000 grant from the USDA Emerging Markets Program, which allowed Maryland companies sell over \$1 million in agricultural products in China.
- Sales of agricultural products to Cuba totaling over \$4 million and recognition as the "most cost-effective" state in the Cuban market.
- Over the past three years, 1,977 horses valued at \$3 million were sold to Russia, Ukraine and Korea.

Seafood and Aquaculture Development worked on formalizing the Task Force to Study the Economic Development of the Maryland Seafood and Aquaculture Industries. The Aquaculture Development Program focuses on supporting the Maryland aquaculture industry through educational, promotional and technical assistance programs. The Seafood Marketing Program promotes the sale and consumption of Maryland seafood through advertising, exhibits, and trade shows throughout the East Coast.

An exciting new opportunity, signed into law during Maryland's 2004 legislative session, is House Bill 1179, which establishes the **Maryland Agricultural and Resource-Based Industry Development Corporation (MARBIDCO)**. This initiative is designed to make significant investments in rural economic and community development programs and in rural industry sectors, such as agriculture, forestry and fisheries. It will be authorized to make loans and grants to fund development and technology transfer relating to agriculture, aquaculture, forestry and seafood industry business development at up to \$4.5 million annually beginning in fiscal year 2006. Beneficiaries of this initiative will include those looking to start, convert or diversify their operations, build or renovate food and fiber processing and secondary manufacturing facilities, improve their operations to comply with environmental regulations, and/or develop markets for alternative products and facilities for value-added processing.

The Maryland Agricultural Preservation Foundation (MALPF) was created in the early 1980s to preserve the agricultural industry in Maryland. A landowner interested in preserving land permanently through this program must first establish the property as an Agricultural Preservation District. If the landowner then chooses to apply to the program and sell development rights, the land is then restricted to the existing residences plus one lot for each child. In 2000, MALPF easements on the Eastern Shore sold from an average of \$637 to \$1,769 per acre depending upon the county in which the property was located.

Local Efforts on the Upper Shore

In addition to federal and state programs, local economic development offices on the Upper Shore are increasingly turning their attention to economic development of agriculture, forestry, and fisheries. Cecil County recently hired an agricultural coordinator in the Office of Economic Development to work with the agricultural community on marketing issues and agricultural development and to act as a liaison with county government. Cecil also recently developed a "Down on the Farm" tourism guide

to agricultural attractions and events. Kent County's Office of Tourism is developing a similar brochure. Caroline County Economic Development Corporation was instrumental in introducing the Bell Nurseries integrator greenhouse to many landowners in the county.

The **University of Maryland Cooperative Extension** offices in the Upper Shore region have held numerous educational meetings throughout the area to address new opportunities for resource-based economic development. The wine-grape movement in Queen Anne's County, the expanded greenhouse projects on the Lower Shore, the sporting clay opportunities, and the for-fee hunting opportunities have all been introduced and supported by Cooperative Extension. Organic opportunities have also been discussed at length, including a Kent County group that met on a regular basis in the late 1990s. Extension has also taken the lead to establish farmers' markets in several areas of the state and has linked local growers with market research efforts.

The **Eastern Shore Land Conservancy (ESLC – www.eslc.org)** works with landowners interested in donating or selling the development rights on their property. ESLC has partnered with the Upper Shore county governments to establish several areas in the region in which landowners voluntarily sold their development rights through the state Rural Legacy program. Since its inception in 1991, ESLC has protected 188 properties totaling 35,903 acres.

APPENDIX C

New and Emerging Market Opportunities

Existing Opportunities

There are a number of new opportunities for farmers interested in diversifying their operations. Others are in the research and development phase and may be available soon.

Chesapeake Fields Institute (CFI – www.chesapeakefields.com) is currently offering local farmers several opportunities to tap into higher value markets:

- **Natto soybeans** are an edible soybean popular in Japan. CFI is now in its third year of coordinating the growing of these soybeans by local farmers and shipping them to Japan via the Port of Baltimore. The acreage of Natto soybeans grown in the region has increased each year.
- **Food-grade soybeans** are roasted and seasoned to make a snack food that is very popular in Europe and Japan. The markets for this soy snack, both organic and non-organic, are expanding in the U.S.
- **Popcorn varieties** are being test-grown as CFI searches for ones that best withstand coating and shaping processes.

Products CFI is researching for development and marketing include:

- Food grade white and yellow corn
- Edamame or vegetable soybeans
- Growing and processing of flax
- Milling of various types of grains
- Additional types of food-grade soybeans
- Additional popcorn varieties

CFI is also developing an *identity preserved (IP)* industry in the Delmarva region. Identity preservation involves developing the infrastructure necessary to keep higher-value grain products separate from feed-grade and/or genetically modified (GMO) products. This could allow the region's farmers to recognize a significantly higher profit margin from these higher value grains and allow them to diversify their current operation. Additional market research CFI is conducting involves alternative uses of grains and oilseeds, plus markets for fruits and vegetables.

Mid-Atlantic Biofuels (MABF) is a working group investigating the creation of an ethanol plant in Maryland, with a likely location in the Upper Shore region or in Central Maryland. With financial input from other Maryland agricultural groups and DBED, MABF has conducted a feasibility study to determine if ethanol production using barley will be profitable. To be competitive, the facility would need to produce 15 million gallons of ethanol/year and use 7 million bushels of hulled barley. MABF is also looking into the possibility of using a hulless barley variety developed by Virginia Tech. This variety may produce more ethanol per bushel, allowing the plant to compete with corn ethanol plants in the Midwest. A final business plan for the operation was completed in 2004.

Emerging Opportunities

AFT's basic research focused on expanding markets and emerging opportunities in resource-based industry sectors and on changes in consumption trends. Only agricultural, forestry and fisheries products' methods of selling that show significant growth have been included here. An effort was also made to include products that could be grown or produced on the Eastern Shore.

By no means should this information be considered a definitive statement on what direction Upper Shore farmers, foresters and watermen should move in order to establish a more diversified operation. Rather, the intent of this chapter is to give local leaders and the resource-based industries ideas on what markets or selling venues could boost profitability of these industries on the Upper Shore. Feasibility research would be needed to determine the suitability of these options on the Upper Shore.

Alternative Field Crops

CFI is conducting research on new markets for human-grade and alternative field crops. According to USDA's Sustainable Agriculture Research and Education Program (SARE), the crops discussed below can be used in an existing rotation of traditional commodity crops and may offer farmers higher value without significant risk.

➤ **Alternative Oilseeds**

Market opportunities for oilseeds are expanding. Most oilseeds are used for cooking oil or in processed foods, but a number of non-food uses are gaining ground. Alternative oilseeds, such as sunflowers and canola, are higher in oil content than soybeans. Oilseeds also have industrial uses and many have been domesticated from wild plants in recent decades. These include meadowfoam, jojoba, vernonia, lesquerella and crambe. More recognizable oilseed crops, such as flax and sesame, offer promising options for an expanding U.S. market. In 1997 organic oilseeds were grown on 31,400 acres in 18 states. Certified organic sunflowers topped the list at nearly 11,000 acres, and flax was grown on over 8,000 acres.

➤ **Alternative Legumes**

Legumes are nitrogen fixing and play an important role in improving soil fertility when used in a crop rotation by reducing or eliminating the need for nitrogen fertilizer. Soybeans, cowpeas, dry edible beans and large-seeded legumes are the most economically significant of these. Chickpeas (garbanzo beans), lentils, dry peas and mung beans are also of some economic significance. Other legumes include adzuki beans, sweet white lupines and guar. Legumes are higher in protein than other crops.

➤ **Alternative Cereal Grains and Pseudocereals**

New market opportunities for alternative cereal grains including pearl, foxtail and proso millet are emerging for both human and livestock consumption. Pseudocereals, such as amaranth, quinoa and buckwheat are also seeing an increased interest. Pseudocereals, which derive their name from the fact that they are broad leaf plants rather than grasses, are typically ground into flour. The

export market to Japan supports buckwheat production, and amaranth and quinoa have seen increased interest due to their high nutritional value. Amaranth may be a viable crop for the Eastern Shore.

Aquaculture Products

Recently in Maryland there has been a lot of attention given to the overall poor health of the Chesapeake Bay. While much of this has been focused on poor water quality, overfishing of fish and shellfish has also been identified as a component of the Bay's demise. However, it does not appear that the movement to restore the health of the Bay recognizes aquaculture as the next step to restoration. Aquaculture industry representatives suggest that aquaculture practices could be used to grow animals and plants for both food and Bay restoration purposes.

According to the Maryland Seafood and Aquaculture Task Force, Maryland, with an estimated \$4 to \$6 million in aquaculture products, has not kept pace with the national growth of aquaculture. Further expansion and development of aquaculture in Maryland has been impeded by limited availability of funding and legal, regulatory and technical limitations. It is estimated that Maryland could have a \$100 million aquaculture industry if constraints were removed and research and development efforts supported.

Domestic demand for aquaculture products shows robust growth. The value of the industry has increased from \$45 million in 1974 to over \$978 million in 1998, with a 10 percent annual growth rate (Harvey 2003). In the first six months of 2003, salmon imports were more than double what they were in 1998. Tilapia imports increased by 230 percent during that time period, and shrimp imports (a mix of farmed and wild-caught) grew 41 percent in the last five years.

Overall U.S. production of aquaculture products is also expected to increase. Catfish are the largest segment of the domestic aquaculture industry and can be grown in Maryland's climate on a mostly grain-based diet. U.S. aquaculture producers are at a competitive advantage for fresh aquaculture products. Demand for fresh fish and shrimp is expected to increase, but more growth is forecast for frozen and processed products. Foreign competition for these products is intense as they can be grown—or caught—and shipped to the U.S. at less expense in China, Taiwan, Honduras, Ecuador, Vietnam and other countries.

Three factors are expected to increase demand for aquaculture products in the near future. First, the U.S. economy is expected to slowly strengthen. This should increase away-from-home food expenditures and discretionary income available for high-value prepared food products. Second, the food sector is expected to grow as demand for away from home and fully prepared meals increases. And finally, the dollar has remained strong relative to a number of foreign currencies.

Biotechnology Crops

There has been considerable interest expressed by the farming and economic development communities on the Upper Shore in biotechnology crops. While there are

considerable, well-documented economic benefits, these are checked by environmental and quality control issues.

According to the Pesticide Action Network, a number of companies including Dow, DuPont, Monsanto, and ProdiGene have been developing genetically engineered crops to produce industrial chemicals, food and feed products, and pharmaceuticals. With its proximity to nearby research centers and large open tracts, the Upper Shore may be a good location for growing acceptable biotech crops.

A “pharma crop” refers to a crop grown to produce a pharmaceutical. The growing of pharma crops holds significant potential in producing medicines. However, this practice is not without its own set of issues—the most significant being how to contain the plants being grown for pharmaceutical purposes. Farmers growing pharma crops are currently required by USDA to have a one-mile buffer around those crops (Hoskins 2004). Some pharma crops are more low risk than others; one variety of altered corn contains an enzyme that helps cystic fibrosis patients digest food. The protein creates no ill effect if consumed by humans as it occurs naturally in the stomach. Yet, environmental and consumer groups have threatened to sue USDA unless it temporarily halts planting of biotech crops on the grounds that the USDA is risking contamination of the food supply and the environment with chemicals and drugs produced by pharma crops (Fabi 2003).

Medicines that can be grown from genetically modified plants include blood clotting agents, blood thinners, blood proteins, industrial enzymes, animal vaccines, antibodies and others. Nebraska and Hawaii have seen open air testing of these plants. The issue of contamination has prevented more widespread acceptance of these crops. In a 2002 study, the National Academy of Sciences reported that “the environmental impacts of biopharm agriculture cannot be predicted, and that the novel compounds being supplied by these plants may contaminate human and animal food supplies.” Several examples confirm this including 155 acres of corn and 500,000 bushels of Nebraska soybeans that had to be destroyed due to contamination.

Biotech crops have been rapidly adopted in the U.S. since their commercial introduction in 1996. Varieties of herbicide-tolerant soybeans took up 81 percent of total soybean acreage in 2003, up from only 7 percent in 1996 (Fernandez-Cornejo 2002). Herbicide-tolerant cotton jumped from 10 percent in 1997 to 56 percent in 2001. However, herbicide-tolerant corn adoption has been slower and does not exceed 10 percent. Biotech crops offer the advantages of higher yields and lower pest control costs. The three most prevalent biotech crops are *Bacillus thuringiensis* (Bt) cotton, herbicide tolerant cotton, and herbicide tolerant soybeans. In 1997 the estimated market benefits of each of these crops ranged from \$213 million to \$308 million (Price 2003).

Direct Marketing and Local Foods

With large urban populations nearby, and a significant potential for agritourism, Upper Shore farmers may be able to develop and expand direct marketing opportunities to consumers. Direct marketing refers to a farmer or producer selling directly to consumers

in the form of farmers' markets and stands, pick-your-own farms, Community Supported Agriculture operations, and catalog sales. Between 1987 and 1997 the number of farms participating in direct marketing in the U.S. increased from 86,432 to 93,140 or 7.8 percent (Payne 2002). More significant is that gross sales of these farms increased from \$404,056,000 in 1987 to \$550,947,000 in 1997—an increase of 36 percent.

- During the same time period the number of **farmers' markets** in the U.S. increased from 1,755 to 2,863, or 63 percent. Customers on average spent \$17.30 per week at farmers' markets. Annual sales were \$306 per customer and \$11,773 per vendor. Thirty one percent of farmers selling at farmers' markets use them as their only method for marketing their products, and 79 percent have less than \$10,000 in annual sales. Data suggest that while farmers' markets are an important income generator for small- to medium- size farms, they are typically used to supplement other income streams. (Payne, 2002)
- There are approximately 1,000 **Community Supported Agriculture** (CSA) operations in the United States (Lass 1999). The 1999 median income of CSAs was \$15,000 and the mean \$30,425. Fifty percent of all CSA operations had incomes between \$7,000 and \$30,960. CSAs employ more women as the primary farmer (39 percent compared to 8.6 percent of all farmers in the 1997 Census) and younger farmers (43.7 years—10 years younger than the national average).

Local and community food systems have become important in both generating additional revenues for local farmers and reconnecting local consumers with where their food comes from. There is a considerable opportunity for local farmers to sell food as a small-scale enterprise to provide a supplemental income.

A 1994 survey of consumers in the Northeast states (Md., Del., W.Va., Pa., N.J., N.Y., Mass., Conn., R.I., Vt., N.H., Maine) suggests that 80 percent of respondents would “be willing to pay more for produce that local farmers grew if doing so would help them stay in business” (Wilkins 1994). Ninety one percent would “buy more local/state/regional produce if it was labeled as such.” Nearly half (49.7 percent) of those polled “rarely or never noticed” where the produce they buy in stores comes from, yet 85 percent agreed “consumers should have more locally-grown fruits and vegetables available to them.” Ninety-seven percent agreed “buying local produce is an effective way to keep farms viable in the Northeast.”

Food Consumption Trends

As food consumption changes on the national level, new market opportunities for agricultural products are continuously being created. This brief discussion shows a trend that the poultry industry has capitalized upon, and further analysis may reveal others that Upper Shore farmers could tap into.

Americans now consume more food, bigger portions, more snacks and more calories than they did in 1970. As of 1997, Americans were consuming 50 percent more grain products, 25 percent more fruits and vegetables, eating leaner meats, and drinking lower

fat milk than they did in 1970 (Putnam 1999). Table 1 provides further details on consumption changes between 1970 and 1997.

Table 1. Changes in U.S. per capita food consumption, 1970-1997	
Food Item	% Change 1970 to 1997
Cheese	146
Carbonated soft drinks	118
Poultry	92
Flour and cereal products	48
Caloric sweeteners	26
Fats and oils	25
Fruits and vegetables	24
Fish	24
Alcoholic beverages	17
Red meat	-16
Eggs	-23
Beverage milk	-23
Coffee	-32

Source: Judith Jones Putnam and Jane E. Allshouse. *Food Consumption, Prices and Expenditures, 1970-97*. Statistical Bulletin No. 965. USDA: ERS, Food and Rural Economics Division, April 1999.

Americans are also spending less of their income on food. In 1997, only 10.7 percent of disposable income was spent on food, compared to 13.8 percent in 1970. However, U.S. consumers are spending more on higher-value, processed foods—in 1997, 45 percent of total food spending was on away-from-home meals and snacks compared to only 34 percent in 1970.

A number of factors have changed food consumption patterns since 1970. New and more convenient products and away-from-home meals have catered to busier lifestyles. Social and demographic factors such as an increase in ethnic diversity, more one-parent households, an aging population, more two-income households and smaller households have all had an impact on food consumption. The continued research and increasing amount of information available to the consumer about the relationship between diet and health, an increased interest in nutrition, more nutrition labels and federal government guidelines on nutrition have also shaped food consumption and marketing trends. Other factors playing a role include more imported foods, increased disposable income, relative price increases in foods, more food assistance to the poor and food enrichment policies.

Nursery and Greenhouse Products

Local nursery industry representatives suggest that the Upper Shore region has an ideal climate to compete favorably in the nursery industry in the Mid-Atlantic and Northeast regions. The region is well poised to take advantage of this growth industry: U.S. sales of

floriculture and nursery crops jumped 23 percent, from \$102 to \$132 per household between 1992 and 2003 (Jerardo 2003). This increase is largely a reflection of increased demand and price increase over the past decade for bedding and garden plants, potted flowering plants, and foliage plants for patio and indoor use. These consumption trends follow rapid expansion of the U.S. economy as well as increases in home construction and ownership from 1992 to 2000. The domestic wholesale price index of potted flowering plants and bedding and garden plants also increased significantly during this time period. Potted flowering plants increased 18 percent while bedding and garden plants rose by 15 percent between 1989 and 2002. Cut flower prices remained flat, causing growers to shift production towards bedding and garden annuals and perennials. Potted plants are protected from imports while foreign competition in the cut flower market is significant.

Organic Products

Increasing consumer demand has created new markets for agricultural producers. While Maryland currently ranks low in the amount of organic acres under cultivation, opportunities may exist in organic products for Upper Shore farmers. Some key national-level findings include (Greene 2003):

- Annual growth in retail sales of organic food products has equaled or exceeded 20 percent since 1990;
- Acreage of certified organic cropland doubled in the U.S. between 1992 and 1997 (Table 2);
- While produce is the top selling organic category, organic dairy was the fastest growing segment in the 1990s with a sales increase of over 500 percent between 1994 and 1999;
- Organic products are available at 20,000 natural food stores and in 73 percent of conventional grocery stores nationwide;
- Over 800 new organic products were introduced in the first half of 2000;
- Organic sales have increased from approximately \$1 billion in 1990 to \$3.3 billion in 1996 to \$7.8 billion in 2000;
- Certified organic acreage in Maryland more than doubled over four years increasing from 1,645 acres in 1997 to 3,590 acres in 2001.

Table 2. U.S. certified organic acreage, livestock numbers and farm operations, 1992–2001				
Item	1992	2001	Change 1992-2001	% Change 1992-2001
<i>U.S. certified farmland (acres)</i>				
Cropland	403,400	1,304,766	901,366	223%
Pastureland	532,050	1,039,505	507,455	95%
Total	935,450	2,343,924	1,408,474	151%
<i>U.S. certified animals (numbers)</i>				
LIVESTOCK				
Beef cows	6,796	15,197	8,401	124%
Milk cows	2,265	48,677	46,412	2,049%
Hogs & pigs	1,365	3,135	1,770	130%
Sheep/lambs	1,221	4,207	2,986	245%
Total livestock	11,647	71,216	59,569	511%
POULTRY				
Layer hens	43,981	1,611,662	1,567,681	3,564%
Broilers	17,382	3,286,456	3,269,074	18,807%
Turkeys	No data	98,653	Unknown	
Other/unclassified	No data	17,244	Unknown	
Total poultry	61,363	5,014,015	4,952,652	8,071%
Total certified operations	3,587	6,949	3,362	94%

Source: Catherine Greene and Amy Kremen, U.S. Organic Farming in 2000-2001: Adoption of Certified Systems. USDA: ERS, Resource Economics Division, Agriculture Information Bulletin No. 780.

Recent studies on the profitability of farming systems have found the following:

- Organic price premiums give organic farming systems similar or higher profits than conventional systems—organic milk price premiums were 50 to 72 percent greater than conventional products between 1996 and 1999;
- Organic systems may be more profitable than conventional profitable systems without the price premiums. For example, organic grain and soybean in the Midwest was more profitable than that of conventional systems because of lower input costs, higher yields in drier soils, and crop mix;
- One recent study that compared organic to conventional apple growing on the Central Coast of California found higher yields and higher returns under the organic system;
- Organic soybeans and grains had considerable price premiums during the 1990s, of over 50 percent for corn, soybeans, wheat and oats from 1993-1999.
- Organic farming systems have been more extensively adopted by the fruit, vegetable and specialty crop industries than by the grain and oil seed industries.

Over 1 percent of dry peas and tomato crops were grown organically in 1997, and approximately 2 percent of apple, grape, lettuce and carrot crops. Close to one-third of the “mixed vegetable” and herb crops were organically grown in 1997.

- In contrast, only about .02 percent of corn, soybean, and wheat crops were grown organically in 1997. Oats, barley, sorghum, rice, spelt, millet, buckwheat, rye, dry peas, lentils, dry beans, flax and sunflowers were also produced organically in 1997.
- Due to the increased demand for organic dairy products, organic hay growers are getting up to 40-50 percent premiums (Lenhart 1998). This is in part due to the growing market for organic soybeans for food, especially in Japan where in 1998 a bushel could fetch more than \$20. In the U.S., demand for organic milk and other organic dairy products has increased since it became legal to sell milk from cows treated with bovine growth hormone (also called BST). Organic dairymen get just over \$17 per hundredweight for their milk.

While the U.S. ranks fourth in the world with total land managed using organic practices at 2.34 million acres, it is not in the top ten when organic is counted as a percentage of total farmland. Switzerland leads this category at 9 percent, followed by Austria (8.64 percent) and Italy (6.76 percent). Approximately 0.3 percent of U.S. cropland is managed organically. Most European countries as well as several U.S. states, including Minnesota and Iowa, have begun subsidizing conversion to organic farming systems in order to maximize environmental benefits of farming. Conversion levels in Europe have been much higher than in the U.S. For the first time in the 2002 Farm Bill, USDA offered small initiatives aimed at assisting producers converting to organic practices, including certification cost-share support, research and technical assistance, conservation initiatives, marketing order exemptions, export promotion and crop insurance. Obstacles to conversion include a limited awareness of organic farming, a lack of marketing and technical infrastructure, and high costs and risks of shifting to a new way of farming.

A recent survey commissioned by CFI suggests a high level of consumer interest in organic products in Maryland. Eighty-nine percent of consumers surveyed indicated they would buy local organic products if they cost the same as non-local non-organic food. The majority of respondents (52 percent) said they would pay an extra 10 percent for local, organic food products. Organic vegetables led the way in consumer interest (89 percent of those polled) with organic fruits a close second at 80 percent, organic dairy and grains (both at 28 percent), meat at 27 percent and poultry at 25 percent.

Poultry

While many other opportunities exist and will come to pass in the future, poultry remains the backbone of Delmarva's economy. New opportunities, such as Delmarva branded and Delmarva Identity Preserved should be incorporated into the region's poultry companies' sales efforts. Delmarva poultry can now distinguish itself from the poultry industries in other regions due to the level of organization established through the 2004 avian influenza outbreak and operating in the context of more stringent environmental regulations.

APPENDIX D

Eastern Shore 2010: A Regional Vision
Goal Two: Economic Development Support for
Resource-Based Industries

A White Paper of Options Focusing on Increasing Economic
Development Support for Agriculture, Forestry and Fisheries on
the Upper Eastern Shore of Maryland

Report prepared for the
Maryland Center for Agro-Ecology, Inc., Queenstown, Maryland

February 2004

Developed and Written by:

American Farmland Trust



ACKNOWLEDGMENTS

The Eastern Shore Land Conservancy initiated this project, and funding was provided by the Maryland Center for Agro-Ecology, Inc. Special thanks to members of the Working Landscapes Task Force for their support and ongoing participation in this project: Herbert Andrew, Ken Bounds, Betty Causey, William Collier, Bryan Coster, John Draper, Paul Gunther, John Hall, Wilbur Levengood, Jr., Katherine Magruder, Kevin Morse, Joanne Richart-Young, P.A.M. Shaller, John Trax, JOK Walsh and Larry Walton.

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American Farmland Trust (AFT) is a private, nonprofit conservation organization founded in 1980 to protect our nation's strategic agricultural resources. AFT works to stop the loss of productive farmland and to promote farming practices that lead to a healthy environment. AFT provides a variety of services to landowners, land trusts, public officials, planners, agricultural agencies and others. Services include Cost of Community Services studies, workshops on farmland protection and estate planning, farmland protection program development and agricultural economic analysis.



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Economic Development Support for Resource-Based Industries

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EXECUTIVE SUMMARY

The Eastern Shore Land Conservancy (ESLC) hired American Farmland Trust (AFT), with funding from the Maryland Center for Agro-Ecology, Inc. (MCAE), to develop a white paper of options focusing on increasing economic development support for agriculture, forestry and fisheries on the Upper Eastern Shore of Maryland.

In August 2003, a task force consisting of Farm Bureau representatives, County Economic Development officials, Cooperative Extension agents from the Upper Shore counties and representatives from Mid-Atlantic Farm Credit, the Mid Shore Regional Council, Chesapeake Fields Institute and Vision Forestry was organized (see Acknowledgments for full list of task force members). The charge of the task force was to assist in the development of the white paper, and the task force met to do so three times during the fall of 2003. AFT conducted a nationwide search to identify economic development plans and initiatives pertaining to agriculture, forestry and fisheries. Numerous plans were identified and reviewed, and information relevant to the Eastern Shore was incorporated into the white paper.

Economic impact research conducted by the Business, Education and Community Outreach Network at Salisbury University using IMPLAN data indicates that resource-based industries are a major economic engine of the Upper Shore, accounting for 22 percent of all economic output. However, these industries face considerable challenges. Between 1982 and 1997 the Upper Shore lost 1,428 agricultural related jobs and the Delmarva Peninsula lost 81,900 acres of farmland.

In order to preserve agriculture, forestry and fisheries on the Upper Shore and one of our most valuable assets—open, productive land—it will be vital that county economic development efforts increase their support for resource-based industries.

Key options for increasing support for resource-based industries:

- 1. Increase business development assistance to resource-based businesses.**
Business consulting in enterprise development, marketing and financial management to farm-, forestry- and fisheries-related businesses can offer assistance to producers who want to diversify into new crops and expanding market opportunities.
- 2. Improve the marketing capacity of the resource-based industries and support diversification.**
Most resource-based businesses are limited in what they can produce by their marketing capability. These business owners need an expanded capacity to market their products.
- 3. Improve workforce availability and retention for resource-based industries.**
Resource-based industries are dependant on the availability and retention of skilled and unskilled workers. The shortage of laborers is a critical issue to these industries on the Upper Shore and around the country.
- 4. Improve access to financing and capital for resource-based industries.**
It is important for resource-based industries to have access to financing and capital for entrepreneurial business development.

It is also important that the region work cooperatively to maximize available resources and support ongoing initiatives. The above options could be accomplished through a regional partnership and housed under one of the regional economic development entities on the Shore. Sharing the expense of the program would keep program costs to each county at a minimum, and funding could be matched by the Maryland Economic Development Assistance Fund, USDA and other grants. If funded, the Delmarva Conservation Corridor Program would also supply monies for this work.

The above work will continue through the spring of 2004 with the creation of a regional economic development strategy for resource-based industries. The strategy will identify the most promising opportunities for retaining and expanding the resource-based industries, as well as any impediments or challenges these industries face now or may be confronted with in the future.

BACKGROUND

Eastern Shore 2010: A Regional Vision (ES 2010) is an inter-county land use agreement proposed in the spring of 2002 by the Eastern Shore Land Conservancy (ESLC) with the guidance of a steering committee chaired by Congressman Wayne Gilchrest and former Maryland Governor Harry Hughes. The agreement encourages the Upper Shore counties of Cecil, Kent, Queen Anne's, Talbot, Caroline and Dorchester to work together to achieve common goals that focus on key land protection and growth management elements. Among those goals (Goal # 2) is to: **“Recognize our resource-based economy as a key part of the Eastern Shore heritage and future by integrating agriculture, fisheries, and forestry into each county’s economic development plan by 2005.”**

This movement already has begun on the Upper Shore, with several important initiatives leading the way. Chesapeake Fields Institute (CFI) was organized to address the profitability issues of farmers on the Eastern Shore and Delmarva region. CFI’s mission is “to strengthen the profitability of traditional agricultural markets for family farms, while conserving the region’s natural and cultural resources.” It is currently working on a project to increase the profitability of grain farming by using soybeans and wheat for bread and snack foods. Cecil County, Maryland, recently hired an agricultural development specialist to help local farmers market their products and to address agriculture’s needs in county government. County Extension and economic development offices across the six-county region are working with farmers on diversification, direct marketing, entering new markets and other strategies for increasing profitability. ES 2010 will build off these and other local successes and support their ongoing operations.

ES 2010 grew out of the concern for preserving the way of life in the six Upper Shore counties, as well as the landscapes and the industries that rely on those landscapes for their well-being. It is an initiative that aims to step up current efforts and increase the amount of resources available to address these issues. Goal # 2 specifically focuses on increasing economic development opportunities for agriculture, forestry and fisheries.

To achieve this goal the ESLC formed a task force of local economic development officials and the farming, forestry and fishing industries. The task force includes representatives from County Economic Development offices/corporations, Cooperative Extension, Farm Bureau, Chesapeake Fields Institute, Mid-Atlantic Farm Credit, the Mid-Shore Regional Council and Vision Forestry.

The task force’s charge is to assist in the development of this white paper that lays out for local governments voluntary options aimed at strengthening the Eastern Shore’s resource-based industries—farming, forestry and fishing. The task force met three times in the fall of 2003 and offered specific suggestions on how counties could step up efforts to support local resource-based industries.

ESLC hired American Farmland Trust (AFT) to coordinate the work of the task force, both to write this white paper and to develop a comprehensive regional strategy for resource-based industries. The strategy, to be released in the summer of 2004, will identify the most promising opportunities for retaining and expanding the resource-based industries, as well as any impediments or challenges these industries face now or may be confronted with in the future.

PURPOSE

The purpose of this white paper is to augment existing efforts and offer Upper Shore counties a menu of options for economic development support that they could use to help local resource-based industries. These options are meant to be incorporated into or are drawn from existing county plans and strategies and existing economic development efforts.

Even more important than the specifics of the options and the commitment of ES 2010, it is vital that county economic development efforts increase their support for resource-based industries, as these industries reflect our traditions and leverage one of our most valuable assets—open, productive land. It is also important to note that this process will not end with the completion of the white paper but will continue with recommendations in a regional strategy and the efforts of individuals and organizations to address new opportunities for resource-based economic development.

INTRODUCTION

The Upper Shore region, made up of Cecil, Kent, Queen Anne's, Talbot, Caroline and Dorchester counties, comprises the northwest sector of the Delmarva Peninsula. This region is part of what is often considered the largest contiguous block of farmland between Maine and Virginia. Agriculture, forestry and fisheries always have been the foundation of the economy here and remain the top industrial sector, accounting for approximately one-third of the economic output for this industry sector across the whole Delmarva Peninsula.

Resource-based industries make up a substantial portion of each county's economy as well as of the region's economy overall. They account for 22 percent of the region's total economic output, or more than \$2 billion annually. In fact, direct output alone was nearly \$1.3 billion in 1999 (Table 1).

Table 1. Economic Output of Resource-Based Industries (RBI), Upper Shore Counties						
County	Direct Output¹	Indirect Output²	Induced Output³	Total Output	Total Output, County	RBI⁴ % of total
Cecil	\$240,277,650	\$62,976,272	\$75,830,170	\$379,084,095	\$2,784,840,000	14
Kent	\$122,608,814	\$32,378,223	\$30,357,023	\$185,344,057	\$820,596,000	23
Queen Anne's	\$194,315,254	\$66,456,012	\$57,336,800	\$318,108,064	\$1,291,180,000	25
Caroline	\$124,081,398	\$28,359,941	\$24,905,640	\$177,346,979	\$1,075,540,000	16
Talbot	\$207,423,188	\$81,094,230	\$100,450,926	\$388,968,342	\$2,076,547,000	19
Dorchester	\$398,893,764	\$134,360,662	\$71,545,577	\$604,799,996	\$1,206,540,000	50
Totals	\$1,287,600,068	\$405,625,340	\$360,426,136	\$2,053,651,533	\$9,255,243,000	22

Source: Business, Economic, and Community Outreach Network at Salisbury University, IMPLAN, 1999.

Agriculture is a major employer on the Upper Shore. Thirteen percent of the region's jobs are provided by agriculture, food processors and related services (Table 2).

Table 2. Agricultural and Related Employment, Upper Shore Counties						
County	Direct Employment	Indirect Employment	Induced Employment	Total Employment	Total Employment, County	% of total
Cecil	1,350	448	620	2,418	31,634	8
Kent	1,109	286	319	1,714	10,756	16
Queen Anne's	1,318	588	563	2,469	16,761	15
Caroline	1,025	383	366	1,774	12,876	14
Talbot	1,798	844	1,014	3,656	27,074	14
Dorchester	1,595	805	805	3,205	15,129	21
Totals	8,195	3,354	3,687	15,236	113,230	13

Source: Business, Economic, and Community Outreach Network at Salisbury University, IMPLAN, 1999.

However, these industries face serious challenges. Between 1982 and 1997, the Delmarva Peninsula lost 81,900 acres of agricultural land to developed uses (Figure 1).

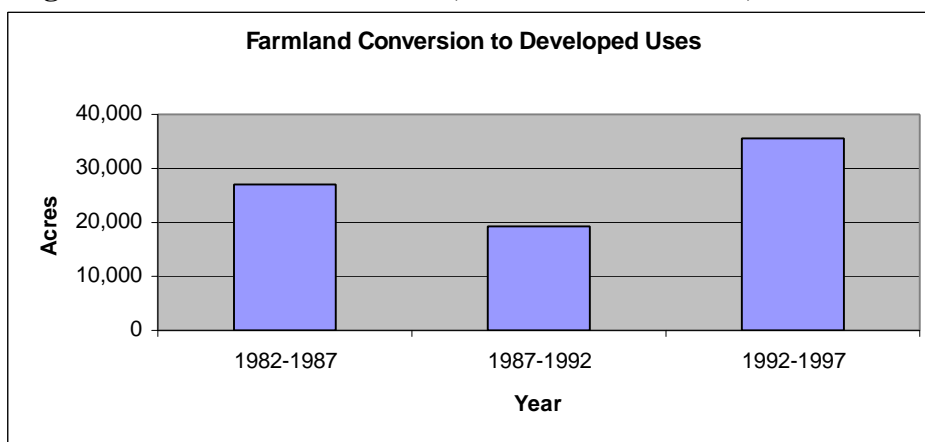
¹ Direct output is total industry production for a given year. It is equal to shipments plus net additions to inventory.

² Indirect output effects describe the interaction of resource-based industries purchasing from other local industries.

³ Induced output effects are the interaction of institutions—typically household spending from income generated by resource-based industries.

⁴ Resource-based industries include agriculture, forestry, fisheries and mining.

Figure 1. Farmland Conversion, Delmarva Peninsula, 1982 to 1997



Source: USDA, National Resource Inventory, 1982, 1987, 1992 and 1997

Job opportunities also are in decline. The Upper Shore counties lost 1,428 agricultural jobs between 1982 and 1997 (Table 3).

Table 3. Agricultural Employment, Upper Shore Counties, 1982 to 1997						
County	1982	1987	1992	1997	# Decrease, 1982 to 1997	% Decrease, 1982 to 1997
Cecil	1,071	945	855	839	232	22
Kent	976	952	924	830	146	15
Queen Anne's	986	875	826	757	229	23
Caroline	1,132	972	902	840	292	26
Talbot	704	586	507	379	325	46
Dorchester	774	660	586	570	204	26
Totals	5,643	4,990	4,600	4,215	1,428	25

Source: Regional Economic Information System, 1982, 1987, 1992 and 1997

In addition, global competition, unstable and unpredictable market conditions, a lack of diversification, and the inability to capture a significant profit from the products produced here add to the obstacles these industries face. These are not new challenges but have proven persistent and have even intensified in recent years.

ES 2010 outlines a comprehensive approach to preserving and expanding the resource-based industries as well as the rural heritage that has defined the Eastern Shore for centuries. **Crucial in this approach are direct actions that can be taken by local and state governments and private organizations to retain and expand these industries.** In the following section, four options are presented that outline potential actions of this nature. They are presented for consideration by Upper Eastern Shore counties as they plan for meeting their commitment to resource-based industries under Goal # 2 of ES 2010. As they are general in nature, these options should be considered as a starting point and will be further refined by counties as this project continues toward a comprehensive regional strategy, due in the summer of 2004.

LOCAL EFFORTS UNDERWAY

Several important local initiatives aimed at improving local productivity of resource-based industries already are underway on the Eastern Shore. Some are businesses, both in operation and just getting off the ground; others are programs that support agricultural viability. A regional partnership could benefit these programs by encouraging more farmer participation, conducting outreach, researching funding opportunities and providing other assistance as needed.

1. **Chesapeake Fields Institute** just completed its second year of growing and shipping natto soybeans to Japan. This shipment was one of the largest of its type sent out of the Port of Baltimore. CFI has spent thousands of dollars researching the marketplace and completing feasibility studies on agricultural products that can be grown on the Eastern Shore.
2. The **Mid-Atlantic Biofuels Group** is conducting research to determine whether a \$30 million dollar ethanol production plant would be successful on Maryland's Eastern Shore. The plant would use barley to produce ethanol, allowing farmers to double crop soybeans in the same ground after harvesting barley.
3. **Boyle Brothers Seed Cleaning** of Centreville offers local farmers the opportunity to grow grains for seed rather than selling them as a commodity. This is a good example of a local value-added agricultural business.
4. **Schillinger Seed, LLC**, operates a research station in Queen Anne's County that focuses on developing new soybean varieties and corn hybrids. The Eastern Shore provides an ideal location for this type of business.
5. Local **canneries, meat packers and poultry and seafood processors** make up a significant part of the Eastern Shore's economy. They account for \$464 million in economic output and provide 2,900 jobs.
6. Local **economic development and tourism** offices have promoted farms, fishing marinas and other rural businesses in varying degrees. **Cecil and Kent Counties** are developing brochures to promote local farms. Tourism represents a significant opportunity for local farms to capitalize on visitors coming into the region.
7. The **Mid-Shore Regional Council** recently developed a Comprehensive Economic Development Strategy (CEDS) that includes as one of its six goals to "strengthen and diversify agriculture, fisheries and support newest techniques in aquaculture and agriculture." The recently established **Upper Shore Regional Council** will have a similar focus, setting the stage for a regional partnership for development of resource-based businesses.
8. The **Chesapeake Bay Region Technical Center of Excellence** works in all nine counties of the Eastern Shore to create and help recruit new businesses that have a significant impact on the region. The Center would make an ideal partner in the above alliance for recruitment and creation of resource-based businesses.

COUNTY-SPECIFIC OPTIONS FOR INCREASING ECONOMIC DEVELOPMENT SUPPORT FOR RESOURCE-BASED INDUSTRIES

The efforts identified in the previous section are very important to the future economic prosperity of resource-based industries on the Eastern Shore. In addition, counties and regional economic development associations throughout the nation are addressing similar issues. Some local examples are mentioned below. Also, economic development plans from selected counties and regions were reviewed to identify new ideas and approaches from other parts of the country that could be applied in the Upper Shore.

In developing a strategy to assist these industries, it is important to recognize that there are fundamentally three different segments.

- 1.) **Commodities** on the Upper Shore include primarily poultry, grains, dairy, beef and pork. Agribusinesses producing these compete on the basis of price. Prices of commodities are subject to international conditions and fluctuate seasonally. Commodity products form the economic backbone of the agricultural economy on the Upper Shore. It will be crucial to provide support in order to retain these industries.
- 2.) **Value-added** producers compete on the basis of customer benefits by marketing a differentiated product. This includes direct-marketed products, organic foods and feed grains, cooperatives, identity-preserved grains for bread and other products. Value-added products are a growing segment on the Upper Shore and allow farmers to realize additional revenue streams through diversification. Producers interested in value-added need assistance in marketing and business development.
- 3.) **Recruiting/expanding existing corporations and/or academic institutions** engaged in agricultural genetics, agriceutical and biotechnology research also holds promise. This is a rapidly expanding sector of economic activity, and the Eastern Shore is ideally suited geographically to host organizations involved in this kind of work.

All of the above segments can benefit from the ideas mentioned below. Research recently conducted on several Eastern Shore counties has concluded that farm and forest lands pay more in taxes than they receive in services. Additional assistance will not only benefit resource-based industries but makes good fiscal sense.

Options for Consideration

1.) Increase business development assistance to resource-based businesses.

Business consulting in enterprise development, marketing and financial management to farm, forestry and fisheries-related businesses would assist small and start-up businesses. Training economic development professionals to be more proficient in agriculture, forestry and fisheries business development could spur growth in this industry sector. Assistance could be offered to producers who want to diversify into new crops and expanding market opportunities. All business development resources, including the Maryland Small Business Association (SBA) and Department of Business and Economic Development (DBED), should be utilized fully to assist farm, forestry and fisheries businesses.

Implementation

- a.) Advocate for the creation of a resource-based business development support program. For example, hire a resource-based industry development specialist to advance the following objectives.** This position would address the needs of resource-based industries and work with Cooperative Extension to provide business and economic development assistance.

Examples:

- The University of Maryland Cooperative Extension has held numerous educational meetings throughout the area to address new opportunities for resource-based economic development. The wine-grape movement in Queen Anne's County, the expanded greenhouse projects on the Lower Shore, the sporting clay opportunities, and the for-fee hunting opportunities have all been introduced and supported by Extension. Organic opportunities have also been discussed at length, including a Kent County group that met on a regular basis in the late 1990s. Extension has also taken the lead to establish farmers' markets in several areas of the state and has linked local growers with market research efforts.
- In 2003, the Michigan Partnership for Product Agriculture coordinated the formation of an agricultural innovation center. The center works to deliver product development, marketing, and research and development services to entrepreneurs with resource-based businesses. To launch the center, Michigan State University (MSU) received a \$1 million grant from USDA; annual appropriations will be made through MSU Cooperative Extension's budget to support ongoing operations. Connected to the center are nearly 20 Agricultural Innovation Counselors who represent all regions of the state. The Counselors assist clients in identifying new market opportunities, developing new products and establishing new businesses.
- Under its Farm Viability Enhancement Program, the commonwealth of Massachusetts provides a team of business consultants and \$20,000 to \$40,000 grants to farmers who qualify for the program and agree not to develop their land for five to 10 years.
- Agricultural development specialists representing nine counties in Maryland (Baltimore, Calvert, Charles, Cecil, Frederick, Howard, Harford, Montgomery, and St. Mary's) assist farmers with marketing, including developing promotional materials and setting up farmers' markets, promoting agritourism and providing legislative support and a voice for agriculture on the county level.

- b.) Access existing incentives and advocate state-level creation of additional financial economic development incentives for resource-based businesses.**

Example: In 1997, Michigan became the first state to adopt tax-free Renaissance Zones to help create new jobs and increase investments. These zones are credited with luring 128 companies to the state, creating 3,663 new jobs and more than \$330 million in new investments. Michigan recently expanded the Renaissance Zones law to include the farming and food processing industries. Ten such zones will be located throughout the state, offering qualified processors to operate tax-free for up to 15 years. The Michigan Department of Agriculture is working with the Michigan Economic Development Corporation to administer this program.

- c.) Adapt and incorporate local and regional business retention and expansion tools and strategies to support resource-based industries.** Provide farmer recruitment, funding, and outreach and education assistance to existing initiatives such as Chesapeake Fields Institute and the Mid-Atlantic Biofuels Group.

Examples:

- Maryland Cooperative Extension is partnering with the Howard County Economic Development Authority on offering a 12-week business development course to local farmers, “Tilling the Soil of Opportunity,” through the NxLevel Agricultural Entrepreneur Training Program. This course is geared toward individuals interested in starting a non-commodity agricultural enterprise. Participants will receive training in innovative ideas and enhanced marketing opportunities.
- The Northern Lakes Economic Alliance, a regional economic development organization covering Antrim, Charlevoix and Emmet counties in Michigan, employs an agribusiness development specialist who explores new markets for local farmers and works with them on pursuing new opportunities.
- Loudoun County, Virginia, recently kicked off a “Farm Business Planning Initiative” aimed at producers interested in high-value agricultural enterprises. The program will conduct an assessment of the resources of current operations and provide assistance to help create farm business plans.

- d.) Work to promote connection between Service Corps of Retired Executives (SCORE) network and resource-based businesses through local economic development office or chamber of commerce.**

2.) Improve the marketing capacity of the resource-based industries and support diversification.

Most resource-based businesses are limited in what they can produce by their marketing capability. Often, each individual farmer, fisherman or forester must promote his/her own products. These business owners need an expanded capacity to market their products. Execute a well-planned and coordinated “buy local” campaign to promote consumer purchase of Eastern Shore agriculture, forestry and fisheries products. Promote farm stands, farmers’ markets, local seafood and forestry products and encourage local supermarkets to stock local products. This could have many potential benefits to the Shore including increased income to local farmers, foresters and fisherman; local dollars remain in local circulation; reduction in transportation costs; and retention or growth in local jobs.

Implementation

- a.) Regional resource-based support entity [outlined in 1 (a)] acts as a broker between producers and local markets, including restaurants, grocery stores and other venues.**

Examples:

- Maryland Department of Agriculture’s “Maryland’s Best” is a branding program that works to promote Maryland agricultural products and access high-value markets, such as restaurants and small market opportunities. This program could be used or customized to promote Eastern Shore products.

- The Appalachian Sustainable Agriculture Project's *Local Food Guide* is a regional effort to promote farm products and services in the mountains of western North Carolina. This attractive, well-organized guide provides details on local farms, bed & breakfasts, caterers and bakers, grocers, restaurants, CSAs and tailgate markets.

b.) Regional resource-based support entity creates a Web site and other promotional materials that list county-based businesses and their products.

Example: Cecil and Harford counties have Web sites featuring products and services offered by the agricultural community. Included is a directory of farms, agricultural markets and events, and information on agricultural land preservation.

c.) Regional resource-based support entity, Cooperative Extension and Chamber of Commerce organize an annual tour of resource-based businesses that produce products for retail sale.

Examples:

- The Maryland Department of Agriculture (MDA) has been working closely with the Office of Tourism Development to get agritourism sites listed on the Maryland Field Trip Guide, Destination Maryland and the Maryland Calendar of Events. MDA also lists agritourism locations on its Web site.
- Howard County promotes farms that sell products directly to consumers. These farms sell a wide diversity of products including fruit, vegetables, jams, flowers, herbs, turkeys, and more. Services offered by the farms include horseback riding, hunting, petting zoos, hayrides and birthday parties. One farm here had 11,000 visitors in 2002.
- Loudoun County, Virginia, has two guides to promote its agritourism industry. The *Loudoun Wine Trail* lists wineries that cater to visitors, while the *Fall Color Tour* highlights all of Loudoun's farms that are open to the public. The *Tour* takes place on a specific weekend.

d.) Regional resource-based business support entity organizes an ongoing farm-marketing task force that identifies new opportunities and develops strategies for developing new products. For example, research market opportunities for products and services in the nearby metropolitan areas of Baltimore, Washington, D.C., Philadelphia, and other areas.

Example: Chesapeake Fields Institute has conducted extensive research to identify an appropriate value-added food processing opportunity that can use grain and soybean products that are easily grown on the Eastern Shore. The resulting products can be sold in nearby markets and identified as locally grown on the Eastern Shore.

e.) Pursue USDA and other grants to develop community food systems, such as the Farm-to-School program, and encourage other county-operated institutions (senior centers, detention centers) to purchase products grown on the Eastern Shore.

Example: The farm-to-school movement began in 1996 in California and Florida when two schools began programs that involved local farmers supplying fresh produce to the schools. Today, at least 75 school districts with over 500,000 school children have such programs that also involve field trips and education about the importance of farming and nutrition.

- f.) Regional resource-based business support entity in partnership with Eastern Shore Heritage, Inc., Chesapeake Country Scenic Byway Association, county public works and Maryland Transportation Authority** provides directional signage to resource-based industries that sell retail products. Produce guide maps to correspond to signage.

Examples:

- Maine has developed a network of signage on the U.S. Route 1 corridor that effectively directs visitors to resource-based and other tourist attractions. Businesses that are identified by the signage include bed & breakfasts, fishing boats, farm stands, farmers markets, eco-tourism operations and local cottage industries, such as jam/jelly processors.
- The five counties of New Jersey's "Great Northwest" (Hunterdon, Morris, Somerset, Sussex, and Warren) have partnered with Rutgers Cooperative Extension to develop a brochure that highlights the region's agritourism attractions. The brochure lists farms that offer goods and services to visitors ranging from vegetables to Christmas trees to hayrides.
- Italy has a network of "agritourismos" that welcome visitors for a wide variety of activities (B & B, wine tasting, hayrides, etc.). The network has special signage and promotional materials.

- g.) Fund cooperative efforts toward local and regional marketing and branding of resource-based businesses.**

Example:

- The Delmarva Economic Development Association's "Shore to Store" program promotes the availability of local produce by encouraging grocers to carry local products. In 2002, 100 stores participated in the program.

3.) Improve workforce availability and retention for resource-based industries.

Resource-based industries are dependant on the availability and retention of skilled and unskilled workers. The shortage of laborers is a critical issue to these industries around the country.

Implementation

- a.) Establish communication with the Maryland Department of Labor, Licensing and Regulation (DLLR) and University of Maryland Cooperative Extension to determine the needs of farm, forestry and fisheries businesses.**
- b.) Staff the coordination of a shared labor pool among resource-based businesses.**
- c.) Assist resource-based business owners in obtaining affordable employee benefits such as health insurance and liability insurance. An example would be to build incentives for the county HMO to provide affordable insurance to these businesses.**
- d.) Provide assistance to resource-based business owners in meeting the housing and language needs of migrant workers.**
- e.) Promote connections between local high schools and resource-based business that need summer help.**

Example:

Cornell Cooperative Extension (New York) has taken a proactive approach to strengthening the state's agricultural workforce by meeting the needs of employers, workers and beginning farmers. Its programs include the following:

- Agricultural Workforce Certification Program – assists New York farmers with the recruitment, training and placement of farm workers.
- Cornell Farm Human Resources Management Program – provides human resources research and training for farm managers.
- Cornell Migrant Program – addresses the needs and issues of migrant workers.
- Cornell Pro-Dairy Program on Human Resources Management.
- New Farmer Development Project – recruits and trains experienced immigrant farmers and helps them grow food for disadvantaged city neighborhoods.

4.) Improve access to financing and capital for resource-based industries.

It is important for resource-based industries to have access to financing and capital for entrepreneurial business development.

Implementation

- a.) Develop a revolving loan fund to provide gap financing for resource-based businesses;**
- b.) Maximize grant funding to resource-based industries by pursuing funding sources on page 17 and provide assistance to resource-based businesses in obtaining grants and low interest loans for startup, expansion and retention;**
- c.) Work to increase private investment in the resource-based industries by sponsoring an informational forum for investors and potential resource-based businesses that would consider locating in the region;**
- d.) Organize regional level resource-based industry lending program with community banks. Make lending to the resource-based industries a mandatory criterion for the placement of county funds with a bank.**

This would allow resource-based businesses to move into producing new products without selling off part of their land or equipment to generate the necessary capital.

FUNDING OPTIONS FOR REGIONAL PROGRAM

The resource-based business development support program outlined in option 1 (see page 11) would consist of one full-time staff person shared between Kent, Queen Anne's, Caroline, Talbot, and Dorchester counties (Cecil currently employs its own full-time agricultural development specialist). A program of this nature would require an annual operating budget of approximately \$60,000. This figure is based on estimated costs of existing programs.

Operating Budget, Years 1 to 5

Salary	\$45,000
Fringe	\$ 4,000
Travel and other expenses	\$ 4,000
Operating	\$ 7,000
Total	\$60,000

The initial costs of the program could be shared as follows:

Time Period	County Allocation	Other Fund Raising/Match	Total
Years 1 to 5	\$ 5,000/county \$25,000 total	\$35,000	\$60,000

A shared program between the five counties would promote regional cooperation and sharing of resources. Responsibility for raising funds outside of the suggested county allocation would be incumbent upon the program and project partners. Possibilities include the following:

1. **Grant funding:** Many sources of funding exist to support the options outlined above. For example:
 - i. United States Department of Agriculture (USDA) grant funding;
 - ii. Economic Development Administration (EDA) grants;
 - iii. United States Department of Commerce grants;
 - iv. Local foundations, such as Town Creek, and
 - v. National foundations, such as the Kellogg Foundation, that support agricultural-related efforts.
2. **Maryland Economic Development Assistance Fund:** Current statutes require that these funds be used in priority growth areas. However, Governor Ehrlich has called upon DBED to support statutory exceptions to the priority funding requirement so that these funds can be used for poultry projects.
3. **Capital campaign:** Campaign soliciting of local businesses and individuals to support resource-based businesses could also help fund initial costs.
4. **Delmarva Conservation Corridor (DCC):** This comprehensive five-year pilot program, which was included in the 2002 Farm Bill, aims to protect and conserve natural resources and make farming profitable, thereby preserving Delmarva's rural way of life. A major goal of the DCC is to make it easier for farmers to enroll in the various agricultural preservation programs the USDA offers through federal, state, local and

private programs. Currently, these programs operate independently, but with an established DCC they could function together and farmers could go to one place to sign up for any of the available programs. Maryland's total request is \$114 million. Five million is earmarked for financial support for rural development that is primarily focused on diversifying production through alternative crops and attracting new businesses.

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APPENDIX E

Focus Group Questions

Questioning Route (2 hours total):

Introductory remarks (10 min.) Explain the purpose of the focus group and that all the discussions are about their specific industry in the Eastern Shore.

Easy beginning question (approx. 10-15 min):

1. Please introduce yourselves. What is your name, what do you do and how long have you been doing it?

Introductory/Transition questions (20 min):

2. Overall, how do you see the state of ____? (*specify their industry*)
3. What is the single greatest challenge to ____? (*specify industry*)

Key questions (60 min.):

4. How do you see the future of ____? (*specify industry*)
5. What do you see as the greatest needs of ____ (*specify industry*)
6. If you could change one thing to make that future brighter, what would it be?
7. Take a moment to dream. If *anything* were possible, what would help you most?
Note to facilitator to prompt them if necessary: Consider financial, educational, regulatory, technical assistance, and other programs and institutions.

Ending questions (15 min.):

8. What advice do you have for us in developing a regional strategy for resource-based industries?
9. We asked you here to help us understand your needs, challenges, and what you would like to see for ____ (*their industry*) in the future. You've said (*have facilitator summarize the discussion*) Is there anything we left out?
10. Is there anything else you'd like to say that you didn't get a chance to say?

Results of Focus Groups

This expanded description of the focus group discussions is organized by themes:

- **Consensus Themes** emerged in every group;
- **Common Themes** came up in several groups but not all; and
- **Industry-Specific Themes** were important and specific to an industry, such as low prices or conglomeration, as well as points that support larger themes.

Focus group participants are listed at the end of this Appendix.

Consensus Themes

These issues were discussed in all of the focus groups. They are presented in random order.

1. Economic development agencies should be more supportive of resource-based industries.

Each group indicated that its industry was not recognized as a legitimate business but needs to be. Some suggested that economic development could help with identifying emerging markets and starting new resource-based enterprises.

Specific suggestions:

- Economic development offices could help farmers identify new and emerging opportunities and profitable business models.
- Marketing and distribution assistance would greatly help producers trying to diversify.
- Economic development could do more for local agriculture, such as promoting local foods and agritourism.

2. Agriculture, forestry and fisheries need to be proactive in educating government and the general public

Each group also discussed the opportunity and need to be proactive in educating both the general public and government officials about agriculture, forestry and fisheries.

Specific suggestions:

- A working educational farm where people can visit and learn about the issues and practices of these industries. Both farms and local governments should encourage tours on farms with schools and the general public. Education needs to be done on a local and regional level.
- Creating positive messages, such as those by the national beef and milk groups, on a regional basis.
- Positive media—newspaper articles, brochures and advertisements—that presents farmers, foresters and watermen in a positive light.
- Developing signage that alerts passers-by to farm areas and attractions.

- Real estate agents taking the time and responsibility to educate prospective buyers about the living situation here and all of the conditions created by farming, as well as showing them the covenants and restrictions of the subdivision and right-to-farm laws.
- Encouraging farmers to clean up their farms to present a good image in order to avoid problems with new neighbors.
- More education efforts explaining the benefits of agriculture to a community, including its net tax contribution, paying more in taxes than it requires in services.
- Fully supporting 4-H programs and an agricultural class requirement in schools.

3. An increasingly urban and suburban public doesn't understand what it takes to earn a living in a resource-based industry.

There was widespread agreement that the general public does not understand the agriculture, forestry and fishery industries. Many participants reported difficulties, one case leading to litigation, with new neighbors complaining about the routine farm operations, sights and smells such as dirty pigs, spreading manure, spraying chemicals, boat engine noise early in the morning and trucks going up and down the road. They suggest that these new neighbors were mostly from suburban and urban areas and do not understand what is necessary for agriculture, fisheries and forestry to operate. Many farmers expressed frustration with encroaching residential development and that they had to defend their existence and right to farm. They are concerned that many consider this region high in "quality of life," drawing people not to farm, but just to live here. In general, participants felt that there is a negative perception of farmers, foresters and watermen in the region.

Specific Suggestions:

- The state should play a larger role in this issue.
- The state could offer to pick up litigation against farmers in exchange for the farmer agreeing to participate in a state program.

4. Government is out of touch with resource-based industries

Similarly, each group felt that elected officials do not understand the issues of resource-based industries. Several participants suggested that many of the elected leaders who control the future of agriculture, forestry, and fisheries are from urban areas and represent an urban or suburban electorate. They feel that these individuals do not understand what is needed to ensure a viable future for resource based industries and often make decisions that are detrimental to these industries. There was considerable discussion around zoning issues that impede or eliminate farming, food processing and aquaculture practices. In general, participants felt the attitude on the state level needs to change and be more supportive to resource-based industries.

Specific Suggestions:

- Resource-based industry leaders should be involved in new policy making to ensure it doesn't inadvertently impact these industries.
- Government should work to promote and encourage farming, forestry, and fisheries and not against them.
- Address nutrient management laws that have caused the public to view farming in a negative way.

5. Participants were concerned by the rate and extent of development that is occurring in the region.

The amount of land available for agriculture and forestry is shrinking and the pattern of new development is causing fragmentation of the working landscape. Farmers, in particular, expressed concern that newcomers were driving up land prices, making it impossible for farmers to expand their operations or for new farmers to go into business.

Participants agreed that the state of Maryland should take the lead in developing and articulating a plan for agriculture. More specifically, there should be a state policy that agriculture should remain viable on the Eastern Shore.

Specific Suggestions:

- State and local governments should support smart growth principles, encourage development in growth areas, make it more desirable to work and live in cities and towns and create a disincentive for people to move into agricultural zones.
- State and county governments should also increase funding for agricultural land preservation programs to ensure the future of agriculture and forestry on the Eastern Shore.
- These programs should spend their money strategically keeping farms next to farms, protecting large contiguous blocks of land.
- These programs should be tailored to benefit working farmers—those who are trying to earn a living off their land.
- The MALPF program specifically should pay a higher premium to landowners who make their land available to working farmers for rental or for spreading manure.
- Manure transport dollars should be reallocated to MALPF and offered as an incentive to landowners who allow manure spreading.
- MALPF funds should be prioritized for areas where agriculture is viable.

Common Themes

These themes were discussed in several groups and are presented in random order.

1. Regulatory environment works against business; does not accomplish goals

Many of the groups discussed their concerns with the regulatory environment in Maryland. One group estimated that they now spent 10 percent of their time on regulations that were not in existence 10 years ago, and unlike other businesses, there is no way of passing on these costs. Several participants who were experienced farmers indicated that they do not know if they are in compliance or not, because there are so many confusing regulations. Farmers feel that the intent of the nutrient management law is good, but the implementation has been handled poorly. Some suggested that this issue is partially due to the regulations being created by government officials. The regulations also typically cause delays, thereby posing significant risk to the lender financing the project.

2. Shortage of labor

Most of the groups discussed experiencing a labor shortage. They report having serious difficulty in finding consistent, reliable labor. Some have used migrant labor and found the workers difficult to deal with because of reliability and language issues and questions of their legal work status. Factory jobs typically pay more than farm jobs and put farms at a disadvantage. While no one knew how to solve the problem, one group suggested that there need to be acknowledgment that the problem does exist and work toward a solution.

3. Difficulty with land transfer

Many reported difficulties in keeping their farm in the family because of high-cost estate taxes. Many farms are sold because the next generation cannot afford to pay these taxes. All farmers need to be educated on the special use valuation and the benefits of land conservation in order to avoid estate taxes.

4. Unfavorable business climate in Maryland

Considerable discussion revolved around Maryland's "unfriendly" business climate. Specific issues regarding this included:

- Health department laws regarding the sale of agricultural products are too restrictive, not uniform among different counties and need to be loosened up to allow farmers to sell directly to consumers.
- There are very few animal and fruit processors in the state because of health department regulations. This excludes producers from direct marketing opportunities.
- Some regulations are necessary but the state should allow small businesses to be small businesses. Regulations are sometimes good but sometimes overly burdensome.
- In Maryland, a lawyer is needed to do a title search and determine what is possible and what is not on any given property before its purchase. This makes buying land for farming operations much more complicated.

- There is a disconnect between local and state government. One participant reports being told by the state and the realtor that the land he was interested in was okay for a food processing facility, but that after its purchase the county would not approve it.
- One group discussed how Maryland operates under a “false economy”—so many dollars come into the state from the federal government, and legislators do not understand the difficulty regulations and more taxes pose to businesses. Other states seem to be more sympathetic to farmers with friendlier regulations. Pennsylvania and Delaware reportedly have more favorable health regulations that allow on-farm cottage industries, such as value-added processing.

5. Tourism becoming a larger industry

Most groups acknowledged that tourism is an important industry to the Eastern Shore. People need to recognize the transition from a resource-based economy to a tourism economy. Resource-based industries can benefit from this by marketing their operations as tourist destinations. This would also help people understand the issues of these industries.

6. Farmers need to capture more of consumer dollar

There was significant discussion around developing new markets for the products currently grown, increasing diversification and getting more of the consumer’s dollar. Many groups commented on the number of people getting into growing specialty crops. Niche markets and direct marketing practices seem to be thriving. However, participants also discussed challenges. For example, when growing specialty crops and selling them directly to consumers, marketing becomes as important as growing. There’s an incentive to do it as there is a greater return on investment in direct marketing than in wholesaling. But it also poses new challenges, such as developing the market and letting people know you want to sell. It takes a lot of research to determine which crops are most popular.

Specific Suggestions:

- Several farmers suggested that they need assistance on entering new markets because of the risk involved—it is difficult to find new markets for products and risky because they may become saturated or collapse. The new population that has moved to the Eastern Shore has created niche markets.
- There was some discussion that the goal of diversifying is to have a number of different enterprises so there is a diversification of income sources. When there is a crop or market failure, another product can take its place.
- Some suggested that most growers on the Eastern Shore who get into niche markets are on smaller farms, but there is also an opportunity to tap into niche markets with a larger acreage, such as growing organic field crops.

7. Develop local and regional food systems

Several groups discussed “regional or local food systems”—food being grown, processed, distributed, and consumed locally. Agriculture needs to be dealt with

on a regional level and not stop at county or state lines. Specific comments included:

- Regional agriculture should be preserved—a disaster would cause a breakdown in supply lines and we would only have about a week’s worth of food supply here in the region.
- There should be a local campaign to bring awareness to the issue of buying local foods—for economic and nutritional reasons. There should be more promotion of local agricultural products.
- Economic development could do more in promoting what is grown here. We need to capitalize on people who want to know where their food comes from and we should do this by labeling products that are grown on the Eastern Shore.
- The Delmarva Conservation Corridor should be funded because it addresses the need for regional agriculture to succeed.

8. Strengthen right to farm

Several groups suggested that the right-to-farm regulations on the Eastern Shore need to be strengthened to ensure that farmers can continue doing what they need to for farming to be viable. This may involve spraying chemicals, spreading manure, running a boat engine at night or whatever is necessary for the operation.

9. Work together to save the Chesapeake Bay

Most of the groups agreed that open land managed right saves the Bay and is better for the Bay than development. Comments included:

- The government policies to save the Bay are not working.
- The nutrient management laws have made farmers into the villain.
- We should move on the issues we all agree upon such as nutrient reduction, grasses, and habitat improvement for the Bay. We should support oyster aquaculture, as it will help with restoring the health of the Bay.

10. Invest in Secondary Processing or Manufacturing

The Eastern Shore could benefit from secondary processing of product.

Comments included:

- A lot of wood leaves the Eastern Shore and the state on trucks for processing elsewhere. Wood processing facilities would add jobs and create wood products from trees harvested locally.
- “I want to locally process or can produce. But, by state law this must be done in a licensed and inspected kitchen. This is a significant investment that I cannot afford right now, and it will be difficult to sort through all the zoning and septic issues. Locally, there is only one cannery left and it is not organic.”
- Queen Anne’s County is working on getting access to small kitchens for farmers. A mobile facility would help, as would a university or test kitchen.

11. Cooperative Extension

Extension was discussed in several groups, but there was not a consistent theme.

Comments included:

- Extension is not utilized enough. Issues such as estate taxes should be pushed and Extension agents could also educate new residents about farming and agriculture.
- Extension has not kept up with the new markets. It does not know about new niche markets or organic farming practices.
- It would be good to have help from Extension with grant writing and research projects.
- Extension agents don't understand the needs and issues of the niche markets and nursery and greenhouse industries.

12. Next generation of farmers

Most groups expressed concern about the next generation of farmers. It was suggested that someone should be able to start in this industry on his or her own without having agriculture in the family, without owning land or capital. That is difficult to do today. Land is too expensive for someone trying to enter the field. Farmers reported that very few people are entering this field and were unsure of who would be farming here in 50 years.

Industry-Specific Issues

Issues presented below each industry group were identified as important and specific to that industry.

Dairy

- Low milk prices are a major concern.
- The dairy industry is dwindling in this region and there are fewer people in the industry. It is more difficult to remain profitable.
- There are many "terminal" dairies now, and these will go out of business when the farmer retires.
- There are no new people getting into the dairy business. Land is worth more for other things.
- Dairy farmers cannot get an adequate return on their investment that is needed to pay for the land.
- There is considerable risk to growing or expanding a dairy herd. Nutrient management has exacerbated the problem because dairy farmers have a hard time finding enough land to dispose of manure.
- Dairies are likely to move out West and to areas where it is more economically viable to farm.
- Land ownership restricts expansion of dairies. Dairy farmers need more land for nutrient management and growing feed.
- Success of dairy is linked to demand. The dairy industry needs to offer more dairy products to consumers and emphasize the benefits of dairy products.
- It has become very difficult for the smaller and middle farmers to be in the dairy business. Milk is now being produced by the larger industrial dairies, and it is more difficult for the smaller producers to compete.

- Better nutrition standards and milk machines in schools would help the dairy industry.
- Dairy farmers need to receive a higher price for the product (milk).

Fisheries and Aquaculture

- There is no recognition of sport fishing as an industry, but it has a \$1 billion impact on the state.
- It is difficult to find common ground among the different segments (commercial, charter, recreational, conservationist) of the fishing industry.
- It is important to keep the rockfish not a gamefish from the perspective of the commercial industry, so that watermen can continue to fish them.
- Water column aquaculture—while highly touted—has its plusses and minuses. Alone, it is not going to solve the problem. Many feel it is too expensive and not practical.
- There is a need to bring water industries together on issues they can all agree on.
- There is concern in the aquaculture industry that the state is not supporting this practice strongly enough for it to have any positive impact.
- Restoration aquaculture could be used to produce animals and plants that are needed in the Bay.
- Leasing is a controversial issue. Some support having the ability to lease bottom water for growing oysters. Some watermen may not support this though.
- Access to the water has been limited to both watermen and sport fishers, both of whom need greater access to water resources. Rising land values have exacerbated this problem. There are also zoning issues that limit water access.
- There should be areas zoned for aquaculture, both for restoration and products for food.
- There is agreement that aquaculture has a lot of promise in Maryland, but concern that it has too many legal and regulatory hurdles. Maryland should cut the red tape and allow for easier permitting. Allow aquaculture to help bring back the bay and its resources.

Forestry

- The public does not understand the needs of the industry and that clearcutting is sometimes necessary on some lands.
- State support for renewable energy could revitalize the forestry industry. If the state backed a plan for green energy, forest industry by-products such as sawdust and slash could be used to provide energy. This would also help farmers by providing another revenue source.
- One of the biggest threats to the industry is the Delmarva fox squirrel. Large areas have become unavailable to logging because of the endangered status of the squirrel.
- Forestry has a high economic multiplier and funds generated by forest industries have great circulation through the local economy.
- Preservation ethic pushes forestry production offshore. Not-in-my-backyard (NIMBY) attitude pushes cutting into the next state, then into the Third World.

- There is potential to open up more public lands for harvesting timber. The forest industry suggests that it can be done in a sustainable manner and will support local sawmills.
- Forestry in Maryland is dealt with by three agencies: MDA, DNR and MDE. This makes things confusing and it would be simpler if one agency handled all forestry issues.
- The industry suggests that MDE be more consistent in its mandates. Agricultural operations are exempt, but forestry sediment erosion control is not.
- Loggers need to pay attention to their practices and avoid making eyesores for the public to see.
- The Master Logger Program is good for the industry and should be continued.

Grains

- The grains industry on the Upper Shore is currently dependent on the poultry industry.
- Consolidation of the poultry industry has caused concern among grain growers and dealers because there are fewer buyers of the product.
- Commodity prices right now are good, but were at poverty level through the late 1990s. It is hard to predict what will happen with this industry because of international market factors.
- There is a threat on the grains industry from South America, which will soon be flooding the market with corn and soybeans
- An export facility would help the grains industry by cutting transportation costs.

Niche Markets

- The niche markets industry suggests that it could use assistance from the state in finding markets to sell products.
- More grants, funding, outreach and education assistance for small-scale growers are needed to level the playing field with larger producers.
- Niche markets would benefit from a distribution system to deliver product.
- Niche market growers need to be sure there is a demand for a product before growing it. Demand should lead supply.
- There is a huge opportunity for the region in the 52 million consumers of the Mid-Atlantic states within a few hours drive. It is also a challenge from the marketing and distribution end.
- Several niche market growers want to expand their operations but are limited in capital. The market opportunities are there for expansion.

New Farmers

- New farmers need a more streamlined way of getting information: a central location for things like grant opportunities. There is no one place to go.
- Several new farmers suggest that Maryland Cooperative Extension has not provided useful information. They have used Cornell Cooperative Extension in New York, Penn State Cooperative Extension and Virginia Tech Cooperative Extension to get the information they need.

- Equipment, storage and processing facilities are difficult to access. New farmers can't afford to buy things they'll use only once or twice a year. Storage is difficult to come by. Suggestions were made to develop a kitchen incubator or processing facility.
- There needs to be a continuous forum for farmers, a sharing of resources and what the successes and failures are. A farmer-to-farmer conference and a mentoring program would benefit new and beginning farmers.
- Information on grants, research and education should be made easier to access.
- There should be more Farming 101 classes. Cecil County has been offering them recently, and they have been full every year. There should be more options for new farmers getting into farming.

Nursery and Greenhouse

- The past 10 years have been great to the nursery and greenhouse industry, due to a building boom. Main customers are developers and landscapers.
- The climate of this area is an advantage to the nursery and greenhouse industry—it is the southernmost region to grow plants for more northern climates.
- Nursery and greenhouse needs to be recognized as an agricultural business.
- Lenders don't appreciate the value of this industry; it is difficult to get money for expansion. This industry often has a cycle of 8 years and inventory is where the value is; this is not recognized. It is also difficult to get insurance for greenhouses. There is a limited ability to expand due to a lack of access to capital.
- One of the biggest challenges has been working with county agencies in getting permits approved for structures, septic and roads.
- Building permits for greenhouses and cold frames are needed in most counties—this is not necessary. Some counties also require a foundation for greenhouses.
- There needs to be better representation of the nursery/greenhouse industry at the local and state levels.
- There needs to be recognition that the nursery industry is one of the largest agricultural industry in the state and that agriculture is a large constituency group.

Poultry

- The industry was well prepared for the recent avian influenza (AI) outbreak and is stronger because of it. AI is expensive to the industry, but it has prompted increased biosecurity measures and this should be beneficial, especially with relations to international trading partners.
- This industry is particularly affected by suburban encroachment in an adverse manner. New neighbors are most likely to complain about the sights and smells of poultry operations near their home. Housing developments have become so widespread on the Eastern Shore that it is difficult to build a new chicken house in a location that will not disturb nearby residents.
- A strong forestry industry is good for the poultry industry. Wood processing by-products are needed for managing poultry waste. Profitable forestry keeps land undeveloped and forests mitigate air pollution and odors.

- This industry will continue to strive to be an efficient, low-cost producer and is dependent on low-cost inputs.
- The international market may impact the poultry industry in the near future. Brazil is seen as a potential strong competitor. Russia and the European Union may soon reduce poultry imports from the U.S. in favor of domestic production.
- Technological developments to reduce ammonia and air pollution from chicken houses, deal with excess nutrients and de-stress chickens should benefit the industry and make poultry farming more environmentally friendly.

Focus Group Participants

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Gary Anderson, farmer
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Mike Bandstra, Horizon Organic Dairy
Peter Battcock, farmer
Sherman Baynard, Coastal Conservation Association
Kenny Bounds, Mid-Atlantic Farm Credit
Bill Cadwallader, forester
Blair Carmean, farmer and grain elevator operator
Ron Darnell, Perdue Broilers
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Kurt Fuchs, Maryland Farm Bureau
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David Lankford, greenhouse farmer
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Katie Mason, Maryland Dairy Princess
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Bill Miles, Association of Maryland Forest Industries
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Don Webster, University of Maryland Sea Grant
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APPENDIX F

Industry-Specific Strategies

The industries presented below—along with their associated linkages and processing facilities— make up the bulk of the economic output for resource-based industries in the Upper Shore region. The first imperative of an expanded economic development program in the region should be to strengthen and solidify current industries and producers.

Here, each industry's chief challenges are discussed, as well as potential solutions that would serve to strengthen these industries. An expanded explanation is offered of how the three regional strategy elements would serve these core industries.

Dairy

The dairy industry has been in decline on the Upper Shore for a number of years, but it still ranks as the sixth largest industry in the region with an economic impact of \$34 million annually. Milk prices have been down the past several years, but some indicators suggest that the market may rebound this year. Prices of dairy products are up significantly this spring: Butter is up from \$1.25 a pound to \$2.25 a pound, cheese from \$1.25 a pound to over \$2 a pound (Dufrense 2004). Cheesemakers bid up the per hundredweight price of milk from \$11.60 in January to \$19.00 in April. However, U.S. milk production increased only 0.1 percent from 2002 to 2003; in January and February 2004, daily milk production numbers were below 2003 levels for the same months. Milk production in the Northeast is down even more than the country as a whole— Pennsylvania's 2003 production was down 4.1 percent from 2002 and New York's by 2.2 percent. Plus, the market is up for corn, soybeans and other feeds resulting in high feed prices, and replacement heifers are in limited supply.

These recent developments should be beneficial to the industry on the Upper Shore, but a number of issues would need to be addressed to ensure the industry's long-term survival here:

- Land. Dairy farmers cannot expand their herds in this region due to high land prices. As herd expansion could create the increased efficiency and wider profit margin that are necessary for their survival, this is a serious limitation. It is also difficult for dairy farmers to even access land for growing feed and spreading nutrients.
- Farmers and labor. Many dairies in the region are "terminal": when the owner gets out of the business, the operation will shut down as well. The shrinking number of producers is also reflected in an eroding infrastructure. This is not an economically viable region for new dairy farmers to relocate because of high land prices. Labor is also scarce, and dairy farms must compete locally with higher paying jobs.
- Milk prices. While prices may be on the rise presently, they are out of the dairy farmer's control and may fluctuate unpredictably. Farmers with a large land base and low capital costs are more likely to be profitable, through good and bad

prices. Newer farmers with mortgages and higher capital costs are less likely to be profitable.

Potential solutions that can be enacted on the regional level:

- A county level PDR or TDR program could significantly benefit dairy farmers by providing cash for development rights, and could be tailored to benefit dairies by offering incentives to landowners who allow nutrients to be spread on their properties and give leasing options to working farmers.
- Methane digesters and other alternative uses for manure may be used to create a new market for manure and resolve some of the nutrient management issues.
- Dairy farmers need more control and stability over milk prices. Options to facilitate this may include:
 - Grass based dairies that cut input costs in half, but only lower production by one-third.
 - Organic dairying has seen rapid expansion in the past decade and offers higher profit margins.
 - Cooperatives, such as “Organic Valley,” have shown that participation in a cooperative could offer a higher price for milk.
 - A local processor would allow dairy farmers to sell directly to the consumer.

Fisheries and Aquaculture

Fisheries have also been a declining industry on the Upper Shore for many years. They are regulated at the state level and it is unlikely that either fish populations or Bay health will rebound in the near future, calling for relaxing of current regulations. However, many feel that aquaculture could provide an economic stimulus to the fishing industry in the region. The U.S. value of aquaculture products has expanded from \$45 million in 1974 to over \$978 million in 1998, while Maryland’s aquaculture industry has declined since the late 1990s (Harvey 2003, Maryland Seafood and Aquaculture Task Force 2003). Current production levels are at \$4 to \$6 million annually and estimates project that the industry could grow to as large as \$100 million if legal and regulatory constraints are removed and research efforts supported. The Maryland Aquaculture and Seafood Task Force has identified a number of impediments that need to be addressed to stimulate this industry:

- Excessive and inadequate regulations
- Multiple agency oversight
- Complicated permitting process
- Lack of coordination within all levels of government
- Environmental impacts
- Land use restrictions
- User group conflicts
- Inadequate funding resources
- Limited industry driven research and development

Many of these issues must be addressed at the state level of government, but some can also be dealt with at the local level. Potential solutions include:

- Local zoning ordinances are prohibiting watermen and others interested in aquaculture to develop aquaculture operations on a larger scale. These barriers could be removed and “aquaculture zones” set up to spur growth of the industry.
- These “aquaculture zones” may help with potential conflicts that could occur on the waterways between different user groups. Other users need to be educated on the value of aquaculture and its economic potential.
- Support the work of the Maryland Aquaculture and Seafood Task Force. It will be issuing a final report later this year.
- Include aquaculture in local economic development efforts.

Forestry

The forest industry of Maryland produced over \$2 billion in economic output in 1996, and provided just fewer than 14,000 jobs. Much of this (56 percent) lies in secondary wood manufacturing and primary wood manufacturing (33 percent), with the remainder (11 percent) in timber management and harvest (Hilchey 1996). In Maryland, the growing stock volume, a measurement of commercially viable trees, has also increased by over 24,000 cubic feet since 1986. However, between 1986 and 1999 over 27,000 cubic feet of timber was permanently lost to land conversion to development. This loss was mirrored by a decline in the industry overall. Important issues facing the forest industry are:

- Poor public perception. The general public has a difficult time understanding forestry management and what is necessary for the industry to survive. Public sentiment about forestry and preservation ethic has pushed much of the forest production out of state.
- Zoning. Recently, zoning ordinances have been enacted that prohibit certain forestry practices.
- Shrinking land base. The amount of available land for an economically viable forestry industry in Maryland is continuously shrinking due to forestland being converted to developed uses. Executive Order 01.01.2004.21, signed into law March 2004, will open more public lands to sustainable forestry practices.
- Multiple agency oversight—several Maryland agencies including the Department of Natural Resources, Maryland Department of Agriculture, and Maryland Department of the Environment have regulatory authority over forestry.

Similar to fisheries and aquaculture, many of the necessary reforms for forestry to survive need to happen on the state level. It would be of great benefit to the industry if forestry were included in all of the economic development and land conservation programs that apply to agriculture. Forestry would clearly benefit from an authorization for Maryland Economic Development Assistance Funds to be used for forestry projects in addition to poultry and agriculture.

However, local actions can have a significant impact on this industry as well, and could include the following:

- Ensure that local zoning ordinances do not impede sustainable forestry efforts.
- As a part of economic development, educate landowners and farmers about the forestry potential of their properties and the economic benefits of a sustainable timber harvest.
- Encourage land preservation by any means that allows sustainable forestry practices on preserved lands.
- Encourage wood processing businesses to locate in the region.

Grains

Similar to dairy, grain prices are subject to fluctuations and to even broader international market conditions. Local producers sell most of their grains to the poultry industry and receive a premium approximately equal to the transportation costs that would be incurred in bringing the grains in from other regions. However, price controls do not reside with the grower and are unpredictable. Specific issues include:

- The grains industry is dependent on the poultry industry. Grain growers are interested in developing alternative crops and enterprises while continuing to grow grains to support the poultry industry.
- Grain prices are subject to considerable fluctuation. Diversification would allow them to recognize other income sources through good and bad grain years.
- Competition from South America threatens to drop grain prices. Brazil's and Argentina's market shares of the soybean trade are expanding rapidly each year; this may work against U.S. producers.
- As land prices increase, it becomes more difficult for grain farmers to continue operating.
- Suburban encroachment—dairy farming and residential development do not make ideal neighbors.

As grain growing is dependent on the amount of available land, local land use controls could have a significant impact on the grains industry. Options include:

- Groups such as Chesapeake Fields Institute and the Mid-Atlantic Biofuels Group are working to help grain farmers diversify into new markets. County-level economic development should work in conjunction with these efforts to maximize available resources and provide additional outreach and education.
- As with dairy, a county-level PDR or TDR program could significantly benefit grain farmers by providing cash for development rights and could be tailored to benefit full-time grain farmers and those who have been farming in the area long-term.
- A new grain export facility would benefit the grains industry by cutting transportation costs. Counties could help by subsidizing the development of a new export site with economic development dollars.

Nursery and Greenhouse

Nursery and greenhouse crops have emerged as a profitable and fast growing sector of the agricultural industry. A recent study commissioned by the Maryland Nursery and Landscape Association indicates that the nursery industry alone ranks as the second largest agricultural industry in the state with sales exceeding \$1.15 billion in 2000. Growing nursery and greenhouse crops may also represent an opportunity for others in the Upper Shore's resource-based industry sector seeking to diversify their operation. While this industry has seen rapid expansion in the region, accounting for \$41 million in output in 1999, or 9 percent of the agriculture industry, there are several factors limiting further growth:

- Labor. Human resource shortages are one of the largest limitations to an expanding nursery industry.
- Recognition of stock value. Lenders have been slow to recognize that much of the value of nursery operations lies in plant stock. Several growers reported being limited in their expansion due to a lack of access to capital.
- Regulatory environment. County agencies require permits that may not be necessary for agricultural structures.

The nursery and greenhouse industry is the fastest growing agricultural industry in the state. Many growers suggest that the climate in the Upper Shore region is ideally suited to growing nursery crops for markets in both the Mid-Atlantic and Northeast. There is considerable opportunity for the industry to expand—this could be facilitated by:

- Economic development efforts to promote this industry could address all of the limiting factors and make the region friendlier for the establishment of new nursery and greenhouse enterprises.
- Lenders have recognized the Bell Nurseries integrator model as a profitable enterprise with many operations coming into production in the Mid- and Lower Shore. This could be promoted as an opportunity for current farmers to diversify.

Poultry

Poultry is the largest resource-based industry on the Upper Shore accounting for 40 percent or \$187 million of primary product value of all agricultural products. On the whole Delmarva Peninsula, the broiler industry accounts for \$1.28 million or 9 percent of Delmarva's economy (Chase 2003). This industry is dependent on very thin profit margins but remains profitable due to increased efficiency and low input costs. There are several local factors that threaten the long-term survival of the poultry industry:

- Development of farmland and encroachment. The conversion of agricultural land to residential development is seen by the industry as very detrimental to its continued existence. In 2003, the amount of available land for growing corn and soybeans (most of which goes to poultry feed) in Maryland dropped below one million acres. Not only does land conversion reduce the acreage of feed producing cropland, it also fragments and brings people into agricultural areas, thereby reducing the amount of land available for spreading nutrients.
- Regulatory environment. Like other commodity producers, this industry has no way of passing along costs imposed through new regulations. These costs are

absorbed, prompting increased efficiency and cuts to be made elsewhere. New regulations also increase the risk associated with new operations.

- Labor shortages.

Local measures that would work toward maintaining viability in the poultry industry:

- County-level PDR and/or TDR programs would benefit the poultry industry by keeping large tracts of agricultural land intact and keeping residential development away from poultry operations. A program that gives preference to farms that are already a part of agricultural districts or adjacent to other protected properties would facilitate the creation of agricultural zones.
- A review of local and/or state regulations could identify those measures that are unnecessarily burdensome and suggest modifications while maintaining the intent of the laws.
- More options for grain export (see Grains).

APPENDIX G

Results of Task Force Brainstorming Exercise

Working Landscapes Task Force Meeting

April 5, 2004

Outline of Recommendations:

1. Create an “Agricultural Chamber of Commerce” (or “organization of organizations”) to spearhead agriculture’s economic development voice for advocacy (11 votes)
2. Raise public awareness of the importance of agriculture to the region (11 votes)
 - a. Brand the problem
 - i. Write executive summary of overall problem (2 votes)
 - ii. Show NASA photos of the region at night over decades
 - iii. Disney-like animation to make the issues real to kids
 - b. Help develop messages
 - c. Create a sense of place
 - d. Explain the costs of services (soybeans don’t need sewers) (7 votes)
 - e. Express economic importance of agriculture
 - i. Get on the MIDAS schedule to feature agriculture as an industry and all the affiliated economic activity (1 vote)
 - f. Reconnect consumers with their food
 - i. Direct marketing
 - g. Turn the consumer into a stakeholder
 - h. Get into consumers’ heads and talk to them about what they care about:
 - i. Regional product identity/brand
 - ii. Fresh high quality (local) food
 - iii. Food they can trust (food safety post 9-11)
 - iv. Environment
 - v. Traffic
 - vi. Wildlife
 - vii. Health of the Bay
 - i. Media relations
 - i. Monthly column in publications
3. Pursue county Ag land preservation (8 votes)
 - a. Counties need to contribute
4. Aggressively pursue resource-related technology transfer—take the technology that’s developed in a university setting—and create business opportunities so it can compete in the market place/business sector, e.g., feather fiber. (8 votes)
 - a. Work with TEDCO to tap into funds
 - b. Cultivate entrepreneurs to adopt the technologies
5. Brand the region for public relations (bigger than the 6 Upper Shore counties) (5 votes)
 - a. Determine the “brand” Delmarva or Chesapeake Bay
 - b. Focus on the Delmarva

- c. Create a sense of place
- 6. Pursue, develop and promote alternative business models (4 votes)
 - a. Integrator systems: Bell nurseries model based on contract growing in poultry
 - b. Mitigate risk
 - c. Identify sources of capital
 - d. Coops/regional cooperation
- 7. Develop more processing entities (4 votes)
 - a. Work with state to relax rules and regulations that get in the way
 - b. Create a regional processing center or “ag incubator”
 - c. Create higher value products
- 8. Publicly support agri-tourism (4 votes)
 - a. “Pizza” farm
 - b. Model farms
 - c. Work with state to underwrite liability insurance to encourage educational activities and more public access to farms
- 9. Use regional counsels and hire a staff person specifically for resource-based industries (3 votes)
 - a. Integrate with existing efforts and organizations (1 vote)
 - b. Work with MDA and Rural Md Council (RMC)
 - c. Organize annual conference (1 vote)
- 10. Put efforts into one centralized location for information and advocacy – one umbrella organization for the eastern shore (2 votes)
 - a. Fund outreach to farmers through percentage of check off \$\$
 - b. Get farmers more involved in the political process
 - i. Local “meet your legislators” workshops
 - ii. Involve Farm Bureau membership in hot issues or survival and more proactively
 - iii. Educate farmers on how they can make a difference, e.g., participating in boards
- 11. Make alliances between local chambers of commerce (2 votes)
- 12. Continue to study trends
- 13. Tap specialized markets
- 14. Hire Dave Khol to do needs assessment
- 15. Need for more statistics on equine: jobs, sales, inputs, secondary impacts—not in break-out group but in full session repeated call for equine support and development (“everyone wants a horse farm in Delaware right now.”)
- 16. Emerging markets/trends: pharmaceuticals

Need for Infrastructure for the Following:

- Regional chamber of commerce for agriculture/RBI (external, more likely private); alliances with local chambers of commerce
- Centralized location for information and advocacy (internal, more likely public)
 - One stop for regulatory issues including liability (state)
 - Planning and zoning issues (health dept, septic, etc.)
- Structure to organize producers to interface with legislators

APPENDIX H

Executive Summary
from
Tools Available for Attaining
the *Eastern Shore 2010* Land Protection Goal

A white paper exploring tools to protect from development through the use of voluntary preservation programs 50% of Eastern Shore land outside of locally designated growth areas by 2010.

—*Eastern Shore 2010 Goal 1*

Eastern Shore 2010: A Regional Vision

Tools Available for Attaining the
***Eastern Shore 2010* Land Protection Goal**

Prepared June 2003 - January 2004

ACKNOWLEDGMENTS

Funding for this project was provided by Town Creek Foundation and the Chesapeake Bay Trust. Special thanks to members of the Land Protection Task Force for their ongoing participation in this project: Tammy Buckle, Anthony DiGiacomo, Karen Houtman, Carla Martin, Commissioner Gene Ransom, Faith Elliot-Rossing, Steve Cohoon, Commissioner Hope Harrington, Frank Hall, George Kinney, Grant Dehart, John Hutson, George Maurer, Debi Osborne, Edith Thompson, Elizabeth Watson, Rob Etgen, and Carl DeMatteo.

.....

Eastern Shore Land Conservancy is a private, nonprofit land conservation organization dedicated to the preservation of farmland and habitat on the Eastern Shore. A 32-member volunteer board of directors, chaired by former Gov. Harry Hughes, includes a diverse group of Eastern Shore landowners representing the agricultural and business communities as well as local governments.

Since its inception in 1990, ESLC, funded by member contributions, has helped landowners to protect more than 35,000 acres of farmland and important habitat on 182 properties on the Eastern Shore.



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3: Data & calculations for land protection projections	
4: Local land protection financing tools—resources	
• General information on PDR programs	
• General information on common local land protection financing tools	
• General information on transfer of development right programs	
5: Details about task force discussions regarding the definition of “lands protected from development”	

EXECUTIVE SUMMARY

Eastern Shore 2010: A Regional Vision (Eastern Shore 2010) is an inter-county agreement that sets the highest expectations for the care of the Eastern Shore landscape. Similar in intent to the Chesapeake Bay Agreement but tailored for the specific regional needs of Eastern Shore lands and communities, this agreement sets four important land use goals focusing on protecting land, strengthening working landscapes, curbing sprawl, and planning for regional transportation.

To garner the research and resources to reach the first goal of the agreement, a regional task force—comprised of county representatives and experts from the federal, state, and private sector—was organized to explore the strategies available to “*Strive to protect from development through the use of voluntary preservation programs 50% of Eastern Shore land outside of locally designated growth areas by 2010.*” The deliberations and ideas developed by the land protection task force is documented in this research white paper with the main purpose of providing voluntary options for individual county consideration (not to be mandates).

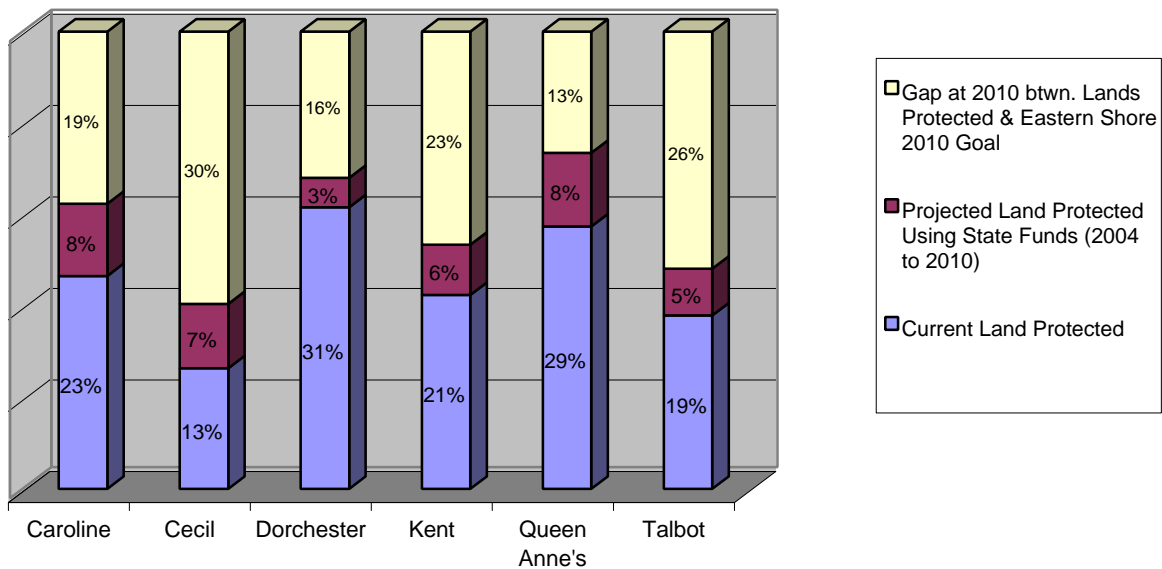
The task force first studied the current state and past accomplishments of land protection in the region, summarized as follows:

BASELINE FOR LAND PROTECTION EFFORTS					
	Acres			Percent	
	Total Land Outside of Growth Area	Eastern Shore 2010 Goal	Protected Land (as of 2003)	Eastern Shore 2010 Goal	Percent Land Protected (as of 2003)
Caroline	185,383	93,691	43,169	50%	23.3%
Cecil	123,030	61,515	16,244	50%	13.2%
Dorchester	319,082	159,541	98,244	50%	30.8%
Kent	156,100	78,050	33,098	50%	21.2%
Queen Anne's	223,273	111,637	64,065	50%	28.7%
Talbot	147,686	73,843	28,007	50%	19%
REGION	1,154,554	578,277	282,827	50%	24.6%

Even with this success, these baseline calculations of the task force revealed that the *Eastern Shore 2010* goal would mean, on average, a doubling of land currently protected in each county. In order to better understand the level and type of effort needed to achieve the 50% goal, the task force explored the following question: if we were to do nothing more than buy easements using State funds (Maryland Agriculture Land Protection Fund and Rural Legacy Program) between years 2004 and 2010, how close would Eastern Shore counties be to attaining the 50% goal at the year 2010?

These projections of current efforts was calculated through the year 2010, summarized as follows:

Projected Progress Toward Goal at year 2010 (status quo)



It is important to note that although purchase of development right-type programs are an essential part of reaching the goal, significant progress has been and should be made through such other mechanisms as the *donation* of development rights. For example, rough calculations of the acreage protected show that, if the current level of effort is extended for protecting land through the donation of easements (as opposed to the purchase), another 0.5% to 3% progress in each county toward the goal can be expected. Further, moving beyond the current level of effort (as explored further in this white paper) to ramp up easement donation could increase substantially this percentage.

The *Implementation section of this white paper* addresses the important question of next steps by laying out the implementation tools available to federal, state, and local governments, and to the private sector that could help the region attain the land protection goal of *Eastern Shore 2010*. The following charts depict the strategies and actions offered by the task force, as well as baseline (as of December 2003) progress towards these actions.

POSSIBLE LOCAL STRATEGIES & ACTIONS		CARO	CECIL	DORC	KENT	QA	TALB
Strategy 1. Create a Strategic Land Protection Plan							
<i>Action 1a</i>	County establish strategic conservation plan outlining conservation priorities			(see *)	Ö		Ö
<i>Action 1b</i>	County include "priority preservation areas" in its conservation plan per MALPF task force recc.						
Strategy 2. Create a Local PDR Program							
<i>Action 2a</i>	County make development of PDR program a priority						
<i>Action 2b</i>	County explore financial opportunities for PDR program		underway			underway	
<i>Action 2c</i>	County develop partnerships/strategy needed to implement PDR program		underway			underway	
Strategy 3. Establish an Effective Transfer of Development Rights (TDR) Program							
<i>Action 3a</i>	Counties, individually or regionally, evaluate current and possible TDR programs	underway					
Strategy 4. Provide Local Incentive for Gift Easements							
<i>Action 4a</i>	County include in their MALPF conservation outreach information about donated easement options				Ö		
<i>Action 4b</i>	County authorize property tax credits for donation of easements			Has enabling legislation as of 1998		Ö	
Strategy 5. Evaluate Rural Cluster Zoning Policies							
<i>Action 5a</i>	Establish policies to be strategic about open space protection in rural developments						
<i>Action 5b</i>	Counties, together or individually, create a land banking process for protecting priority conservation lands						

POSSIBLE STATE STRATEGIES & ACTIONS		STATE of MD
Strategy 1. Provide Additional Incentives for Conservation Easements		
<i>Action 1a</i>	State provide a capital gains tax exclusion for land sold for conservation	
<i>Action 1b</i>	State improve income tax credit for easement donation	
<i>Action 1c</i>	State provide greater incentives for donated easements, per recent "impediments to conservation easements report"	
Strategy 2. Provide Incentives to Help Local Government Provide Funds for Land Protection		
<i>Action 2a</i>	State provide enabling language for uniform taxing authority for Eastern Shore counties	
<i>Action 2b</i>	State launch a local land preservation program	
Strategy 3. Provide Stable and Increased Funding		
<i>Action 3a</i>	State maintain and augment funding for existing conservation programs	

POSSIBLE FEDERAL STRATEGIES & ACTIONS		FEDS
Strategy 1. Provide Funding for the Delmarva Conservation Corridor (DCC) Pilot Project		
<i>Action 1a</i>	Federal reps. fund DCC to advance Eastern Shore land protection priorities	
Strategy 2. Use the National Park Service Chesapeake Bay Special Resource Study toward Land Protection Efforts		
<i>Action 2a</i>	Federal reps. include in chosen NPS alternative resources for land protection funds	
Strategy 3. Monitor Opportunities for CO₂ Trading and Related Funding for Eastern Shore Farmers		
<i>Action 3a</i>	Federal reps. monitor CO ₂ trading as land protection funding source	
Strategy 4. Maintain and Expand Existing Federal Land Protection Funding Programs		
<i>Action 4a</i>	Fed reps. maintain and augment funding for existing conservation programs	

POSSIBLE PRIVATE SECTOR STRATEGIES & ACTIONS		PRIV
Strategy 1. Explore Private Sector Partnerships for County Land Protection Donations		
<i>Action 1a</i>	Private sector work to establish local land protection donor pools	
Strategy 2. Explore Private Sector Partnerships for Education, Capacity Building and Land Acquisition		
<i>Action 2a</i>	Private sector help develop partnerships to advance land protection outreach and support new conservation efforts/groups	
<i>Action 2b</i>	Private sector partner with local governments on acquisition projects	ongoing

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