

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Climate Change

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	10%	10%	15%	57%
111	Conservation and Efficient Use of Water	10%	10%	5%	0%
112	Watershed Protection and Management	15%	20%	10%	15%
123	Management and Sustainability of Forest Resources	5%	5%	5%	0%
131	Alternative Uses of Land	10%	5%	5%	0%
132	Weather and Climate	0%	0%	0%	10%
133	Pollution Prevention and Mitigation	10%	10%	25%	18%
205	Plant Management Systems	15%	10%	10%	0%
216	Integrated Pest Management Systems	10%	10%	10%	0%
403	Waste Disposal, Recycling, and Reuse	5%	10%	15%	0%
608	Community Resource Planning and Development	10%	10%	0%	0%
	Total	100%	100%	100%	100%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	16.0	3.0	11.0	2.5
Actual Paid	16.0	0.0	11.0	6.5
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
341273	135656	374864	325071
1862 Matching	1890 Matching	1862 Matching	1890 Matching
341273	135656	374864	502584
1862 All Other	1890 All Other	1862 All Other	1890 All Other
292204	0	21588	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- UME, MAES, and AES will have a combined focus to help producers plan and make decisions in adapting to changing environments, sustaining economic vitality, and taking advantage of emerging economic opportunities offered by climate change mitigation technologies.
 - UME, MAES, and AES will also develop research and education programs that generate knowledge to develop agriculture systems that maintain high productivity in the face of climate changes and reduce greenhouse gas emissions.
 - In an effort to meet these objectives, UME, MAES, and AES will develop research and action teams that will focus on: Alternative energy and biofuels; Aquatic resources; Biodiversity/ecosystem services; Energy conservation; Forest resources; Integrated Pest Management; Invasive and exotic species; Land use; Nutrient management; Recreational resources; Waste management; Waste utilization and resource recovery; Watershed restoration; and Wildlife resources.
 - UME, MAES, and AES will conduct workshops, demonstrations, symposia, twilight tours, forums and research to educate producers, farmers and citizens about adapting management practices to benefit the environment and minimize climate change impacts.
 - MAES, AES, and UME will develop and expand collaborative research and education programs with partners and stakeholder and develop new web based and media educational materials.

2. Brief description of the target audience

- Maryland citizens;
- Master Gardeners and Naturalists;
- Land developer and owners;
- UME, MAES, and AES faculty;
- USDA-NRCS conservationists;
- Soil Conservation District personnel;
- MDA program staff;
- MDE program staff;
- Producers;
- Farmers;

- Nursery and Greenhouse industry personnel;
- Forest landowners;
- 4-H youth;
- County planning and zoning program staff;
- AGNR industry;
- Nonprofits;
- Appropriate state and municipal government officials;
- Primary and Secondary Science Teachers;
- Media; and
- Maryland homeowners.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	45784	192562	6991	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2014

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2014	Extension	Research	Total
Actual	17	40	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Nutrient Management Planning, Waste Management Systems, Composting and Water Resources (Agronomic, Livestock & Green Industry): Short courses; Workshops; Twilight tours; Field days; Seminars; In-service training; Grants; Publications; and Websites.

Year	Actual
2014	51

Output #2

Output Measure

- Chesapeake Bay, Water Resources, Nutrient Management and Composting (Residential): Water Resources-Short courses; In-service training; Volunteers trained; and New relationships, policy & technology developed.

Year	Actual
2014	148

Output #3

Output Measure

- Management and Sustainability of Forest/Wildlife Resources (Forest landowners, Forest Industry and Loggers): Publications; Workshops; Distance Education Courses; Field trials; Demonstrations; Grants; and Web sites.

Year	Actual
2014	25

Output #4

Output Measure

- Alternative Crop Production: Workshops; Seminars; In-Service training programs; Variety trials; Field days; Twilight tours; Publications; Grants; and Participants in alternative/ethnic crop production programs.
Not reporting on this Output for this Annual Report

Output #5

Output Measure

- Nursery & Greenhouse Crop Production: Workshops; Seminars; Twilight tours; Field days; Grants; In-service training programs; Web sites; Publications; and Producers attending educational programs.
Not reporting on this Output for this Annual Report

Output #6

Output Measure

- Pesticide Safety Education: Workshops; Seminars; Demonstrations; Grants; Web sites; Publications; and Participants in educational/certification programs.

Year	Actual
2014	580

Output #7

Output Measure

- New Technologies-Using High Tunnels to Remain Competitive in a Global Market: Workshops; Field trials; Demonstrations; Twilight tours; Grants; Publications; and Participants in educational programs.

Year	Actual
2014	8

Output #8

Output Measure

- Master Gardener Program: Workshops; Seminars; Advanced training; Grants; Publications; and Participants in educational programs.

Year	Actual
2014	341

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Nutrient Management Planning, Waste Management Systems, Composting and Water Resources (Agronomic, Livestock & Green Industry): Number of producers implementing nutrient management plans; plans written; Producers relate nutrient management to water quality; Producers trained in plan writing; Policy makers and farmers understand the scientific issues of land applied poultry litter and poultry stockpiles; Producers using compost technology.
2	Chesapeake Bay, Water Resources, Nutrient Management and Composting (Residential): Adoption of composting; Water wells tested; Septic tanks improved; Number of citizens adopting practices of landscape ecology and understanding the relationship among pesticides, poor septic systems and environmental health.
3	Management and Sustainability of Forest/Wildlife Resources (Forest Landowners, Forest Industry & Loggers): Number of forest landowners and loggers gain knowledge of forest stewardship and practices; Understand wildlife damage control measures; Forest Stewardship Plans implemented; and Master loggers trained.
4	Alternative Crop Production: Number of farmers growing new alternative crops; New farm enterprises; Farm markets selling new alternative crops and/or value added crops; and New varieties researched.
5	Nursery & Greenhouse Crop Production: Number of IPM scouts and producers that can identify threshold pest levels; Research based recommendations implemented, such as efficiency of water use and energy; Certification in pesticide safety; Field trials developed; Nutrient management plans developed; Growers that adopt sustainable practices that will improve crops with reduced losses; Growers implementing sustainable practices that reduce losses and reduce environmental impacts; and New crop varieties planted based on UME/MAES research.
6	Pesticide Safety Education (Agronomic & Green Industry): AGNR producers/farmers/applicators that are certified in pesticide safety; Pesticide safety practices implemented such as wearing a respirator, gloves and showering after application; Increase in knowledge of IPM techniques.
7	New Technologies in a Global Market: New high tunnels established; Producers who have implemented research based practices; New varieties established; Applied research- variety trials; Producers who have increased profitability as a result of installing high tunnels; Request for workshops, seminars and twilight tours; Producers who participate in USDA's high tunnel cost share program; and Cooperators in on-farm research projects.
8	Environmental Stewardship: Master Gardeners programs developed and delivered by MGs; Plant Clinics held; and MGs who participate in MD Master Naturalist Program.
9	Research: Responses of Coastal Ecosystems to Rapid Environmental Change

Outcome #1

1. Outcome Measures

Nutrient Management Planning, Waste Management Systems, Composting and Water Resources (Agronomic, Livestock & Green Industry): Number of producers implementing nutrient management plans; plans written; Producers relate nutrient management to water quality; Producers trained in plan writing; Policy makers and farmers understand the scientific issues of land applied poultry litter and poultry stockpiles; Producers using compost technology.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension
- 1862 Research
- 1890 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The Maryland Water Quality Improvement Act requires Maryland farmers as well as green industry businesses to develop and follow nutrient management plans that are approved by the State of Maryland. The guiding principle behind nutrient management planning and implementation, as outlined in the Maryland Water Quality Improvement Act of 1998, is that nutrients applied in any form should balance with plants' nutrient needs.

What has been done

UME Nutrient Management Advisors prepared nutrient management plans for 40 Manure Transport Project clients, developed or updated plans to partially fulfill permit requirements for 68 CAFO or MAFO clients, conducted the Phosphorus Site Index for 213 clients on 1,384 fields, and wrote 324 plans for 178 Maryland producers for more than 10,000 acres. The nutrient management advisors' updated 5,605 plans for 1,200 clients for approximately 250,000 acres.

Results

The nutrient management programs continue to conduct research on nutrient utilization in agronomic and horticultural crop production and animal nutrition, as well as educate the public on

fertilizer management and sustainable horticultural practices. These research and education efforts allowed the nutrient management initiatives to continue achieving their goal of improving and protecting the health of the Chesapeake Bay and Maryland's tidal and nontidal waterways while maximizing the state's economic potential.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
132	Weather and Climate
133	Pollution Prevention and Mitigation
403	Waste Disposal, Recycling, and Reuse

Outcome #2

1. Outcome Measures

Chesapeake Bay, Water Resources, Nutrient Management and Composting (Residential): Adoption of composting; Water wells tested; Septic tanks improved; Number of citizens adopting practices of landscape ecology and understanding the relationship among pesticides, poor septic systems and environmental health.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension
- 1862 Research
- 1890 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Urban stormwater runoff is the source for 22% of phosphorus, 18% of nitrogen and 51% of sediment load for Maryland's annual load contributions into the Chesapeake Bay (MDE 2012). Urban stormwater is the one sector of the total maximum daily load (TMDL) that continues to see

increasing loads as more forest and agricultural lands are converted to residential and other developed uses. The Bay TMDL requires all counties to quantify and reduce those pollutant loads from urban stormwater in their watershed implementation plans (WIPs).

What has been done

A myriad of programs have been designed to address these issues: Bay-Wise & Watershed Stewards Academy, Stormwater Management and Restoration Tracker (SMART), and the new Chesapeake Bay Landscape Contractor Certification Program (CBLP). SMART is an interactive, web-based mapping, tracking and reporting tool that provides a credible and certifiable way to account for 15 small-scale practices that can be implemented by property owners. The tool allows individuals to upload their BMP data to a local website, where the data are tracked, checked and certified by trained volunteers.

Results

According to the UMCES report card, water quality has improved in the Potomac River from a D+ in 2012 to a C- in 2013. A Watershed Stewards Academy (WSA) for the Eastern Shore, started in 2012, uses a train-the-trainer approach to target community members who provide stormwater education and assist with the stormwater BMPs to help Maryland meet its load allocation targets by 2025.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
133	Pollution Prevention and Mitigation
608	Community Resource Planning and Development

Outcome #3

1. Outcome Measures

Management and Sustainability of Forest/Wildlife Resources (Forest Landowners, Forest Industry & Loggers): Number of forest landowners and loggers gain knowledge of forest stewardship and practices; Understand wildlife damage control measures; Forest Stewardship Plans implemented; and Master loggers trained.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

In many Maryland waters and in the Chesapeake Bay, a challenge is to improve water quality and maintain viable natural resources. Forestland is a critical component towards meeting this challenge as it functions as a buffer, reducing the nutrients and sediment entering waterways which adversely affect water quality, aquatic organisms, fisheries, and human health. A healthy forest directly impacts water quality and is a benefit to all Maryland citizens.

What has been done

The Maryland Woodland Stewards Project is an educational program of UME. It teaches forest and wildlife management practices and leadership skills to participants who apply these principles to property they own or manage, and actively encourage others to practice good forest stewardship using the principle of Neighbor Helping Neighbor.

Results

Since 1990, 454 individuals with a total ownership of 69,040 acres have been trained as Woodland Stewards and have developed and implemented a forest stewardship plan, provided outreach to friends, neighbors, and others, and have become advocates in their communities. Through this education, informed decisions about forest acreage has increased, resulting in better water quality and a healthy eco-environment.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
123	Management and Sustainability of Forest Resources
205	Plant Management Systems
608	Community Resource Planning and Development

Outcome #4

1. Outcome Measures

Alternative Crop Production: Number of farmers growing new alternative crops; New farm enterprises; Farm markets selling new alternative crops and/or value added crops; and New varieties researched.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension
- 1862 Research
- 1890 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

For Maryland, as with the nation, there are needs to: (1) provide mentoring education to beginning farmers to ensure their success; (2) ensure that those interested in farming, but do not have access to land or other resources, are linked to landowners with land to lease or sell and sources of resources; and (3) develop mechanisms to promote new farmers in the midst of an aging farm operator population and shortage of qualified operators to replace them

What has been done

The Maryland Collaborative for Beginning Farmer Success builds on existing Extension resources and partnerships with Future Harvest-CASA and Southern MD Agriculture Development Commission, regional nonprofits, agricultural organizations, and experienced farmers to provide beginning farmers with easily accessible tools and practical experience-based training on farm production, marketing, land management, business planning, and financial resources. The program reached 1,243 beginning farmers and had approximately 11,000 web site visits for information.

Results

As a result of this project, participants increased business knowledge by 74% and crop knowledge by 88%. Participants were then asked if they would take action as a result of the program--82% plan to implement business actions and 92% plan to implement crop actions.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
132	Weather and Climate
205	Plant Management Systems
216	Integrated Pest Management Systems
608	Community Resource Planning and Development

Outcome #5

1. Outcome Measures

Nursery & Greenhouse Crop Production: Number of IPM scouts and producers that can identify threshold pest levels; Research based recommendations implemented, such as efficiency of water use and energy; Certification in pesticide safety; Field trials developed; Nutrient management plans developed; Growers that adopt sustainable practices that will improve crops with reduced losses; Growers implementing sustainable practices that reduce losses and reduce environmental impacts; and New crop varieties planted based on UME/MAES research.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension
- 1862 Research
- 1890 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Agriculture is the greatest consumptive user of water in the US, and in many regions agricultural water use cannot be sustained. Irrigation accounts for 62% of freshwater (surface and ground water) use in the United States. More than 55.4 million acres of land were irrigated in the United States in 2013, of which 72% were irrigated by sprinkler and micro-irrigation systems. Water moves fertilizer through the soil, so irrigation management is a key part of nutrient management.

What has been done

Better tools are needed to assist farmers to use irrigation water as efficiently as possible. With funding from the USDA Specialty Crops Research Initiative (SCRI) the SCRI-MINDS project has developed advanced wireless sensor control technology and software to apply irrigation water based on daily plant requirements.

Results

The SCRI-MINDS project has demonstrated that wireless sensor network control systems can provide specialty crop producers with real-time soil moisture and environmental conditions of the

farm via smartphone and that a reduction of between 40-70% in irrigation water applications can be achieved.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
132	Weather and Climate
133	Pollution Prevention and Mitigation
205	Plant Management Systems
216	Integrated Pest Management Systems
403	Waste Disposal, Recycling, and Reuse
608	Community Resource Planning and Development

Outcome #6

1. Outcome Measures

Pesticide Safety Education (Agronomic & Green Industry): AGNR producers/farmers/applicators that are certified in pesticide safety; Pesticide safety practices implemented such as wearing a respirator, gloves and showering after application; Increase in knowledge of IPM techniques.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

There is growing market demand for greenhouse and nursery plants grown either without use of pesticides that potentially damage pollinators and using low risk pesticides that improve worker and public safety.

What has been done

UME developed the "Biological Control for Greenhouses and Nurseries" program to teach growers about alternative methods, including biological control, use of low-risk pesticides, and use of organic fertilizer sources.

Results

Two Maryland greenhouse operations started using entomopathogenic nematodes for thrips and fungus gnat control. Three greenhouse operations reported that since the conference they started using Rootshield application on their poinsettia crops. Program participants indicate they plan to use Trichoderma, Soilguard, Bacillus subtilis (Cease) Bromine water treatment, Milistop, or biological control for disease control on one or more crops in the coming year.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
133	Pollution Prevention and Mitigation
205	Plant Management Systems
216	Integrated Pest Management Systems
403	Waste Disposal, Recycling, and Reuse

Outcome #7

1. Outcome Measures

New Technologies in a Global Market: New high tunnels established; Producers who have implemented research based practices; New varieties established; Applied research- variety trials; Producers who have increased profitability as a result of installing high tunnels; Request for workshops, seminars and twilight tours; Producers who participate in USDA's high tunnel cost share program; and Cooperators in on-farm research projects.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The planting of vineyards is one of the most rapidly expanding agricultural ventures in Maryland. With this rapid expansion comes a concomitant increase in demand for information on site evaluation, establishment, and maintenance details. There will be high demand for this information and services as most of the new growers do not have practical agricultural backgrounds. They will therefore be looking for regional research based information to help them to make the proper decisions for all of the inputs into the project.

What has been done

Conducted Beginners Grape Grower Workshops. Conducted on-farm field days and programs to demonstrate procedures and techniques. Conducted site visits with local Extension educators to evaluate sites when possible. Conducted applied regional research on varieties, canopy management and training systems, and enological techniques.

Results

Growers gain knowledge and confidence necessary to make accurate evaluation of suitability of sites and proper decisions on establishment and variety choice leading ultimately to efficient and successful establishment of new productive and profitable vineyards.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
205	Plant Management Systems
216	Integrated Pest Management Systems
608	Community Resource Planning and Development

Outcome #8

1. Outcome Measures

Environmental Stewardship: Master Gardeners programs developed and delivered by MGs; Plant Clinics held; and MGs who participate in MD Master Naturalist Program.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Reducing pesticide use in home, school, and community gardens is especially critical because of the risk of ingesting pesticide residues on vegetables and fruits. Master Gardeners are volunteer outreach educators, trained and managed by Extension professionals. They influence the garden, landscape, and pest management decisions of tens of thousands of residents each year. Master Gardeners who understand and adopt these practices are more likely to teach them to the public.

What has been done

Six Master Gardener basic training classes in sustainable vegetable production and IPM, sustainable fruit production and IPM, soils, composts, and fertilizers, and plant diagnostics and pesticide safety have been provided. Vegetable plant and pest diagnostic classes were taught to 72 Master Gardeners, mostly using in-field and hands-on techniques.

Results

As a result of the vegetable and fruit IPM training given to Master Gardeners, Maryland home gardeners reduced chemical pesticide use, thus saving money and reducing environmental damage and health risks.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
123	Management and Sustainability of Forest Resources
133	Pollution Prevention and Mitigation
205	Plant Management Systems
216	Integrated Pest Management Systems
403	Waste Disposal, Recycling, and Reuse

Outcome #9

1. Outcome Measures

Research: Responses of Coastal Ecosystems to Rapid Environmental Change

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

In a collaboration with the Smithsonian Environmental Research Center and supported by NSF and NASA grants, MAES research is documenting the poleward expansion of mangrove ecosystems into temperate saltmarsh driven by climate change.

What has been done

This research is documenting the regional and global extent of mangrove expansion with climate change, testing alternative mechanisms for this phenomenon, and seeking to understand biodiversity and ecosystem-level consequences of this coastal change.

Results

Using remote sensing, research showed clear evidence that mangrove expansion on Florida's eastern coast is linked with a decreased frequency of severe freeze events over the past 30 years. Follow-up work linked plant physiology with these broad scale patterns and then projected mangrove areal range under climate change scenarios to 2060. Current work is analyzing the role of insect pollinators and herbivores in the mangrove expansion, and also the consequences for settlement of crabs in the marine environment

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
132	Weather and Climate

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Populations changes (immigration, new cultural groupings, etc.)
- Other (funding)

Brief Explanation

UME is still limited in climate change expertise and is working to develop that expertise among educators, specialists, and researchers.

The limitation for research has always been shortage of funds. Our faculty achieved excellent research findings in the area of climate variability and land use impacts on our water resources and the environment despite limited funds. Again, UME, MAES, and UMES need more positions and expertise in this area, which requires additional resources.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Not reporting

Key Items of Evaluation

Not reporting