

CIVIL SOCIETY, NON-GOVERNMENT ORGANISATIONS AND ACADEMIA CONSULTATION

ON THE WATERSHEDS POLICY FOR JAMAICA

MAY 26, 2023



Report
Prepared by Maxine McDonnough

Contents

Acronyms	3
Background.....	4
Opening Remarks: Ms Joni Jackson, Director of Environment Policy Development and Monitoring (Acting), Disaster Risk Management Branch, Ministry of Economic Growth and Job Creation (MEGJC)	5
Keynote Address: Senator the Honourable Matthew Samuda, Minister without Portfolio, MEGJC	5
Status of Jamaica’s Hydrological Basins, Geoffrey Marshall, Deputy Managing Director, Water Resources Authority	7
State of Jamaica’s Forest Cover, Jason Gordon, Director, Forest Assessment Section, Forest Information Management Branch, Forestry Department.....	8
Watersheds Policy For Jamaica (Green Paper), Ms Toni-Ann Miller, Director, Natural Resources (Acting), MEGJC	9
DISCUSSION moderated by Ms Joni Jackson	15

Acronyms

CBD	Convention on Biological Diversity
MEGJC	Ministry of Economic Growth and Job Creation
NEPA	National Environment and Planning Agency
NLBI	Non-legally Binding Instrument on all Types of Forests
NRCA	Natural Resources Conservation Authority
NWC	National Water Commission
ODPEM	Office of Disaster Preparedness and Emergency Management
PIOJ	Planning Institute of Jamaica
RADA	Rural Agricultural Development Authority
SDC	Social Development Commission
SRC	Scientific Research Council
UNCCD	United Nations Convention to Combat Desertification
UNFCCC	UN Framework Convention on Climate Change
WMU	Watershed Management Unit
WPA	Watershed Protection Act
WRA	Water Resources Authority

Background

The term 'watershed' is defined as the land area in which rain falls and from which water drains into a stream or river. This area covers not only the mountains and hill slopes but also forests, farms, industries, and housing developments on them. Jamaica is divided into 10 hydrologic basins and 26 watershed management units (WMUs) each identified by the name of the major river which runs through it.

While the protection of watersheds and areas adjoining watersheds and the promotion of the conservation of water resources were assigned to a specific entity with the enactment of the Watersheds Protection Act (WPA), 1963, the range of issues to be addressed is wide and involves several different agencies. Since the enactment of the WPA, there have been many changes among the institutions involved, new policies and legislation have been put in place, new technology has become available, several projects implemented, and new global commitments made. It is within this context that this Policy seeks to address the institutional arrangements for effective watershed stewardship.

The Government of Jamaica seeks to articulate a comprehensive policy on watershed management given the degradation of the island's watersheds, challenges in the management of watersheds, involvement of certain entities in various areas, outdated laws and policies and threats such as climate change.

According to the State of Environment Report 2017, on the status of the country's watersheds, "...all 26 WMUs have been assessed as degraded to some extent... More than a third of the total watershed area in Jamaica was classified as either degraded (22%), or severely degraded (14%). These are generally located on the eastern side of the island. The most severely degraded WMUs included Rio Minho, Wag Water, Hope River and Yallahs".

This Policy sets out the goals and principles that should guide decision making by public sector agencies that have mandates concerning watershed management and includes provisions related to the involvement of communities and other stakeholders in watershed protection (*taken from Executive Summary, Watershed Policy of Jamaica - Green Paper*).

In order to ensure the fulsome input of stakeholders on the draft Policy, six consultations were scheduled to discuss the provisions and recommendations detailed in the document. Stakeholder groups with whom consultations were held were public and private sector representatives, civil society, academia, members of the watershed community in Clarendon, officers of municipal corporations islandwide, and the general public. The latter by way of a virtual townhall meeting. Prior to the consultations, copies of the document were distributed to parish libraries across the island as well as to offices of municipal corporations. Electronic copies were made available on the websites of the National Environment and Planning Agency (NEPA), the Forestry Department, the Water Resources Authority (WRA) and the Ministry of Economic Growth and Job Creation (MEGJC).

**Watershed Policy: Civil Society, Non-Government Organisations (NGOs) and Academia
May 26, 2023**

Opening Remarks: Ms Joni Jackson, Director of Environment Policy Development and Monitoring (Acting), Disaster Risk Management Branch, Ministry of Economic Growth and Job Creation (MEGJC)

Ms Jackson welcomed stakeholders including representatives from civil society, NGOs and academia to the third consultation on the draft Watersheds Policy. She advised that the draft document had been approved by Cabinet as a Green Paper in March 2023, and was tabled in Parliament in the same month. She explained that The Environment and Risk Management Branch, on behalf of the Ministry of Economic Growth and Job Creation, was in the process of carrying out a series of consultations on the draft Policy. She said that the feedback which would inform the revision of the Policy which would then be resubmitted to Cabinet for approval as a white paper later this year.

She noted that, to date, there had been consultations with public and private sector groups. She shared that there would be two face-to-face sessions in selected communities after which the series would be concluded with a virtual town hall meeting.

She, again, welcomed all stakeholders present and advised that the programme would begin with a keynote address from Senator the Honourable Matthew Samuda, Minister without Portfolio, Ministry of Economic Growth and Job Creation (MEGJC). It would be a virtual presentation.

Keynote Address: Senator the Honourable Matthew Samuda, Minister without Portfolio, MEGJC

Senator Samuda welcomed all participants attending the consultation comprising members of civil society, NGOs and academia and apologised for not being able to be present for the duration of the meeting. He expressed thanks to the members of the Environment and Risk Management Branch, led by Chief Technical Director Gillian Guthrie, for their work on the draft policy and in convening the series of consultations.

Senator Samuda advised participants that the Watersheds Policy had been approved by Cabinet as a Green paper and was tabled in the House of Representatives in March 2023. He said that the document set out principles which would guide decision-making by public-sector agencies regarding the watershed management mandates. It also outlined provisions for engaging communities and other stakeholders in watershed protection. Policies and goals detailed in the document included enhanced watershed management and provisions to ensure that Jamaicans were aware of the importance of watersheds and were active participants in their conservation. He said that watersheds were key sources of clean water

for economic sectors such as agriculture, tourism and industry. Additionally, watersheds were habitats for several species of flora and fauna. However, unchecked human activities have disrupted the delicate balance of those ecosystems leading to the degradation and depletion of water resources.

He shared that the 2019 Water Sector Policy and Implementation Plan had recognised the critical relationship between adequate water supply and the health of the island's watersheds. It was imperative, he said, to protect the integrity of the island's watersheds to enable them to provide the functions for the protection of lives and livelihoods. He emphasized that water was a finite resource, essential for sustaining life, supporting livelihoods and driving economic growth, but, in many cases, was not treated as such and thus not conserved and used efficiently. He noted that rationalisation of the country's legislative and institutional framework was required to ensure coherence, efficiency and effectiveness in watershed and integrated water resources management.

He pointed to the need for the participation of all stakeholders including the private sector, civil society and communities in these efforts were crucial in fostering inclusivity, ownership and sustainability of water supply sources, our watersheds. He said that community engagement and involvement were vital in watershed management. In addition to legislative and institutional measures, watershed management needed to focus on building capacity and knowledge for effective water resource management. He observed that collaborative efforts among government agencies, public and private sectors, academia and research institutions and other stakeholders could help to develop innovative and evidence-based solutions to address the challenges faced.

Senator Samuda cited regular monitoring of watersheds, in conjunction with disaster risk management and climate change considerations, as being important in informing evidence-based decision-making. Sustainable watershed management had to consider the social, economic and environmental dimensions of the issue. He said a holistic approach that utilised integrated watershed resources management, ecosystem-based approaches and participatory decision-making.

He reiterated that the Watersheds Policy was passed by Cabinet in March 2023 and tabled by the Prime Minister during his budget presentation in that same month. The Policy, he said, was critical to bringing cohesive, integrated management to the country's watersheds. Senator Samuda pointed out that the timing of consultations was most appropriate as the island was experiencing one of the worst droughts it had ever had.

Senator Samuda said he looked forward to feedback from participants as they contributed to the finalisation of the document as it moved from Green Paper to White Paper.

Ms Joni Jackson apologised on behalf of the National Environment and Planning Agency (NEPA) as that Agency would not be making their presentation. Presentations would be made by the Water Resources Authority, the Forestry Department and the Ministry of Economic Growth and Job Creation. She invited Mr Geoffrey Marshall of the Water Resources Authority (WRA) to make his presentation.

Status of Jamaica's Hydrological Basins, Geoffrey Marshall, Deputy Managing Director, Water Resources Authority

Mr Marshall described the administrative framework of the country's watersheds from a hydrological perspective. He noted that the island was divided into 10 hydrological basins: the Blue Mountain South; Kingston; Rio Cobre; Rio Minho; Black River; Cabaritta River, Great River; Martha Brae, Dry Harbour Mountains and Blue Mountain North, clockwise from the southeastern end of the island. These basins were further subdivided into 26 watershed management units.

He provided the definition of a watershed as an area of land with a common point of outflow, for example, the area of a watershed comprises surface water flow to a common outlet area. He explained that the watershed management units (WMUs) were defined in the early 1990s as groupings of watersheds for management purposes and were not geographic units. He noted that some hydrological basins comprised only a single watershed such as the Black River Basin and the Rio Cobre while others had multiple watersheds. He noted that watershed made up the WMUs which in turn made up the hydrological basins.

Mr Marshall presented a brief look at the geology of the country in relation to its water-bearing characteristics. The island was divided into aquifers, a geologic formation which generally produced substantive volumes of water for wells from groundwater resources. He explained that, on the other hand, aquicludes were rock formations that did not provide significant groundwater storage. Most of Jamaica's aquifers were limestone aquifers. There were also alluvium aquifers and coastal aquifers on the north coast. The island's volcanic rocks, primarily in the Blue Mountains, were classified as basal aquicludes. He said there were also limestone formations (Montpelier formation) aquifers that were not as productive as the white limestone aquifers.

Mr Marshall emphasised that the delineation of basins was based on surface water drainage. Groundwater, he said, was not as well defined as surface water. He noted that there was the potential for inter-basin transfer of groundwater. He noted that while surface water had a clear mountain divide with water flowing in opposite directions, the groundwater may flow under that divide into the adjoining watershed based on the pressure gradient. More research was required to identify where this was happening and how to quantify it. He pointed out that it was most likely happening in the Gut River WMU area as the output of water into the sea could not be sustained by the precipitation in that region. This proved that inter-basin transfer was taking place and needed to be quantified and managed.

He looked at the classification of Jamaica, 50 per cent of which was classified as limestone aquifer, mostly karstic regions. Twenty-five per cent of the country was classified as basal aquiclude where most of the water was from surface water resources; this was obvious in the Blue Mountains with its many rivers. The balance of the island was divided into limestone aquifer, coastal aquifer, and coastal aquiclude and so on.

He next discussed the total mean annual flow of water from rivers and included historical and current data. The majority of the average annual flow was produced by three WMUs – Rio Grande, Black River and Dry Harbour Mountains. Dry Harbour included the Rio Bueno from the west and White River from the east. The combined flows produced a significant discharge. The Rio Cobre and Martha Brae also had strong outflows.

Mr Marshall also demonstrated the WRA's surface water monitoring network which included regular daily monitoring stations, spot measuring stations (once per month) and discontinued stations. He shared that there were plans to expand the network by installing new stations and rejuvenating those that had been discontinued to produce a more accurate record of flows. He looked, also, at the groundwater monitoring wells in Jamaica. There were stations where monthly measurements were taken. He advised that all data could be found on the WRA's website up to 2022.

Mr Marshall said that the WRA had proposed the delineation of new boundaries for hydrological basins and WMUs. This would be done in consultation with NEPA and the Forestry Department.

Ms Joni Jackson thanked Mr Marshall and invited Mr Jason Gordon of the Forestry Department to make the second presentation.

State of Jamaica's Forest Cover, Jason Gordon, Director, Forest Assessment Section, Forest Information Management Branch, Forestry Department

Mr Gordon provided an overview of the Forestry Department's role in the assessment of Jamaica's forest cover.

Mr Gordon advised that the Forestry Department was the lead agency with responsibility for the sustainable management and conservation of the island's forest resources. The Department managed about 117, 000 hectares of forest cover. Its work was supported by the Forest Act of 1996. The Department was also guided by the National Forest Management and Conservation Plan, 2016-2026.

The most recent assessment, he said, had been conducted in 2013 and the Department was currently in the process of conducting the second assessment in the 10-year cycle which would be ready for publication by the end of 2023.

The 2013 assessment revealed that 40 per cent of the island's forest cover could be classified as disturbed broadleaf. That was followed by secondary forests, primarily the result of abandoned farmlands. The third category was the closed broadleaf forest which was concentrated in the Blue Mountains and Cockpit Country. The parishes with the largest forest cover were Trelawny followed by St. Catherine, St. Ann, Portland and Clarendon, the latter mainly dryland forest and some wetlands.

The major change noted was the disappearance of swamps since 1998 which had been caused primarily by developments along coastal areas which destroyed large areas of swamp forests. He said mangrove forests had remained relatively stable. Secondary forests was a new category of forests identified since the previous assessment. For the most part, disturbed broadleaf had seen only minimal changes.

Mr Gordon highlighted at the gains recorded in land use. He said that it was assumed that the country was only experiencing loss in forest cover but there were areas in which gains in forest cover have been identified. These were mainly due to shifts in land use in rural areas. He noted that as farmlands were abandoned, secondary forests took over the area representing positive changes. He observed that the

main reason for the loss of forest cover was infrastructure development and human settlements. The North-South Highway, for example, had impacted forest cover.

Mr Gordon noted that several opportunities were generated by the improved REDD strategy. The Forestry Department, his aid, was seeking to tap into the voluntary carbon market which would facilitate some monetary compensation for the preservation and conservation of the country's forests.

He described land use changes along the coast of northern Trelawny between 2013 and 2022 which showed extensive development, gleaned from the 2022 land cover assessment.

Mr Gordon noted that the Department had a number of policies and documents by which it was guided in strengthening the management of the forest resources across the island.

- **The 2017 Forest Policy of Jamaica** promoted no loss of forest cover.
- **National Forest Management and Conservation Plan (2016-26)** promoted sustainable forest management in the face of climate change.
- **Partnership with Stakeholders** (declaration of private forests, adopt a hillside, WRA, NEPA, NLA) – to strengthen their ability to preserve and conserve forests which will preserve the water quality.
- Economic restoration of underutilised or post-mined lands.
- Enhanced income generation (agroforestry businesses).
- Increased climate resilience and functionality.

Ms Jackson thanked Mr Gordon for his presentation and invited Ms Toni Ann Miller to make the presentation on the Draft Watersheds Policy.

Watersheds Policy For Jamaica (Green Paper), Ms Toni-Ann Miller, Director, Natural Resources (Acting), MEGJC

Ms Miller advised participants that the feedback elicited in the discussion session would inform the finalisation of the Policy document.

She advised that the main purpose of the Policy was to address the institutional and legal frameworks for more effective management of Jamaica's critical watershed areas; considering relevant policies and legislation as well as the UN's Sustainable Development Goals.

She first defined three important terms: a **watershed** as an area having a common outlet for its surface water runoff; a **watershed area** as one defined and declared to be a watershed area under section 5 of the Watersheds Protection Act; and a **watershed management unit** as a defined land area from the ridge of a mountain to the coast within which a group of sub hydrological basins drained into a major water body.

She expanded on the concept of the watershed and noted that a healthy watershed provided several goods and services including food, fresh water, air filtration, soil formation, water filtration and timber as well as opportunities for recreation and ecotourism and was better adapted to mitigate against climate change.

She reiterated that there were 26 WMUs across the island and listed some of the issues impacting watersheds. These included: forest removal to facilitate mineral extraction, improper disposal of solid waste, lack of sewage infrastructure, poor farming practices including the improper use of chemicals which resulted in the contamination of water, informal settlements, illegal logging, charcoal burning, agricultural runoff and groundwater contamination.

Policy and Legislative Frameworks and Institutional Arrangements

Ms Miller noted that the preparation of the draft was guided by the Fundamental Rights and Freedoms and was aligned to the Vision 2030 – National Development Plan – and several policies including:

- The Climate Change Policy Framework, 2023
- National Land Policy, 1997
- The Forest Policy, 2016
- The National Forest Management and Conservation Plan, 2016-2026
- The National Water Sector Policy and Implementation Plan, 2019
- The National Minerals Policy, 2017-2030
- Policy for Jamaica’s System of Protected Areas, 1997
- Protected Areas System Master Plan 2013-2017
- Local Sustainable Development Plans

She explained that the Land Policy and the Protected Areas Policy were currently being updated.

The principal legislations relevant to Watershed protection and preservation were identified as:

- The Watershed Protection Act, 1963
 - The Natural Resources Conservation Authority Act, 1991
 - The Forest Act, 1996
 - The Water Resources Act, 1996
 - The Rural Agricultural Development Authority Act
- Other legislations relevant to watershed included:
- The Wildlife Protection Act
 - The River Rafting Act
 - The Public Health Act

The institutional arrangements for the oversight of the Policy listed the body with primary responsibility as the Ministry with responsibility for the environment, which was the Ministry of Economic Growth and Job Creation. Associated with the Ministry was the Integrated Water Resources Management Council, which fell under the aegis of Senator the Honourable Matthew Samuda. The Ministry was supported in the effort by the Natural Resources Conservation Authority/ National Environment and Planning Agency, Forestry Department and the Water Resources Authority.

Ms Miller then shared the relevant regional and global arrangement to which Jamaica was a Party and thus had made certain commitments in relation to environmental protection. These included:

- The Convention on Biological Diversity (CBD), 1992
- The UN Framework Convention on Climate Change (UNFCCC), 1994

- The United Nations Convention to Combat Desertification in those countries experiencing serious drought/ or desertification, particularly in Africa (UNCCD), 1994
- The Convention on Wetlands of International Importance (Ramsar Convention), 1971
- The Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention), 1983
- The United Nations Forest Instrument, 2015 - formally known as the Non-legally Binding Instrument on all Types of Forests (NLBI)
- The Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, 1995
- Regional Agreement on Access to Information public participation and justice in environmental matters in Latin America and the Caribbean, 2018
- The Convention Concerning the Protection of World Cultural Music and Natural Heritage, 1972 (The UNESCO World Heritage Convention)
- International Plant Protection Convention, 1951
- Agenda 2030 and its Sustainable Development Goals.

Ms Miller pointed out that the legislative and institutional framework governing watershed management required urgent attention, also human and financial as well as technical resources were needed for effective watershed management. Other challenges and gaps to be addressed included the practice of sustainable land management which meant using land without damaging ecological processes or reducing biological diversity. An example of sustainable land management, she said, was agroforestry, in which trees and shrubs were integrated into crop and animal farming systems. These were to be supported by ongoing public education and awareness raising. It was observed that effective integrated watershed management was challenging to put into effect and an important pillar was intensive and ongoing public education and awareness programmes.

Vision of the Policy – Jamaica has healthy and optimally functional watersheds that are efficient and effective in the provision of ecosystem services for the benefit of all.

Ms Miller listed the nine **guiding principles** within the draft policy:

1. Transparency and accountability,
2. Precautionary Approach
3. Sustainability and inter-generational equity
4. Participation and collaboration
5. Conflict resolution
6. Environmental economic tools and technology
7. Protection and sustainable use of water resources
8. Evidence-based approach
9. Polluter pays principle.

She highlighted the goals and objectives of the Policy.

The five Policy Goals were identified as follows:

1. Comprehensive legislative and institutional frameworks are developed to support the effective management of Jamaica’s watersheds.
2. Adequate and sustainable finance mechanisms are provided for improved watershed management.
3. Watershed management is enhanced through increased access to information and data to facilitate informed decision-making at all levels.
4. Jamaicans are aware of the importance of watersheds and are active participants in their conservation.
5. Sustainable land management is promoted within the watersheds through the utilization of best environmental practices and best available technologies.

Ms Miller listed the Objectives of the Policy as follows:

1. Rationalization of legislative and institutional frameworks for watershed and water resources management.
2. Updating the national watersheds management programme and provision of adequate human and technical resources for the implementation of the programme
3. Provision of adequate and sustainable financing for watershed management activities.
4. Increased availability of appropriate information and data for effective watershed management.
5. Increased public education and awareness initiatives geared towards positive changes in attitudes to watershed conservation and promotion of public participation in the planning of watershed management interventions.
6. Support initiatives to encourage appropriate land use and sustainable land management.

Institutional framework for implementation of the Policy.

The NRCA would be required to establish a Watersheds Protection Committee taking into consideration the status of the WMUs across the island. This committee would comprise representatives from various ministries including the Ministry of Finance, NEPA, Forestry Department, Water Resources Authority, Rural Agricultural Development Authority (RADA), National Water Commission (NWC), Planning Institute of Jamaica (PIOJ), Scientific Research Council (SRC), Social Development Commission (SDC), civil society, community-based organisations, NGOs and the private sector. The Committee would be established at the national level and sub-committees at the parish level.

Implementation plan

Ms Miller presented a matrix representing a summary of the proposed implementation plan highlighting selected strategies and accompanying key activities.

Policy Objective	
1. Rationalization of legislative and institutional frameworks for watershed and water resources management. For example, the WPA will be amended to include definitions and institutions that are not there. Also, currently it does not include sub-committees and these will be incorporated.	
Strategy	Key Activities

1.1. Review and streamline the provision of the NRCA Act, WPA, RADA Act, WRA Act and Forestry Act	1.1.1. Preparation of technical paper and drafting instructions for the amendment to the requisite legislation. 1.1.2. The review of the legislative provisions relating to point and non-point source pollution.
1.2. Prepare the boundary description and zoning plans for the WMUs for inclusion in the WPA	1.2.1 Reconnaissance of WMU boundaries, prepare maps and written descriptions, and conduct ecological assessments.
2.Updating the national watersheds management programme and provision of adequate human and technical resources for the implementation of the programme.	
2.1 The WAMM will be established as a code of practice for watershed management	2.1.1. Consultation with the relevant agencies such as NEPA and the WRA to develop the code of practice.
2.2 A national programme will be developed and implemented to facilitate training in watershed management in areas such as soil conservation, hydrology and GIS. Courses would be offered at educational institutions among others.	2.2.1. Consultation with the relevant agencies, training institutions and ministries to identify gaps and best practices.
3. Provision of adequate and sustainable financing for watershed management activities.	
3.1 Implementation of a PES scheme. This scheme will incentivise individuals living within watersheds to practice land management systems to preserve and maintain ecological integrity within the areas.	3.1.1. Pilot and implement the PES scheme. 3.1.2. Develop and recommend an incentive scheme for private sector participation in watershed management.
3.2. Rehabilitation and management needs in WMUs will be identified	3.2.1. Establishment of the Watersheds Protection Committee and Watersheds Protection Sub-Committees with a constitution having consideration for youth and gender balance
3.3. Funding options will be explored and implemented	3.3.1. Solicit commitment from Government to provide financial support for watershed management
4. Increased availability of appropriate information and data for effective watershed management	
4.1. Enhance the use of information technology	4.1.1. Implementation of the integrated watershed management GIS-DSS. 4.1.2. Revision the WMU classification system. The last one was done in 1999. 4.1.3 Implement the use of drones in monitoring watersheds.
4.2 Increase the capacity to conduct research and exchange information	4.2.1. Determine research by the Watershed Protection Committee
5. Increased public education and awareness initiatives geared towards positive changes in attitudes to watershed conservation and promotion of public participation in the planning of watershed management interventions.	
5.1. Preparation of public awareness and education programming on watersheds.	5.1.1.Strategies and material for public awareness and education developed and executed.

	5.1.2..Create public education programme on the importance of watershed protection to be used in schools in Jamaica.
5.2 Implementation of the WAMM	5.2.1. Implementation of WAMM components 1,9 and 10. A key component of the WAMM is community engagement which is important for watershed management; taking into account gender considerations.
6. Support initiatives to encourage appropriate land use and sustainable land management (SLM).	
6.1 Integration of SLM practice	6.1.1. Determine existing SLM practice 6.1.2. Integrated management of watershed will pay specific focus on changing landscapes.
6.2 Commissioner of Lands will address issues relating to land tenure and access to crown land	6.2.1. Support the Systematic Land Registration Programme
6.3. NEPA will update existing development orders focussing on core areas for protection	6.3.1. Assess to determine core areas for watershed protection
6.4. NEPA will recommend to the municipal corporation the inclusion of watershed protection strategies in parish development plans	6.4.1. Develop strategies for parishes 6.4.2. NEPA makes recommendations for local government to include watershed protection strategies
6.5. The NRCA/TCPA and the municipal corporations will take into consideration areas within the watershed to be protected	6.5.1. Recommendations on the designation of tree preservation orders at the parish level.

The monitoring and evaluation of the Policy, Ms Miller said, would be carried out by the Ministry with responsibility for the environment (MEGJC) bi-annually.

She shared a list of Appendices that might be consulted for further details on areas covered by the Policy.

1. Policies and Plans Relevant to Watershed Management
2. Approaches to the Management of Land and Water Resources
3. Declared Watershed Areas
4. Watershed Management Units and Hydrological Basins
5. Global and Regional Commitments Relevant to the Management of Watersheds
6. Main Global Agreements Focused on Sustainable Development
7. Consolidated List of Watershed Management Projects
8. Detailed Monitoring and Evaluation

DISCUSSION moderated by Ms Joni Jackson

Ms Jackson thanked all presenters and apologised on behalf of Mr Marshall who had to leave. Mr Gordon from The Forestry Department continued to be available online to respond to any questions or comments on his presentation. She asked those participants who had questions for Mr Gordon to share them.

Ms Jackson first highlighted the comments placed in the chat.

Dr. Doreen Gordon (Department of Sociology, Psychology and Social Work - University of the West Indies) had written that– some of the different goals, policies and objectives of the Watershed Policy were related to the community. She suggested that maybe these could be brought together under one explicit heading and goal which specifically addressed community issues. She further suggested the heading– “Community Engagement and Empowerment” be used for this goal.

Ms Jackson acknowledged the comment and said that once all feedback had been received, the team would see how best to address it.

Dr. Arpita Mandal, University of the West Indies observed that the classification ranking the watersheds in terms of parishes was not clear and recommended that water resources assessment should be done on a continuous basis. She cited the DSS system that had been developed for the Hope-Yallahs Project and suggested that it could be extended to other watersheds.

Ms Jackson advised that the classification in terms of priorities, had been done in 1999 and the authorities were now moving in a different direction. Some of the work had already started and participants would have heard from Ms Miller’s presentation that there was a move towards the adoption and implementation of the DSS system.

Ms Jackson directed the participants to the following questions which would guide the rest of the discussion.

1. In relation to existing policies, legislation and state actors, are there any additional gaps or other matters to be considered/addressed in the Policy Framework?
2. Are the Vision, Goals and Principles adequate?
3. Are the Objectives, Strategies and Actions adequate?
4. Are there any programmes, projects, strategies, plans of other initiatives (past, ongoing or planned) that may have an impact on the Policy’s context and its recommended objectives/strategies/actions?
5. Other recommendations?

The participants were asked to make suggestions for the improvement of the vision, if they considered it necessary.

Vision of the Policy: Jamaica has healthy and optimally functional watersheds that are efficient and effective in the provision of ecosystem services for the benefit of all.

There were no comments on the vision so the discussion moved to an examination of goal 1.

Goal 1: Comprehensive legislative and Institutional frameworks are developed to support the effective management of Jamaica's watersheds.

Dr. Doreen Gordon expanded on the comment she had written in the chat. She reiterated that she was unable to see how the goals appropriately represented the role of communities. She noted that goal number 4, for example, had to do with community education and number 5 with the promotion of better land management. The latter would impact farmers. She felt that the goals needed to be more focused and explicit in the way that communities were addressed. She stressed that it was the involvement of communities that would bring about effective change in watershed management. Empowerment, education and involvement of communities needed to be addressed more explicitly in the goals.

Ms Jackson noted the comment.

Goal 2: Adequate and sustainable finance mechanisms are provided for improved watershed management.

Dr. Doreen Gordon requested clarification as to whether the reference to financing was related to the government accessing funding to promote watershed management or to assisting communities/civil society associations to apply for funding related to watershed management and climate change. She emphasised that financing was important from both the government and community perspectives. She suggested that the intent be communicated more effectively as it was somewhat vague.

Ms Miller advised there was more information on the financing mechanism could be found in the implementation plan under objective 2. It highlighted possible avenues for the funding of watershed management. Most, she said, would be government funding along with certain grants that the Ministry could apply for.

Dr Doreen Gordon recommended that perhaps the Policy could include ways in which the communities could be assisted to access funding. She explained that community-based organisations and civil society often had to apply for funding to address issues in a particular area. She suggested that the type of funding could be included in a community goal. She also wanted to know where in the Policy issues such as disaster risk management were being addressed as watersheds faced the impacts of flooding, landslides and drought.

Joni Jackson was grateful for the comment and noted that in revising the Policy the team would see how best to include those issues. She expanded on the response to the financing of watershed management and pointed out that one of the roles of the National Conservation Trust Fund of Jamaica was to assist communities in accessing funding.

Ms Miller referred Ms Gordon to pages 34 and 36 which detailed strategies for financing watershed management including the allocation of a percentage of major construction projects, and utility companies, in particular, the NWC. The money from these allocations would be applied to the finance watershed management. She also asked that if anyone had additional ideas for funding, they should include them in written comments to the Branch.

Richard Bowen, Montego Bay Fishermen Cooperative, stated that the meeting was interesting and he learnt a lot.

Dr. Mandal shared general comments on various aspects of the implementation plan. She highlighted the need for improved coordination on water quality measurements, especially in regard to the NWC which could adopt the IWRM approach in watershed management. She noted that surface water monitoring was sometimes missed. Groundwater monitoring was conducted, more regularly, particularly where it was being used as potable water. She recommended that one of the goals should include increased collaboration between NWC and private laboratories in the monitoring of water.

She asked how the Policy addressed collaboration with the Office of Disaster Preparedness and Emergency Management (ODPEM) on no-build zones. She observed that communities had been established in areas where people shouldn't be living – on the flood plains and beside slopes that were prone to landslides. There were communities in degraded watersheds that would be negatively impacted by floods and hurricanes. Consequently, the Policy should include the implementation of no-build zones as an element of disaster management and in collaboration with ODPEM.

Toni-Ann Miller said there was nothing in the Policy which addressed no-build zones so would discuss this point with ODPEM. She thanked Dr. Mandal for her comments.

Dr. Mandal promised to email additional comments which would include adaptation measures for land degradation in, for example, the Rio Minho watershed which was a degraded area. She cited MEGJC projects that had been implemented in the area. She said that the farming communities complained about excessive erosion from upstream areas. The Policy, in collaboration with RADA, could include something on planting crops to prevent or reduce soil erosion which fell under sustainable land management practices. She also added the need for water quality monitoring.

Joni Jackson asked whether there were any other comments on the goals of the Policy.

Mr Murray commented that there had been some discussion on the building of biodigesters and asked if this was being pursued. He suggested that a minimal cess be imposed on the supervision of such an activity allowing the government to earn some money in that way to pay for watershed and environmental preservation.

Joni Jackson said she was unable to speak directly to bio-digesters. Individuals could utilise different methods of wastewater treatment and were not limited to biodigester. This activity was regulated by NEPA/NRCA. There would be revisions to the Act and so may be addressed in that way but dealt with in a more general way and not limited to biodigesters. We will look at all suggestions regarding sustainable financing that were addressed in the comments.

Toni-Ann Miller shared that NEPA was addressing the issue relating to water quality monitoring in watershed zones. She said it was an added parameter to support the water classification process and had started in 2021. The Agency had commenced monitoring water quality in areas like the Rio Cobre, White River and Rio Minho and would be expanded to include other areas. She pointed participants to page 17 of the Policy for further information in this regard.

Dr. Mandal asked if the data would be made available to the public. She said she recalled an objective which cited data sharing of information generated in relation to watershed management. She asked about the process regarding data sharing.

Toni Ann Miller noted that reports were prepared by the agencies. NEPA might also be contacted to get data. Information was generally shared in State of the Environment reports and annual and other reports. In terms of detailed data not yet being circulated but might be considered. Agencies did not always present raw data to the public as they wanted people to understand what the data indicated. However, the sharing of that type of data could be discussed if it is required by a researcher.

Dr. Mandal noted that some people may want raw data.

Delcita Turner, Bluefields Fish Sanctuary, advised that the Dean's Valley Watershed was close to the Bluefields Fish Sanctuary and this proximity impacted the sanctuary. She said that community involvement was important to her organisation which was committed to the cause of environmental protection. She found the document very comprehensive. Her intention was to complete reading the Policy and share it with key stakeholders and submit any further comments. She liked the treatment of financial goals which she believed would work. She also commented on the value of the education aspects and advised that the organisation had many outreach activities and was visited by many researchers. They were on board to assist with implementation, she said. Researchers who were interested in water quality often visited.

Joni Jackson thanked her for her commitment and asked her to send comments as well as to assist with implementation.

Vincent Wright, Northern Caribbean University, noted changes in agricultural practices that had taken place over the years in terms of agricultural practices. He cited sugar cane grown in Westmoreland and along the north coast. A lot of water had been used in the irrigation and cultivation of sugar cane which generated significant runoff. He wanted to know what impact on the water table. He referred, also, to banana cultivation in the eastern end of the country. He wanted to know how these changes had affected the water table. Secondly, he asked about the wildlife in these areas. For example, there used to be many crocodiles in St. Catherine that relied on the runoff from sugar cane. All had been severely affected. How are these situations being dealt with, he asked.

Joni Jackson suggested that Mr Wright email the WRA for a response to his question regarding the water table. She thanked him for his comments.

Vincent Wright reiterated that wildlife had been affected by changes in farming practices (alligators, birds) and wanted to know how the Watersheds Policy was designed to support and protect natural habitats.

Toni-Ann Miller advised that the implementation of activities detailed in the Policy would assist in recovering some species and improve biodiversity. She noted that species often returned to an area when particular activities had been discontinued.

Joni Jackson advised she would move on to discuss the objectives of the Policy.

Ms Turner asked about enforcement to ensure that no illegal activities were taking place in the watershed areas.

Toni-Ann Miller said that there were challenges as legislation needed modification in order to address some of the issues related to enforcement. She concurred that more enforcement was needed for the management of watersheds.

Joni Jackson added that there were related legislations, apart from the Watersheds Protection Act, which includes enforcement strategies depending on activities that were being executed in the watershed.

Ms Turner shared that she was a game warden and fishery inspector and had visited the Dean's Valley Watershed which has a reserve. People visited the reserve for bird watching and to enjoy the area. She noted that the area was managed by the Forestry Department and she was aware that the enforcement team came to Dean's Valley but suggested that it needed to be beefed up.

Dr. Gordon reiterated the need for more explicit wording of objectives designed to target communities which would address areas such as public education, attitudes towards the environment and public participation. She recommended an objective that was more explicit in regard to community-based involvement.

Strategies and Actions

Ms Jackson pointed out that Ms Miller's presentation represented a summary of the implementation plan which starts on page 42 of the Policy and invited participants to check on more detailed information contained in the document.

She next highlighted objective 3 with related strategies and activities.

Objective 3 Provision of adequate and sustainable financing for watershed management activities.

There were no questions or comments, so she moved on to objective 4.

Objective 4 Increased availability of appropriate information and data for effective watershed management.

There were no questions or comments, so she moved on to objective 5.

Objective 5. Increased public education and awareness initiatives geared towards positive changes in attitudes to watershed conservation and promotion of public participation in the planning of watershed management interventions.

In regard to objective 5 – Ms Jackson thanked Ms Gordon for comments made previously related to this topic.

Dr. Gordon noted that there were colleagues in the Faculty of Humanities and Education who had been working in the area of community education and had looked at how to share concepts such as the concept of a watershed with the community. She suggested that it might be useful to engage some of them.

Dr. Nikki Bramwell, University of Technology, Division of Environmental Science, cited 5.1.2 which referred to the preparation of material to be used in schools and asked what level of education was being targeted in the statement "to be used in schools".

Toni-Ann Miller said that this was in reference to primary and secondary levels. Another objective addressed programmes at the tertiary level which looked at training in technology such as GIS, hydrology and so on which would target older stakeholders.

Dr. Gordon recommended that organisations such as churches might also be targeted as possible stakeholders in public education and awareness raising.

Ms Turner highlighted the need for a basic presentation targeted at the community level. She observed that many community members did not know what a watershed was. Most of the people in coastal communities – fishermen and some farmers – didn't know what a watershed was. They must be able to understand and suggested the preparation of a simple presentation.

Toni-Ann Miller advised that such a presentation could be prepared, and the team was aware of the need to engage and educate community members. She pointed to the recommendations for sub-committees as they would be working within communities to elicit the views of the community and thus provide the appropriate response.

Nikki Bramwell pointed out that even tertiary students outside the environmental field may not know what a watershed is. She advised that her department had developed an environmental studies module for the non-environmentalists which explained what a watershed was. This, she suggested, was another channel for sharing information and providing education.

Michael Gordon, University of the Commonwealth Caribbean (UCC), wanted to know what provisions there were for higher level educational training, such as management degrees and sustainable tourism opportunities. He asked whether funding was available at this level.

Toni-Ann Miller advised that the presentation had referred to consultations with educational institutions to see what programmes existed that could feed into watershed management studies. This would first require identifying the gaps in order to provide guidance in terms of the programmes to be developed.

Objective 6 strategies and activities- Support initiatives to encourage appropriate land use and sustainable land management.

Ms Jackson asked whether there were any key programmes, plans, or other initiatives that may have an impact on the Policy's context and its objectives/strategies/actions based on where they worked. She asked participants to provide any other recommendations for the Policy.

Ms Turner cited the issue of pollution in areas close to watersheds. She noted that unplanned developments often generated contamination of groundwater. She cited a lack of bathroom facilities and proper sewage treatment.

Toni-Ann Miller referred participants to page 49 of the implementation plan which alluded to areas within watersheds for protection in which certain activities could not take place (with proper enforcement). Some areas would also be included in the development plans for protection.

Nikki Bramwell suggested that tertiary institutions could assist in the education effort through programmes such as short courses. Something targeted could be developed for awareness raising among stakeholders. This would be linked to water being central in sustaining life and thus explain the functions of a watershed.

Joni Jackson asked for written comments to be sent to the Ministry ermb@megjc.gov.jm by June 9, 2023. She shared that there would be a virtual meeting. She asked participants to share the information on the town hall meeting.

In closing, Ms Jackson thanked presenters, partner agencies and participants for their valuable contribution to the consultation.