

Spectrum Management Master Plan for Jamaica

(Policies, Practices and Requirements)

ITU-BDT





- ICT Regulation and Spectrum Management Institutional Structure
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With a population of 2.8 million of which approximately 53.9% live in the urban areas the country demonstrates one of the higher GDPs in the region.

In recent years ICT has demonstrated sustainable growth:

- ICT is the thriving sector with notable M&A cases Columbus Communications was acquired by Cable & Wireless in mobile, Digicel Jamaica acquired Telstar in broadband and cable TV.
- Cable & Wireless embarked on \$150 million investment program. In 2015 it secured spectrum in the AWS band 1710 2200 MHz.
- East-West cable between Jamaica, the BVI and the Dominican Republic has significantly augmented capacity for data and telephony services.
- Cable & Wireless and Digicel in 2014 renewed their licences for spectrum in 800, 900, 1800 and 1900 MHz bands for another 15 years. Both companies acquired additional blocks of spectrum in 700 MHz and 1700/2100 MHz frequency bands.





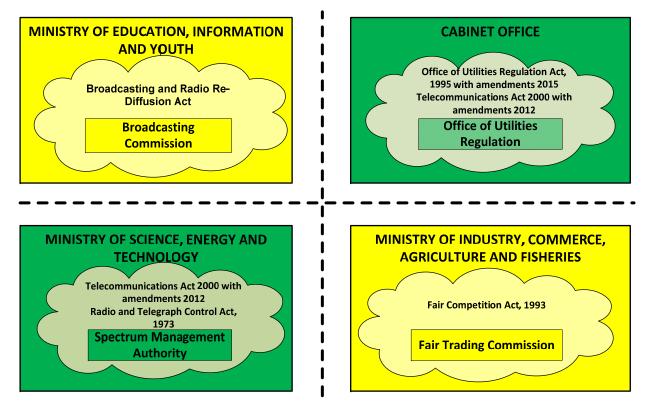
1. ICT Regulation and Spectrum Management Institutional Structure





Current Institutional Structure

Telecom regulation is distributed currently between the Ministry of Science, Energy & Technology and the Office of the Prime Minister, while the Ministry of Education, Information and Youth regulates electronic media and the Ministry of Industry, Commerce, Agriculture and Fisheries is in charge of fair competition issues.



The distribution of responsibilities between several different entities significantly burdens the regulatory process in the country in general and spectrum management in particular.





Institutional Drawbacks and Actions Recommended

Complicated Institutional

Spectrum management related functions and operations are proliferated among several authorities.

Drawbacks and Risks

Demarcation of functional responsibilities of different authorities is not evident. Overlapping and gaps in the terms of responsibilities of different regulators.

Actions Recommended

The standalone ICT regulator should be established as the matter of urgency. It should encompass full set of responsibilities of the SMA, telecom responsibilities of the OUR and technical regulation of broadcasting transmissions of the BCJ.

Technology Specific Regulation

Different Radio Services are subjects to technology specific regulation by separate independent authorities.

Drawbacks and Risks

Lack of regulatory unification for different classes of spectrum users (e.g. broadcasting is not the subject of the SMA's spectrum licencing and spectrum pricing). Contrary to service/technology convergence the existing regulatory regime remains technology/service specific.

Actions Recommended

The standalone ICT authority should apply innovative regulatory practices corresponding to converged environment

Independency of Regulator

The SMA lacks independency in decision-making process, financial aspects, licencing and capacity building.

Drawbacks and Risks

Results in tightness in adoption of subsidiary legislation, formal limitations in spectrum licencing and pricing practices, uncertainties in capital investment programmes etc.

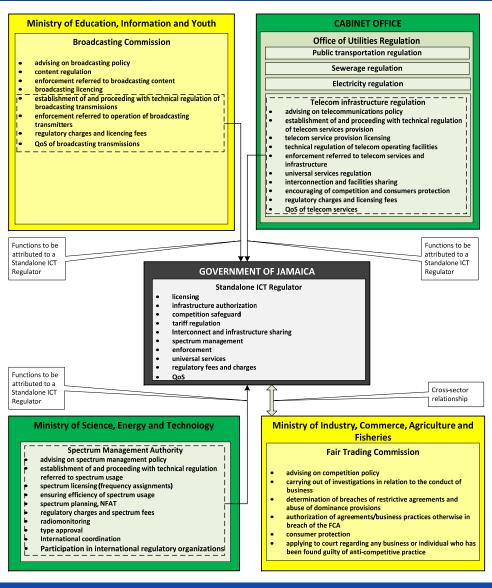
Actions Recommended

The SMA should become the integrated part of the future standalone converged ICT regulator.





Target Institutional Scheme



The key objective is to concentrate the full set of ICT regulatory functions within the single entity taking into account convergence of different technologies and services.

- 1. Future regulator should be independent including the responsibility for granting of operating and spectrum licenses.
- 2. The FTC is proposed to remain an independent agency with responsibility for competition regulation, with a strengthening of the mechanisms for consultation with a standalone ICT regulator.
- 3. Policy development and decisionmaking is recommended to become the function of a Ministry with ICT portfolio responsibility.





2. ICT and SM Legislation

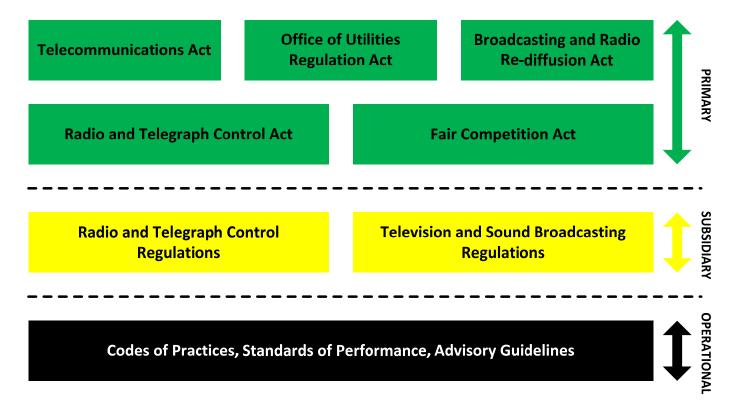




Existing ICT Legislative Framework

ICT regulation constitutes a significant part of national legal framework of Jamaica. The provisions related to ICT regulation, including SM are determined in legislative instruments belonging to different levels of legal hierarchy.

STRUCTURE







Legislative Drawbacks and Actions Recommended

Primary egislation

Primary legislation is composed of two principal laws with formidable diverged dates of promulgation

Drawbacks and Risks

Two principal laws are in force thus complicating general regulatory environment and burdening the establishment of sustainable subsidiary legislation

Actions Recommended

The standalone principal ICT Act should be promulgated presumably establishing new institutional structure with the converged ICT regulator

Primary Legislation

Primary legislation related to technical regulation and spectrum management for broadcasters and telecommunications is separate Drawbacks and Risks

Separate legal acts assume different regulatory environment for telecommunications and broadcasting. SM aspects are blurred between two jurisdictions.

Actions Recommended

All technical/spectrum management provisions of the BRRA should be disentangled and transferred to a new standalone ICT Act.

Secondary legislation is insufficient and significantly outdated

Drawbacks and Risks

Valuable part of the SMA's operation is not clearly specified (incl. policy procedures for consultations, spectrum fees policies and procedures, spectrum licencing policy and procedures, spectrum monitoring and interference management etc.).

Actions ecommended The SMA has drafted the number of policy documents to the Ministry. Those documents should be considered and approved as the matter of urgency.





Legislative Drawbacks and Actions Recommended

Primary Legislation

Primary legislation of Jamaica does not contain separate part or chapter on market regulation

Drawbacks and Risks

The values of spectrum assets (e.g. spectrum caps) are out of the scope of current regulatory practices. There is no clear demarcation between telecommunications and competition regulatory entities.

Actions Recommended

Telecommunications market regulation including spectrum aspects should become the subject of future primary legislation.

Primary Legislation Primary legislation of Jamaica does not contain provisions on scarce resources (spectrum, numbering). Drawbacks and Risks

May impede introduction of generalized schemes of authorization as long as demarcation between technical/service neutral regulation and service/technology specific regulation is not clearly defined.

Actions Recommended The provisions on scarced resources should be included in the primary legislation. In the context of spectrum management it would further promote auctions and other market-based methods of spectrum regulation.



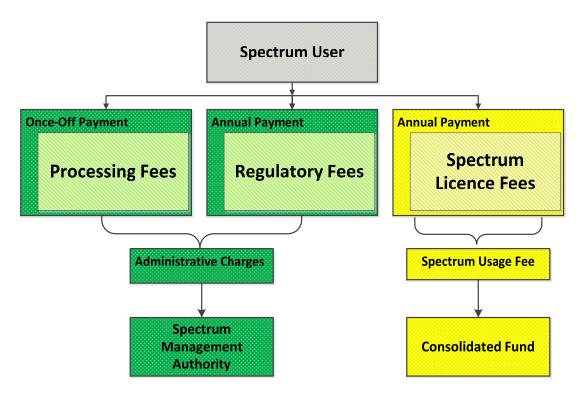


3. Spectrum Pricing and Financial Aspects





Existing Spectrum Pricing Scheme



The model applied by the SMA today is mostly based on cost recovery but includes payments related to market value of spectrum bands in the form of spectrum licence fees.

There are three major drawbacks with the current scheme:

- 1. Broadcasters are exempt from the regulatory and spectrum licence fees
- 2. The outdated methodology of cost recovery. Difficulties with financing capital expenditures of the SMA.
- 3. Spectrum fees are insufficiently incentive.





Financial Drawbacks and Actions Recommended

ınding

Financial scheme covering the SMA's capital expenditures is not created

Drawbacks and Risks

Development programs of the SMA requiring capital expenditures can't be adequately financed resulting in shortage of equipment and facilities.

Actions Recommended

Financial mechanisms to ensure adequate reimbursement of CAPEX should be introduced as the matter of urgency. It can be based on retaining of the portion of spectrum licencing fees within the budget of the SMA.

Funding

The SMA's spectrum pricing scheme is aimed on covering operational costs. The amount collected is insufficient to cover the entire list of the SMA's operational expenditures

Drawbacks and Risks The SMA is limited in financing its operational expenditures incl. human capacity program (training, staff motivation, international activities, studies, researches etc.)

Actions Recommende

Current structure of regulatory/processing charges should be modified to provide sufficient reimbursement of the entire list of operational expenditures

Spectrum Pricing

Current methodology of regulatory fees is based on outdated primary legal acts

Drawbacks and Risks Regulatory fees as levied under current primary acts stems from the outdated classification of radio services and do not reflect the market value of spectrum bands utilized Actions Recommended

The methodology of regulatory fees should be revised based on the up-to-date classification of radio services and applications. Regulatory fees levied should reflect the market value of the utilized bands.

Spectrum Pricing

Current spectrum pricing methodology is insufficiently incentive.

Drawbacks and Risks The SMA does not apply sufficient financial leverage to influence spectrum holders to use their resources in the most efficient manner.

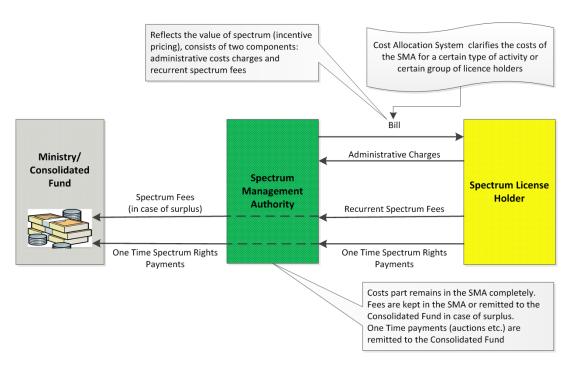
Actions Recommended

AIP is recommended for the bands with proven market demand providing motivation to ensure the highest possible efficiency of spectrum usage.





Recommended Target Financial Scheme



The bill contains administrative charges (ACP) and fees part (AIP) of spectrum payments.

The ACP reflects the costs of administering spectrum allocated/assigned.

The AIP is based on the value of spectrum for users and levied on the annual basis.

Administrative charges and annual spectrum usage fees are proposed to remain with the SMA to cover the Authority's direct and indirect costs.

ACP is kept by the SMA completely. Annual spectrum usage fees also remain with the SMA except the surplus that should be remitted to the Consolidated Fund. One time spectrum rights payments are remitted directly to the Consolidated Fund.





4. Strategy and Operational Aspects





Strategy Drawbacks and Actions Recommended

SM Strategy

The SMA does not provide publically available document on the strategy of spectrum usage.

Drawbacks and Risks

The telecom market is not provided with the clear guidance on the SMA's strategic vision of spectrum utilization in the country. It does not secure confidence of future investors.

Actions

be developed. It should be periodically revised according to the rapid radio technology innovations presumably based on the results of WPCs. periodically revised according to on the results of WRCs.

Spectrum

The SMA does not provide publically available spectrum utilization plan.

Drawbacks

Lack of publically available information on the status and principles of spectrum bands utilization.

Spectrum utilization plan should be developed. It should provide market with the data on current types of spectrum applications and estimated plans on the usage of thereof usage of thereof.

Spectrum

Spectrum reallocation/refarming framework is not established **Drawbacks and**

As long as demand for new radio technologies is increasing, most of spectrum bands are becoming congested.

Actions Recommended

The SMA should envisage the challenges arising from reallocation. Regulatory framework should be established to facilitate future process of spectrum reallocation.

Spectrum

Spectrum trading aspects are not covered by the existing legislation as well as not included in regulatory practice of the regulators.

Drawbacks and Risks

Rapid technology turnover assumes secondary marketbased mechanisms to facilitate implementation of the up-todate technologies in the congested spectrum.

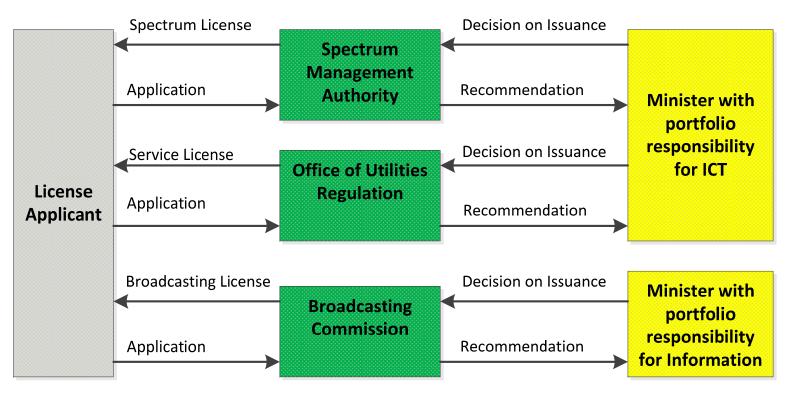
Actions Recommende

The SMA should envisage the need for introduction of further market-based methods of spectrum regulation including spectrum trading.





Current Licences Application Process



Licencing procedure is complicated and seriously outdated. It inherits the features of pre-convergence period with separate licencing procedures for telecommunications and broadcasting. In particular the complexity is significantly burdening market players preventing them from making effective and well-judged decisions on investing in the ICT market of the country.





Operational Drawbacks and Actions Recommended

Spectrum Licencing Spectrum licencing and pricing are embedded to the outdated list of radio applications.

Drawbacks and Risks

The outdated list of radio applications complicates introduction of up-to-date licencing (generalized authorization) and pricing procedures (AIP).

Actions ecommende

The SMA should modify the list of radio applications currently used for spectrum licencing and pricing purposes.

BroadcastingRegulation

Technical regulation of broadcasting transmissions is formally attributed to the BCJ. The SMA is responsible for spectrum authorization and interference management for broadcasters.

Drawbacks and Risks Cross-sectorial financing of the SMA's broadcasting related activities since broadcasters are not the subjects of spectrum pricing.

Actions Recommende The entire list of technical and spectrum management regulatory aspects should be removed from the BCJ and transferred to the SMA.

Spectrum Licencing E®S

Spectrum licencing and pricing are embedded to the outdated list of radio applications.

Drawbacks and Risks The outdated list of radio applications complicates introduction of up-to-date licencing (generalized authorization) and pricing procedures (AIP).

Actions

The SMA should modify the list of radio applications currently used for spectrum licencing and pricing purposes.

Radiomonitoring

Radio monitoring equipment used by the SMA is largely aimed on the most actively utilized spectrum bands below 21 GHz.

Drawbacks and Risks

Due to congestion in traditional spectrum bands the higher frequency ranges would become of significant demand in the short-term. The SMA has the risk to overlook this problem.

Actions Recommended

The SMA should modify the existing radio monitoring equipment to cover the higher spectrum bands. To accomplish this task the effective mechanism of capital investments of the SMA should be established as the matter of urgency.





Thank you!

