





National Irrigation Commission Limited

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## VISION

National Irrigation Commission Limited, NIC, a collaborative, efficient, innovative, customer-oriented and viable organisation making our contribution to facilitate a substantial increase in agricultural productivity in irrigated areas.

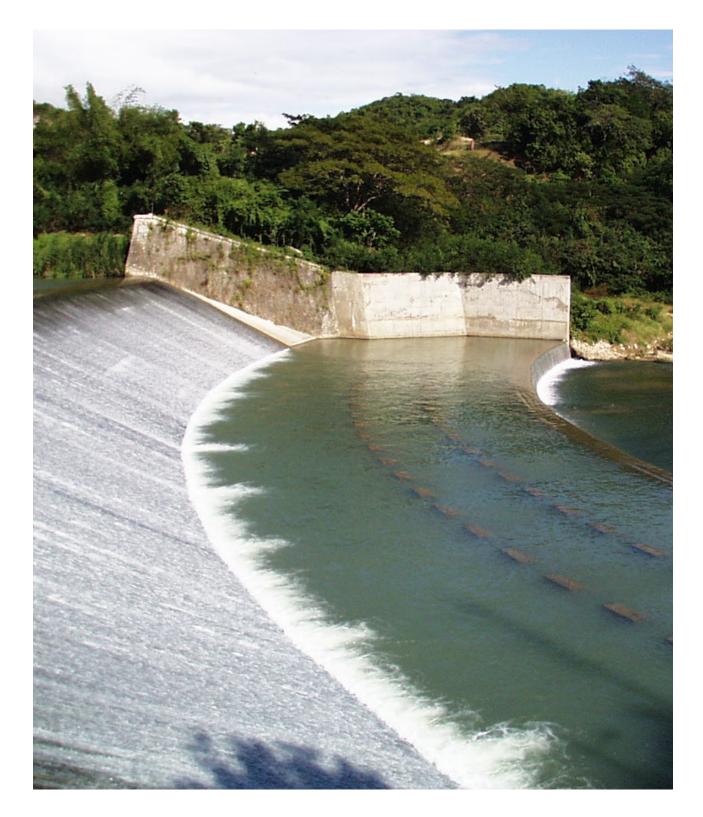
## **MISSION STATEMENT**

To enable improvement in agricultural productivity, production and prosperity through the provision of reliable, efficient and affordable irrigation and related services to farmers and other customers while ensuring the viability of the Commission.

### **CORE VALUES**

TEAMWORK RESPECT EXCELLENCE COMMITMENT KNOWLEDGE-DRIVEN





The Rio Cobre Dam is a diversion dam on the Rio Cobre River near Spanish Town in the parish of St. Catherine, Jamaica. It is owned by the National Irrigation Commission Limited. The primary purpose of the dam is to divert water into a canal on its right bank for the irrigation of up to 12,000 hectares (30,000 acres) to the south as well as provide municipal water to Spanish Town.

## OVERVIEW

#### The mandate of the National Irrigation Commission Limited (NIC) is to:

• Provide irrigation services to the agricultural sector. In addition to irrigation, water is made available to industrial and commercial operations.

National coverage is provided through Eastern, Central and Western regions, as follows:

#### **Eastern Region**:

Yallahs, St. Thomas; St. Dorothy, Rio Cobre & Colbeck, St. Catherine

#### Central Region:

Mid-Clarendon; New Forest/Duff House, Manchester

#### Western Region:

Braco, Trelawny; Hounslow and Beacon/Little Park, St. Elizabeth; Seven Rivers, St. James

The NIC also provides drainage services in the "Black River area". This area refers to that portion of the Black River including the banks thereof, from the sea to Lacovia Bridge; the Upper Morass area; the Y.S. River area; the areas described in the additional areas (Parish of St. Elizabeth) Reclamation Order, 1953, published in the Jamaica Gazette Supplement Proclamations, Rules and Regulations on the 26th day of January, 1953; and such other areas in the parish of St. Elizabeth as the Minister may, by order, specify for the purposes of Irrigation Act.

• Fix and collect the rates or charges and to be paid for the use of such water.



## FIVE-YEAR SNAPSHOT

The National Irrigation Commission Limited: Five Year Statistics

SIGNIFIGANT METRICS					
	2015	2014	2013	2012	2 <b>011</b>
	\$'000	\$'000	\$'000	\$'000	\$'000
Shareholders Equity	367,891	447,268	627,535	586,736	504,094
% Increase/Decrease compared to prior year	-17.75%	-28.73%	6.95%	16.39%	8.68%
PROFIT & LOSS ACCOUN	Т				
Operating Revenue (\$'000)	1,235,205	984,543	1,005,853	999,961	718,673
(% Dec)/% Inc. compared to prior year	25.46%	-2.12%	0.59%	39.14%	13.21%
Accumulated Surplus (\$)	40,238	39,138	219,405	178,605	95,964
(% Decr.)/% Inc. compared to prior year	-203%	-82%	23%	86%	72%
IMPORTANT RATIOS					
Admin. Exp as a % of Total Costs	20.68%	20.74%	24.45%	24.74%	19.93%
Operating Exp as a % of Total Costs	79.72%	79.26%	75.40%	74.33%	78.89%
Electricity Exp as a % of Total Costs	35.96%	29.99%	27.25%	27.67%	25.38%
Electricity Exp. as a % of Operating Costs	45.11%	37.83%	36.14%	37.22%	32.17%
Rates/Water Sales as a % of Total Costs	44.93%	40.45%	46.95%	35.42%	27.30%
Rates/Water Sales as a % of Operating Costs	56.35%	51.03%	62.27%	47.65%	34.60%
GOJ Subsidy as a % of Total Costs	46.68%	42.03%	52.25%	68.86%	65.67%
GOJ Subsidy as a % of Operating Costs	58.56%	53.03%	69.29%	92.64%	83.25%



## MESSAGE FROM THE HONOURABLE DERRICK KELLIER C.D., M.P.

The 2014-2015 Annual Report of the National Irrigation Commission Limited (NIC) highlights the strategic transformation initiatives of the organisation which will guide its sustainability.

This financial year was one of challenges for the agricultural sector as a result of the prolonged drought period experienced in some parishes, but it was also a time of great strides made by the Commission as it embarks on its path of strategic transformation to improve efficiency in administration and operations which will result in increased volumes of water delivered to farmers.

The Ministry of Agriculture and Fisheries will continue to work closely with the NIC through various interventions focused on improving irrigation water systems island wide, in a bid to further boost agricultural outputs and, thereby safeguard Jamaica's food security.

The total irrigable land in Jamaica is 187,814 hectares yet only 12,500 hectares or about seven per cent of that land is currently being provided with water. As such the Ministry's mission is, therefore, to move quickly to have a significantly greater proportion of those areas irrigated. To this end, the Ministry of the Agriculture and Fisheries, through the NIC will seek to implement irrigation projects in parishes and communities most adversely impacted during the dry season, using the National Irrigation Development Plan as our guide.

I give my full support to the management and staff of National Irrigation Commission Limited, in the fulfillment of its mission to enable agricultural productivity, production and prosperity. I thank each of you for your hard work and continued commitment to the agricultural sector as we go for growth.

Honourable Derrick Kellier, C.D., M.P. Minister of Agriculture and Fisheries







## MESSAGE FROM DR. CONRAD DOUGLAS, C.D. CHAIRMAN, BOARD OF DIRECTORS

Before I comment on the achievements of this year, it is important to remind ourselves of the history and mandate of the National Irrigation Commission Limited (NIC).

The NIC is a government entity that was established in 1986 and became operational in May 1987. The company is guided by the Irrigation Act, 1949, which stipulates that it (a) manages, operates and maintains existing and future irrigation schemes and systems; (b) provides drainage services in areas prescribed by the Act; and (c) charges rates for the delivery of irrigation water.

The Board of Directors and the Commission have an important responsibility to farmers and farming communities across Jamaica to ensure reliable, efficient and affordable services to support agricultural development. As we well know, development of the

agricultural sector is an important contributor to gross domestic product, employment, foreign exchange earnings and general improvement in the lives of ordinary Jamaicans.

Achievements in Corporate Governance and Management:

- The NIC is well advanced on a path of strategic transformation. The organisation has developed and approved updated mission and vision statements along with its core values to form the basis for strategic transformation;
- Strategic objectives have been developed and are being cascaded to all posts in the organisation to ensure these objectives are effectively understood and accepted by all employees;
- Other transformation achievements include cultural change training for staff and training in the implementation of the Performance Management Appraisal System;
- On November 5, 2014, Dr. Mark Richards joined the organisation as Chief Executive Officer and
- The Board of Directors held a successful Strategic Planning Retreat in Kingston between March 6-7, 2015.

The year has not been without its challenges, particularly as it relates to increased responsibilities for the entity, with the growth in the number of agro parks, amid resource constraints. Additional challenges included the tariff regime which impacts NIC's revenue, high energy cost of water production and managing the effects of climate change in light of projections for permanent climate shift by 2023. However, with challenges come opportunities for innovation, improvement and growth. There is a clear need to develop and sustain strong partnerships with all our stakeholders, namely staff and their unions as our internal customers and the farmers and communities we serve across the irrigation districts.

On behalf of my colleague Board Members, I wish to thank the entire family of the NIC including the Ministry of Agriculture and Fisheries, our sister agencies and partners for their continuing commitment and support of the organisation. I invite everyone to join us as we move forward with renewed commitments and efforts into the new year.

Dr. Conrad Douglas, C.D. Chairman, Board of Directors



## MESSAGE FROM DR. MARK RICHARDS CHIEF EXECUTIVE OFFICER (CEO)

I wish to extend sincere gratitude to the Board of Directors, Management and Staff of the National Irrigation Commission Limited (NIC) for the support given to me since I assumed the position as Chief Executive Officer (CEO) in November 2014.

During the year, the organisation focused on a path of strategic transformation which will result in improved efficiency and accountability in administration and operations with corresponding improvements in energy management, quality, efficiency and volumes of water delivered. Developing an improved organizational structure to meet these outcomes and getting staff buy in was at the forefront of activities during the year.

We encountered some hurdles to improving service delivery such as significant costs incurred in supplying irrigation water to farmers

especially during the drought period. The energy cost per hectare of land irrigated increased from a low of \$3600 to a high of \$6300 during the height of the drought. However, we continue to meet the challenges of energy management with a strategic approach to cut costs and continue the gains currently being made. Savings of some fourteen million dollars have been achieved between the period April 2014 to February 2015. These initiatives included:

- Installation of capacitor banks at 10 pump stations to make power supply more efficient and cost effective;
- Use of Variable Frequency Drives;
- Implementation of energy saving plans at our offices;
- Improvement in the scheduling of delivery of irrigation water
- The push to increase the use of alternative energy sources in our energy supply mix continued by completing a technical assessment study into the use of wind energy for pumping irrigation water and the engagement of the Clinton Foundation to assist with the installation of solar power systems.

The mandate of the NIC is central to the Ministry of Agriculture and Fisheries' Agro Parks Programme and of the nine Agro Parks already developed, we were integrally involved in eight of them. Our team continued to provide invaluable support to the development of the Agro Parks during the year and ensured the Government of Jamaica's (GOJ) target for active Agro Parks under the International Monetary Fund (IMF) were met. The proposed implementation of additional Agro Parks in St. Elizabeth, St. James, Hanover and St. Mary will see an additional 1,533 hectares of lands being brought into production.

Critical to the development of these systems will be climate resilience mainstreaming in both design and systems maintenance for these infrastructure. One of the key inputs for the success of these Agro Parks will be affordable, efficient and reliable delivery of water. The NIC started efforts towards having an effective maintenance and comprehensive drought management plans which should provide the efficiency and reliability needed for success. The NIC has renamed its building located on the Denbigh showgrounds and offered a scholarship in memory of the late Minister of Agriculture and Fisheries, the Honourable Roger Clarke, C.D., M.P.

There is much work to be done, but I am confident in the leadership of the Board of Directors, the support of the Ministry of Agriculture and Fisheries, and most importantly, in the commitment of all members of staff to move the organisation forward as we seek to achieve our mission and contribute to the development of our country.

Dr. Mark Richards Chief Executive Officer

## **BOARD OF DIRECTORS**



Dr. Conrad Douglas Chairman



Linford Cooper Deputy Chairman



Emile Spence



Howard Hill



Keith Verley



Edith Chedda



Miranda Wellington



**Basil Fernandez** 



Balfour Hewitt



Carolyn Campbell



**Everton Fisher** 



**Oswald Bent** 



**Rankin Watson** 



Rev Glenroy Clarke



Ludgar Parish



# CORPORATE GOVERNANCE STATEMENT & REPORT

#### GOVERNANCE STATEMENT

The Board of Directors of the National Irrigation Commission Limited commits to an organisation-wide adherence to policies and procedures in accordance with best practice principles of corporate governance beyond mere legislative compliance.

The Board seeks to reaffirm its commitment by observing the highest standards of corporate governance. It recognises its responsibility to stakeholders for the performance of the Commission, and seeks to balance sometimes competing objectives in the best interests of the company as a whole. The Chairman of the Board, Dr. Conrad Douglas is responsible for leading the Board, ensuring proper briefing of its Directors, facilitating discussions and managing the relationships between the Board and members of staff of the Commission and its stakeholders in general.

Day-to-day management of the company and implementation of approved strategy and policy initiatives are a separate function and formally delegated to the Chief Executive Officer.

#### This approach is grounded in clearly defining the following relationships:

#### Roles, Responsibilities & Relationships

Setting out the roles and responsibilities of the Board, the Chairman, its Sub-Committees, Board Members, and the Chief Executive Officer; Managing the key relationships between the Board of Directors and Senior Management and the Ministry of Agriculture and Fisheries; and conducting Board business efficiently and effectively.

#### Effective Financial Management

How the Board and senior management demonstrate its financial accountability for the stewardship of public money and its performance in the use of resources.

#### Standards of Behaviour

How the Board exercises leadership in determining the values and standards of the organisation, and ensuring compliance with ethical standards.

#### **Board Composition**

The Board comprises fifteen Directors drawn from private sector, accounting and farming communities across the island.

#### **Board Remuneration**

In accordance with fees that are in keeping with Government of Jamaica guidelines and Ministry of Finance and Planning policy, circular number 1, dated January 15, 2007.

#### **Board Committees**

Board committees oversee and advise the Board on specialist issues which require more detailed analysis and review. The Standing Committees at March 31, 2015 are:

- Audit and Risk Management Committee
- Finance & Performance Management Committee
- Projects, Energy & Technology Committee
- Corporate Affairs and Governance Committee
- In addition, there are local Advisory and Monitoring Committees which meet as required.

#### Code of Conduct

The National Irrigation Commission Limited has continued to promote its recently redefined core values in its internal culture, including leadership development initiatives, which reflect our deep commitment to providing service delivery and performance to stakeholders and the wider community. In the creation of a culture of accountability, it is necessary to demonstrate and continually practice behaviour that reinforces these values. The Code of Conduct provides guidance for Directors.

#### Training

Directors are encouraged to participate in training initiatives offered. The Board Secretariat works in collaboration with the Training and Development Unit to ensure best practices in governance approaches.

#### Independent Professional Advice

At the Company's expense and with the permission of the Chairman, Directors of the Company have the right to seek independent professional advice on matters of concern, in executing their responsibilities.

#### DIRECTORS' REPORT

Directors present their report on the Commission for the financial year ended 31 March 2015.

#### Corporate Secretary

Paola Arscott, Attorney-at-Law, was the Corporate Secretary for the period 1 April 2014 to March 31, 2015.

#### **External Auditors**

KPMG, the present Auditors, will continue in office pursuant to section 154 of the Companies Act, 2014.

#### Meetings

The Board of Directors met in person seventeen times during the year. Additionally, a retreat was held to deal with specific items requiring decisions relating to these intiatives identified.

#### **Risk Management**

The process of refining the formal risk and compliance management system continued during the year, while addressing the further development of policies and procedures. Significant areas such as legislative compliance, workplace health and safety, and management of environmental risks will receive greater focus.

Of concern is the ongoing business risks arising from customers' ability to pay and the NIC's rising input costs.

In reviewing the implications of the proposed retirement health scheme for pensioners, which had been started on humanitarian grounds to assist a number of pensioners, the determination was made that the Commission could not afford to sustain this benefit through the next financial year.



Discussions have commenced with all stakeholders who will be impacted by the cessation of this programme with a view to determining the best approach in returning to the Commission acting solely as facilitators to access of these benefits.

#### Compliance

The Company has met its operating and statutory requirements during the course of the year 2014/2015.

#### Auditor's Independence

Company Auditors have no representation on the Board or its Committees, nor is there any relationship between the Company's Officers and Auditors, other than the normal business relationship between auditor and the Commission.

The Auditor's Independence Declaration is included with the financial statements. Fees paid to the external auditors are fully disclosed in the notes.

#### Legal Proceedings

In the ordinary course of business operations, the Commission is involved from time to time in commercial litigation, employment disputes, conveyancing and other legal transactions. No current proceedings, individually or in aggregate are expected to have a material effect on the business or financial condition of the Commission.

#### **Financial Statements**

The Financial Statements for the year in review are contained within this Annual Report.

#### **Review of Operations**

During the Financial Year, the NIC produced 101.2 million cubic meters (mcm) of water and sold to customers resulting in a 70% flow recovery. This 70% recovery exceeded the 65% target by 5%. The invoicing levels achieved in 2015 exceeded that during the 2014 Financial Year by 11%.

#### Significant Changes in the State of Affairs

Changes were made to the Company's Articles of Association as approved by shareholders and registered in October 2014, to amend the nomenclature of Chief Executive Officer to Managing Director.





BOARD SUB-COMMITTEES	SUB-COMMITTEE MEMBERS	MEETINGS HELD IN 2014/15
FINANCE AND PERFORMANCE MANAGEMENT	Ms. Carolyn Campbell – ( Chairperson & representative from Ministry of Finance & Planning ) Dr. Conrad Douglas Mr. Linford Cooper Mr. Ludgar Parish Mr. Rankin Watson Mrs. Edith Chedda Mr. Emile Spence	12
PROJECTS, ENERGY AND TECHNOLOGY	Mr. Howard Hill - (Chairperson) Dr. Conrad Douglas Mr. Linford Cooper Mr. Balfour Hewitt Mr. Basil Fernandez - (representative from Water Resources Authority) Mr. Oswald Bent Mrs. Yvonne Barrett-Edwards - (representative from Ministry of Science, Technology, Energy and Mining (MSTEM)	12
AUDIT & RISK MANAGEMENT	Mr. Keith Verley - (Chairperson) Dr. Conrad Douglas Mr. Linford Cooper Mrs. Edith Chedda Mr. Rankin Watson Ms. Miranda Wellington	9
CORPORATE AFFAIRS & GOVERNANCE	Mr. Emile Spence - (Chairperson) Dr. Conrad Douglas Mr. Linford Cooper Rev. Glenroy Clarke Mr. Howard Hill Mr. Ludgar Parish Mr. Oswald Bent	10

# STRATEGIC INITIATIVES THE PLAN FOR TRANSFORMATION

(17)

The Plan for Transformation began in 2013 under the leadership of the Chairman of the Board, Dr. Conrad Douglas, with the approval and support of the Ministry of Agriculture and Fisheries. This effort to transform the culture and meet the infrastructural needs of the organisation emerged in the context of serious resource constraints, changing client demand and global challenges of climate change and food security.

Under the direction of the current Chief Executive Officer, Dr. Mark Richards, this effort has been reorganized in the context of the existing realities of a crippling drought which affected the agricultural sector over the period under review, to ensure that priority was given to the mitigation of the risks and impact resulting from the drought. The goals of the Plan are the attainment of the following targets by the end of 2017:

MAJOR INDICATORS	2014/15 YO L/E	2016/17 Y3 TARGET	% GAP	2015/16 Y1 TARGET
Volume of irrigation water delivered, Million M 3	53	70	32	56
Overall Unit cost of water delivered, 2013 J\$/ M 3	18	15	17	18
% Annual Increase in agricultural productivity (over 2013/14) in irrigated areas	TBD	20	20	TBD
% of our farmers whose earnings have increased	N/A	15	15	TBD
# of farmers impacted	2850	3794	33	3135
Total hectares irrigated/ drained	36,000	40,000	11	37,000
Total revenue collected, 2013 J\$M	420	500	19	430
% Expenditure from government subsidy	70	60	14	65
% Energy use from renewables	O	30	30	0
Value of projects implemented, J\$M	90	180	100	160



STRATEGIC INITIATIVES	UPDATE					
BUSINESS DIRECTIC	BUSINESS DIRECTIONAL SHIFTS INITIATIVES					
Develop and implement a Resource Mobilisation System (Project Fund and Sourcing) to drive capital improvement for new and existing.	The Project Fund and Sourcing is continuing and approaches have been made to the Mexican Government and United States Agency for International Development (USAID).					
Develop and implement a formal process to engage RADA and other key stakeholders in strategic alliances.	Dialogue continues with Rural Agricultural Development Authority (RADA) and other key stakeholders.					
Develop and implement a formal system to engage individual customers, to provide technical support and to educate them on the financial value of irrigation.	Meetings of the Internal Committee have been held. The Process to execute the initiative has commenced with the training of farmers.					
Design and implement an IT strategy to support the NIC strategy.	The design of the IT strategy to support NIC has been completed and the process of its implementation is ongoing.					
CULTURE SHI	FT INITIATIVES					
Design and implement a Culture Transformation Programme aligned to the strategy.	Performance Management Training completed. Core Values were circulated primarily to the management staff. All staff members have been exposed to the Core Values.					
Revamp and implement an enhanced Talent Management System linked to the strategic planning process and promulgate throughout the organisation (targets, measurement, development, succession).	The Talent Management System is in the development stage.					
Develop and implement a formal system to engage individual customers, to provide technical support and to educate them on the financial value of irrigation.	Meetings of the Internal Committee have been held. The Process to execute the initiative has commenced with the training of farmers.					
CAPACITY BUILE	DING INITIATIVES					
Redesign and implement new organisation structure to support NIC strategy.	New Organisational Structure to be completed and approved.					
Design and implement a Governance Training Programme and rationalize committees to support the strategy.	The Governance Training Programme has been completed with annual training update. The Terms of Reference were rewritten for each Committee, dates of Committee meetings have been decided and the composition of the Committees has been revised.					
Development of Standard Operating Procedures.	Loan Procedure & the requirements under the Security Interest in Personal Property Act implemented.					

The Plan for transformation aims to provide expanded service offerings to the stakeholders within farming communities. Presently, the plan has primarily been focused on drought response and mitigation strategies within the areas of operation that are directly impacted. In light of the drought and its crippling effect, the NIC continues to be guided by the Vision Statement, its realigned Mission and Core Values in charting its desired future state. Adopting the approach of a value chain analysis, a mechanism to rank and evaluate performance and link the current state of the NIC to the desired future state was utilised to identify performance gaps. The NIC is committed to providing services to its stakeholders at the required standard and is determined to improve agricultural productivity, production, prosperity and NIC's viability in line with its Mission Statement.

#### The Strategy Statements focus our efforts on:

1. Building relationships with RADA and other key stakeholders to encourage expansion of agricultural activity in Jamaica;

2. Expanding out, irrigation water supply by directly sourcing project funds focusing on climate change and food security opportunities;

3. Providing value added services and technical support to our farmers to supplement irrigation services while educating them on the real value of irrigation;

4. Containing cost and increasing service delivery to world class levels through innovative technological solutions;

5. Increasing water revenue and collections through increased customer engagement and risk management; and

6. Substantially improving strategy execution by strengthening governance, leadership, management, staff capability, culture, accountability systems and working environment.

#### **NIC Strategy Map**

A strategy map was developed to link the areas of the Commission's operations that would have the greatest impact within the organisation as well as nationally. The mapping highlights the need for the Commission to excel at its internal processes such as customer acquisition, engagement, and support, effective irrigation design systems and financial and operational management. Ten precursor strategic initiatives were initially identified and are detailed in the table above.

National	I1. To enable improvement in viability of the Commission	n agricultural productivity, produ	action and prosperity while	ensuring the
Impact	I2. Increased Provision of Irrigation Services	I3. Increased Farmer Productivity & Prosperity	I4. NIC is financially st	able
Customer & Financier	C1. NIC is well known for reliable & affordable irrigation services	is responsive in meeting making	ing my farm more tran uctive and profitabe agri	NIC is accountable, sparent & enables cultural productivity luction and prosperity
Internal			proved Irrigation system I ns and maintenance	P7. Targeted sourcing of project financing
Process				Governance, Risk agement and Compliance
Learning & Growth	competent and highly motivated	processes, information and equ structure to execute the strategy envi	3. We have an open participativ itable and respectful working ironment where our Core Value R.E.C.K.) are lived by all.	visionary leadership at

#### DEVELOPMENT OF THE BALANCED SCORECARD

This requires further defining and establishment of Performance Targets through rigorous measurement processes to be able to compare these targets with the actual performance and provide reasoned insight into how the processes which are to be implemented, are performing.



#### Future State Approaches to the Development of the Balanced Scorecard:

#### Performance Targets

Once a set of suitable indicators has been defined for a programme or project, the next step is to specify what levels of performance the institution and its employees will strive to achieve. This involves specifying suitable performance targets relative to current baselines.

Plan

The baseline is the current level of performance that the institution aims to improve. The initial step in setting performance targets is to identify the baseline, which in most instances is the level of performance recorded in the year prior to the planning period. So, in the case of annual plans, the baseline will shift each year and the first year's performance will become the following year's baseline.

Defining performance targets in line with performance standards will establish the bar for the minimum acceptable level of performance. These must be informed by legislative requirements, policies and service-level agreements. They can also be benchmarked against performance levels in other institutions, or accord with accepted best practices.

#### **DEVELOPING PERFORMANCE INDICATORS**

Performance indicators being crafted will identify service delivery and performance gaps to impel the Commission to work towards achieving better results.

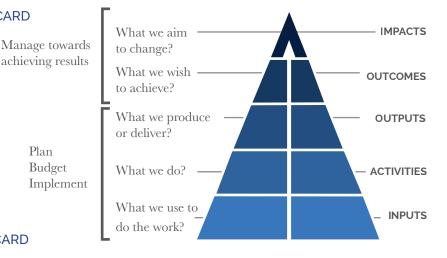
Our proposed methodology:

#### Step 1: Agree on what is to be achieved

Once what is to be achieved is defined, what is needed to be delivered this must also be determined.

#### Step 2: Specify the outputs, activities and inputs

The second step is often the most difficult - specifying what needs to be done to achieve the desired outcomes and impacts. Specifying appropriate outputs often involves extensive policy debates and careful analysis. The process of defining appropriate outputs needs to take into consideration what is practical and the relative costs of different courses of action. It is also important to assess the effectiveness of the chosen intervention.



#### Step 3: Select the most important indicators

We will then select indicators that measure important aspects of the service that is being delivered, such as critical inputs, activities and key outputs while keeping the following elements in mind: • Clear communication

- Clear communica
- Available data
- Manageability

#### Step 4: Set realistic performance targets

The chosen performance targets will:

- · Communicate what is to be achieved if the current policies and expenditure programmes are maintained
- Enable performance to be compared at regular intervals as appropriate.
- Facilitate evaluations of the appropriateness of current policies and expenditure programmes.

#### Step 5: Determine the process and format for reporting performance

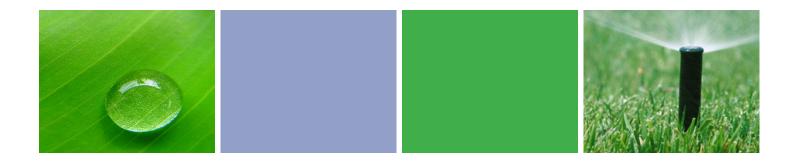
Performance information is only useful if it is consolidated and reported back into planning, budgeting and implementation processes where it can be used for management decisions, particularly for taking corrective action. This means getting the right information in the right format to the right people at the right time and ultimately standardizing reporting from the level of the Board to the Department level.

#### Step 6: Establish processes and mechanisms to facilitate corrective action

Regular monitoring and reporting of performance against expenditure plans and targets enables managers to manage by giving them the information they need to take decisions to keep service delivery on track. The information should help managers establish:

- What has happened so far?
- What is likely to happen if the current trends persist, say, for the rest of the financial year?
- What actions, if any, need to be taken to achieve the agreed performance targets?

The final and most important step will be to ensure a coherent link between the organisational balanced scorecard tiered to divisional and ultimately individual performance. To achieve this, the Commission has targeted the implementation of the revised Performance Management System in the next financial year. This purposeful approach will ensure that staff operate from a common set of goals and work to maximize their potential while contributing to the growth and development of the organization.



# DISTRICT ADVISORY & MONITORING COMMITTEES

# DISTRICT ADVISORY & MONITORING COMMITTEES

Tenure: Appointed to serve for three (3) years, December 1, 2012 –November 30, 2015

#### ST. ELIZABETH

Miranda Wellington (Chairman) Rev. Milton Russell Donovan Williamson Layton Smith Hubert Khanni Frazer Griffiths Sylburn Blake Kingsley Palmer (RADA) Vivian Blake (NEPA) Kevin Dunkley (Parish Council)

#### BRACO

Balfour Hewitt (Chairman) Winston Kellyghan Norman Simpson Griffin Gray Fernando Henlon Mervyn Green (RADA)

#### ST. CATHERINE

Howard Hill (Chairman) Juliet Taylor Monica Sang-Binns Ralston Fray Vivian Kildare Derrick Dunn Alfred Guyah Yorkwin Walters Victor Edwards (RADA) Michael Morris (Parish Council)

### MID-CLARENDON

Linford Cooper (Chairman) Godfrey Knight Pershad Williams Ludgar Parish Thomas Burton Noel Lowe Leslie Farquharson Charles Reid (AIC) Courtney Peters (Parish Council) Melvin Aris (RADA)

## DISTRICT ADVISORY AND MONITORING COMMITTE'S REPORTS



### BALFOUR HEWITT (CHAIRMAN) BRACO IRRIGATION DISTRICT THE BRACO MONITORING & ADVISORY COMMITTEE

The Braco Advisory & Monitoring Committee seeks to give focus to or challenge the level of agricultural research work being carried out by the NIC. The following highlights took place over the financial year 2014/2015:

- The Braco Demonstration Plot generated approximately \$541,395.00 in revenue. There will be continued efforts to obtain assistance in research methodology from the Rural Agricultural Development Authority (RADA).
- Farmers and customers were sensitized of changes to the pumping schedule in an effort to manage the effects of drought.
- The Government of Jamaica (GOJ) Adaptation Fund Programme provided aid to a number of farmers in the form of chemicals, fertilizer and seedlings.
- The Jamaica Social Investment Fund (JSIF) constructed a packing/changing facility on the property of the Braco District Office to support agricutural activities



### HOWARD HILL (CHAIRMAN) ST. CATHERINE IRRIGATION DISTRICT

# ST. CATHERINE ADVISORY & MONITORING COMMITTEE

The St. Catherine Advisory & Monitoring Committee continued to test the water quality at the Rio Cobre Irrigation District to ensure its compliance with the St. Catherine Health Department standards for public consumption.

- The Committee continued its efforts to tackle illegal use of water for car washing activities and blocking of the canals for swimming.
- Increased farming activities were also seen in the Colbeck area as a result of the Committee's effort to educate and sensitize farmers to the onion crop. This is expected to boost the agricultural productivity in the Colbeck area.
- Within the Financial Year 2014/15, the eastern region invoiced 74% of water produced which represents a 9% increase above target.





### LINFORD COOPER (CHAIRMAN) MID-CLARENDON IRRIGATION DISTRICT

The Spring Plain and Ebony Park Agro Parks gross irrigable area is comprised of 880 hectares of land; with 263 hectares located in Spring Plain, 450 hectares in Ebony Park and 167 hectares for private holdings. Four wells namely Ebony Park, Jungle West, St. Jago No. 1 and Spring Plain with a potential supply of 645 L/s were considered to meet the projected peak irrigation demand of 487 L/s.

Irrigation distribution lines exist on approximately 50% of the overall area however the existing outlay required modifications. A proposed 21.4 km of PVC pipelines is expected to be used to facilitate expansion and to convey supply from the Spring Plain and St. Jago No. 1 wells located on the periphery of the Spring Plain project area.

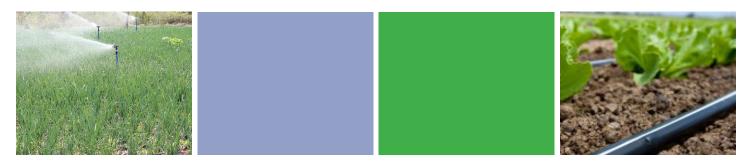
The proposed design will facilitate interconnection between all four wells; the turbine for two wells (St. Jago No. 1 and Spring Plain) will have the capacity to maintain 100% reliability in the irrigation water supply in the event that one of the remaining two wells becomes non-functional. Approximately 280 farming lots with lot sizes ranging from 2 to 5 hectares will be served across this project area.



### MIRANDA WELLINGTON (CHAIRMAN) ST. ELIZABETH IRRIGATION DISTRICT

The St. Elizabeth Advisory & Monitoring Committee is mandated to provide recommendations, advice and information regarding irrigation and the agriculture sector to relevant stakeholders such as farmers, the NIC and Parish Councils etc. The following highlights took place over the financial year 2014/2015:

- A new loading bay constructed in Hounslow, St. Elizabeth to expand accessibility of more water trucks at the bay.
- The Ministry of Agriculture & Fisheries announced the development of the Hounslow and Beacon/Little Park Irrigation Schemes.
- The country has been experiencing below normal levels of rainfall and as such the Rapid Response Unit has been tasked with ensuring that farmers were given priority in regard to trucked water.
- The Committee welcomed the discussions between the NIC and the St. Elizabeth Parish Council for the use of the Bluntas Storage Tank to offset the mounting need for water.



## AGRO PARKS INITIATIVE FOR SUSTAINABLE DEVELOPMENT

While no country has been able to decrease poverty through agricultural development alone, at the same time, no country has solved its problem of poverty without creating a dynamic agricultural sector.<sup>1</sup>

Irrigated agriculture has driven much of the increase in global food production over recent decades.<sup>2</sup>

This is also true for Jamaica as can be seen from Table 1 which shows the production in the two extension areas highlighted increasing as a result of irrigation infrastructure installation.

Table 1. Agricultural Production for two extension areas pre and post irrigation

	New	Forest	Pedro Plains		
Crops	Year (Tonne)				
	2010	2013	2009	2013	
Escallion	3107	3107 4060		2417	
Cabbage	362.9 525.5		281	440.5	
Thyme	440 638		21.6	14.3	
Tomato	323.8 815.14		1236	1539.92	
Watermelon	581.9 1016		5984	7309	
Callaloo	130 258.3		168.6	339.6	
Sweet Pepper	83.9	282.18	272	351.49	

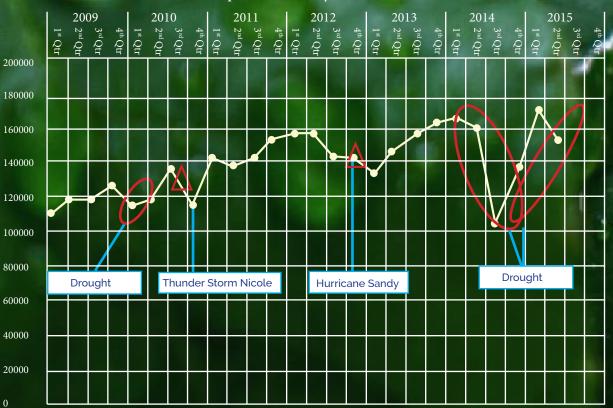
The development of irrigation infrastructure in Jamaica over the last 20 years has been guided by the National Irrigation Development Master Plan which highlighted that approximately 187,000 hectares or 17% of the total surface of the Jamaica is irrigable. The irrigable area is divided into 3 categories based on the ease by which irrigation can be effected. Table 1 below shows the categorization.

Table 2. Agricultural Production for two extension areas pre and post irrigation

Category	Description	Area in Jamaica
Ι	Lands which may be irrigated with all common methods of irrigation	23,462 hectares
II	Lands which are suitable for irrigation only with sprinkler and micro- irrigation methods	67,274 hectares
III	Lands with generally steep slopes and thin soils which are productive with careful management of the limitations and are responsive to manual irrigation (slopes > $10^{\circ}$ ). This category was specifically developed to identify potential irrigable lands primarily in the hills of Jamaica to help possibly increase the income of small farmers.	97,077 hectares
TOTAL		187,814 hectares

1 Timmer 2003 "Agriculture and Pro-Poor Growth" 2 World Bank 1994, 2008

With only about 6% of the irrigable area under public irrigation the agricultural sector productivity has remained quite sensitive to the shocks of natural meteorological phenomena such as droughts and storms. Figure 1 illustrates the impact of these phenomena on the production in agriculture for the last six years.



Domestic Crop Production by Quarter - 2009 to date

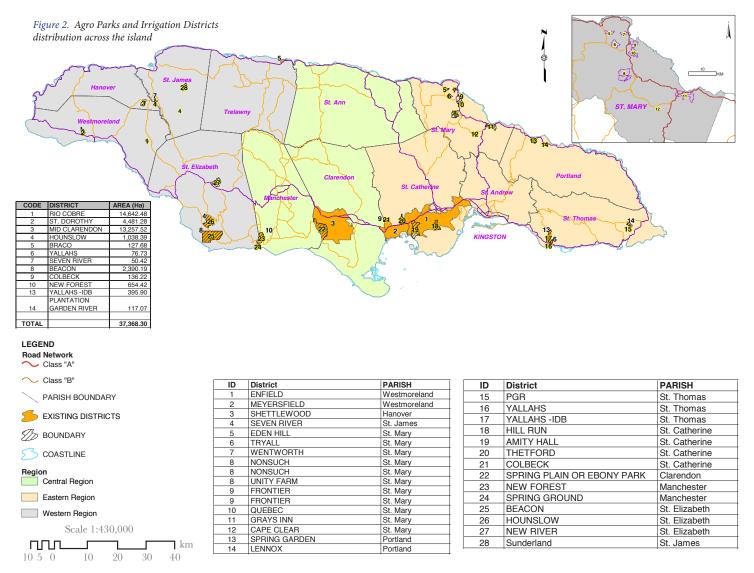
Figure 1. Trend in Agricultural Productivity over the last 6 years

With the development in agriculture being one of the pillars for the development of the Jamaican economy, Ministry of Agriculture has embarked on a drive to increase the resilience of the agricultural sector to impacts of drought, storms and climate change in order to improve food security, improve domestic production, increase the productivity and cost efficiency of agricultural enterprise by developing Agro Parks. The Agro Parks are agricultural production zones with adequate infrastructure and targeted crops and technical support services. The Ministry of Agriculture and Fisheries (MOAF) will also facilitate investment in Agro Parks. The development of these parks was formally tied to the growth agenda with the inclusion of the development of nine Agro Parks by the end of 2014-15 in the extended fund agreement with the International Monetary Fund.

One of the crucial infrastructure within these zones is the development of sustainable irrigation. The National Irrigation Commission Limited has the responsibility to develop these sustainable systems and has worked tirelessly to meet the deadline of March 31 2015 to have the nine Agro Park implemented. The NIC was directly involved in the development of eight of the nine existing Agro Parks. The availability of irrigation within areas such as New Forrest/Duff House, Manchester and Yallahs in St. Thomas made them attractive for the designation with Agro Park status. The NIC's work has become the foundation for eight out of the nine Agro Parks established

The mandate of the NIC under the Irrigation Act is to effectively manage the planning, development/ installation, operation and maintenance of these systems. Once the Minister of Agriculture and Fisheries declares an irrigated area the NIC shall do the investigations needed to develop a scheme and analyse its viability. The Agro Parks initiative has been quite successful and the MOAF has decided that this model would be quite useful for the sector and has proposed a number of additional Agro Parks for development in the next five years. Figure 2 shows the existing irrigation districts, existing Agro Parks and the proposed Agro Parks.

### NATIONAL IRRIGATION DISTRICTS AND PROPOSED AGRO PARKS



The NIC's need to expand irrigation is therefore now tied into the MOAF's and Government's thrust for development in Agriculture. In moving forward with the establishment of these systems the development of climate resilient, energy efficient and easily maintained irrigation networks will be the deliverable anticipated. The NIC must develop its capacity to effectively manage the delivery of such systems to assure the sustainability of the Agricultural sector. We have embarked on a process of strategic transformation which is vital for us to remain viable and improve our product delivery to our customers, a significant portion of which will be in these new Agro Parks. The management of energy resources and use and the improvement of water use efficiency are critical for the success of these areas and these are all focal points of the strategic transformation which was central to activities executed last financial year. The synergies between different agencies of the MOAF and the NIC to build sustainability into the Agro Parks were initiated in last financial year and we anticipate full integration for the development of the new parks. The NIC is committed to the development of agriculture and will evolve to make these important production areas viable to spur economic growth for the localities in which they exist and for the nation as a whole.



## **DIRECTORS' COMPENSATION 2014 - 2015**

Names and position of Director	Fees (\$)	Motor Vehicle Upkeep/ travelling or Value of assignment of Motor Vehicle (\$)	Honoraria (\$)	All other compensation including non- cash Benefits as applicable (\$)	Total (\$)
Chairman Dr. Conrad Douglas	371,250.00	26,484.50			397,734.50
Deputy Chairman Linford Cooper	197,625.00	511,219.30	-	-	708,844.30
Dir. 1 Balfour Hewitt	127,125.00		-	-	576,178.70
Dir. 2 Basil Fernandez	88,500.00	-		-	88,500.00
Dir. 3 Carolyn Campbell	135,130.00		-	-	135,130.00
Dir. 4 Edith Chedda	187, 875.00	488,604.60	-	-	636,479.60
Dir. 5 Emile Spence	183,750.00	10,730.10	-	-	194,480.10
Dir. 6 Everton Fisher	44,625.00	73,696.00	-	-	118,321.00
Dir. 7 Howard Hill	337,125.00	168,906.10	-	-	506,031.10
Dir. 8 Keith Verley	139,125.00	7,426.00	-	-	146,551.00
Dir. 9 Ludgar Parish	195,750.00	228,886.80	-	-	424,636.80
Dir. 10 Miranda Wellington	71,625.00	135,774.60	-	-	207,399.60
Dir. 11 Oswald Bent	160,500.00	370,844.00	-	-	531,344.00
Dir. 12 Rankin Watson	196,125.00	431,722.50	-	-	627,847.50
Sub-Total	2,248,255.00	2,454,294.50			5,299,478.20
Dir. 13 Noel Lowe *	-	20,580.00	-	-	20,580.00
Total	2,248,255.00	2,474,874.50	-	-	5,320,058.20

\*Director 13, Appointed for the period 2012- 2013, however, payment was actually effected during this review period 2014-2015

Name of Committee Member	Fees	
		Total (
Yvonne Barrett-Edwards *	10,500.00	10,500.00
Total		10,500.00

## EXECUTIVE MANAGEMENT TEAM



Paola Arscott Director of Corporate & Legal Services/ Corporate Secretary



Milton Henry Director of Engineering & Technical Services



Dr. Mark Richards Chief Executive Officer



Wayne Barrett Director of Commercial Operations



Edgar Watson Director of Finance & Corporate Planning

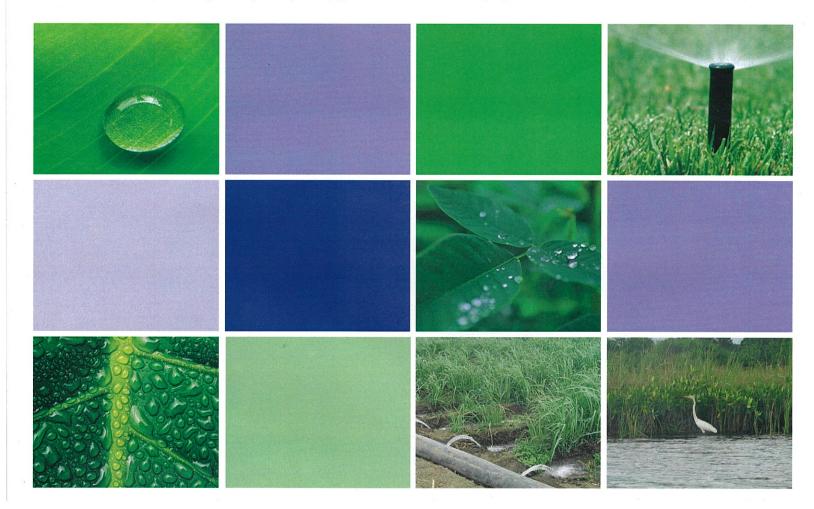


# SENIOR EXECUTIVES' COMPENSATION 2014 - 2015

Position of Senior Executive	Year	Salary	Gratuity or Performance Incentive (\$)	Travelling Allowance	Pension or Other Retirement Benefits (\$)	Other Allowances (\$)	Non cash Benefits(\$)	Total
Dr. Mark Richards Cheif Executive Officer *	2014/2015	2,361,731.38		197,854		7,530	-	2,567,116
Tafari Burry Dir. Finance & Coporate Planning /Acting	2014/2015	4,301,404.75	-	477,263	-	53,613.32	-	4,832,282
Wayne Barret Director Commercial Operations	2014/2015	4,655,173	-	975,720	-	35,445	-	5,666,338
Milton Henry Director Engineering & Tech Sercives	2014/2015	5,692,912	-	975,720	-	556,991	-	7,225,623
Paola Arscott Director Corporate & Legal Services	2014/2015	4,863,142	-	975,720	-	350,318		6,189,180
Edgar Watson Director Finance - New	2014/2015	285,172	-	65,573	-	-	-	350,744
ж. А. <sub>11</sub>		22,159,535	-	3,667,850	-	1,003,898	-	26,831,28

\*Chief Executive Officer

\*Chief Executive Officer's compensation figures comparatively lower, appointment date was later in the year, November 2014.



# CORPORATE AND LEGAL SERVICES YEAR IN REVIEW

## CORPORATE AND LEGAL SERVICES

#### Corporate Objectives:

- To develop a cadre of professionals through human resources programmes which support and expand staff competencies and ultimately enhance the sustainable delivery of service to our customers.
- To implement and monitor the administrative systems, procedures and policies of the Commission; to ensure the protection of its assets and legal rights and to provide an efficient support system through general office services.

#### Corporate & Legal Services Division

During the year under review, the Corporate and Legal Services Division sought to secure an organizationwide commitment to excellence and to support the strategic direction and programmes undertaken by the Board of Directors and Senior Management. Training & Development in a knowledge driven culture became the central theme and a number of initiatives were undertaken to strengthen the company's management of its assets, adherence to policy and procedural guidance and compliance. Public Relations sought to expand its programmes through the redesign of the NIC's website, reintroduction of the internal newsletter "The Channel", and the introduction of E-news communications to standardise the look and feel for future staff engagement initiatives. An outline of the Unit's focus is provided below:

#### Legal Services

During the period April 2013 to March 2014, the Legal Services Unit had oversight for:

- Implementation of strategies to strengthen functional competency and build foundations for a performance based meritocracy.
- Implementation of strategies to protect the Commission's irrigation infrastructure through securing lands for reservations and the acquisition of easements.
- Implementation of the "Vesting Project" which seeks to bring on to the books of the Commission land interests which were not acquired at the time of incorporation of the NIC.
- Managing litigation and negotiating claims against the Commission in a cost effective manner.
- Provision of adequate insurance values for property.
- Cost Containment Initiatives.
- Facilitating effective corporate governance mechanisms.



#### The Vesting Project

NIC is mandated to register its interest in properties within declared Irrigation Areas, under sections 16-18 of the Irrigation Act. The Irrigation Act outlines the mechanism to achieve this (Vesting Order) but is silent on the procedural steps for obtaining this Order. The delay in registering land interests has resulted in several issues exacerbated by :

- 1. An explosion of squatter settlements on properties along canal infrastructure;
- 2. Claims for negligence by land owners whose lands were flooded from blockages in watercourses ;
- 3. Construction of establishments on canal reservations preventing effective maintenance of the infrastructure
- 4. Titles being issued to private land owners without the interests of the NIC being noted.

The Vesting Initiative therefore seeks to determine the location and condition of the infrastructures owned and controlled by the NIC (canals, pump houses, houses, micro dams, wells and field offices), the ownership of lands upon which these infrastructures have been established and to implement an appropriate plan of action to guide the acquisition of ownership of the identified properties. One projected spin-off benefit of this programme is the consolidation of the Commission's Fixed Asset Portfolio with projected increases in its fixed asset holdings in the future.

#### **PROPERTY & TRANSPORT UNIT**

#### Vehicle Management System

The Property & Transport Unit's effort in fleet management has resulted in a significant reduction in cost and utilization of petrol through strict conformance to the Government's Motor Vehicle Policy guidelines. The savings realized in fuel use for the fleet is a marked reduction of 55.33%, using October 2014 consumption as the baseline.

#### **Registration of Lien and Security Agreement**

In supporting efforts at risk reduction, the organisation's procedures for the registration of liens on vehicles acquired by staff through its motor vehicle loan facility, were redrafted and implemented. All liens are registered on the national database for security for personal property at the Companies Office of Jamaica in keeping with the National Security Interest in Personal Property Regulations for the securing of motor vehicle loans to employees.

The Unit continues to ensure the Lease Portfolio is kept current and ensure adequacy of insurance coverage for all property of the Commission.

#### **OCCUPATIONAL HEALTH & SAFETY UNIT**

The Unit's efforts have been focused on the following areas:

- Signage at strategic points on the open canal system,
- Fire emergency responses.

A draft policy was developed for the area which will be expanded and used to guide initiatives as a precursor to legislative demands expected by the end of the coming financial year. The unit continues to monitor and investigate accidents to ensure that hazards are identified and risk assessment guides interventions undertaken.

#### ADMINISTRATION & GENERAL SERVICES

The focus of the Unit for the year under review was to ensure a clean and safe working environment with quality service to our internal and external customers. This initiative was supported by our ancillary staff being exposed to training interventions at MIND. This programme will be instituted across the District over the coming fiscal year. In response to the policy requirement for fiscal prudence, the Department implemented cost-saving measures in an attempt to reduce the cost of office supplies and stationery. The programme to archive documents at the St. Dorothy's location continues with the cataloging of files which has commenced at the Head Office. The analysis of the feasibility of establishing a document registry and digital library has commenced.

#### HUMAN RESOURCES MANAGEMENT & INDUSTRIAL RELATIONS

#### Scholarship Awards



#### The 2014 NIC scholarship awardees were as follows:

Front Row, L-R: Miranda Wellington (Board Member), Scholarship Awardees: Karesha Richardson, Jhaneel Burrell, Abigail Pollack, Majorie Hyatt (Guest Speaker), Shanice Brown and Abigail Coke Back Row, L-R: Dr. Mark Richards (NIC's Chief Executive Officer), Aston Johnson (Deputy Chairman, University & Allied Workers Union), Paola Arscott (NIC's Director of Corporate and Legal Services), Edith Chedda (Board Member) and Linford Cooper (Deputy Chairman)

#### • Daneil Forrest and Abigail Pollack, son and daughter of Icyline King, Office Attendant, Mid-Clarendon Office;

- Abigail Coke, daughter of Collin Coke, Special Works Superintendent, Braco District Office;
- Jhaneel Burrell, daughter of Percival Burrell, Mechanical Technician, St. Dorothy District;
- Shanice Brown, daughter of Tricia Bambury, Administrative Assistant, Head Office;
- Jon-Leon Walker, son of Leonie Walker, Information Systems Administrator, Head Office; and
- Karesha Richardson, daughter of Sandra Rhone-Richardson, Accounting Officer, Head Office.



#### The Roger Clarke Scholarship

This year saw the introduction of the "Roger Clarke Scholarship", named in honour of the late Minister of Agriculture and Fisheries, Honourable Roger Clarke, C.D., M.P. This scholarship was awarded to the child of a member of staff whose involvment in agriculture whether through school, extra-curricular activities or programmes at the community level is worthy of commendation. The recipient of the Scholarship for 2014 was Daneil Forrest.

#### The Minister of Agriculture & Fisheries Scholarship

Karesha Richardson received the prestigious Minister's Cup, a scholarship award to the student with the highest overall academic results.

#### Staff Achievement

The NIC congratulates Mr. Wilbert Clarke, Electrical Technician at the St. Dorothy District Office who was awarded an Associate Degree in Engineering Technology from the Portmore Community College.

#### Industrial Relations Initiatives

The organization is faced with a myriad of challenges as it seeks to reposition and retool to manage the effects of high energy cost, climate change, reduced resource access and the ever increasing demand for knowledge driven solutions to ensure innovation and sustained viability. The need for staff engagement has never been greater.

The Unit sought to manage staff expectations and the need for an ethos of *espirit de corps* by exercising a balanced approach to resolving conflicts and building consensus.



#### Training and Development Initiatives

The organisation's continued commitment to staff development is evident by the number of training and development programmes that were implemented during the period. Every category of staff was provided with training opportunities through in-house, external institutions, Government-sponsored and or special programmes. In the context of budgetary constraints, training intervention will continue to be effectively planned to support the creation of value in the transformational effort.

The following table summarises the training and development initiatives for the period.

Programme Type	Course/Initiative Name	Staff/Category	Total Number of Participants
Overseas Scholarships	Water Supply & Waste Water treatment technology seminar, China	Technical Staff/Engineering & Technical Services	3
	Water Resources Management Capacity Building, China	Technical & Supervisory Staff/Engineering & Technical Services	2
	International Masters in Business Administration, China, Sept 2014–August 2015	Administrative Staff/Public Relations	1
	IAEA Sub-Regional Training Meeting on Tools & Best Practices for TC Project Design, Austria	Director, Manager/ Engineering & Technical Services	2
Locally Sponsored Training (External Institutions)	Studio Pietrangeli (Italy) Consulting Engineers Workshop-Hydro Power Capacity Building	Director, Manager/ Engineering & Technical Services	1
	Champion Industrial Equipment & Supplies presents Franklin Electric Training Workshop	Engineering/Technical Services	2
External Institutions	Understanding the Public ServiceStaff Order-HLSTUEI, Mandeville	Managers/Engineering & Technical Services	3
	Understanding & Relating to Union Practices-HRMAJ	Manager/Operations	1
	HR Analytics for Business Strategy-HRMAJ	Management/ Administration & Operations	2

Programme Type	Course/Initiative Name	Staff/Category	Total Number of Participants
External Institutions	Jamaica Productivity Centre: EU/GOJ EnergyProject Workshop- "Developing an Energy Services Company (ESCO) Industry in Jamaica'	Director, Manager/ Engineering & Technical Services	2
	Energy Efficiency Audit Course-UTECH	Engineering Staff	1
	Jamaica Chambers of Commerce IR Seminar - Choosing the right Employment Contract	Management/Admin	2
	Pension Reforms Seminar- Pension	Management/Admin	2
	Fund Association of Jamaica		
	Service Skills for Ancillary Workers, MIND	Ancillary (Head Office)	3
	ICAJ Taxation Seminar	Accounting	2
	Annual IFRS Updates Seminar	Accounting/Audit	2
	Project Management Training-Vantage Point	MIS	2
	Microsoft Excel Online Training course-INFOSERV Institute of Technology	Various staff	10
	Change Pace Leadership Workshop	Director	1
	MCS Ltd: Payroll Seminar	Accounting	3



Programme Type	Course/Initiative Name	Staff/Category	Total Number of Participants
External Institutions	Mona School of Business- Executive Roundtable Forum	Director	1
	Mines & Geology: BSC Safety Conference	Manager	1
	HLSTUEI: Climate Change Workshop/Promoting Sustainability (Montego Bay)	Manager, Supervisors, Board Member	4
	HLSTUEI: Climate Change Workshop/Promoting Sustainability, UWI, Mona	Manager & Supervisors	3
	Norman Manley Law School Continuing Legal Education (Online) TrainingWorkshop	Director	1
	ICAJ: IFRS Updates Workshop	Director & Manager	2
	Detecting Credential & CV Fraud	1	
Conferences- (Local)	General Legal Council Weekend CLPD Seminars (2)	Director	1
	Caribbean Microfinance Conference	Director	1
In-House Workshops	Electronic Power Solution (EPSOL): PCJ/NIC Project - Training on Toshiba Variable Speed Drive (VSD) Installation	Engineering & Technical Services Division staff	64
	Customer Service Staff Training	Systems Operators, Works Supervisors, Admin., etc	19
	Microsoft Excel Training- Infoserv Institute of	Managers , Supervisory & Administrative Staff	24

Technology (Facilitator)



Programme Type	Course/Initiative Name	Staff/Category	Total Number of Participants
In-House Workshops	Microsoft Outlook 2010 Level 2 workshop	Information Systems Staff	4
	Management Development Programme- Success with People	Director, Managers, Supervisory & Technical	42
	Workshops (2)		
	Strategic Objectives Departmental Workshops (5)	Directors, Managers, Supervisory & Technical staff	34
	Conflict Management Workshops (4)	All Categories of Staff	104
	Microsoft Dynamics-HR Module Refresher's Training	HR Deptartment	5
	Infotech Caribbean Limited (Trinidad): MIS & Accounts Depts. Refreshers' Training	Accounting staff Head Office and Regional Offices	14
	Management & Professional Development –Social Graces Seminar Presentation (Management Retreat)		25
In-House Training (Sponsored)	Laidmar Company Ltd: Drip Irrigation Seminar	Various Staff- Engineering/ Technical Services	13
In-House (Staff Facilitators)	Inventory Management System Users In House Training by IS Staff presenters	Accounting staff in all districts	7
	New Staff Orientation Programme	CEO & Managers	3
GOJ Sponsored Sensitization Training			

Programme Type	Course/Initiative Name	Staff/Category	Total Number of Participants
GOJ Sponsored Sensitization Training	SIPPS Business Reform Sensitization Seminar, Mobay	Management & Administrative Staff	3
	Energy Efficiency Public Procurement Workshop	Directors, Managers, Supervisory, Technical & Administrative Staff	16
	GOJ Policy Forum hosted by MIND:Social Protection in support of Vision 2030	Manager	1
	Energy Efficiency Conservation Sensitization Programme-Launch of Public Sector Energy Champion Competition	Various Staff	6
	Ministry of Water, Land, Environment & Climate Change: National GreenEconomy Workshop	Director & Manager	2
	MIND: Training Managers' Network Forum (3)	Manager	1
	Workshop-Understanding the IR Processing the Public Service (MOF&P)	Managers	2
	Strategic Programme for Climate Resilience Monitoring & Reporting Framework Workshop (PIOJ)	Various NIC staff & other GOJ Agencies	71
	Insolvency Workshop, Ministry of Industry & Commerce	Director & Administrative Support Staff	2



Programme Type	Course/Initiative Name	Staff/Category	Total Number of Participants
Special Projects	Wind Energy Project Development Workshop	Engineering & Technical Services Staff; others from UWI, MSTEM, UTECH,	17
	Wigton Wind Farm Educational Tour	Directors, Managers, Technical Staff, PET Committee Members; staff from other GOJ Agencies	17
Governance Training	Choosing the Right Employment Contract Training Presentation - Myers, Fletcher & Gordon	Board Members, Directors, Managers	25
	Strategic Objectives- Strategy Map Presentation (Consultant)	Board & Senior Management	23
Certificate Programmes	INPRI Ja Levels 1-4 Public Sector Procurement Certification Training	Manager	1
	Professional Trainer's Institute: Administrative Management	Administrative Support Staff	1

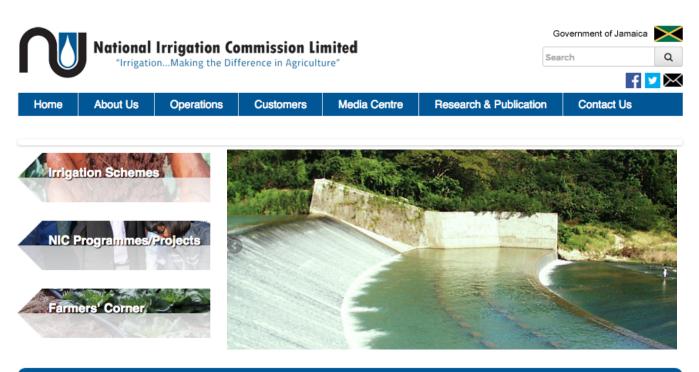
#### PUBLIC RELATIONS UNIT

The Public Relations Unit focused on several areas during the year including increasing the visibility of the organisation and improving public awareness about the role of the NIC and its contribution to farmers, the agricultural sector and rural development. To cement the direction a public relations and communications plan was developed.

The organisation's website, www.nicjamaica.com was redesigned and redeveloped with a fresh new look, userfriendly navigation and search functionality to appeal to our various stakeholders. Several new media channels, such Twitter and Facebook, were integrated into the communication mix to extend our reach to internal and external persons.

Promotional literature for exhibitions were redone.

### THE WEBSITE



#### Latest News

#### Braco Farmers Get Drip Irrigation System

Eighteen small farmers, who cultivate fruits and vegetables on the Braco Farms in Trelawny, are benefitting from the installation of a

#### Screenshot of NIC's Homepage

#### **V** Irrigation Schemes

Rio Cobre Location: 17 Barrett Street, Spanish Town, St. Catherine Contact: (876) 984-2141; 984-2334 Crops/Livestock: Sugar cane,



No

The NIC's building located on the Denbigh Showground was renamed the "Roger Clarke Building" in honour of the late Minister of Agriculture and Fisheries, the Honourable Roger Clarke C.D., M. P. This gesture was in recognition of his commitment to the expansion of irrigation services to farmers and the development of agriculture across Jamaica.

In an effort to increase the NIC's public outreach the Public Relations Unit participated in a number of activities across Jamaica, including the following events:

- Denbigh Agricultural Industrial and Food Show, August 4-6, 2014 Clarendon
- World Food Day Expo, October 2014 St. James
- Eat Jamaica Campaign Exposition, November 2014 Kingston
- Jamaica Agricultural, Food Security and Economic Summit, January 2015 Kingston
- World Wetlands Day , February 2015 Clarendon
- Hague Agricultural and Livestock Show, Feb 17 & 18, 2015 Trelawny
- World Meteorological Day, March 2015 Kingston



Anna-kay Austin, Public Relations Unit (right) presents an award to Keron Campbell, Botanist, National History Museum of Jamaica for coaching the winning debating team that participated in the World Wetlands Day Celebration held in Clarendon. Looking on is Dilip Ragu, Bustamante High School.

The Unit also sought to engage the media in its efforts to educate and inform the public of the critical projects and programmes being implemented. One such engagement was the participation of members of NIC's management team in a "Think Tank" session hosted by the Jamaica Information Service (JIS).



Dr. Mark Richards, Chief Executive Officer, NIC (centre), Lorraine Geddes-McDonald, Manager, Commercial Department (left) and Milton Henry, Director, Engineering and Technical Services (right), as they fielded questions during the JIS Think Tank session.

The team members shared information on several areas including the organisation's strategic transformation initiatives; NIC's contribution to the Government of Jamaica's Agro Parks Programme and drought mitigation strategies being implemented throughout our irrigation districts.

Our work to improve internal communication across all district offices of organisation continues. Some headway was made through the consistent use of E-News and E-Bulletin channels to keep staff informed of NIC's achievement, activities and events.

The staff newsletter, The Channel, was brought back on stream during the first quarter of 2015. Additionally, there have been ongoing visits by the Chief Executive Officer and members of the Public Relations Unit to NIC offices across parishes to engage staff via face to face meetings on different organisational issues.



# **ENGINEERING** & TECHNICAL SERVICES YEAR IN REVIEW

### **ENGINEERING & TECHNICAL SERVICES**

#### Corporate Objective:

• To implement methods which will improve efficiencies in procurement, conveyance and delivery of irrigation water to enhance the quality and reliability of service.

During the financial year, the Engineering & Technical Services Department was engaged in work activities aligned with Priority Programmes as outlined in the NIC's Strategic Business Plan for the period 2015 – 2018. The key areas and targets included:

#### (i) Volume of Water Produced and Delivered.

A target of 65% revenue water was set for the financial year. Strategies agreed included:

- Improved flow monitoring to minimize losses
- Calibration and maintenance of measuring devices
- Develop and implement projects to reduce system losses.

#### (ii) Reduce operating expenses notably in Energy Management.

An overall target of 10% avoidance of energy cost was set along with :

#### The development of renewable energy systems

Energy cost containment initiatives

#### (iii) Irrigation Systems Implementation for Agro Parks.

The NIC target was to design and install and subsequently manage at main system level, irrigation systems for the nine Agro Parks agreed under the Government of Jamaica's (GOJ's) Medium Term Agreement with the International Monetary Fund. Subsequently, the GOJ announced an additional six Agro Parks that will be implemented during the 2015/16 financial year. The NIC Engineering team is responsible for developing engineering designs and implementing irrigation projects under the GOJ's Agro Parks Programme.

#### (iv) Improve operational efficiency- operations and maintenance.

The NIC targets include 100% implementation of the Electrical/Mechanical Preventative Maintenance Programme as well as full satisfaction of Civil Works.

#### (v) Drain Maintenance Services

#### (vi) Reduce security cost and risks to NIC staff and property.

The target was to have no increase in the number of major security incidents during the year.





### **IRRIGATION WATER DELIVERY**

#### **Overall Irrigation Conditions including Drought**

During the year the nation including the agricultural sector was negatively impacted by a severe drought. Several irrigation districts including New Forest and Mid-Clarendon suffered severe drought conditions while Rio Cobre. Yallahs, Beacon/Little Park and Hounslow schemes encountered moderate drought conditions. The major irrigation consequences on the Commission and our customer included:

(i) Reduction in irrigation supplies notably in the surface flows in Mid-Clarendon and Rio Cobre schemes. During 2013/14, for example, 61% of the NIC's supplies were from surface flows. However this was reduced to 54% of flow supplied during the 2014/15 review period.

(ii) Increased irrigation demand especially in the New Forest and Mid-Clarendon Irrigation schemes which were driven by expansion in sugarcane and vegetable production respectively.

(iii) Dramatic increase in NIC's energy cost as the commission responded to the farmers irrigation needs by pumping the wells for longer hours.

#### 5 St. James Hanover Trelawny St. Ann St. Marv Westmoreland Portland Clarendon St. Elizabeth St. Catherine St. Andrew Manchester St. Thomas Kingston 108 6 CODE DISTRICT AREA(Ha) 1 Rio Cobre 15,711.07 2 St. Dorothy 3411.12 LEGEND WATER SUPPLY 3 Mid-Clarendon 13.257.52 Parish Boundary Drainage Area 4 Hounslow 1039.39 Central Region Moderate 5 Braco 127.68 Yallahs 6 873.65 Eastern Region Low Seven River 7 50.42 Beacon/Little Park 8 805.73 Severe Western Region Colbeck 9 136.22 10 New Forest 654.42 Scale 1:966,555 11 Yallahs IDB 395.90 km 12 Plantain Garden River 10 5 0 10 20 30 40 117.07 TOTAL 37,368.30

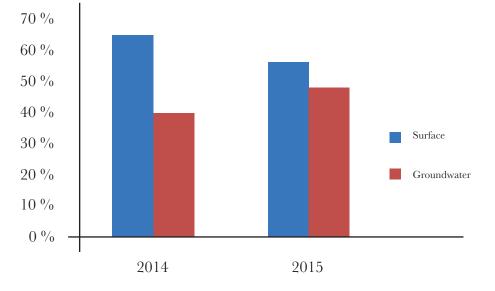
#### FIGURE 1. DROUGHT IMPACT ON NIC'S DISTRICTS

The NIC worked with the farmers to mitigate the drought conditions through several initiatives including: (i) Agreed flow rotation within the districts

- (ii) Promoting ramp sales of irrigation water to customers not served by irrigation schemes
- (iii) Partnering with Rural Enterprise Development Initiative (REDI) to distribute farm-scale storage tanks and drip irrigation equipment

(iv) Farmer training and information sharing in efficient irrigation application

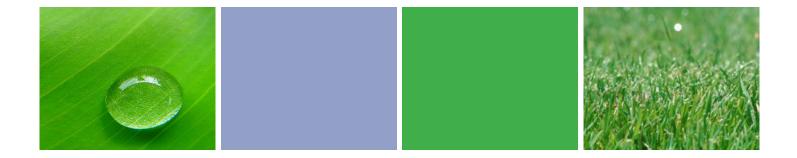
#### FIGURE 2. COMPARATIVE SURFACE VS GROUNDWATER CONTRIBUTION TO IRRIGATION FLOWS 2014/15

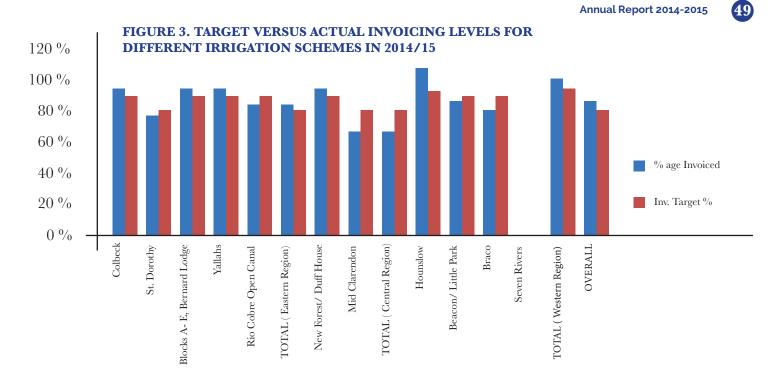


#### Water Production, Invoicing Levels and Accounting for Irrigation Flows

The level of water production and invoicing in each district during the 2014/15 Financial Year is outlined in Table 1 and Figure 3. Overall, the NIC produced 101.2 mcm of water and sold 70.7 mcm to customers resulting in a 70% flow recovery. This 70% recovery exceeded the 65% target by 5%. The invoicing levels achieved in 2015 exceeded that during the 2014 Financial year by 11%.

At the district level the flow recovery targets were realized in eight of the ten districts in operation, the exceptions being Mid-Clarendon and Braco. The improved results reflect the success of the Operation Team's effort in through increased monitoring of water delivery to customers over the period.





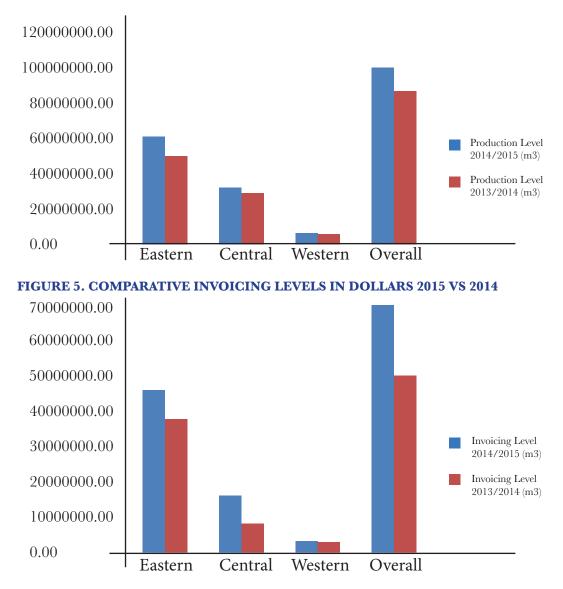
The Eastern Region continues to produce the larger flow volumes, being 61% of the overall flows compared to 32% and 7% respectively for the Central and Western Regions. Going forward, the NIC has embarked on a major water loss recovery programme in Mid-Clarendon and this is expected to improve flow accountability to meet the target levels during the upcoming financial year.

Location	Active Area (ha)	No. of Active Customers	Produced M <sup>3</sup>	Invoiced $M^3$	% Invoiced	$\underset{Target (\%)}{Invoice}$	Variance	System Type
Colbeck	61	52	219,592	195,196	89%	85%	4%	Р
St. Dorothy	470	397	7,548,939	4,752,539	63%	65%	-2%	P,O
Blocks A- E, Bernard Lodge			6,067,259	5,348,716	88%	85%	3%	Р
Phillipfield/ Heartease/ Norris	77	104	597,900	520,473	87%	85%	2%	Р
Rio Cobre Open Canal	5,373	230	47,496,411	34,772,575	73%	65%	8%	G, O
TOTAL (Eastern Region)	5,981	783	61,930,102	45,589,499	74%	65%	9%	Р
New Forest/ Duff House	286	273	1,405,900	1,235,018	88%	85%	3%	Р
Mid Clarendon	2,214	429	30,992,670	17,678,956	57%	65%	-8%	P,O
TOTAL (Central Region)	2,500	702	32,398,570	18,913,973	58%	65%	-7%	Р
Hounslow	688	470	3,567,289	3,520,206	99%	85%	14%	Р
Beacon/ Little Park	334	270	2,886,095	2,387,974	83%	85%	-2%	Р
Braco	126	112	422,711	309,374	73%	85%	-12%	Р
Seven Rivers	19	12		12,745				G
TOTAL (Western Region)	1,168	864	6,876,095	6,230,299	91%	85%	6%	
OVERALL	9,649	2,349	101,204,767	70,733,771	70%	65%	5%	

#### TABLE 1. TARGET VERSUS ACTUAL INVOICING LEVELS FOR DIFFERENT DISTRICTS IN 2014/15

Key: P- Pressurized, O - Open Canal, G - Gravity

Overall, both water production and invoicing levels increased during the year. While production levels increased by 17% overall, the invoicing levels increased by 38% (Figures 4 and 5). The impressive invoicing level improvement was recorded in the Mid-Clarendon District where invoicing levels increased by over 100% in the 2014/15 financial year (Figure 5). Going forward, NIC is expecting to see continued increase in both production and invoicing levels as Agro Park projects and sugar cane expansion are realized especially in Mid-Clarendon.



#### FIGURE 4. COMPARATIVE PRODUCTION LEVELS IN DOLLARS 2015 VS 2014

#### Flow Measurement Improvement

In order to improve accuracy of flow measurement and overall irrigation systems management, the NIC Engineering and Technical Services Department continued the programme of bulk flow metering and measuring device calibration. The NIC partnered with the Water Resources Authority (WRA) to calibrate twelve important flow measurement locations comprising six in Mid-Clarendon and six in the Rio Cobre District. To date, the recommended corrective steps have been implemented at 8 of the 12 sites, improving measurement accuracy at those locations.

The NIC has also purchased additional bulk flow meters which will be installed in the Mid-Clarendon District in order to improve bulk flow measurement accuracy.

### **OPERATING COST REDUCTION STRATEGY – ENERGY MANAGEMENT**

#### Energy Use and Cost Overview

During the Financial year 2014/15 the NIC commenced an aggressive energy management programme. The target was to avoid 10% of the electrical energy costs being paid by the Commission. Despite this effort, the NIC recorded the highest level of energy use and cost in its history. This was due to the need for additional pumping resulting from increased irrigated production acreage and drought conditions experienced.

Table 2 shows the volume of irrigation water produced and the associated energy and energy cost utilized. The year closed with energy consumption of 12.54 kWh with associated cost of \$484 million for pumping (See table 2 below). The Central Region irrigation districts accounted for 54% of the energy used, followed by Western with 24% and Eastern 21%.

# TABLE 2. HOURS PUMPED, VOLUME PRODUCED AND ELECTRICITYUTILIZED IN NIC DISTRICTS DURING 2014/15

Location	$\begin{array}{c} \text{Hours} \\ \text{Pumped} \\ (\text{hr}) \end{array}$	Produced $(M^3)$	Energy used (kWh)	Energy Cost (\$)	(\$/M <sup>3</sup> ) Pumped	$({ m kWh}/{ m M^3})$ Pumped	System Type
Colbeck	983	219,592	85,748	5,659,252.38	25.77	0.390	Р
St. Dorothy	21,503	7,548,939	1,368,416	46,341,073.92	6.14	0.181	P,O
Blocks A- E, Bernard Lodge	45,782	6,067,259	941,688	36,341,073.92	6.00	0.155	Р
Yallahs	2,291	597,900	242,025	10,933,909.76	18.39	0.405	Р
TOTAL Pumped (Eastern Region)	70,559	14,433,691	2,637,877	99,391,267	6.89	0.183	
Rio Cobre Open Canal	-	47,496,411					G
TOTAL (Eastern Region)	70,559	61,930,102	2,637,877	99,391,267	1.60	0.043	
New Forest/ Duff House	4,763	1,405,900	1,086,085	46,392,678.21	33.0	0.773	Р
Mid Clar. Pumped (Central Region)	74,635	23,572,739	5,481,499	212,990,064.87	9.04	0.233	
Total Pumped (Central Region)	79,399	24,978,639	6,567,585	259,382,743	10.38	0.263	
Mid Clarendon Surface	-	7,419,931					
Total (Mid Clarendon)	74,635	30,992,670	5,481,499	212,990,065	6.87	0.177	P,O
TOTAL (Central Region)	79,399	32,398,570	6,567,585	259,382,743	8.01	0.203	P,O
Hounslow	6,727	3,567,289	1,383,016	53,265,924.51	14.93	0.388	Р
Beacon/ Little Park	10,761	2,886,095	1,849,522	67,685,592.09	23.45	0.641	Р
Braco	1,612	422,711	103,022	4,672,175.34	11.05	0.244	Р
Total Pumped (Western)	19,101	6,876,095	3,335,560	125,623,691.94	18.27	0.485	
Seven Rivers	-	-					G
TOTAL (Western Region)	19,101	6,876,095	3,335,560	125,623,692	18.27	0.485	
OVERALL (PUMPED)	169,058	46,288,425	12,541,022	484,397,702	10.46	0.271	
GRAND TOTAL	169,058	101,204,767	12,541,022	484,397,702	4.79	0.124	

Intensified drought conditions saw the highest energy consumption between May and September, peaking in July 2014 at 1.4 kWh. During that five months period it accounted for 52% of the energy consumed and 55% of the associated cost. Energy use in 2014/15 represented a 27% increase in consumption when compared with the 10.05 kWh in 2013/14 at an attendant cost of \$303.2 million. The monthly electricity bills for NIC pumps along with commensurate monthly regional energy cost from the Jamaica Public Service Company (JPSCo) are shown in Figures 6 and 7 below.

#### FIGURE 6. 2014/15 MONTHLY ENERGY COST (J\$/MIL)

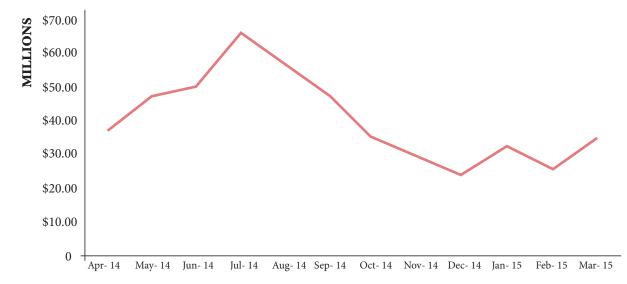
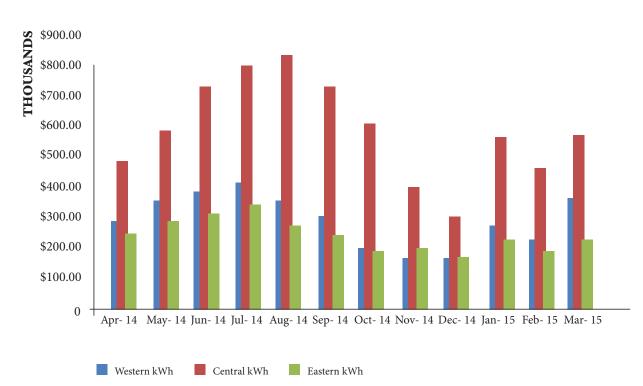


FIGURE 7. 2014/2015 MONTHLY ENERGY USE BY REGION



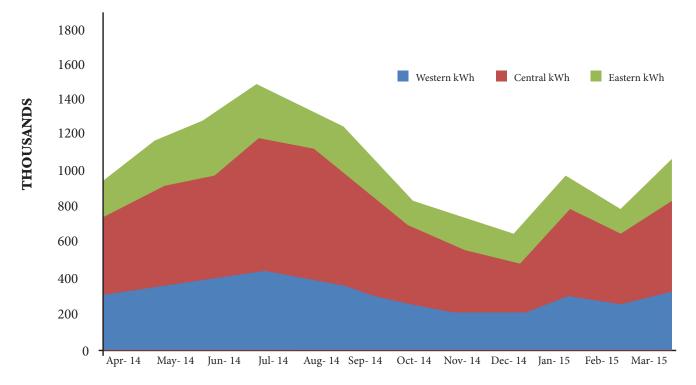
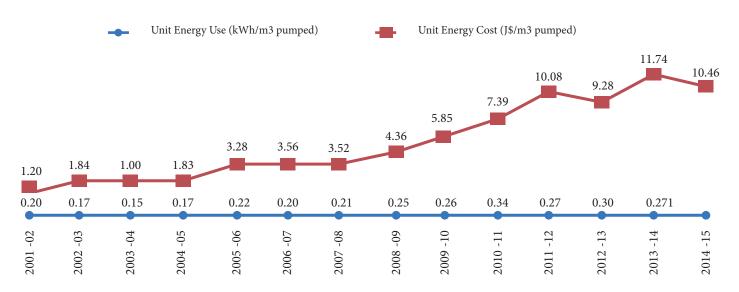


FIGURE 8. MONTHLY ENERGY USE BY REGION

At the start of the financial year, the NIC paid an average of US\$0.42/kWh for electricity. The fall in oil prices on the international market in October 2014 along with an aggressive NIC energy management strategies, reduced the overall unit cost to US\$0.32/kWh and created some relief on energy expense for the Commission.

#### FIGURE 9. AVERAGE UNIT ENERGY USE AND COST FOR WATER PUMPED (2001-2015)



Unit Energy Use and Unit Energy Cost also trended downwards in 2014/15 when compared to 2013/14 as shown in Figure 9. Unit Energy Cost (\$/m³ pumped) was \$10.46 /m³ or a 10.9% reduction compared with the \$11.74/m³ recorded in the prior year. Unit Energy Use (kWh/m³ pumped) also declined from 0.30 to 0.27 or 10.9%. This is directly attributable to the energy management strategy implemented to ensure that where multiple pumps exist in a network, the low energy demand pumps are first put in operation.



#### National Irrigation Commision Limited

#### NIC Energy Management Strategy

In order to achieve the strategic goal of reducing operating to 2013 levels, the NIC has embarked on an aggressive Energy Management Plan. The overall goals include:

(i) Installing Renewable energy projects providing 30% of NIC energy supplies by 2018

(ii) Annual target of 10% energy cost avoidance especially through retrofitting and improved management of the JPSCo tariff and energy supplies

The achievements under the strategy are outlined in Table 3 below. Although the 10% avoidance targets were not realized, a total of \$19,301,787 worth of saving was identified. This represents a 4.1% cost avoidance level and was achieved during the second half of the year. Continuous savings are expected going forward as the NIC sustains the energy management strategies.

#### **TABLE 3: STATUS OF CURRENT ENERGY DEVELOPMENT AND MANAGEMENT STRATEGIES**

No.	Title	Scope	Expected Benefit	Budget	Spent to Date (\$)	Value of Benefits YTD	Remaining Activities
EN01	Capacitance Improvement	Install capacitor banks at 10 pump stations for 0.95 Power Factor	11% JPSCO demand charge reduction	J\$ 3 mil.	\$ 2,749,317.00	\$ 1,225,357.76	Project Closeout
EN02	(VFD)	Through an MOU with PCJ Install VFD's at 6 stations to reduce energy and improve Power Factor	10% energy cost reduction at stations	J\$ 18 mil.	\$ 5,000,000 deposited to EPSOL by PCJ	0	Evaluate VFD performance including energy savings
EN03	Wind Resource Assessment	Wind resource assessment at 1 site to determine wind power feasibility	Improve alternative energy use to match NIC Strategic Plan target of 25%	US\$ 60,000	\$ 5,394,550.00	0	Closeout phase, handing over ceremony of wind monitoring equipment to UWI
EN04	Office Energy Savings	To implement energy savings plan at NIC Offices to save 20% of kWh use	Reduction of energy waste due to conservation and improved efficiency	Being established	\$ 20,700.00	\$ 391,013.84	Rotation of A/C at Rio Cobre office continues, installation of energy efficient A/C Units and full staff engagement
EN05	Pump station retrofit with Grid tied photovoltaic (PV) systems	Retrofit pump stations with solar panels inorder to utilize & sell power to JPSCO	Partner with New Leaf Power to Installation of pilot 10 KW and allowable 100 KW grid-tie PV system at Ebony Park to reduce energy use	Being established	0	0	Sign off on MOU with New Leaf Power, installation and monitoring of Grid Tied PV system.
EN06		Implementation of SCADA systems at 60 selected pump station	Partial automation of pumping facilities. Improve data collection and system monitoring	Pilot project of 10 stations @\$18.8M	0	0	Re-submission of document to PCJ
EN07	Telemetry System Installation	To Analyze and change JPS rate of various pumping stations	To avoid energy cost by matching JPSCo Tariff with operating level at each pump station	0	0	\$10,531,435.42	Continue to analyze other pumping stations for possible JPS rate change and reduce pump hours where necessary
EN08	Irrigation	Alter pump hours to better match actual irrigation demand at Hounslow, MCIA,New Forest/Duff House	Reduced pump operating hours to avoid energy cost			\$7,153,980.81	Continue to reschedule pump operating hours to better match demand in all systems

#### Renewable Energy Management Strategy

Wind and solar as renewable energy sources are being targeted by the NIC as sustainable approaches to energy reduction and energy management. The overall goal is to generate 25% of NIC energy needs from renewable sources by 2018.

#### Wind Energy

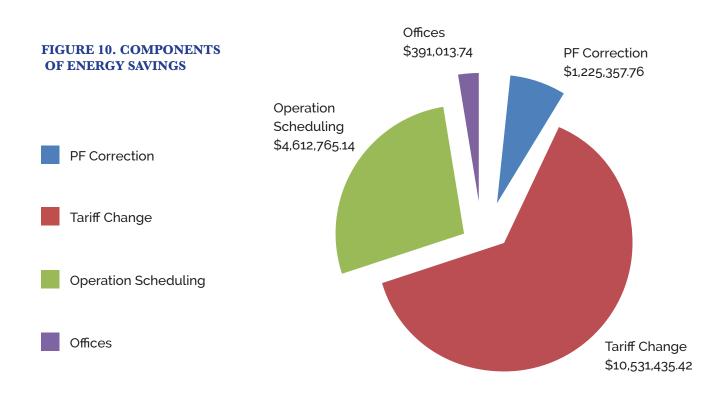
The journey to implement a 5MW wind park continued as the Commission successfully completed wind resource assessment at one site in Spur Tree, Manchester. The work was funded to the tune of US\$60,000 from the Energy and Climate Partnership of the Americas (ECPA), the Organization of American States' Department of Sustainable Development (OAS/DSD). The average wind speed at the site is 8.86m/s and is deemed suitable for development while the estimated annual energy production range from 16,390 – 26,097 mWh/a, being dependent on the configuration of turbines employed. An estimated US\$100,000 is now required to complete the feasibility studies and finalize the project document to attract wind project developers. The feasibility studies phase is expected to commence during the upcoming financial year.

#### Solar Systems

The NIC is now at an advanced stage of finalizing a Memorandum of Understanding (MOU) with New Leaf Power to install a 10KW grid-tied photovoltaic (PV) system at the Ebony Park pumping facility. The 10KW PV system will be installed free of cost to the NIC and operated for a period of three months. The three months period will allow for monitoring and evaluation of the PV system performance prior to the expansion to a 100 KW system.

#### Pump Station Retrofitting and Energy Cost Saving Strategies

As outlined in Table 3 this strategy comprises several initiatives including power factor correction at selected pump stations, Variable Frequency Drive (VFD) installations, changes in JPSCo tariffs. During the financial year the NIC identified total savings of \$19,301,707 as shown in Figure 10 below.



#### **Power Factor Correction**

The installation of fixed and automatic capacitor banks were implemented at ten of the Commission's pumping facilities. The selection was done based on the best possible savings on demand charges. The Commission has realized savings of \$1,225,357.76 within a seven months period. The projected savings is \$1,839,985/annum as per project development document.

#### Variable Frequency Drive (VFD) installation

The NIC in collaboration with the Petroleum Corporation of Jamaica (PCJ) has installed six variable frequency drives (VFD) as a measure to improve pumping system energy efficiency at Little Park F3, Braco, Clarendon Park #1, Ebony Park, Cow Park A and Cow Park B. The project included a two-day training session for NIC operations and maintenance staff including system operators, supervisors, system managers and other technical staff. The training session was conducted by the installation contractor, Electronic Power Solutions Limited (EPSOL). The VFDs are projected to save the Commission \$5 million/annum.

#### JSPCo Tariff changes

The NIC has separate contractual obligations with the Jamaica Public Service Company Ltd (JPSCo) for all pumping facilities using three different tariff structures. Benefits can be derived if the facilities are aligned with the structure that is best suited based on size and operation mode. The NIC has realized \$10,531,435.42 in savings because of tariff changes of moving to Rate 40 structure from Rate 20; and in one instance to Rate 44, Time-of-Use.

#### **Pumping Schedule Revisions**

The adjustment in irrigation schedule started in the irrigation districts of Hounslow, Beacon/Little Park and New Forest. Normal pumping operations were reduced in Hounslow by one hour each day for all five stations resulting in monthly savings of \$775,000. This practice was replicated in other districts and has yielded savings totaling \$4,612,765.

#### Offices Energy Conservation

At two St. Catherine and the Mid-Clarendon offices, energy efficiency and conservation practices are in effect that have resulted in savings of over \$391,000. All fluorescence tubes have been replaced with LED lamps at Mid-Clarendon. Also, by way of conservation, two air conditioning units, at the Rio Cobre and Operations Centre have had reduced functions that has resulted in energy savings. Going forward, the NIC will continue to develop and implement the energy management strategies to meet the agreed targets as follows:

- Formation of an Energy Task Force to drive the implementation of energy initiatives
- Advance the wind project to the development stage;
- Implement 100KW grid-tied PV systems to at least two pumping facilities;
- Apply energy efficiency specifications for new air conditioning units procured for the NIC;
- Review and readjust if possible the power consumed baseline of existing VFDs in operation prior to recently installed units;
- Engage Irrigation District Operations personnel, On Farm Water Management personnel and customers to constantly review irrigation scheduling to conserve on energy use.
- Continue to review the existing JPSCo tariff structure at the pumping facilities and adjust where it is beneficial to do so.

### REPAIRS AND MAINTENANCE TO IRRIGATION SYSTEM

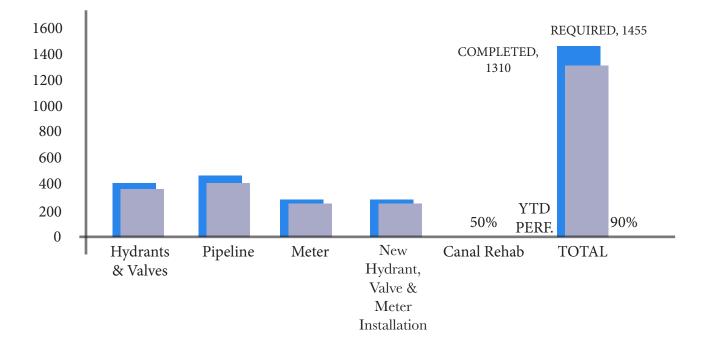
#### Civil Works Maintenance and Installation

During the year, the Civil Works Team continued the effort to effect repairs and improve the system maintenance as well as complete new customer connections, disconnections and reconnections. The quantity of work done and attendant cost is shown in Table 4 below. A total of 1,315 jobs were completed, being 90% of the number requested. A total of 286 meter installations were completed during the year to satisfy new customer demand especially in the various new Agro Parks. This however was a 32.7% reduction on connection for the previous financial year.

Infra structure	Eastern Region	Central Region	Western Region	Total Completed	Total Requested	YTD PERF.	COST (\$)
Hydrants & Valves	112	166	88	366	395	93%	4,212,487
Pipeline	158	109	136	403	465	87%	17,462,460
Meter Installation	68	117	65	250	275	91%	1,907,380
New Installation Hydrant, Valve & Meter	84	150	52	286	310	92%	8,959,835
Canal Rehab	5	5		10	13	77%	2,170,000
Total	427	547	341	1315	1458	90%	34,712,162

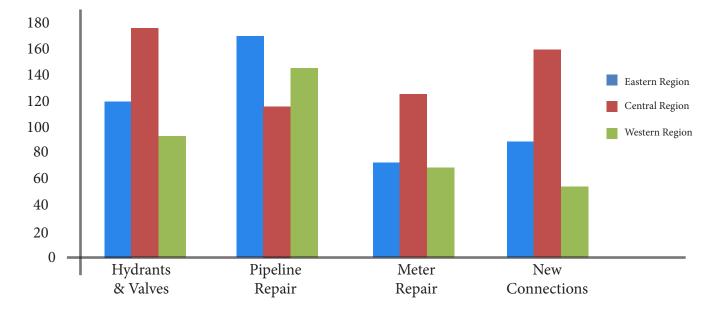
#### TABLE 4. SUMMARY OF 2014/2015 CIVIL WORKS MAINTENANCE AND INSTALLATIONS





#### FIGURE 11. CIVIL WORKS YTD. PERFORMANCE

#### FIGURE 12. CIVIL WORKS CARRIED OUT ON PIPES, METERS, HYDRANTS AND VALVES



It should be noted that the NIC has not been able to significantly improve the aging irrigation infrastructure during the year as a result of the low level of capital funds available. The Civil Works maintenance team is however hoping for improvements in capital projects spend in the upcoming financial year in order to ensure both reduced maintenance costs and sustain customer service.

### ELECTRICAL/MECHANICAL SYSTEM MAINTENANCE AND WORKSHOP PERFORMANCE

#### NIC Workshop Performance

During the year the NIC Workshop continued to provide both equipment and services to maintain and improve the irrigation system operations. The Unit provides infrastructural support to the Civil, Electrical/Mechanical and Operation sections of the Commission to include:

- (i) Fabrication of items for customer installations and Agro Parks
- (ii) Field repairs throughout NIC's irrigation networks
- (iii) Repairs and servicing to NIC Mechanical units including backhoes, dragline and excavator

Overall the workshop performed well throughout the year with the fabrication of items. The unit received a mechanical pipe threading machine and this contributed significantly to productivity improvements for threaded items including risers and pipe nipples.

The schedule of items fabricated and delivered by NIC Workshop during 2014/15 financial year is outlined in Table 5. All requests except for Parshall Flumes were satisfied. The workshop also manufactured a relatively large quantity of smaller items for the pressurized system connections including nipples, risers and tees. These were utilized largely in the new Agro Parks at Yallahs, Plantain Garden River (PGR) and New Forest as well as to satisfy the NIC stock levels.

Item	Eastern	Central	Western	TOTAL	% Satisfied	Remarks
Parshall Flumes	16	1		17	85	Customer Installations and Secondary Canal Measurements
Control Gates	33	23	7	63	100	Customer turnouts
Pipe Saddles	4	1	15	20	100	
Pipe Nipples	281	69		350	100	Customer connections main in Yallahs, PGR Agro Parks.
Risers	11	41		52	100	
Tees	2	4		6	100	
Adapters	96	0	39	135	100	
Flanges	17	0	2	19	100	

#### TABLE 5: ITEMS MANUFACTURED BY NIC WORKSHOP

The Workshop however continues to be challenged in the timely execution of field work as well as productivity levels in the shop due to lack of some critical tools and equipment including welding plant, drill press and a replacement lathe.

#### Electrical/Mechanical Maintenance

The Electrical/Mechanical Unit continues to be engaged in installation, maintenance and repairs of key NIC assets including pump plants and offices. Team members of the unit were also engaged in irrigation system installation and project management at several of the recently established Agro Parks including Yallahs, Spring Plain/Ebony Park and Meylersfield.

The implementation of a proper Preventative Maintenance (PM) programme is a critical part of managing the asset portfolio of the NIC's pumping equipment, inclusive of pumps, motors and motor control centres (MCCs). A quarterly preventative maintenance cycle is in place for the electrical and mechanical elements of pumping plants. The NIC utilizes both staff and contractors to undertake the work as outlined in Table 6.

Activities	Apr 14 - Jun 14	Jul 14- Sep 14	Oct 14- Dec14	Jan15 - Marl	Proposed Cycle	Contractor	% Completed	Comments
	Ql	Q2	Q3	Q4		•		
			W	ESTERN F	REGION			
Electrical	Ο	Х	Х	Ο	4	External Contractor	50%	Last cycle was not done due to finance
Mechanical	Ο	Х	Х	Ο	4	External Contractor	50%	
			l	EASTERN I	REGION			
Electrical	Х	Х	Х	Х	4	NIC Staff Personnel	100%	
Mechanical	Х	Х	X	Х	4	NIC Staff Personnel	100%	
			C	ENTRAL I	REGION			
Mechanical	0	Ο	Х	Ο	4	External Contractor	25%	Some challenges contracting a service provider for the first 2 cycles- Last cycle was not done due to finance
Electrical	X	Х	X	X	4	NIC Staff Personnel	100%	

**TABLE 6: PREVENTATIVE MAINTENANCE PROGRAMME ACHIEVED AT PUMP STATIONS** 

KEY X - Service cycle completed 0 - Service cycle not done

While the electrical PM schedule was on average 83% satisfied during the year, the mechanical maintenance lagged in the Central and Western Regions. This was mainly caused by a lack of personnel and financial resources. The NIC has two electrical maintenance technicians on staff to undertake the PM exercise but only one mechanical technician. The NIC is currently finalizing the PM contracts with suitably qualified contractors for mechanical PM in the Central and Western regions as well as electrical PM in the Western Region. This is in order to ensure that the PM targets are satisfied in all regions during the upcoming financial year.

Complementary to this PM Programme, the Commission has also identified the need for a restorative maintenance (RM) strategy allowing NIC to plan the replacement of inefficient pumps and obsolete equipment. These elements will be included in the overall maintenance plan for NIC operations assets.

# IRRIGATION SYSTEM DESIGN & INSTALLATION FOR AGRO PARKS INITIATIVE

#### TABLE 7: IRRIGATION DESIGN & INSTALLATION WORK COMPLETED IN AGRO PARKS

Scheme	Plantain Garden River	Yallahs	Hill Run	Amity Hall	Spring Plain/ Ebony Park	New Forest	Meylers- Field	Non such	Sunder- land	Total
Parish	St. Thomas	St. Thomas	St. Catherine	St. Catherine	Clarendon	Manchester	West	St. Mary	St. James	
Proj. Area (ha.)	117	30	267	947	1032	23	10	600	40	3,066
Main Crops	Veg., Spices	Onion	Fish	Sorghum, Vegetables	Vegetables, Onions	Pineapples, Sweet Potato	Fish, Proc Facilities	Tree Crops	Bananas	
Principal Agency	NIC	ACP	NIC	AIC	NIC	ACP	NIC	MOA&F	MOA&F	
Irrig. Cap Improvement Budget (\$)	93,562,000		192,000,000	to be decided	340,000,000	66,000,000	16,355,000			
Spent to date(NIC)(\$)	15,883,257.89		967,325.00	2,499,344.43	17,665,393.59		2,138,510.97	2,526,411.69		41,680,243.57
Status - Design	Done	Done NIDP Scheme	Done by NIC	Pressurised system slated for takeover by NIC. Remaining areas in abeyance -Logistics Hub	Done	Done NIDP Scheme	Owners to decide scope	Preliminary assessment done. awaiting water supply determination	Preliminary field assessment done - awaiting plans/maps	
Status - Construction	54 ha of complete. Pumphouse 90% complete	Sand separator installation 80% comp	Awaiting approvals and waste water design & funding	System taken over by NIC on May 1, 2015	Pipe works 98% complete. Pump installations 80% complete	l Pump being procured through REDI	Drainage work 50% done	Not yet commenced	Not yet commenced	
Issues/ Risks	Easement, Agric. Plan, remaining funds to complete final phase	Install Separator	Proj. Plan dev. Including wastewater	Low agric. Dev., security and energy cost risk	Fiscal space, high energy, low initial agriculture development,	Additional procurement time as contractors did not meet specs	Weather, NIC staff resources	Water supply availability, funds	Water supply availability, funds	

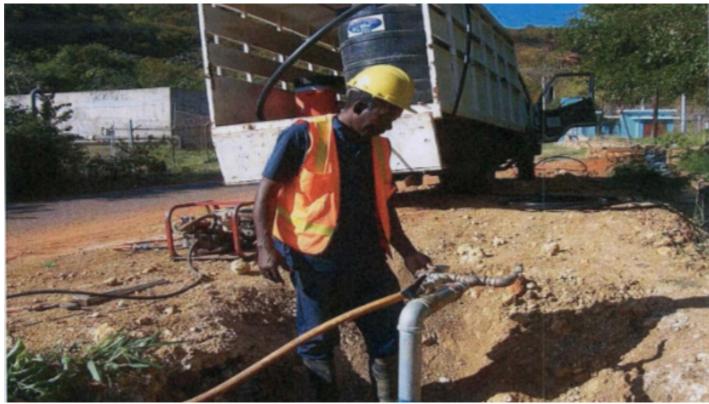
During the year the NIC Technical staff was engaged in significant work to deliver the irrigation components of the Agro Park Programme as required under the GOJ Medium Term Agreement with the IMF. The NIC planning, design, installation and project management as required under the programme being implemented by the MOAF. Works completed to date is shown in Table 7. The main activities undertaken by the team include:

- (i) Field layout plans and GIS mapping at Spring Plain/Ebony Park and PGR
- (ii) Project Management Services and Engineering Supervision at Spring Plain and Ebony Park
- (iii) Development of irrigation system designs for Hill Run, Spring Plain, Meylersfield and PGR
- (iv) Installation of irrigation systems at PGR
- (v) Drainage system rehabilitation at the Meylersfield System
- (vi) Irrigation System repairs and customer engagement at Amity Hall
- (vii) Farmer training in on-farm irrigation systems installation and operation at Yallahs, PGR and New Forest
- (viii) Preparation of Procurement documentation for Spring Plain, Ebony Park

In addition to the nine Agro Parks being developed to satisfy the IMF Agreement, the MOAF has subsequently advised that an additional six Agro Parks are to be developed for the 2015/16 financial year.

It must be noted that the Yallahs and New Forest Agro Parks are being established in irrigation schemes previously developed by the NIC under the National Irrigation Development Programme (NIDP) which was funded by the Inter-American Development Bank (IDB). Despite the many challenges experienced, the work done to date by the NIC team has greatly facilitated the agricultural development in these Agro Parks while contributing significantly to the national growth. The NIC continues to benefit through the growth of the customer base especially in Yallahs and PGR Agro Parks where new onion projects were established. It must be noted that all the new Agro Park irrigation systems require fossil fuel to operate. Unless the full agricultural development is experienced and the NIC benefits from a fairer tariff structure, the NIC will see significant cost impact from these projects.

For the upcoming financial year, the NIC expects to continue the partnership with the MOAF and its agencies in enhancing the development and operation of this important national initiative to include the completion of Hill Run and the establishment of irrigation systems for the proposed new Agro Parks.



Pressure Testing of Pipeline at Spring Plain Agro Park, Clarendon

### DRAINAGE SERVICES

The NIC is responsible for maintaining a schedule of waterways in the Upper and Lower Morass regions of St. Elizabeth. In addition, the NIC responded to requests from the MOAF for assistance with drain maintenance in Westmoreland. Using both mechanical and manual methods, the operations team embarked on drain cleaning programme each month as shown in Table 8 below. A total of 127 km of drain was cleaned during the month. The level of work achieved was limited by the following:

(i) Frequent downtime by both the excavator and dragline. The dragline has done its useful life and requires replacement.

(ii) Unavailability of sufficient funds especially for manual cleaning

#### TABLE 8. DRAINAGE DISTANCES CLEANED IN THE UPPER AND LOWER MORASS

Annual Drainage Maintenance: April 2014 - March 2015						
Month	Drains Cleaned	Length (km)				
April	One Mile, Gayle River	3.02				
May	Gayle River, George's Valley Tributaries	5.03				
June	Gayle River, Grass River, Little River	7.20				
July	Bogue Tributaries, Upper Dover, Gayle River, Brumdec, George's           Valley Tributaries, Grossmond Tributaries	14.38				
August	Brumdec, Onestead Canal, Brighton Area, Gayle River, Black River Main, Elim	6.78				
September	Brumdec, Brighton	34.42				
October	Grass River, Braes River, Bogue Tributaries, Niga River	16.09				
November	Hope River, Brumdec, Braes River, Bogue, Niga River	6.91				
December	Windsor Canal Bamboo Bridge, Sheqbug, Brumdec, Niga River, Braes River	9.45				
January	Black River Tributaries, Brumdec, Braes River, Grossmond River	5.63				
February	Mitchan River	5.87				
March	Black River Tributaries, Brumdec, Dover Bridge, Braes River, CabbageValley, Peru's, Mitchan	14.10				
	TOTAL LENGTH CLEANED	128.88				

The length of drains cleaned during the year on review is similar to the 127 km maintained during the previous year.

### SECURITY INCIDENTS

During the year, the NIC continued to be affected by the nationwide reality of crime and violence facing our country. Security activities by the NIC Security team were intensified in all Regions in order to adequately respond to the wave of security activities encountered. Table 9 below shows a schedule indicating the number of security incidents reported along with the quantity resolved to date. A total of 52 incidents were reported during the year with 50% of the cases occurring in the Eastern Region. To date over half the reported cases were resolved with the remainder being handled both internally and through the police.

Region	Total cases YTD	Resolved YTD	% of cases fully resolved	Balance being handled Internally (NIC Demand Form)	Balance police Investigations	Summons serviced for illegal extraction	Squatting and Reservation cases (removal process commenced)
Eastern	25	10	40%	6	4	2	3
Central	17	11	65%	4	2	-	-
Western	10	5	50%	4	0	1	-
Total	52	26	50%	*14	6	3	3

#### TABLE 9. NUMBER OF SECURITY CASES REPORTED AND RESOLVED DURING 2014/2015

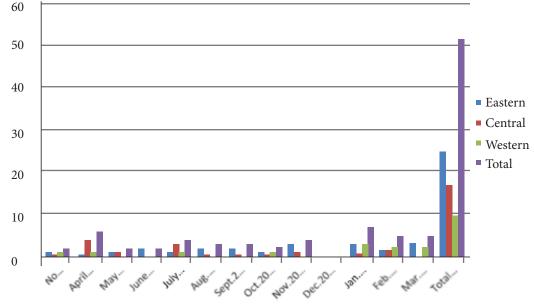
\* In five of these cases, payment plan in place for Demand Form fines.



*The Eastern Region, specifically the St. Catherine District had the most security cases for the year, followed by Central then Western Region. A total of 43 major cases were addressed with nine cases brought forward from 2013/2014.* 

65





#### Analysis of Security Incidents

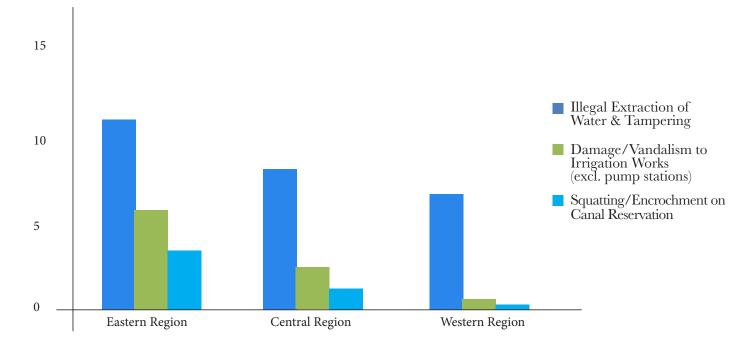
The leading categories of security breaches encountered were illegal extraction and tampering; vandalism and damage to irrigation works and squatting or encroaching on the canal reservations. Table 10 shows a comparison of the current number of these incidents per category and funds recovered for these breaches over the previous year.

Location	Activity: Nature & Number of Incidents									
	Illegal extraction of water & Tampering		Damage/ Vandalism to Irrigation Works (excl. pump stations)		Squatting/ Encrochment on Canal Reservation		Total Cases		Funds Recovered	
	2013/14	2014/15	2013/14	2014/15	2013/14	2014/15	2013/14	2014/15	2013/14	2014/15
Eastern (St. Catherine, Rio Cobre, St. Dorothy)	5	12	2	5ª	3	3	10	20	\$274,277.75	\$330,563.97
Subtotal	5	12	2	5	3	3	10	20	\$274,277.75	\$330,563.97
Central Mid- Clarendon District	4	8	0	2 <sup>b</sup>	0	1	4	11	\$44,336.00	\$61,047.48
New Forest District	0	0	1	0	0	0	1	0		
Subtotal	4	8	1	$2^{\mathrm{b}}$	0	1	4	11	\$44,336.00	\$61,047.48
Western Houndslow, Severs Rivers, Beacon/ Little Park District	3	6	0	0	1	0	4	6	\$16,695.00	\$131,049.05
Braco District	1	2	0	0	0	0	1	2	\$1,386.00	\$2,851.20
Subtotal	4	8	0	0	1	0	5	8	\$18,081.00	\$133,900.25
Funds recovered from cases b/f									\$157,973.05	\$36,000.00
Subtotal (fund Recovered)									\$157,973.05	\$36,000.00
Total	13	28	3	7	4	4	20	39	\$494,667.80	\$561,511.70

#### TABLE 10. ACTIVITY: NUMBER AND NATURE OF INCIDENTS

Notes: <sup>a</sup> A total of 20 NIC meters were vandalized/stolen from customers' connections

<sup>b</sup> Break-in at Denbigh Building & Field Officers' building



#### FIGURE 14. TYPES OF SECURITY INCIDENTS

#### Illegal Extraction and Tampering with the Irrigation System

The number of incidents pertaining to tampering with the NIC's irrigation systems island wide, as well as the illegal extraction of irrigation water from our systems totalled 28 cases. This represented an increase of 115% over the previous year. An increase was seen across all districts, with illegal pumping from canals and meter tampering being the most prevalent cases. Increased vigilance and patrols were implemented by the security team as well as enforcement of fines. Twenty five of these cases were addressed through NIC's internal adjudication process while three cases have been referred to the Courts.

#### Damage/Vandalism to Irrigation Works

Incidents related to damage/vandalism to NIC's irrigation works increased to seven incidents in 2014/2015. Five of these incidents involved the vandalism and theft of customers' meters in the St. Catherine District. Unscrupulous persons stole a total of 20 meters installed by the NIC, disrupting service to customers and forcing the company to incur the cost of replacements. These cases are under Police investigation.



Removal of entire connection and meter by vandals

## **TABLE 11. TYPES OF SECURITY INCIDENTS**PUMP STATIONS VANDALIZED OVER APRIL 2014 TO MARCH 2015

Location	Pump Station	Date Vandalised	Extent of Damage/ Vandalism		
RCIW	Port Henderson Relift	June 2014	No damage to pump equipment		
MCID	Milk River	July 2014	Auto transformer, and other electrical equipment stolen		
	Clarendon Park #2	July 2014	Cable wires, pothead and glands taken		
	St. Toolis #3	July 2014	Cable wires, pothead and glands taken		

During the period under review, there were four incidents of vandalism to NIC's pump stations similar to the number reported during the previous year. Table 11 summarizes the extent of the damage/vandalism done at each station. All incidents are under police investigation. The NIC continues to strengthen security measures to deter and mitigate against these criminal acts.

While security risks cannot be eliminated, our primary objective in the way forward is to contract the number of incidents and the effect of security breaches against the Commission's staff and properties. This is to be achieved through increased monitoring and patrol, constant vigilance, speedy enforcement measures and continued phased implementation of security technologies within our systems.



# INFORMATION SYSTEMS YEAR IN REVIEW

### INFORMATION SYSTEMS

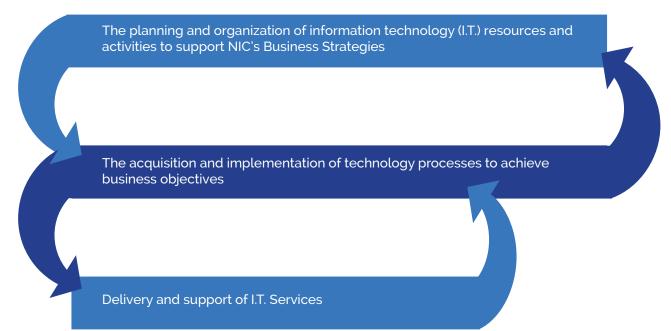
#### Corporate Objective

 To use Information and Communication Technology (ICT) to enable improvements in NIC's business processes and provide support services to achieve corporate goals.

Information Technology Values

- Strengthening
- Leading
- Enabling
- Securing
- Supporting

#### Information Technology Strategy



#### Planning and Organization of I.T. Resources

The technological goal for the period included:

- Improve efficiency of systems and processes to reduce time and increase data quality
- Improve corporate reporting systems through consolidation and compliance
- Reduce organisation operating expenses through application of existing Information Technology through innovation

#### Management of I.T. Resources

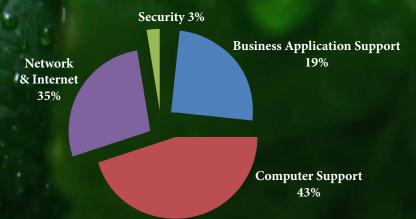
Activities for period 2014/2015 were strategized on an annual planning budget of J\$12,495,600.00 as outlined in Table 1.



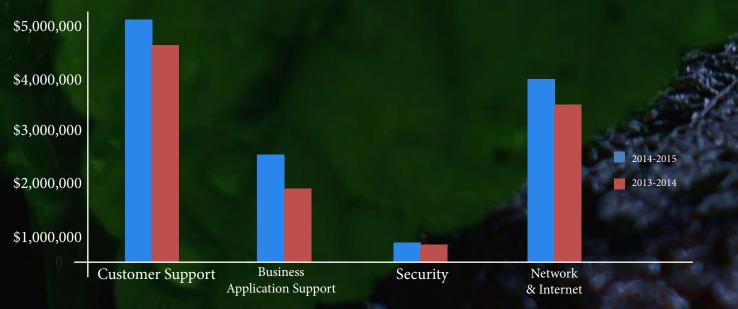
#### TABLE 1. 2014/ 2015 BUDGET ESTIMATE

Expenses	Estimate (J\$)			
Computer Support	5,114,000			
Business Application Support	2,900,000			
Security	320,000			
Network & Internet	4,161,600			
TOTAL	12,495,600			

#### FIGURE 1. BUDGET ESTIMATE 2014/2015



#### FIGURE 2. BUDGET ESTIMATE 2014/2015 VERSUS 2013/2014



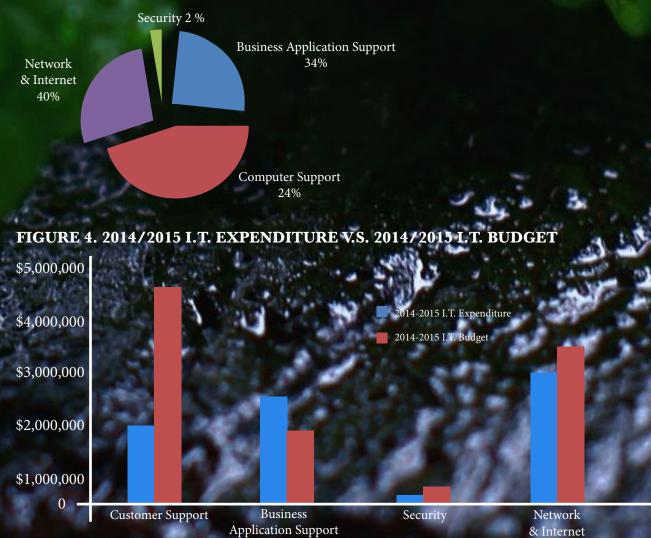
(71)

#### TABLE 2. EXPENDITURES 2014/2015

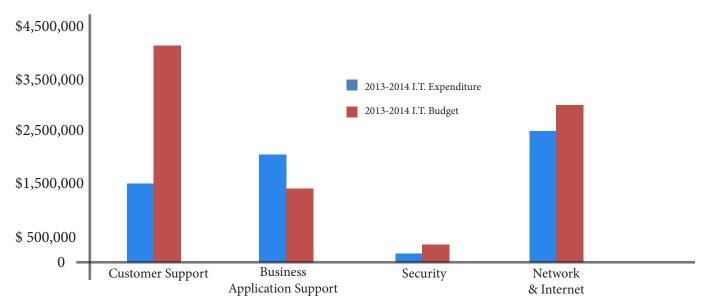
Expenses	Estimate (J\$)	Comment
Computer Support	1,969,657	Support maintenance and some hardware replacement
Business Application Support	2,821,658	Affected by vendor increase and inflation
Security	129,290	Realignment of renewal date for security application
Network & Internet	3,320,142	Improvement in Wide Area Network
TOTAL	8,240,747.00	

Actual I.T. expenditures for financial year 2014/2015 were J\$ 8,240,747 as shown in Table 2.

#### FIGURE 3. EXPENDITURES DISTRIBUTION 2014/2015







Update of I.T. Policies and Procedures

#### **TABLE 3. I.T. POLICIES UPDATED**

Policy	2014/2015	2013/2014	Comment
Information Systems Policy and Procedures	Updated	Updated	Review and update as required of all sub-policies
Disaster Recovery Policy and Procedures	Updated	Updated	Review and update
Printing Policy and Procedure	Drafted		

#### Maintenance, Acquisition and Implementation of Technology and Processes

# **TABLE 4. MAJOR BUSINESS APPLICATION SUPPORTRENEWALS AND IMPLEMENTATION**

Business Application	Support Renwal & Maintainance	Comment
Microsoft Dynamics GP	Completed for period	Financial Management Human Resources Inventory Fixed Asset
NIC CRMS	Completed for period	Customer Information & Billing
McAfee Total Protection	Completed for period	Anti Virus/ Network Security

#### Delivery and Support of I.T. Resource Services

#### 1. Receipt Subsystem

As a part of its Strategic Transformation Initiative and with the approval of the Ministry of Finance and Planning, the NIC will implement an Automated Receipts System in all its district offices. Advanced and increased availability of Wide Area Networks (WANs) technology has provided an opportunity to improve the payment management process. The benefits should include:

- Reduced Manual Work
- Reduced duplication by eliminating data entry of payments
- Complete visibility of process
- Generation of import data for the billing system
- Unique Computer Generated number for each recipt

#### 2. Training in Microsoft Dynamics (Human Resources & Finance Departments)

In continuing its efforts to build capacity across the Human Resources and Finance Departments, the NIC delivered training through remote classrooms. This is a cost effective, online training channel which was offered through a partnership with Infotech Caribbean Limited to support on-the-job training.

#### 3. SharePoint Services

SharePoint Services is a web based collaboration software, which allows users to share, store and organize documents. During the period under review, the Property and Transport Department utilized this system for analyzing vehicle maintenance and costs to the Commission. This pilot project resulted in better analysis and reduction of motor vehicle repair costs.

#### 4. Performance and Capacity Management

A priority of the I.T. Department was to minimize downtime of major I.T. resources in support NIC's business requirements. There were no major disruptions in service delivery which impacted the NIC's ability to provide for its customers. Some critical resources that required high availability included financial management; customer information & billing and Wide Area Network. The performance levels for access to information or data at the district offices were maintained with constant management and monitoring of the Wide Area Network. Improvements to hardware capacity were minimal as a result of financial constraints.

#### 5. System Security

Maintaining information integrity and protecting I.T. assets were a prioritized. The following activities were involved in minimizing the impact of vulnerabilities on the business process:

- I. Application of security standards regarding information or network access and authorization.
- II. Maintenance of anti-virus contract and updates including e-mail and web security.
- III. Adherence to and enforcement of NIC's policy related to the protection of physical assets for computer and network infrastructure.

For the period:

- No incidents of Information access breach was reported
- No network down time due to malicious software





#### SCADA SYSTEMS

SCADA (Supervisory Control and Data Acquisition) is a system operating with coded signals over communication channel so as to provide control of remote equipment. There are many applications that use SCADA systems:

- 1. Electric Power Generation, Transmissions Systems
- 2. Water and Sewage
- 3. Building Facilities and Environments
- 4. Traffic Signals.

A SCADA system performs four functions – Data acquisition, network data communication, data presentation and Control. To perform these four functions four components are needed: 1. Sensor – control relays that directly interface with the managed system 2. Remote Telemetry Units (RTUs) – small computerized units deployed at specific locations 3. SCADA Master Units – computer consoles that serves as the central processor for the system 4. Communication Network – connects SCADA master Units to the RTUs in the field.

SCADA systems provide the sensing capabilities and the computational power to track everything thataffects your operations. For example: - how to measure changing inputs that affect the output of your operations. - equipment need controlled in real time and from a distance. Level of accuracy, real-time data labout key processes that affect operations SCADA systems provide information and control capabilities to allow accurate measurements of important processes both immediately and over time. It allows for the detection of problems as soonas they begin. It allows for trends over time and eliminates bottlenecks and inefficiencies. A SCADA System has two elements:

- 1. The process to be monitored, e.g. a network, water flow, circuit breakers, etc.
- 2. A network of intelligent devices that interfaces through sensors and control outputs

#### SCADA and the NIC

The National Irrigation Commission Limited (NIC) provides irrigation services across 10 Irrigation Districts. Our water source is primarily from Deep Wells. As a result we face economic hardships brought about by increased maintenance costs, high electricity cost and reduced water supplies. A SCADA System would provide the capability to capture real-time data, monitor changes in the water flows, shutdown or reopen a water channel, start-up and shutdown of pumping systems and additional data capture that could be analyzed to improve operational planning and efficiencies. Research by Powell and Gill indicates that "SCADA Systems have been out of the reach of smaller and less-affluent district because of large capital outlays required for adoption.<sup>1</sup>

The NIC would have to install new motorized gates and pumps equipped with flow and level sensors. The flow and level sensors would monitor and record water usage; and handle increase or reduction in demand requested. Communication by means of wireless options or cellular modems would allow for the system to be used in any location that has cellular service. The SCADA system would have the ability to display canal status on a computer and allows the user to set alarms based on events. System status such as water levels and volume could be determined from the system. The system would have the ability to open and close gates based on usage and demand. All the data captured by the system could be used to analyze efficiency of operations and provide almost real-time information. Water is a limited resource and as such has to be carefully monitored to ensure sustainability. A SCADA system would enable the NIC to effectively manage this essential commodity.

How can we use SCADA Systems in the future? With advanced technology there is no doubt that this system will have a great impact in the Irrigation sector and allows the NIC to effectively manage its scarce resources.



# COMMERCIAL OPERATIONS

YEAR IN REVIEW

### COMMERCIAL OPERATIONS

#### • Corporate Objective

To expand the customer base, maximize the collection of revenue and ensure continued customer satisfaction

#### Water Sales and Drainage

During the 2014/2015 financial year Water Sales and Drainage Charges increased by approximately twenty five percent (25%) from \$482,821,713.00 to \$604,476,191.86. This increase in sales can be attributed to:-(a) Increased demand during the excessive drought conditions experienced by customers throughout the irrigation systems island wide in 2014;

(b) Demand for irrigation services in the new areas targeted under the Ministry of Agriculture and Fisheries Agro Parks Programme.

The percentage rate of collection remained in the high nineties.

The National Irrigation Commission Limited (NIC) is cognizant of the economic challenges currently being experienced by its customers.

Consequently, the Commission continues to partner with its credit challenged customers, using different strategies to optimize revenue collection. The Commission's levels of invoicing for the financial years 2010/2011 to 2014/2015 are outlined below:

#### TOTAL WATER SALES AND DRAINAGE



#### **Customer Service**

Continuous customer engagement remains a priority for the Commission. A number of initiatives were taken during the year to ensure continued customer satisfaction. The Simple Messaging Service (SMS) is now in place and improved communication between the NIC customers and other stakeholders have been experienced.

The NIC is committed to delivering the highest quality of service to its valued customers.

**Customer Status** 

#### ANALYSIS OF DISTRIBUTION OF IRRIGATED LAND AMONG ACTIVE, SUSPENDED AND TERMINATED CUSTOMERS

Terminated 4,408 ha. 1043(28%) Customers

Suspended 292.88 ha 88(2%) Customers

Active 10,085.14 ha. 2577 (70%) Customers

The pie chart above depicts the distribution of irrigated lands among customers classified as active, suspended and terminated. With a total customer base of 3,708 occupying 14,786.02 hectares of land,70% or 2,577 customers on 10,085.14 hectares were active, 2% or 88 customers on 292.88 hectares were suspended and 28% or 1,043 customers on 4,408 hectares were terminated. The number of active customers increased from 2,351 to 2,577 reflecting a 10% increase.



#### Newly Established Irrigation Scheme

The Plantain Garden Irrigation System (PGR) in the Eastern Region is the newest system to be added to the number of systems operated by the NIC. The PGR System was developed as an Agro Park under the Ministry of Agriculture and Fisheries initiatives. This system can accommodate 87.99 hectares of land with 45 customers. To date, 34 applications have been received and 28 customers with 39.65 hectares of land have been connected to the system.

#### Complaints

Through improved service delivery, customer complaints have minimized throughout the year. During the period under review, a number of complaints in the Eastern Region regarding vandalization and theft of flow meters have been reported. The NIC has moved to institute corrective measures. The Western Region recorded ten (10) major complaints all of which were resolved within reasonable time.

#### Irrigation Water Applications

Applications received for the year under review were as follows:

#### **Eastern Region**

One hundred and thirty-two applications (132) were approved with a corresponding acreage of six hundred and ninety nine (699) hectares.

#### Western Region

Two hundred and two (202) applications were approved with a total hectare of four hundred and fifty nine (459).



Irrigating a thyme field at New Forest/Duff House Agro Park



# ON-FARM WATER MANAGEMENT UNIT

YEAR IN REVIEW

### ON FARM WATER MANAGEMENT UNIT

#### **Corporate Objective**

- To plan, direct and implement on-farm water management and drainage techniques by providing sound technical advice of a high standard to the farming sector.
- To increase the production and productivity of cultivable lands by the use of irrigation technology.
- To assist farmers to improve their knowledge and income by the adaptation of suitable on-farm irrigation systems through technology transfer.
- To promote sustainable use of land and water resources through appropriate water management techniques.
- To help farmers optimise the use of scarce water resources by helping them improve their on-farm water use efficiency whilst improving productivity.

The On-farm Water Management Unit focused on the methods to improve on-farm water management and water use efficiency along with the training of both farmers and technical officers. The Unit also facilitated the development of small-scale irrigation schemes, rainwater harvest systems as well as developed relevant farm demonstration plots and provided guidance on best practices in irrigation. The major activities undertaken by the Unit during the period under review are summarised below.

Objectives	Activities	Remarks
To improve water manage- ment capabilities of farmers within the NIC schemes	<ul> <li>Provided appropriate training in on farm water management techniques including</li> <li>Basic layout design for drip irrigation</li> <li>Detecting soil moisture content</li> <li>Use and management of tensiometers</li> <li>Installation operation and maintenance of drip irrigation</li> <li>Knowing when and how long to irrigate</li> </ul>	45 Training Sessions 473 Farmers trained
To improve water manage- ment capabilities of farmers within the NIC schemes	<ul> <li>Soil, plant and water relationship</li> <li>Methods of irrigation</li> <li>Selecting irrigation systems</li> <li>Detecting soil moisture</li> <li>Use and management of tensiometers</li> </ul>	45 Training Sessions 50 Technical Officers
Provide technical support to the MOAF's Onion Project	<ul> <li>Site evaluation</li> <li>Irrigation system design</li> <li>Technical supervision for installation</li> <li>Monitor and evaluate system performance</li> <li>Provide appropriate training in operation of irrigation systems</li> <li>Provide training in water use efficiency</li> </ul>	150 hectares
Provide technical support to Agro Parks Project	<ul> <li>Site evaluation</li> <li>Irrigation system design</li> <li>Technical supervision for installation</li> <li>Monitor and evaluate system performance</li> <li>Provide appropriate training in operation of irrigation systems</li> <li>Provide training in water use efficiency</li> </ul>	Provided technical support in six Agro Parks

015	8	1)
		1

Objectives	Activities	Remarks
Provide technical support to GOJ Adaptation Fund project	<ul> <li>Site evaluation</li> <li>Irrigation system design</li> <li>Technical supervision for installation</li> <li>Monitor and evaluate system performance</li> <li>Provide appropriate training in operation of irrigation systems</li> <li>Provide training in water use efficiency</li> </ul>	Provided technical support in the following parishes: •St. Thomas •Clarendon •Manchester •St. Mary •St. Ann •Trelawny •St. Catherine
Provide technical support to the Jamaica Bauxite Institute rain harvest and green house cluster project	•Site evaluation •Irrigation system design •Technical supervision for installation	Provided technical support at 3 locations: •Rose Hill, Manchester •Schwallensburg, St. Ann •Watt Town, St. Ann
Technical information on on-farm water management to present at exhibitions to educate the public	•Denbigh Agricultural Show •World Water Day •World Food Day	Sta Barrow

# FINANCE AND CORPORATE PLANNING YEAR IN REVIEW

### FINANCE AND CORPORATE PLANNING

#### Corporate Objective

To continue the development of financial management systems to provide accurate, reliable, timely and relevant information for decision-making to ensure the financial resources are optimally developed to drive service delivery.

#### FINANCIAL SUMMARY

The Commission incurred a deficit of \$79.4M for Financial Year 2014/2015. This represents an improvement of \$100.8M or 56% over the previous year's deficit of \$180.2M. It should be noted that Depreciation for Year 2014/2015 accounted for \$44.8 million.

Operating Revenue grew to \$1.23 billion, an increase of \$0.25 billion above the income figure of \$0.98 billion reported for Year 2013/2014.

Revenue from company's core business, water sales and drainage charges, grew by \$122.9M or 25.5%, up from the previous year's figure of \$482.8M to reach a high of \$605.7 million for Year 2014/2015. Increased revenue was driven primarily by increased demand resulting from the extended drought experienced during the financial year. The NIC increased its sales to existing as well as new customers as demand continued to exceed supply indicating the need for new capital expenditure.

The Government of Jamaica (GOJ) increased its subsidy on behalf of farmers from \$501.7M to \$629.4M, an increase of \$127.7M or 27% over the previous year. However, based on the last review conducted by the Office of the Utilities Regulation, the company estimated that the subsidy would need to be \$721.4 million in order for the company to deliver irrigation as required by farmers.

Further, the company continues to face a particular challenge in respect of Government subsidies as the records indicate that during the months of February and March the expected subvention is substantially reduced, as the national focus shifts towards addressing the Macro Economic Indicators.

Total expenses for the year amounted to \$1.36 billion, up from the previous year's figure of \$1.19 billion, an increase of \$0.17 billion or 14%.

The direct cost of producing water and distributing it to farm gates increased to \$1.08 billion, up from the previous year's figure of \$0.95 billion, by \$0.13 billion or 14%.

For the year under review the Commission experienced many challenges, primary among which was the extended drought period during which electricity pumping cost occasionally exceeded revenue from water sales, at existing tariff rates. Pumping cost therefore remains the single, most difficult challenge at this time.

Electricity pumping cost increased during the Year from \$357.9M to \$493.8M, an increase of \$136 Million or 38%. The Commission was compelled to supply significantly higher volumes of water than normal to its customers, resulting in longer pumping hours and incurring higher pump electricity cost.

Total Assets decreased from \$1.16B to \$1.15B by \$10M or 0.8% relative to the prior year. This reduction was due mainly to a decrease of \$14.1M in Net Property, Plant and Equipment, arising from depreciation, while accounts receivable grew by \$2.2M, in keeping with the increased sales volume; and inventories increased by \$2.9M.

Accounts Payable grew from \$294.6M in the previous year to \$351.7M, with amounts payable for electricity accounting for \$259.6M as at March 31, 2015. The NIC is faced with the enduring problem of significant rises in electricity pumping cost annually.

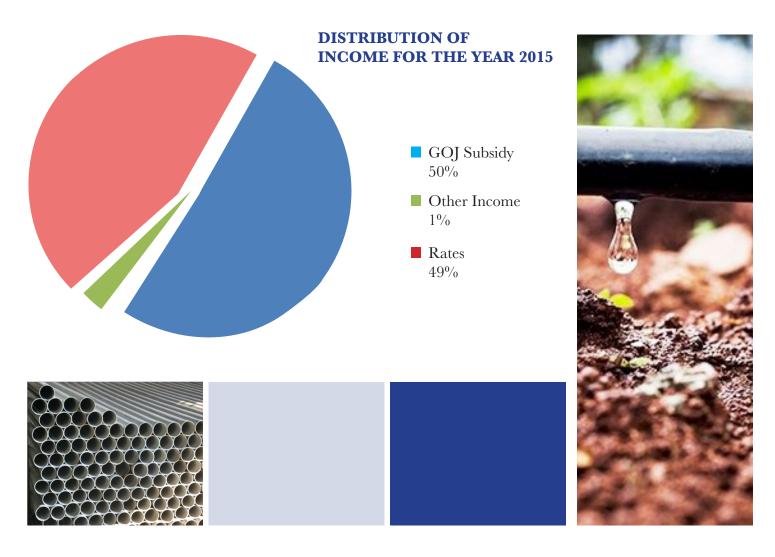
This situation has continued over the recent years as the GOJ has not provided the required budgetary support to meet the NIC's energy cost annually.

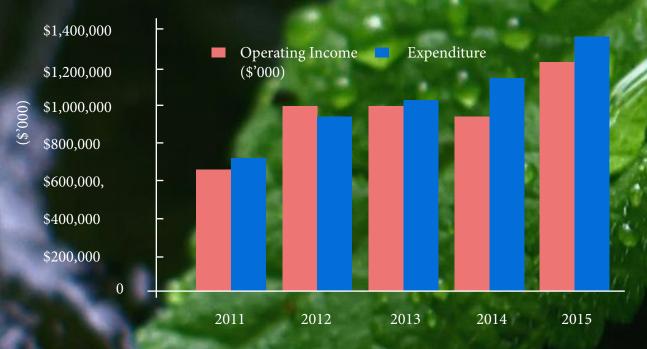
The Commission's current asset ratio declined from 0.72:1 in the prior year, to 0.60:1 in the current financial year.

The loss of \$79.3M reported for the Year 2014/2015 resulted in a 17.7% reduction in shareholders' equity.

During the year the Commission collaborated with a number of local and International Institutions, including the Sugar Transformation Unit (STU) and the Agro Investment Corporation (AIC). The collaboration resulted in a number of grant projects, designed to enhance the capacity of the NIC to deliver irrigation water in areas such as Ebony Park, Port Henderson, Vernamfield and Plantain Garden River. These projects are expected to be fully commissioned by September 30, 2015.

Other capital projects planned for the near future include the participation of the Mexican Embassy in the National Irrigation Canal Rehabilitation Project scheduled for the St. Catherine and Mid Clarendon Districts and expected to commence in the latter part of Financial Year 2015/2016.



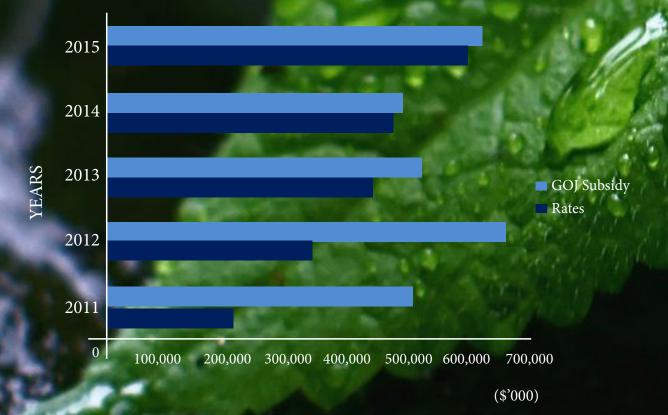


#### **OPERATING INCOME VS EXPENDITURE**

### GOVERNMENT OF JAMAICA SUBSIDY ON BEHALF OF FARMERS



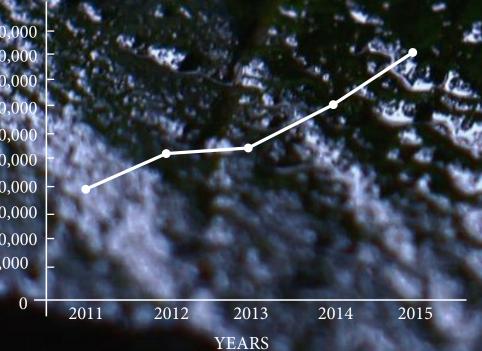
#### **RATES V GOJ SUBSIDY**



### ELECTRICITY COST 5 YEAR TREND ANALYSIS

500,000 450,000 400,000 350,000 300,000 250,000 200,000 150,000 100,000 50,000

Electricity Cost (\$'000





# INTERNAL AUDIT YEAR IN REVIEW



### INTERNAL AUDIT DEPARTMENT

**Corporate Objective** 

- To conduct an independent systematic review, assessing the risks and evaluating the controls designed to address those risks, thus providing management with the assurance that its operations are being conducted effectively, efficiently and economically.
- To establish systematic, disciplined approaches to evaluate and improve the effectiveness of risk management, controls and governance processes.

Internal Audit work plan for the financial year under review 2014/2015 included:

- Operation
- Finance
- Administration

During the financial year 2014-15, the NIC's Internal Audit Department completed audits and Investigation projects resulting in Reports which produced numerous recommendations for improvements in internal controls and operations.

Investigative Activities:

#### **TABLE 1 - INVESTIGATION AUDIT SUMMARY**

Audits Completed	Audits Planned	Pending Audits	Special Audits
16	8	a line of	8

# FINANCIAL STATEMENTS MARCH 31, 2015



KPMG Chartered Accountants The Victoria Mutual Building 6 Duke Street Kingston Jamaica, W.I. P.O. Box 76 Kingston Jamaica, W.I. Telephone +1 (876) 922-6640 Fax +1 (876) 922-7198 +1 (876) 922-4500 e-Mail firmmail@kpmg.com.jm

#### INDEPENDENT AUDITORS' REPORT

### To the Members of NATIONAL IRRIGATION COMMISSION LIMITED

#### **Report on the Financial Statements**

We have audited the financial statements of National Irrigation Commission Limited (company), set out on pages 3 to 37 which comprise the statement of financial position as at March 31, 2015, the statements of profit or loss and other comprehensive income, changes in equity and cash flows for the year then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

#### Management's Responsibility for the Financial Statements

Management is responsible for the preparation of financial statements that give a true and fair view in accordance with International Financial Reporting Standards and the Jamaican Companies Act, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditors' Responsibility

Our responsibility is to express an opinion on the financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance as to whether or not the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence relating to the amounts and disclosures in the financial statements. The procedures selected depend on our judgment, including our assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation of the financial statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our modified audit opinion.

KPMG, a Jamaican partnership and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity. R. Tarun Handa Patricia O. Dailey-Smith Linroy J. Marshall Cynthia L. Lawrence Rajan Trehan Norman O. Rainford Nigel R. Chambers W. Gihan C. de Mel Nyssa A. Johnson Wilbert A. Spence



#### INDEPENDENT AUDITORS' REPORT (CONT'D)

To the Members of NATIONAL IRRIGATION COMMISSION LIMITED

#### Report on the Financial Statements (cont'd)

#### Basis of Qualified Opinion

As described in note 8(b), the company extended health insurance coverage to its retirees effective April 1, 2014. An actuarial valuation was not done at the reporting date, contrary to IAS 19, *Employee Benefits*, which requires that an entity's obligation in respect of post-employment benefits should be actuarially valued at the reporting date. In the absence of a valuation, there is no basis for determining the financial effects of the adjustments which might have been determined to be necessary to the company's non-current liabilities, administration expenses, loss for the year and the accumulated deficit, had the required actuarial valuation been done.

In our opinion, except for the effect of the matter described in the Basis for Qualified Opinion paragraph, the financial statements give a true and fair view of the financial position of the company as at March 31, 2015, and of its financial performance and cash flows for the year then ended, in accordance with International Financial Reporting Standards and the Jamaican Companies Act.

#### Emphasis of matter

We draw your attention to note 2(b) in the financial statements, which sets out management's assertions underlying the continuing appropriateness of the going concern assumption utilised in the preparation of financial statements, which inter alia, refer to management's plans for the future.

#### Report on additional matters as required by the Jamaican Companies Act

Except as disclosed in the Basis of Qualified Opinion, we have obtained all the information and explanations which, to the best of our knowledge and belief, were necessary for the purposes of our audit.

In our opinion, proper accounting records have been maintained, so far as appears from our examination of those records, and the financial statements, which are in agreement therewith, give the information required by the Jamaican Companies Act in the manner required.

KPM(-

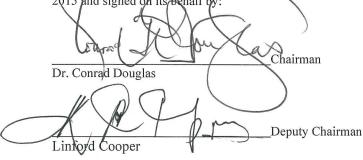
Chartered Accountants Kingston, Jamaica

September 21, 2015

Statement of Financial Position March 31, 2015

	Notes	2015	2014
CURRENT ASSETS Cash	4	17 077 040	20 501 251
Resale agreements	4 5	17,077,842 9,135,198	20,501,351 8,809,538
Accounts receivable	6	132,716,305	130,514,613
Current portion of long-term receivable	7	11,720,109	11,470,288
Inventories	,	66,669,536	63,730,724
Income tax recoverable		8,934,725	8,825,701
Total current assets		246,253,715	243,852,215
NON-CURRENT ASSETS			
Long-term receivable	7	17,587,187	16,411,820
Employee benefit asset	8(a)	112,666,000	110,355,000
Intangible asset	9	7,830,065	9,135,033
Property, plant and equipment	10	768,109,254	782,240,072
Total non-current assets		906,192,506	918,141,925
Total assets		\$ <u>1,152,446,221</u>	<u>1,161,994,140</u>
CURRENT LIABILITIES			
Accounts payable and accrued charges	11	351,704,708	294,651,150
Government of Jamaica project advances	12	73,714,276	42,892,085
Total current liabilities		425,418,984	337,543,235
NON-CURRENT LIABILITIES			
Long-term liability	13	17,832,092	-
Deferred credit	14	341,303,533	377,183,140
Total non-current liabilities		359,135,625	377,183,140
Total liabilities		784,554,609	714,726,375
EQUITY			
Share capital	15	100	100
Capital reserve	16	408,130,161	408,130,161
Accumulated (deficit)/surplus		( <u>40,238,649</u> )	39,137,504
Total equity		367,891,612	447,267,765
Total liabilities and equity		\$ <u>1,152,446,221</u>	<u>1,161,994,140</u>

The financial statements on pages 3 to 37 were approved for issue by the Board of Directors on September 21, 2015 and signed on its behalf by:



3

# Statement of Profit or Loss and Other Comprehensive Income Year ended March 31, 2015

On eventing version ve	<u>Notes</u>	<u>2015</u>	<u>2014</u>
<b>Operating revenue</b> Water sales and drainage charges Government of Jamaica subsidy on behalf of farmers	17	605,755,612 629,449,695	482,821,714 501,721,242
		1,235,205,307	984,542,956
Cost of producing water and distributing it to farm gates		( <u>1,083,856,071</u> )	( <u>946,116,471</u> )
Gross operating surplus		151,349,236	38,426,485
Amortisation of deferred credit	14	38,224,432	41,800,944
Other income	18	15,942,237	18,200,753
Administration expenses	19	( <u>282,676,048</u> )	(247,543,100)
Loss before finance costs and taxation		( 77,160,143)	(149,114,918)
Finance costs	20	( <u>14,010</u> )	( <u>24,536</u> )
Loss before taxation		( 77,174,153)	(149,139,454)
Taxation charge	21		( <u>41,745,731</u> )
Loss for the year	22	( <u>77,174,153</u> )	( <u>190,885,185</u> )
Other comprehensive (loss)/income			
Item that will never be reclassified to profit or loss Re-measurement of employee benefit asset Deferred tax on re-measurement of employee	8	( 2,202,000)	15,926,000
benefit asset			( <u>5,308,136</u> )
Other comprehensive (loss)/income, net of tax		( <u>2,202,000</u> )	10,617,864
Total comprehensive loss for the year		\$( <u>79,376,153</u> )	( <u>180,267,321</u> )

#### Statement of Changes in Equity Year ended March 31, 2015

	Share <u>capital</u> (Note 15)	Capital <u>reserve</u> (Note 16)	Accumulated surplus/(deficit) Total
Balances at March 31, 2013			
As previously stated Impact of change in accounting policy	100	408,130,161	191,370,121599,500,38228,034,70428,034,704
Balances at March 31, 2013, as restated	<u>100</u>	408,130,161	<u>219,404,825</u> <u>627,535,086</u>
Loss for the year	-	-	(190,885,185) (190,885,185)
Other comprehensive income Re-measurement of employee benefit asset, net of deferred tax, being total other comprehensive income	<u> </u>		10,617,864 10,617,864
Total comprehensive loss for the year			(180,267,321) (180,267,321)
Balances at March 31, 2014	<u>100</u>	408,130,161	<u>39,137,504</u> <u>447,267,765</u>
Loss for the year	-	-	(77,174,153) (77,174,153)
Other comprehensive loss Re-measurement of employee benefit asset, net of deferred tax, being total			
other comprehensive loss			( <u>2,202,000</u> ) ( <u>2,202,000</u> )
Total comprehensive loss for the year			( <u>79,376,153</u> ) ( <u>79,376,153</u> )
Balances at March 31, 2015	\$ <u>100</u>	<u>408,130,161</u>	( <u>40,238,649</u> ) <u>367,891,612</u>

#### Statement of Cash Flows Year ended March 31, 2015

	Notes	<u>2015</u>	2014
Cash flows from operating activities Loss for the year		(77,174,153)	(190,885,185)
Adjustments to reconcile loss for the year		(77,174,155)	(190,885,185)
to net cash provided/(used) by operating activities:			
Depreciation	10	44,880,717	48,744,405
Amortisation of intangible asset	9	1,304,968	1,304,966
Loss/(gain) on disposal of property, plant			
and equipment		18,333	( 692,505)
Amortisation of deferred credit	14	(38,224,432)	( 41,800,944)
Employee benefits	21	( 4,513,000)	( 6,893,000)
Taxation Interest income	21	( 695,659)	41,745,731
Foreign exchange gains on bank balances		( 095,039) ( 34,542)	(1,924,495) (888,173)
r oreign exchange gains on bank balances		· · · · · · · · · · · · · · · · · · ·	
		( 74,437,768)	(151,289,200)
Decrease/(increase) in current assets		( 225 ((0)	20 1 45 425
Resale agreements Accounts receivable		(325,660)	30,145,425
Inventories		(3,640,597) (2,938,812)	43,597,401 ( 9,507,368)
Income tax recoverable		(2,938,812) (109,025)	( 9,307,308) ( 464,461)
		( 10),025)	( 101,101)
(Decrease)/increase in current liabilities			
Accounts payable and accrued charges		57,054,001	87,930,679
Government of Jamaica project advances		30,822,191	( <u>17,494,941</u> )
Net cash provided/(used) by operating activities		6,424,330	( <u>17,082,465</u> )
Cash flows from investing activities			
Purchase of property, plant and equipment	10	( 31,563,232)	( 56,224,412)
Proceeds from disposal of property, plant and equipment		795,000	2,646,556
Interest received		708,934	73,180
Long-term receivables			253,714
Net cash used by investing activities		( <u>30,059,298</u> )	( <u>53,250,962</u> )
Cash flows from financing activities			
Long-term liability		17,832,092	-
Deferred credit	14	2,344,825	50,184,149
Net cash provided by financing activities		20,176,917	<u>50,184,149</u>
Net decrease in cash and cash equivalents		( 3,458,051)	( 20,149,278)
Cash and cash equivalents at beginning of the year		20,501,351	39,762,456
Effect of exchange rate fluctuations on cash held		34,542	888,173
Cash and cash equivalents at end of the year		\$ <u>17,077,842</u>	20,501,351

Notes to the Financial Statements Year ended March 31, 2015

#### 1. Identification

National Irrigation Commission Limited (company) is incorporated and domiciled in Jamaica, and is wholly-owned by the Government of Jamaica through the Accountant General. The company's registered office is located at 191 Old Hope Road, Kingston 6.

The principal activities of the company are:

- (a) The management, operation, maintenance and expansion of existing and future irrigation schemes established by the Government. The principal schemes currently in operation are Hounslow, Braco, Mid-Clarendon, Rio Cobre, Yallahs, Beacon/Little Park, Seven Rivers, Colbeck, St. Dorothy, New Forrest and Yallahs IDB.
- (b) The identification and designation of the persons who shall be entitled to use the water generated by the irrigation schemes and the fixing and collection of rates or charges for such services rendered.

#### 2. <u>Statement of compliance and basis of preparation</u>

(a) Statement of compliance:

Except as indicated below the financial statements are prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB), and comply with the provisions of the Jamaican Companies Act.

The financial statements are not in compliance with IFRS in the following significant respect:

IAS 19, *Employee Benefits:* An actuarial valuation was not done at the reporting date, contrary to IAS 19 which requires post-employment benefits [see note 8(b)] to be actuarially valued. Consequently, there has been no recognition in the current year's financial statements of such amount of employee benefit obligation as might have been determined to be necessary had the required actuarial valuation been done.

# New, revised and amended standards and interpretations that became effective during the year

Certain new, revised and amended standards and interpretations, which were issued, came into effect during the current financial year. The company has assessed them and has adopted those which are relevant to the financial statements, viz;

• IFRIC 21, *Levies*, which is effective for accounting periods beginning on or after January 1, 2014, provides guidance on accounting for levies in accordance with the requirements of IAS 37, *Provisions, Contingent Liabilities and Contingent Assets.* The interpretation defines a levy as an outflow from an entity imposed by a government in accordance with legislation. It requires an entity to recognise a liability for a levy when and only when the triggering event specified in the legislation occurs. The company reviewed legislation which applies to them and determined that the adoption of the interpretation did not result in any change to amounts recognised or disclosed in these financial statements.

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

- 2. Statement of compliance and basis of preparation (cont'd)
  - (a) Statement of compliance (cont'd):

#### New, revised and amended standards and interpretations that are not yet effective

At the date of approval of these financial statements, certain new, revised and amended standards and interpretations were in issue but were not yet effective and had not been early-adopted by the company. The company has assessed their relevance with respect to its operations and has concluded that the following may be relevant:

- *Improvements to IFRS 2010-2012 and 2011-2013* cycles contain amendments to certain standards and interpretations and are effective for accounting periods beginning on or after July 1, 2014. The main amendments applicable to the company are as follows:
  - IFRS 13, *Fair Value Measurement*, is amended to clarify that issuing of the standard and consequential amendments to IAS 39 and IFRS 9 did not intend to prevent entities from measuring short-term receivables and payables that have no stated interest rate at their invoiced amounts without discounting, if the effect of not discounting is immaterial.
  - IAS 24, *Related Party Disclosures*, has been amended to extend the definition of 'related party' to include a management entity that provides key management personnel services to the reporting entity, either directly or through a group entity. For related party transactions that arise when key management personnel services are provided to a reporting entity, the reporting entity is required to separately disclose the amounts that it has recognised as an expense for those services that are provided by a management entity; however, it is not required to 'look through' the management entity and disclose compensation paid by the management entity to the individuals providing the key management personnel services.
  - IAS 16, *Property, Plant and Equipment* and IAS 38, *Intangible Assets* have been amended to clarify that, at the date of revaluation:
    - (i) the gross carrying amount is adjusted in a manner that is consistent with the revaluation of the carrying amount of the asset and the accumulated depreciation is adjusted to equal the difference between the gross carrying amount and the carrying amount of the asset after taking account of accumulated impairment losses; or
    - (ii) the accumulated depreciation (amortisation) is eliminated against the gross carrying amount of the asset.

The company is assessing the impact that these amendments to the standards will have on its 2016 financial statements.

Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 2. <u>Statement of compliance and basis of preparation (cont'd)</u>

(a) Statement of compliance (cont'd):

# New, revised and amended standards and interpretations that are not yet effective (cont'd)

• *Improvements to* IFRS 2012-2014 cycle, contain amendments to certain standards and interpretations and are effective for accounting periods beginning on or after January 1, 2016. The main amendment applicable to the company is as follows:

IFRS 7, *Financial Instruments: Disclosures*, has been amended to clarify when servicing arrangements are in the scope of its disclosure requirements on continuing involvement in transferred assets in cases when they are derecognised in their entirety. A servicer is deemed to have continuing involvement if it has an interest in the future performance of the transferred asset -e.g. if the servicing fee is dependent on the amount or timing of the cash flows collected from the transferred financial asset; however, the collection and remittance of cash flows from the transferred asset to the transferee is not, in itself, sufficient to be considered 'continuing involvement'. The company is assessing the impact this amendment will have on its 2017 financial statements.

- IAS 19, *Employee Benefits*, has been amended to clarify that high-quality corporate bonds or government bonds used in determining the discount rate should be issued in the same currency in which the benefits are to be paid. Consequently, the depth of the market for high-quality corporate bonds should be assessed at the currency level and not the country level.
- Amendments to IAS 19, Defined Benefits Plans: Employee Contributions, effective for annual periods beginning on or after July 1, 2014, clarified the requirements that relate to how contributions from employees or third parties that are linked to services should be attributed to periods of services. In addition, it permits a practical expedient if the amount of the contributions is independent of the number of years of services.

The company is assessing the impact that the amendment will have on its 2017 financial statements.

- Amendment to IAS 16 and IAS 38, *Classification of Acceptable Methods of Depreciation* and *Amortisation* are effective for accounting periods beginning on or after January 1, 2016.
  - (i) The amendment to IAS 16, *Property, Plant and Equipment* explicitly states that revenue-based methods of depreciation cannot be used. This is because such methods reflect factors other than the consumption of economic benefits embodied in the assets.
  - (ii) The amendments to IAS 38, Intangible Assets introduce a rebuttal presumption that the use of revenue-based amortisation methods is inappropriate for intangible assets.

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 2. <u>Statement of compliance and basis of preparation (cont'd)</u>

(a) Statement of compliance (cont'd):

# New, revised and amended standards and interpretations that are not yet effective (cont'd)

• Amendment to IAS 16 and IAS 38, *Classification of Acceptable Methods of Depreciation* and *Amortisation* (cont'd)

The company is assessing the impact that this amendment will have on its 2017 financial statements.

- IAS 1, *Presentation of Financial Statements*, effective for accounting periods beginning on or after January 1, 2016 has been amended to clarify or state the following:
  - specific single disclosures that are not material do not have to be presented even if they are a minimum requirement of a standard;
  - the order of notes to the financial statements is not prescribed;
  - line items on the statement of financial position and the statement of profit or loss and other comprehensive income (OCI) should be disaggregated if this provides helpful information to users. Line items can be aggregated if they are not material;
  - specific criteria is now provided for presenting sub-totals on the statement of financial position and in the statement of profit or loss and OCI with additional reconciliation requirements for the statement of profit or loss and OCI; and
  - the presentation in the statement of OCI of items of OCI arising from joint ventures and associates are accounted for using the equity method follows IAS 1 approach of splitting items that may, or that will never, be classified to profit or loss.

The company is assessing the impact that this amendment will have on its 2017 financial statements.

• IFRS 15, *Revenue From Contracts With Customers*, effective for accounting periods beginning on or after January 1, 2018, replaces IAS 11, *Construction Contracts*, IAS 18, *Revenue*, IFRIC 13, *Customer Loyalty Programmes*, IFRIC 15, *Agreements for the Construction of Real Estate*, IFRIC 18, *Transfer of Assets from Customers* and SIC 31, *Revenue – Barter Transactions Involving Advertising Services*. It does not apply to insurance contracts, financial instruments or lease contracts, which fall in the scope of other IFRSs. It also does not apply if two companies in the same line of business exchange non-monetary assets to facilitate sales to other parties.

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 2. <u>Statement of compliance and basis of preparation (cont'd)</u>

(a) Statement of compliance (cont'd):

# New, revised and amended standards and interpretations that are not yet effective (cont'd)

• IFRS 15, *Revenue From Contracts With Customers* (cont'd)

The company will apply a five-step model to determine when to recognise revenue, and at what amount. The model specifies that revenue should be recognised when (or as) an entity transfers control of goods or services to a customer at the amount to which the entity expects to be entitled. Depending on whether certain criteria are met, revenue is recognised at a point in time, when control of goods or services is transferred to the customer; or over time, in a manner that best reflects the entity's performance.

There will be new qualitative and quantitative disclosure requirements to describe the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. The company is assessing the impact that the standard will have on its 2019 financial statements.

- IFRS 9, Financial Instruments, which is effective for annual reporting periods • beginning on or after January 1, 2018, replaces the existing guidance in IAS 39 Financial Instruments: Recognition and Measurement. IFRS 9 includes revised guidance on the classification and measurement of financial assets and liabilities, including a new expected credit loss model for calculating impairment of financial assets and the new general hedge accounting requirements. It also carries forward the guidance on recognition and derecognition of financial instruments from IAS 39. Although the permissible measurement bases for financial assets – amortised cost, fair value through other comprehensive income (FVOCI) and fair value though profit or loss (FVTPL) - are similar to IAS 39, the criteria for classification into the appropriate measurement category are significantly different. IFRS 9 replaces the 'incurred loss' model in IAS 39 with an 'expected credit loss' model, which means that a loss event will no longer need to occur before an impairment allowance is recognised. The company is assessing the impact the standard will have on the 2019 financial statements.
- (b) Basis of preparation:

The financial statements are prepared on the historical cost basis and are presented in Jamaica dollars which is the functional currency of the company.

The preparation of the financial statements in accordance with IFRS assumes that the company will continue in operational existence for the foreseeable future. This means, in part, that the statements of profit or loss and other comprehensive income and financial position assume no intention or necessity to liquidate the company or curtail the scale of operations. This is commonly referred to as the going concern basis.

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 2. Statement of compliance and basis of preparation (cont'd)

(b) Basis of preparation (cont'd):

The company reported losses for the year of \$77,174,153 (2014: \$190,885,185), net current liabilities of \$179,165,269 (2014: \$93,691,020) and, as at March 31, 2015, has an accumulated deficit of \$40,238,649. This may cast doubt on the ability of the company to continue as a going concern. However, the company's management presented unaudited results as at July 31, 2015 which shows profit of \$110M. The company has plans to generate sufficient cash flow to meet liabilities, including:

- (i) Completion of major projects to earn additional revenue;
- (ii) The expectation that the company will continue to receive capital grants from Government of Jamaica and international agencies to fund on-going projects; and
- (iii) Reduction of administration expenses.

On the basis of the foregoing, the Board of Directors and management believe that preparation of the financial statements on the going concern basis continues to be appropriate.

(c) Accounting estimates and judgements:

The preparation of the financial statements in conformity with IFRS requires management to make estimates and assumptions that affect the reported amounts of, and disclosures relating to, assets, liabilities, contingent assets and contingent liabilities at the reporting date and the income and expenses for the year then ended. Actual amounts could differ from those estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the year in which the estimate is revised, if the revision affects only that year, or in the year of the revision and future years, if the revision affects both current and future years.

Key sources of estimation uncertainty

Judgements made by management in the application of IFRS that have a significant effect on the financial statements and estimates with a significant risk of material adjustment in the next financial year are presented below:

• Pension and other post-employment benefits

The amounts recognised in the statements of financial position and comprehensive income for pension and other post-employment benefits are determined actuarially using several assumptions. The primary assumptions used in determining the amounts recognised include the discount rate used to determine the present value of estimated future cash flows required to settle the pension obligations.

The discount rate is determined based on the estimate of yield on long-term Government securities that have maturity dates approximating the terms of the company's obligation; in the absence of such instruments in Jamaica, it has been necessary to estimate the rate by extrapolating from the longest-tenor security on the market. Any changes in loss assumptions would impact the amounts recorded in the financial statements for these obligations.

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

- 2. Statement of compliance and basis of preparation (cont'd)
  - (c) Accounting estimates and judgements (cont'd):

Key sources of estimation uncertainty (cont'd)

• Allowance for impairment losses

In determining amounts recorded for impairment of accounts receivable in the financial statements, management makes judgements regarding indicators of impairment, that is, whether there are indicators that suggest there may be a measurable decrease in the estimated future cash flows from accounts receivable, for example, repayment default and adverse economic conditions. Management also makes estimates of the likely estimated future cash flows from impaired accounts receivable, as well as the timing of such cash flows. Historical loss experience is applied where indicators of impairment are not observable on individual significant accounts receivable and total trade accounts receivable with similar characteristics, such as credit risks.

- 3. <u>Significant accounting policies</u>
  - (a) Financial instruments:- classification, recognition and de-recognition, and measurement:

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity. In these financial statements, financial assets have been determined to comprise cash, resale agreements, accounts receivable and long-term receivables. Financial liabilities comprise accounts payable and Government of Jamaica project advances.

Financial instruments are classified, recognised and measured in accordance with the substance of the terms of the contracts as set out herein.

(i) Classification of financial instruments

The company classifies non-derivative financial assets as *loans and receivables*. Management determines the appropriate classification of investments at the time of purchase. Securities acquired and loans granted with fixed or determinable payments and which are not quoted in an active market, are classified as loans and receivables.

The company classifies non-derivative financial liabilities into the other financial liabilities category.

(ii) Non-derivative financial assets and financial liabilities – recognition and derecognition

The company recognises a financial instrument when it becomes a party to the contractual terms of the instrument.

The company initially recognises loans and receivables and debt securities on the date when they are originated. All other financial assets and financial liabilities are initially recognised on the trade date.

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 3. <u>Significant accounting policies (cont'd)</u>

- (a) Financial instruments:- classification, recognition and de-recognition, and measurement (cont'd):
  - (iii) Non-derivative financial assets and financial liabilities recognition and derecognition

The company derecognises a financial asset when the contractual rights to the cash flows from the asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all of the risks and rewards of ownership of the financial asset are transferred, or it neither transfers not retains all or substantially all the risks and rewards of ownership and does not retain control over the transferred asset. Any interest in such derecognised financial assets that is created or retained by the company is recognised as a separate asset or liability.

The company derecognises a financial liability when its contractual obligations expire or are discharged or cancelled.

Financial assets and financial liabilities are offset and the net amount presented in the statement of financial position when, and only when, the company has the legal right to offset the amounts and intends either to settle them on a net basis, or to realise the assets and settle the liabilities simultaneously.

(iv) Non-derivative financial assets - measurement

*Loans and receivables:* On initial recognition loans and receivables are measured at fair value plus any directly attributable transaction costs. Subsequent to initial recognition, they are measured at amortised cost, using the effective interest method, less impairment losses.

(b) Cash and cash equivalents:

Cash comprises cash in hand and demand and call deposits with banks. Cash equivalents are short-term, highly liquid investments where original maturities do not exceed three months, are readily convertible to known amounts of cash, are subject to an insignificant risk of changes in value, and are held for the purpose of meeting short-term cash commitments, rather than for investment or other purposes. Cash and cash equivalents are measured at amortised cost.

(c) Resale agreements:

The company purchases Government securities and agrees to resell them on a specified date and at a specified price ('resale agreements' or 'reverse repos'). The company, on paying cash to the counterparty, sometimes, takes possession of the underlying securities, although title is not formally transferred, unless that counterparty fails to repurchase the securities on the date specified or to honour other conditions.

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 3. <u>Significant accounting policies (cont'd)</u>

(c) Resale agreements (cont'd):

Resale agreements are accounted for as short-term collateralised lending. Resale agreements are classified as loans and receivables and are carried at amortised cost less impairment. The difference between the purchase and resale considerations is recognized on the accrual basis over the period of the engagement, using the effective yield method.

- (d) Property, plant and equipment and depreciation:
  - (i) Owned assets

Property, plant and equipment are stated at cost, less accumulated depreciation and impairment losses [see note 3(h)].

Cost includes expenditures that are directly attributable to the acquisition of the asset. The cost of replacing part of an item of property, plant and equipment is recognised in the carrying amount of the item if it is probable that the future economic benefits embodied in the part will flow to the company and its cost can be reliably measured.

(ii) Depreciation

Property, plant and equipment with the exception of capital work-in-progress are depreciated on the straight-line method at annual rates estimated to write down the assets to their residual values over their expected useful lives. The depreciation rates are as follows:

Building and leasehold improvements	21/2%
Utility plant	2-3%
Furniture, fixtures and equipment	10% and 20%
Computer equipment	20%
Motor vehicles	20%
Machinery and equipment	21/2%

The depreciation rates, useful lives and residual values are reassessed at each reporting date.

(e) Capital grants:

Grants for acquisition of property, plant and equipment and an amount equivalent to the value of property, plant and equipment received as gifts, (including an amount equivalent to the values ascribed to utility plant at the districts, which were taken over by way of gift in 1990), are included in the Deferred Credit account. Annually, an amount equivalent to the depreciation charge for the year on these assets is transferred to profit or loss.

(f) Inventories:

Inventories are carried at the lower of cost or net realisable value determined on the first-infirst-out basis, and valuation, being substantially salvage values determined by professional valuators.

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 3. <u>Significant accounting policies (cont'd)</u>

(g) Employee benefits:

Employee benefits comprise all forms of consideration given by the company in exchange for service rendered by employees. These include current or short-term benefits such as salaries, bonuses, NIS contributions, annual leave; post-employments benefits such as pension; and other long-term employee benefits such as termination benefits.

Employee benefits that are earned as a result of past or current service are recognised in the following manner: Short-term employee benefits are recognised as a liability, net of payments made, and charged as expense. The expected cost of vacation leave that accumulates is recognised when the employee becomes entitled to the leave. Post-employment benefits are accounted for as described below.

Post-employment benefits, comprising pension and health care benefit obligations included in the financial statements, are actuarially determined by a qualified independent actuary, appointed by management. The appointed actuary's report outlines the scope of the valuation and the actuary's opinion. The actuarial valuation is conducted in accordance with IAS 19, and the financial statements reflect the company's post-employment benefit obligations as computed by the actuary. In carrying out their audit, the auditors rely on the work of the actuary and the actuary's report.

(i) Defined benefit pension plan

The company's net obligation in respect of the defined-benefit pension plan is calculated by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that value is discounted to determine the present value, and the fair value of any plan assets is deducted. The discount rate is the yield at reporting date on long-term Government bonds that have maturity dates approximating the terms of the company's obligation. The calculation is performed by a qualified actuary, using the projected unit credit method.

When the benefits of the plan are changed or when a plan is curtailed, the resulting change in benefit that relates to past service or the gain or loss on curtailment is recognised immediately in profit or loss. The company recognises gains and losses on the settlement of a defined benefit plan when the settlement occurs.

Remeasurement of the net benefit asset, which comprises actual gains and losses, the return on plan assets (excluding interest) and the effect of the asset ceiling (if any, excluding interest), are recognised immediately in other comprehensive income. The company determines the net interest income on the net defined benefit asset for the period by applying the discount rate used to measure the defined benefit obligation at the beginning of the annual period to the then-net defined benefit asset, taking into account any changes in the net defined benefit asset during the period as a result of contributions and benefit payments. Net interest expense and other expenses related to defined benefit plans are recognised in profit or loss.

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 3. <u>Significant accounting policies (cont'd)</u>

- (g) Employee benefits (cont'd):
  - (ii) Post-retirement health care benefits

As of April 1, 2014, the company provides health care benefits to employees upon retirement. The expected costs of these benefits are accrued over the period of employment, using a methodology similar to that for the defined-benefit pension plan and the present value of future benefits at the reporting date is shown as an obligation on the statement of financial position. As at March 31, 2015 actuarial valuation was not completed and the post – retirement health care benefits to pensioners was revoked on September 2, 2015 (see note 29).

(iii) Other long-term employee benefits

The company's net obligation in respect of long-term employee benefits is the amount of future benefits that employees have earned in return for their services in the current and prior periods. That benefit is discounted to determine its present value. Remeasurements are recognised in profit or loss in the period in which they arise.

(iv) Termination benefits

Termination benefits are expected at the earlier of when the company can no longer withdraw the offer of those benefits and when the company recognises cost for a restructuring. If benefits are not expected to be settled wholly within 12 months of the end of the reporting period, then they are discounted.

(h) Impairment:

The carrying amounts of the company's assets are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, the asset's recoverable amount is estimated at each reporting date. An impairment loss is recognised whenever the carrying amount of an asset or its cash-generating unit exceeds its recoverable amount. Impairment losses are recognised in profit or loss.

(i) Calculation of recoverable amount

The recoverable amount of the company's receivables is calculated as the present value of expected future cash flows, discounted at the original effective interest rate inherent in the asset. Receivables with a short duration are not discounted.

The recoverable amount of other assets is the greater of their fair value less costs to sell and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For an asset that does not generate largely independent cash inflows, the recoverable amount is determined for the cash-generating unit to which the asset belongs.

(ii) Reversals of impairment

An impairment loss in respect of receivables is reversed, if the subsequent increase in recoverable amount can be related objectively to an event occurring after the impairment loss was recognised.

In respect of other assets, an impairment loss is reversed, if there has been a change in the estimates used to determine the recoverable amount.

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

- 3. <u>Significant accounting policies (cont'd)</u>
  - (h) Impairment (cont'd):
    - (ii) Reversals of impairment (cont'd)

An impairment loss is reversed only to the extent that the assets carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

(i) Taxation:

Income tax on the profit or loss for the year comprises current and deferred tax. Income tax is recognised in profit or loss, except to the extent that it relates to items recognised in other comprehensive income in which case it is recognised in other comprehensive income.

Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted at the reporting date, and any adjustment to tax payable in respect of previous years.

Deferred tax is provided for temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. The amount of deferred tax provided is based on the expected manner of realisation or settlement of the carrying amount of assets and liabilities, using tax rates enacted at the reporting date.

A deferred tax asset is recognised only to the extent that it is probable that future taxable profits will be available against which the asset can be utilised. Deferred tax assets are reduced to the extent that it is no longer probable that the related tax benefit will be realised.

(j) Accounts receivable:

Accounts receivable are stated at their cost, less impairment losses.

(k) Intangible asset:

Intangible asset, which represent computer software costs, is stated at cost less accumulated amortisation and, if any, impairment losses. It is being amortised on the straight-line basis at annual rates estimated to write down the assets over their expected useful lives, not exceeding a period of ten years. Costs associated with maintaining computer software programs are recognised as expenses as incurred.

(l) Accounts payable and accrued charges:

Accounts payable and accrued charges are stated at their cost.

(m) Foreign currencies:

Foreign currency balances at the reporting date are translated at the rates of exchange ruling on that date.

Transactions in foreign currencies are converted at the rates of exchange ruling at the dates of those transactions.

Gains and losses arising from fluctuations in exchange rates are included in profit or loss.

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 3. <u>Significant accounting policies (cont'd)</u>

(n) Related parties:

A related party is a person or entity that is related to the entity that is preparing its financial statements (referred to in IAS 24, *Related Party Disclosures* as the ("reporting entity"), in this case, the company.

- (A) A person or a close member of that person's family is related to the company if that person:
  - i) has control or joint control over the company;
  - ii) has significant influence over the company; or
  - iii) is a member of the key management personnel of the company or of a parent of the company.
- (B) An entity is related to a company if any of the following conditions applies:
  - i) The entity and the company are members of the same group (which means that each parent, subsidiary and fellow subsidiary is related to the others).
  - ii) One entity is an associate or joint venture of the other entity (or an associate or joint venture of a member of a group of which the other entity is a member).
  - iii) Both entities are joint ventures of the same third party.
  - iv) One entity is a joint venture of a third entity and the other entity is an associate of the third entity.
  - v) The entity is a post-employment benefit plan for the benefit of employees of either the company or an entity related to the company.
  - vi) The entity is controlled, or jointly controlled by a person identified in (A).
  - vii) A person identified in (A)(i) has significant influence over the entity or is a member of the key management personnel of the entity (or of a parent of the entity).

A related party transaction is a transfer of resources, services or obligations between related parties, regardless of whether a price is charged.

(o) Revenue recognition:

Revenue from water sales and drainage services is recognised in profit or loss when water is delivered to the customer, drainage services are rendered and the amounts can be reliably measured.

Government subsidy and other funding are recognised when received.

(p) Interest income and expense:

Interest income and expense are recognised in profit or loss on the accrual basis, using the effective interest method.

Notes to the Financial Statements (Continued) Year ended March 31, 2015

4. <u>Cash</u>

	2015	<u>2014</u>
Cash Bank balances	121,994	82,782
Bank balances	<u>16,955,848</u> \$ <u>17,077,842</u>	<u>20,418,569</u> <u>20,501,351</u>

#### 5. <u>Resale agreements</u>

At the reporting date, the fair value of underlying securities used as collateral for resale agreements was \$9,135,198 (2014: \$9,247,794).

#### 6. <u>Accounts receivable</u>

	<u>2015</u>	<u>2014</u>
Trade receivables for water sales and drainage charges		
[note 25(b)(ii)]	118,044,527	99,481,242
Staff loans	22,568,765	31,267,912
Other receivable	21,568,466	23,815,373
	162,181,758	154,564,527
Provision for probable losses	( <u>29,465,453</u> )	( <u>24,049,914</u> )
	\$ <u>132,716,305</u>	<u>130,514,613</u>

The aging of trade receivables at the reporting date was:

	20	2015		2014	
	Gross	Impairment allowance	<u>Gross</u>	Impairment <u>allowance</u>	
Not past due	47,019,893	818,958	46,595,699	1,117,983	
Past due 1-30 days	30,394,791	457,065	23,177,605	976,324	
Past due31-60 days	5,660,019	751,840	3,477,615	901,033	
Past due 61-90 days	1,884,842	543,126	2,075,750	486,328	
More than 90 days	33,084,982	26,894,464	24,154,573	20,568,246	
	\$ <u>118,044,527</u>	<u>29,465,453</u>	<u>99,481,242</u>	<u>24,049,914</u>	

The movement in the allowance for impairment in respect of trade receivables during the year was as follows:

	<u>2015</u>	2014
Balance as at April 1	24,049,914	26,726,392
Amounts written back	(3,627,035)	( 6,443,913)
Provision recognised	9,042,574	3,767,435
Balance as at March 31	\$ <u>29,465,453</u>	<u>24,049,914</u>

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 7. Long-term receivables

	<u>2015</u>	<u>2014</u>
Refundable utility deposits Employee loans	2,575,379 <u>26,731,917</u>	2,575,379 25,306,729
Less: Current portion	29,307,296 ( <u>11,720,109</u> )	27,882,108 ( <u>11,470,288</u> )
	\$ <u>17,587,187</u>	<u>16,411,820</u>

Employee loans are for the purchase of motor vehicles. The loans are repayable over 4-8 years. The interest rate on motor vehicle loans is 0%. The loans are measured at commercial bank interest rate and are secured by the respective motor vehicles [see note 25(b)(iii)] on which the loans are outstanding.

#### 8. Employee benefit asset

The company sponsors a defined-benefit pension scheme for all employees who have satisfied certain minimum service requirements. The benefits are computed at 2% of pensionable salary for each year of membership in the plan and on other increments as determined by the pension plan.

Amounts recognised in the financial statements in respect of this benefit are as follows:

- (a) Pension asset:
  - (i) The amounts recognised in the statement of financial position are determined as follows:

	<u>2015</u>	<u>2014</u>
Present value of funded obligations Fair value of plan assets	(857,595,000) <u>970,261,000</u>	(767,662,000) <u>878,017,000</u>
Asset in the statement of financial position	\$ <u>112,666,000</u>	110,355,000

(ii) Movement in the amounts recognised in the statement of financial position:

	<u>2015</u>	<u>2014</u>
Balance at beginning of year	110,355,000	87,536,000
Contributions paid	18,532,000	18,070,000
Pension expense recognised in profit or loss	( 14,019,000)	( 11,177,000)
Re-measurement recognised in other comprehensive		
income	( <u>2,202,000</u> )	15,926,000
Balance at end of year	\$ <u>112,666,000</u>	<u>110,355,000</u>

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 8. <u>Employee benefit asset (cont'd)</u>

- (a) Pension asset (cont'd):
  - (iii) Movement in the present value of obligation:

(111)	MOV	ement in the present value of obligation:		
			<u>2015</u>	<u>2014</u>
	Bala	nce at beginning of year	767,662,000	641,112,000
		ice costs	26,279,000	20,668,000
	Inter	rest on obligation	70,649,000	56,999,000
	Emp	loyees' contributions	19,738,000	18,557,000
		efits paid	(71,248,000)	(18,758,000)
		uities purchased	32,223,000	2,829,000
		uarial (gains)/losses arising from:		0.0.0.11.000
		hanges in demographic assumptions	-	82,341,000
		hanges in financial assumptions	-	52,523,000
	E	xperience adjustments	12,292,000	( <u>88,609,000</u> )
	Bala	nce at end of year	\$ <u>857,595,000</u>	767,662,000
(iv)	(1)	Movement in fair value of pension plan assets:		
			<u>2015</u>	<u>2014</u>
		Fair value of plan assets at beginning of year	878,017,000	764,757,000
		Employees' contributions	19,738,000	18,557,000
		Employer's contributions	18,532,000	18,070,000
		Interest income on plan assets	82,909,000	69,739,000
		Benefits paid	(71,248,000)	(18,758,000)
		Annuities purchased	32,223,000	2,829,000
		Actuarial gains arising from: Experience adjustment		13,186,000
		Change in financial assumptions	-	2,713,000
		Change in demographic assumption	10,090,000	6,924,000
		Fair value of plan assets at end of year	\$ <u>970,261,000</u>	<u>878,017,000</u>
	(2)	Plan assets consist of the following:		
			<u>2015</u>	<u>2014</u>
		International equity	64,865,000	7,769,000
		Global market funds	18,008,000	2,492,000
		Equity fund	132,357,000	191,686,000
		Fixed income fund	54,075,000	98,888,000
		Mortgage and real estate fund	156,423,000	93,786,000
		Money market fund Foreign currency fund	51,189,000 273,121,000	47,367,000 244,190,000
		Un-invested contributions (late deposit)	(7,108,000)	2,966,000
		Value of purchased annuities	110,387,000	79,018,000
		CPI indexed fund	<u>116,944,000</u>	<u>109,855,000</u>
			\$ <u>970,261,000</u>	<u>878,017,000</u>

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 8. <u>Employee benefit asset (cont'd)</u>

- (a) Pension asset (cont'd):
  - (v) Expense recognised in surplus:

		2013	2014
	Current service costs Interest on obligation Interest income on plan assets Interest on effect of asset ceiling	26,279,000 70,649,000 ( 82,909,000)	20,668,000 56,999,000 (69,739,000) <u>3,249,000</u>
	Net pension expense included in staff costs (note 23)	\$ <u>14,019,000</u>	<u>11,177,000</u>
(vi)	Amounts recognised in other comprehensive income:	<u>2015</u>	<u>2014</u>
	Experience adjustments Change in demographic assumptions Change in financial assumptions	12,292,000 (10,090,000) 	$(141,153,000) \\ 75,417,000 \\ \underline{49,810,000} \\ (\underline{15,926,000})$

- (vii) As mortality continues to improve, estimates of life expectancy are expected to increase. The effect on the projected employee benefit asset of an increase of one year in the life expectancy is approximately \$14.82 million.
- (viii) Sensitivity analysis on projected employee benefit asset:

The calculation of the projected benefit asset is sensitive to the assumptions used. The table below summarizes how the projected employee benefit obligation measured at the end of the reporting period would have increased/(decreased) as a result of a change in the respective assumptions by one percentage point. In preparing the analyses for each assumption, all others were held constant. The economic assumptions are somewhat linked as they are all related to inflation. Hence, for example, a 1% reduction in the long-term discount rate would cause some reduction in the medical trend rate.

	20	015	201	4
	1%	1%	1%	1%
	Decrease	Increase	Decrease	Increase
Discount rate	144,624,000	(113,903,000)	131,682,000	(103,685,000)
Future salary increases	( 55,129,000)	63,338,000	( 50,922,000)	58,848,000
Future pension increases	( <u>67,751,000</u> )	78,419,000	( <u>60,806,000</u> )	70,396,000
	\$ <u>21,744,000</u>	27,854,000	19,954,000	25,559,000

2014

2015

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 8. <u>Employee benefit asset (cont'd)</u>

- (a) Pension asset (cont'd):
  - (ix) Liability duration:

Active members and all participants	<u>34 years</u>	<u>34 years</u>
-------------------------------------	-----------------	-----------------

2015

(x) The principal actuarial assumptions (expressed as weighted averages) used were as follows:

<u>2015</u>	<u>2014</u>
9.5%	9.5%
6.0%	5.5%
<u>4.0%</u>	<u>4.0%</u>
	6.0%

- (xi) The company expects to pay \$35,588,000 in contributions to the plan in 2015/2016 (2014/2015: \$37,548,000).
- (b) Post-retirement medical benefit:

Effective April 1, 2014 an offer was extended to pensioners to participate in the company's health insurance scheme. IFRS requires that the amount for post – employment benefits be actuarially-determined by a qualified independent actuary appointed by Management. As at March 31, 2015 an actuarial valuation was not completed. Consequently, the amounts which should have been recognised in these financial statements as the company's obligation and expense for the current year have not been determined and therefore not recognised. The offer was revoked subsequent to year end (see note 29).

#### 9. Intangible asset

Computer software	
<u>2015</u>	<u>2014</u>
<u>13,049,961</u>	<u>13,049,961</u>
3,914,928 <u>1,304,968</u>	2,609,962 <u>1,304,966</u>
<u>5,219,896</u> \$ <u>7,830,065</u>	<u>3,914,928</u> <u>9,135,033</u>
	<u>2015</u> <u>13,049,961</u> <u>3,914,928</u> <u>1,304,968</u>

2014

Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 10. Property, plant and equipment

	Building & leasehold improvements	Utility plant	Furniture, fixtures & equipment	Motor <u>vehicles</u>	Machinery and equipment	Capital work-in- progress	Total
Cost March 31, 2013 Additions Disposals	98,503,881 612,187	1,711,598,502	99,766,710 4,226,046	31,580,285	24,027,753 	18,575,058 51,386,179 	1,984,052,189 56,224,412 ( <u>5,798,940</u> )
March 31, 2014 Additions Disposals	99,116,068 - -	1,711,598,502	103,992,756 7,450,377 ( <u>759,298</u> )	28,712,421 (	21,096,677 - -	69,961,237 24,112,855 -	2,034,477,661 31,563,232 ( <u>1,709,298</u> )
March 31, 2015	<u>99,116,068</u>	<u>1,711,598,502</u>	110,683,835	27,762,421	21,096,677	94,074,092	2,064,331,595
<b>Depreciation</b> March 31, 2013 Charge for the yea Eliminated on	17,275,274 ar 2,349,093	1,101,260,069 32,352,772	67,082,514 9,432,419	17,174,821 4,015,884 ( <u>2,867,864</u> )	4,545,395 594,237 ( <u>977,025</u> )	-	1,207,338,073 48,744,405
disposals March 31, 2014 Charge for the yea Eliminated on disposals		1,133,612,841 32,247,553	76,514,933 6,757,061 ( 484,298)	18,322,841 2,956,883	4,162,607 527,067		( <u>3,844,889</u> ) 1,252,237,589 44,880,717 ( <u>895,965</u> )
March 31, 2015	22,016,520	1,165,860,394	82 787 696	20,868,057	4,689,674		1,296,222,341
Net book values March 31, 2015	\$ <u>77,099,548</u>	545,738,108	27,896,139	<u>6,894,364</u>	<u>16,407,003</u>	<u>94,074,092</u>	768,109,254
March 31, 2014	\$ <u>79,491,701</u>	577,985,661	27,477,823	<u>10,389,580</u>	<u>16,934,070</u>	<u>69,961,237</u>	782,240,072
March 31, 2013	\$ <u>81,228,607</u>	610,338,433	32,684,196	<u>14,405,464</u>	<u>19,482,358</u>	<u>18,575,058</u>	776,714,116

- (i) Included in building and leasehold improvements are leasehold improvements with net book value of \$54,428,525 (2014: \$56,250,960).
- (ii) Capital work-in-progress represents internal projects, relating to lining of canals, construction of building and other construction works, funded by the Government of Jamaica, which are undertaken and managed by the company. The cost to complete the projects has not been quantified to date. There are currently no contractual commitments related to completion of these projects, as they are being carried out by the company as, and when, funds become available.

#### 11. Accounts payable and accrued charges

Accounts payable and accided charges		
	<u>2015</u>	<u>2014</u>
Customer deposits	13,428,243	11,721,655
Trade payables	279,329,747	221,388,978
Accrued vacation leave (note 13)	20,080,899	44,816,594
Provision for litigation settlement	4,484,256	4,684,256
Other accruals	28,483,602	4,003,238
Other payables	5,897,961	8,036,429
	\$ <u>351,704,708</u>	<u>294,651,150</u>

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 12. Government of Jamaica project advances

This balance represents the net unspent portion of funds received from the Government of Jamaica (GOJ) and its agencies for the following projects:

2015	2014
46,394,709	49,501,797
18,182,307	7,895,740
( 11,000)	( 11,000)
4,889,475	(18,753,237)
4,258,785	4,258,785
\$ <u>73,714,276</u>	42,892,085
	46,394,709 18,182,307 ( 11,000) 4,889,475 _4,258,785

The NIDP project involved the implementation of an irrigation plan for Jamaica and was being jointly funded by the Caribbean Development Bank (CDB), Inter-American Development Bank (IDB) and the Government of Jamaica. The project was being administered by the company; however, disbursement of funds was made directly to contractors by the CDB, while the company made direct payments to contractors from the IDB funds.

#### 13. Long-term liability

Long term nuonity	<u>2015</u>	<u>2014</u>
Unused vacation leave	37,912,991	44,816,594
Current portion (see note 11)	( <u>20,080,899</u> )	( <u>44,816,594</u> )
	\$ <u>17,832,092</u>	

#### 14. Deferred credit

<u>Defendereda</u>	Balance at March 31, 2013	Movement during the year	Balance at March 31, 2014	Movement during the year	Balance at March 31, 2015
Grant for acquisition of properly, plant	256,495,179	25,485,010	281,980,189	12,518,704	204 409 902
and equipment (net of disposals) Property, plant and equipment gifted	230,493,179	25,485,010	281,980,189	12,318,704	294,498,893
by Agro 21 Corp., net, in 1991	1,198,152		1,198,152		1,198,152
Property, plant and equipment gifted	1,196,132	-	1,196,152	-	1,196,152
by Ministry of Agriculture	1,203,061	_	1,203,061	_	1,203,061
Property, plant and equipment	1,205,001	-	1,205,001	-	1,205,001
transferred from NIDP Project	1,896,725	_	1,896,725	_	1,896,725
Property, plant and equipment, other	1,070,725	-	1,000,725	-	1,070,725
than utility plant, gifted by district					
irrigation authorities	3,520,295		3,520,295	_	3,520,295
Utility plant acquired under CDB/IDB	5,520,275		5,520,275		5,520,275
project and utility plant of previously					
unrecorded irrigation					
authorities capitalised					
during 1991	141,941,917	-	141,941,917	-	141,941,917
Utility plant acquired out of	y- y		,- ,- ·		y- y
project funds	591,096,098	-	591,096,098	-	591,096,098
Revaluation surplus on inventories	1,233,211	-	1,233,211	-	1,233,211
Irrigation pipes gifted by	y y		, <u>,</u>		, ,
Chinese Government	41,993,367	-	41,993,367	-	41,993,367
Computers funded by the NIDP Project	14,546,237	-	14,546,237	-	14,546,237
Global Postioning System (GPS) units					
funded by the NIDP Project	854,367	-	854,367	-	854,367
Motor vehicle acquired out of NIDP					
project funds	2,945,000	-	2,945,000	-	2,945,000
Motor vehicle gifted by the Ministry of					
Agriculture and Fisheries	950,000	-	950,000	-	950,000
Customer Relationship Management					
System (CRMS) funded by the NIDP	13,049,961	-	13,049,961	-	13,049,961
Expenditure on contracts-in-progress					
(net of amounts expensed out of					
GOJ project advances) (note 12)	18,575,058	24,699,139	43,274,197	( <u>10,173,879</u> )	33,100,318
	1,091,498,628	50,184,149	1,141,682,777	2,344,825	1,144,027,602
Amortisation transferred to profit or loss	(	(41,800,944)	( <u>764,499,637</u> )	( <u>38,224,432</u> )	( <u>802,724,069</u> )
	\$ <u>368,799,935</u>	8,383,205	377,183,140	( <u>35,879,607</u> )	341,303,533

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 14. Deferred credit (cont'd)

The net book value of property, plant and equipment, with the cost of which the deferred credit account was increased at the date of acquisition, is eliminated from the deferred credit account on the disposal of the assets.

#### 15. Share capital

	<u>2015</u>	<u>2014</u>
ssued and fully-paid:		
y shares at no par value	\$ <u>100</u>	<u>100</u>
5 1	\$ <u>100</u>	

#### 16. Capital reserve

This represents previously determined revaluation surplus on property, plant and equipment which, on first-time adoption of IFRS, was deemed part of the cost of the utility plant.

#### 17. Government of Jamaica subsidy on behalf of farmers

The purpose of this subsidy is to significantly reduce the portion of the cost of providing irrigation water to farmers which would normally be recovered from them as rates. By this means, Government subsidises irrigated agriculture.

In light of the last review conducted by the Office of Utilities Regulation, the company estimated that the subsidy would need to be \$721.4 million (2014: \$850.0 million) in order for the company to deliver irrigation water as required by farmers, in the context of the schemes mentioned in note 1(a). Of this amount, \$629.449 million (2014: \$501.7 million) was approved by Parliament and paid to the company.

#### 18. Other income

	2015	<u>2014</u>
Finance income:		
Investments and cash and cash equivalents	404,565	1,510,940
Other	291,094	413,555
Amortisation of interest on concessionary loans	3,068,784	3,227,576
Exchange gains	34,542	888,173
Service fees	2,980,241	2,837,520
Gain on disposal of property, plant and equipment	-	692,504
Miscellaneous	9,163,011	8,630,485
	\$ <u>15,942,237</u>	<u>18,200,753</u>

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 19. <u>Administrative expenses</u>

	<u>2015</u>	<u>2014</u>
Amortisation of intangible assets	1,304,968	1,304,966
Interest on concessionary loans	5,062,925	3,193,329
Advertising and public relations	3,084,007	3,347,302
Bank charges	379,265	326,640
Bad debts, net of recoveries	5,415,539	( 2,676,478)
Directors' expenses	9,741,843	7,015,724
General Consumption Tax (GCT)	16,600,743	16,564
Insurance	1,061,462	481,851
Motor vehicle fuel, repairs and maintenance	4,977,007	4,319,087
Office maintenance	2,362,539	3,164,230
Computer expenses	4,132,138	4,457,159
Stationery	1,767,631	1,491,399
Telephone, postage, data, etc.	7,710,249	7,811,762
Refreshment	958,235	1,613,581
Subscription and donation	637,714	753,444
Other expenses	239,720	86,288
Office utilities	6,821,764	7,002,239
Professional fees	10,190,471	8,065,121
Salaries, wages and related costs	195,373,782	191,152,292
Security	2,089,170	2,112,990
Office expenses	246,727	229,708
Special projects expenses	2,499,816	2,273,902
Loss on disposal of property, plant and equipment	18,333	
Total administration expenses	\$ <u>282,676,048</u>	<u>247,543,100</u>
Finance costs		
	<u>2015</u>	<u>2014</u>
Interest on bank overdraft	\$ <u>14,010</u>	<u>24,536</u>

#### 21. Taxation

20.

(a) The provision for income tax is computed at 33<sup>1</sup>/<sub>3</sub>% of the results for the year, as adjusted for tax purposes, and is made up as follows:

<i>.</i>		<u>2015</u>	<u>2014</u>
(1)	Current tax charge: Provision for charge on current year's profits	-	-
(ii)	Deferred tax: Origination and reversal of temporary differences	-	9,019,492
	Tax losses		32,726,239
	Actual tax charge recognised	\$ <u> </u>	<u>41,745,731</u>

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 21. Taxation (cont'd)

(b) The actual taxation charge differs from the "expected" tax charge for the year as follows:

	<u>2015</u>	<u>2014</u>
Loss before taxation	\$( <u>77,174,153</u> )	( <u>149,139,454</u> )
Computed "expected" tax credit Tax effect of treating items differently for financial statements and tax reporting purposes -	(25,722,145)	( 49,708,181)
Depreciation, amortisation and capital allowances Foreign exchange gain, capital Amortisation of deferred credits	$\begin{array}{c} 10,\!680,\!105\\(11,\!513)\\(12,\!740,\!203)\end{array}$	16,493,602 ( 296,028) ( 13,932,255)
Expenses not allowed for tax purposes Loss/(gain) on disposal of property, plant and	38,998 6,111	47,444 ( 230,812)
equipment Interest on concessionary loans Effect of change in tax rates	( 1,687,473)	( 11,415) 5,222,979
Tax losses Other	30,660,715 ( <u>1,224,595</u> )	83,228,605 <u>931,792</u>
Actual tax charge recognised	\$ <u> </u>	41,745,731

- (c) At March 31, 2015, taxation losses amounting to approximately \$363,000,000 (2014: \$136,209,000) are available for set-off against future taxable profits, subject to agreement by the Commissioner General, Tax Administration Jamaica. As at January 1, 2014, tax losses may be carried forward indefinitely; however, the amount that can be utilised in any one year is restricted to 50% of the current year's taxable profits.
- (d) Deferred tax asset of approximately \$104,976,000 (2014: \$90,676,600) in respect of taxation losses has not been recognised in the financial statements, due to the uncertainty that future profits will be generated within the foreseeable future against which the asset can be realised.

#### 22. Loss for the year

The following are among the items charged in arriving at loss for the year:

	<u>2015</u> \$	<u>2014</u> \$
Directors' emoluments [note 24(c)]:		
Fees	2,446,630	1,908,375
Travel	2,883,928	2,743,787
Auditors' remuneration	2,216,400	1,900,000
Depreciation	<u>44,880,717</u>	<u>48,744,405</u>

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 23. Employee numbers and costs

The average number of persons employed by the company during the year was as follows:

	<u>2015</u>	<u>2014</u>
Full-time Part-time Other	164 18 12	154 13 <u>28</u>
	<u>194</u>	<u>195</u>

The aggregate payroll costs for these persons were as follows:

	<u>2015</u>	<u>2014</u>
Salaries	372,508,717	359,024,655
Statutory payroll contributions	16,551,464	16,454,640
Pension benefit cost (net of contribution) [note 8(a)(v)]	14,019,000	11,177,000
Travel and subsistence	113,779,191	101,799,741
Gratuities	8,695,291	3,669,800
Training	4,643,295	4,371,542
Accrued vacation leave	( 6,903,603)	( 960,010)
Insurance scheme	29,683,657	28,045,772
Staff welfare	4,832,955	5,288,933
	\$ <u>557,809,967</u>	<u>528,872,073</u>

#### 24. Related party balances and transactions

Identity of related parties:

- (a) The company has a related party relationship with its associates and key management personnel, comprising directors and certain senior executives.
- (b) In addition to those stated thereon, the statement of financial position includes balances, arising in the ordinary course of business, with related parties as follows:

	<u>2015</u>	<u>2014</u>
	\$	\$
Accounts receivable:		
Directors	1,024,347	182,554
Long-term receivables:		
Employee loans - key management personnel	<u>2,033,333</u>	<u>3,275,000</u>

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 24. Related party balances and transactions (cont'd)

(c) The statement of profit or loss and other comprehensive income includes transactions with key management personnel in the ordinary course of business, as follows:

	<u>2015</u>	<u>2014</u>
	\$	\$
Compensation paid to key management personnel:		
Directors' emoluments (note 22)	5,330,558	4,652,162
Salaries to other key management personnel	26,831,283	27,414,083
Post-employment benefits	485,000	381,000
	<u>32,646,841</u>	<u>32,447,245</u>
Interest income from key management personnel	<u>    157,113</u>	616,379

#### 25. Financial risk management

(a) Overview:

The company has exposure to the following risks from its use of financial instruments and its operations:

- Credit risk
- Liquidity risk
- Market risk
- Operational risk

This note presents information about the company's exposure to each of the above risks, the company's objectives, policies and processes for measuring and managing risk and the company's management of capital. Further quantitative disclosures are included throughout these financial statements.

The Board of Directors has overall responsibility for the establishment and oversight of the company's risk management framework. The Board has established the Finance, Audit and General Purposes Committee, which is responsible for developing and monitoring the company's risk management policies. The committee reports regularly to the Board of Directors on its activities.

The company's risk management policies are established to identify and analyse the risks faced by the company, to set appropriate risk limits and controls and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the company's activities. The company, through its training and management standards and procedures, aims to develop a disciplined and constructive control environment in which all employees understand their roles and obligations.

The Finance, Audit and General Purposes Committee oversees management's monitoring of compliance with the company's risk management policies and procedures and reviews the adequacy of the risk management framework in relation to the risks faced by the company. The Finance, Audit and General Purposes Committee is assisted in its oversight role by Internal Audit. Internal Audit undertakes both regular and *ad hoc* reviews of risk management controls and procedures, the results of which are reported to the Finance, Audit and General Purposes Committee.

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 25. Financial risk management (cont'd)

(b) Credit risk:

Credit risk is the risk of financial loss to the company, if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from cash and cash equivalents, resale agreements, trade receivables and long-term motor vehicle loans to employees.

(i) Cash and cash equivalents and resale agreements

Cash and cash equivalents and resale agreements are held with financial institutions which the company regards as strong.

The company limits its exposure to credit risk by investing only in liquid securities that are backed by the Government of Jamaica through established counterparties that are licensed under the Financial Institutions Act and registered with the Financial Services Commission. Consequently, management does not expect any counterparties to fail to meet their obligations. Collateral is held for resale agreements.

(ii) Trade receivable

The company's exposure to credit risk is influenced mainly by the individual characteristics of each customer. The company has a policy under which each customer is analysed before being contracted for the supply of services. Contracted customers are required to make a refundable security deposit that is based on three months projected consumption with regard to the customer's holdings. Customers that fail to meet the company's benchmark for the supply of services may transact with the company on a prepayment basis.

Credit risk is concentrated in the ten largest customers who hold more than 50 percent of the company's trade receivables.

The Director of Commercial Operations has overall responsibility for ensuring the timely collection of outstanding receivables. The Commercial Department reports on the status of collections and receivables to the Finance, Audit and General Purposes Committee monthly.

#### Allowances for impairment

The company establishes an allowance for impairment that represents its estimate of incurred losses in respect of trade receivables based on pre-determined criteria. The main component of this allowance is a specific loss component that relates to individual exposures.

The allowance account in respect of trade receivables is used to record impairment losses, unless the company is satisfied that no recovery of the amount owing is possible; at that point, management obtains permission from the Minister of Agriculture and Fisheries to write off the amounts against the receivable balance directly.

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 25. Financial risk management (cont'd)

- (b) Credit risk (cont'd):
  - (ii) Trade receivable (cont'd)

#### Exposure to credit risk

The maximum exposure to credit risk for trade receivable at the reporting date by geographic region was:

		amount
	2015	<u>2014</u>
St. Thomas	1,468,809	584,663
St. Catherine	65,024,112	55,661,404
Clarendon	24,370,515	19,099,918
St. Elizabeth	25,351,793	22,107,205
Trelawny	1,403,164	1,681,415
St. James	426,134	346,637
	\$ <u>118,044,527</u>	<u>99,481,242</u>

#### (iii) Long-term receivable

The company grants loans to its employees to facilitate the purchase of motor vehicles. Loans are repayable over a period of 4-8 years; however, the repayment period may not exceed the expected remaining years to retirement of individual employees. Management does not expect any counterparty to fail to meet his/her obligations.

#### Collateral held against financial assets

Loans granted are secured by the registration of a lien on the motor vehicles acquired as well as a bill of sale. Estimates of the fair values are based on the sum insured of the collateral, at each reporting date. The fair value of these collateral as at March 31, 2015 was \$83,591,900 (2014: \$74,756,808).

There has been no change to the company's exposure to credit risk or the manner in which it measures and manages this risk.

(c) Liquidity risk:

Liquidity risk is the risk that the company will not be able to meet its financial obligations as they fall due. The company's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the company's reputation.

Typically, the company ensures that it has sufficient cash on demand to meet expected operational expenses.

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 25. Financial risk management (cont'd)

(c) Liquidity risk (cont'd):

The contractual outflow for accounts payable and accrued charges is represented by its carrying amount and may require settlement within 12 months of the reporting date. Government of Jamaica project advances represents the amounts remaining from Government grants and multilateral financing received to finance the company's capital budget as well as to undertake specific NIDP projects. Funds are received from the Government and multilateral agencies based on an approved budget.

There has been no change to the company's exposure to liquidity risk or the manner in which it measures and manages the risk.

(d) Market risk:

Market risk is the risk that changes in market prices, such as foreign exchange rates and interest rates, will affect the company's income or the value of its holdings of financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimising the return on risk.

(i) Currency risk

The company is exposed to currency risk on purchases and borrowings that are denominated in a currency other than the functional currency of the company, primarily, the United States Dollar (US\$). The company's net exposure at reporting date was:

	<u>2015</u> US\$	<u>2014</u> US\$
Cash and cash equivalents	<u>5,319</u>	<u>4,268</u>

The average exchange rate for the US dollar in terms of Jamaica dollars, at March 31, 2015 was: US\$1.00 = J\$114.4883 (2014: J\$108.9943).

#### Sensitivity analysis

A 10% (2014: 15%) strengthening of the US\$ against the Jamaica dollar would have increased profit by \$60,896 (2014: \$69,778). A 1% (2014: 1%) weakening would have decreased profit by \$6,090 (2014: \$4,652). This analysis assumes that all other variables, in particular, interest rates, remain constant. The analysis is performed on the same basis as for 2014.

(ii) Interest rate risk

Interest rate risk is the risk that the value of a financial instrument will fluctuate due to changes in market interest rates.

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 25. Financial risk management (cont'd)

- (d) Market risk (cont'd):
  - (ii) Interest rate risk (cont'd)

#### Profile

At the reporting date, the interest rate profile of the company's interest-bearing financial instruments was:

	Carryin	ng amount
	2015	<u>2014</u>
Resale agreements Employee loans	9,135,198 <u>22,568,466</u>	8,809,538 <u>31,267,912</u>
	\$ <u>31,703,664</u>	<u>40,077,450</u>

These financial assets are carried at cost and bear interest at fixed rates.

There has been no change to the company's exposure to market risk or the manner in which it measures and manages this risk.

(e) Operational risk:

Operational risk is the risk of direct or indirect loss arising from a wide variety of causes associated with the company's processes, personnel, technology and infrastructure, and from external factors other than credit, market and liquidity risks such as those arising from legal and regulatory requirements and generally accepted standards of corporate behaviour. Operational risks arise from all of the company's operations.

The company's objective is to manage operational risk so as to balance the avoidance of financial losses and damage to the company's reputation with overall cost effectiveness and to avoid control procedures that restrict initiative and creativity.

The primary responsibility for the development and implementation of controls to address operational risk is assigned to senior management. This responsibility is supported by the development of overall company standards for the management of operational risk, including the following:

- requirements for appropriate segregation of duties, including the independent authorisation of transactions;
- requirements for the reconciliation and monitoring of transactions;
- compliance with regulatory and other legal requirements;
- training and professional development;
- ethical and business standards; and
- risk mitigation, including insurance where this is effective.

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 25. Financial risk management (cont'd)

(e) Operational risk (cont'd):

Compliance with the company's standards is supported by a programme of periodic reviews undertaken by the internal audit unit. The results of internal audit reviews are discussed with management, with summaries submitted to the Board of Directors, the Audit Committee and senior management of the company, and action is taken to deal with the matters reported.

There has been no change to the company's exposure to operational risk or the manner in which it measures and manages this risk.

(f) Capital management:

The company is not subject to any externally imposed capital requirements.

It is the Board's policy to maintain a strong capital base so as to sustain the future operation of the company. The Board of Directors monitors the return on capital, which the company defines as total equity.

26. <u>Fair values</u>

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Market price is used to determine fair value where an active market exists as it is the best evidence of the fair value of a financial instrument.

#### Determination of fair value and fair value hierarchy

IFRS specifies a hierarchy of valuation techniques based on whether the inputs to those valuation techniques are observable or unobservable. The different levels have been defined as follows:

Level 1 – Quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 – Discounted cash flow technique using a discount rate from observable market data, i.e. average of several brokers/dealers market indicative yields in active markets for identical assets or liabilities.

Level 3 – Valuation techniques using significant unobservable inputs.

The fair values of cash and cash equivalents, resale agreements, accounts receivable and accounts payable are assumed to approximate to their carrying values, due to their short-term nature.

The fair value of long-term receivable approximates to its carrying value as no discount is expected on settlement.

#### Notes to the Financial Statements (Continued) Year ended March 31, 2015

#### 27. Contingent liabilities

(i) A claim was made against the company in August 2000 for damages in the amount of \$2,254,630 arising from alleged damage to the crops of the plaintiff as a result of alleged disconnection of water supply.

The company made an appeal against the claim which was heard on 26<sup>th</sup> January 2010. The appeal was allowed with cost. A determination of the cost is currently being made to bring closure to the above matter. No provision has been made in these financial statements.

- (ii) A claim was made against the company by an ex-employee in which the court awarded cost to the ex-employee. An amount of \$3,684,256 is included in accounts payable (note 11) pending any claims.
- (iii) A claim was made against the company by an ex-employee. An amount of \$700,000 is included in accounts payable (note 11) pending any claims.
- (iv) A claim was made against the company in April 2005 for damages in the amount of \$155,000 arising from alleged flooding caused by canal. This matter was adjourned to August 13, 2015. No provision has been made in these financial statements.
- (v) A claim was made against the company by a customer in the amount of US68,000. The customer claims loss of earnings for crops due to damages to the land allegedly by NIC. The matter has not yet been heard. No provision has been made in the financial statements.

#### 28. Capital commitments

Commitments for capital expenditure were as follows:

	<u>2015</u>	<u>2014</u>
Capital commitments	\$ <u>1,130,238</u>	

#### 29. <u>Subsequent event</u>

Effective September 2, 2015, the company revoked its offer or post-retirement health benefits to pensioners.

# SUPPLEMENTARY INFORMATION TO THE FINANCIAL STATEMENTS

YEAR ENDED MARCH 31, 2015

L IRRIGATION COMMISSION LIMITED	NATIONAL
COMMISSION LIMITE	L IRRIGATIO
LIMITE	N COMMISSI
	LIMITE

# Government of Jamaica Project Advances As at and for year ended March 31, 2015

	Phase 2	IDB Well Sites	Wind Monitoring Project	Wind Monitoring System	System	Ebony Park filtration	construction	PGR pump house	numn station	Port Henderson re lift	Fishing Beach Projects	Agro Parks Project	System Project phase 1	Vernamfield Irrigation	Energy Saving Projects	Harvesting Project	Rain Water	Yallahs	Thetford	Rehabilitation	Second Sugar	Ext. Block E Pipeline	Era rehab infrastructure	Joint Venture- New	Other capital projects	- Implementation	Development Plan	National Irrigation	Development Plan	National Irrigation	Lining of Canale	Hounslow	Construction of Dam	Colbeck	reservoirs	Construction of storage	mechanical devices	Fabrication of gates and installation of	PROJECTS
\$ <u>2,909,251,283</u>	1	ı	ı		ı		I				70.000.000	1	65,700,000		6.042.125	12,896,074		25,336,710	29,094,791	151,069,666		2,639,774	2,701,354		229,444,544	448,435,563		•	1,655,125,231	171,000,000	101 655 055	7 198 189	14.143.538	578,305	1,200,220		990,144		At beginning of year
39,674,339	4,400,000	485,000	4,228,704	800,000	1,090,000		2,000,000	.,0,000	1 670 635		ı		ı						I	I		ı			25,000,000				ı		I	ı	I	ı	•				Received during year
ı		ı	ı		ı		ı		ı		ı	·	ı						ı	ı		ı				·			·		I		ı	ı	·				Transfer of <u>project funds</u>
2,948,925,622 (	4,400,000	485,000	4,228,704 (	800,000	1,090,000		2,000,000	.,	1 670 635		70.000.000		65.700.000 (		6.042.125	12,896,074		25,336,710	29,094,791	151,069,666		2,639,774	2,701,354		254,444,544	448,435,563			1,655,125,231		101 655 055 1	7 108 180	14.143.538 (	578,305	1,200,220		990,144		Total
(74,504,256)			(2,302,971)	ı			ı		ı			(29,405,135)	(17.753.766)		I	ı		·	I	I		I	ı		ı				ı	(21,772,701)	(74 007 384)		50.000)	I	ı		ı		Capital work
(510,689,855)		ı	ı	ı	ı		I		ı		ı	ı	I		ı	ı		(24,394,104)	(29,070,822)	(149, 502, 023)		( 2,547,798)	ŗ		(186, 286, 661)	ı			ı	(100,000,011)	(103 800 711)		(14.022.668)	ı	ı		( 966,068)		Expenditure capitalised
(232,851,150)		ı	ı	·	·		I		ı	( 00,1 1,-10)	( 65.741.215)	(2,236,614)	( 38.499.812)		( 8.006.974)	(12,907,074)		( 942,606)	( 23,969)	( 1,567,643)		1	( 528,773)		(24,204,861)	'			'	( , -1, 100, 20, -1)	(74160574)	( 7 198 189)	(30.245)	( 578,305)	(1,200,220)		( 24,076)		Non-capital expenditure
(2,057,166,085)		ı	ı	ı	ı		ı		ı		I	ı	I		ı	ı		ı	I	I		ı	·		- 43,953,022	448,920,563)			(1,608,245,522) 46,879,709 49,986,797		I	I	I	ı			ı		Capital 'B' expenditure
73,714,276	4,400,000	485,000	1,925,733	800,000	1,090,000		2,000,000	.,0,0,0,000	1 670 635	.,,	4.258.785	(31,641,749)	9,446,422		( 1.964.849)	( 11,000)		ı	I	I		91,976	2,172,581		43,953,022	( 485,000)			46,879,709	(++,-,-,-,-,-)	(11 307 614) (11 307 614)		40.625	ı	ı		ı		2015
42,892,085			ı	·			I		ı	.,,	4.258.785	(31,641,749)	12.888.511		1.964.849) ( 1.964.849)	( 11,000)			I	I		91,976	2,172,581		18,953,022	( 485,000)			49,986,797	(	(11 307 614)		40.625	I	ı		ı		<u>2014</u>

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#### Expenses Year ended March 31, 2015

	2015	<u>2014</u>
Cost of producing and distributing water to farm gates		
Cost of producing and distributing water to farm gatesDepreciationElectricityEquipment hireageFuel and lubricantsGeneral expensesGeneral insuranceHaulageMaintenance of conveyance system (labour)Motor vehicle fuel, repairs and maintenanceTelephone, postage, data, etc.Office refreshmentsStationeryComputer expensesBank chargesRegulatory feesOffice rent and property taxesOffice utilitiesAdvisory committee fees and related expensesProfessional feesRepairs to buildings, distribution canals, pipelines,	$\begin{array}{c} 44,880,718\\ 493,841,926\\ 4,017,250\\ 5,915,685\\ 2,036,464\\ 8,655,836\\ 5,272,126\\ 65,005,511\\ 14,632,624\\ 3,645,250\\ 1,612,540\\ 1,755,047\\ 768,208\\ 275,480\\ 882,220\\ 1,013,744\\ 9,236,840\\ 2,486,473\\ 470,300\\ \end{array}$	$\begin{array}{c} 48,744,405\\ 357,958,083\\ 8,042,350\\ 3,767,888\\ 6,205,379\\ 7,660,066\\ 3,662,610\\ 59,502,626\\ 14,706,446\\ 3,480,796\\ 1,085,779\\ 1,386,780\\ 770,050\\ 182,161\\ 837,776\\ 1,160,243\\ 9,779,451\\ 2,516,086\\ 3,235,100\\ \end{array}$
pumps etc. (material) Salaries, wages and related costs (see below) Security	38,594,869 362,454,604 <u>16,402,356</u>	56,235,756 337,719,781 <u>17,476,859</u>
Total cost of producing and distributing water	1,083,856,071	946,116,471
Administration expenses (note 19)	282,676,048	247,543,100
Finance costs	14,010	24,536
Total expenses	\$ <u>1,366,546,129</u>	<u>1,193,684,107</u>
Salaries, wages and related costs		
Personnel emoluments Insurance scheme Statutory contributions Staff welfare Accrued vacation leave Travel and subsistence Training	$\begin{array}{r} 242,534,293\\ 20,428,081\\ 10,697,866\\ 2,545,065\\ (\ 4,379,315)\\ 88,019,971\\ \underline{2,608,643}\\ \$\underline{362,454,604} \end{array}$	223,893,528 19,077,256 10,563,907 3,165,513 700,376 76,955,634 <u>3,363,567</u> <u>337,719,781</u>

#### Expenses (Cont'd) Year ended March 31, 2015

#### Salaries, wages and related costs included in administrative expenses

Personnel emoluments	130,015,238	135,131,127
Pension benefit cost (net of contribution)	14,019,000	11,177,000
Insurance scheme	9,255,576	8,968,516
Statutory contributions	5,787,536	5,890,733
Vacation leave	( 2,524,288)	( 1,660,386)
Gratuities	8,695,291	3,669,800
Staff welfare	2,331,557	2,123,420
Training	2,034,652	1,007,975
Travel and subsistence	25,759,220	24,844,107
	\$ <u>195,373,782</u>	<u>191,152,292</u>

# CORPORATE DATA

# **REGISTERED OFFICE**

#### National Irrigation Commision Limited

Head Office 191 Old Hope Road, Kingston 6 Tel: (876) 977-4022/6727 Fax: (876) 927-2696 E-mail: nic@cwjamaica.com Website: www.nicjamaica.com

# **DISTRICT OFFICES**

#### St. Catherine Irrigation District

Rio Cobre Office 17 Barrett Street, Spanish Town St. Catherine Tel: 984-2334/ 4042 Fax: 984-8401

# THE OPERATION OFFICE

#### National Irrigation Commision Limited

15 Barrett Street, Spanish Town, St.Catherine Tel: 984-0625/ 5792 Fax: 984-0532

St. Dorothy Office Bodles, Old Harbour, St. Catherine Tel: 983-2712/ 2742 Fax: 745-2759 New Forest Office New Forest P.A., Manchester Tel: 371-0794

#### Mid-Clarendon Irrigation District

Osbourne Store, May Pen, Clarendon Tel: 987-3140/ 3259 Fax: 987-3139 Yallahs Irrigation District Yallahs, St. Thomas Tel: 706-3159/ 3160

#### St. Elizabeth Irrigation & Drainage District

Watchwell P.A., St. Elizabeth Tel: 965-0714 Fax: 965-0232

#### **Braco Irrigation District**

Duncans, Trelawny Tel: 954-2147 Fax: 954-2295

# AUDITORS

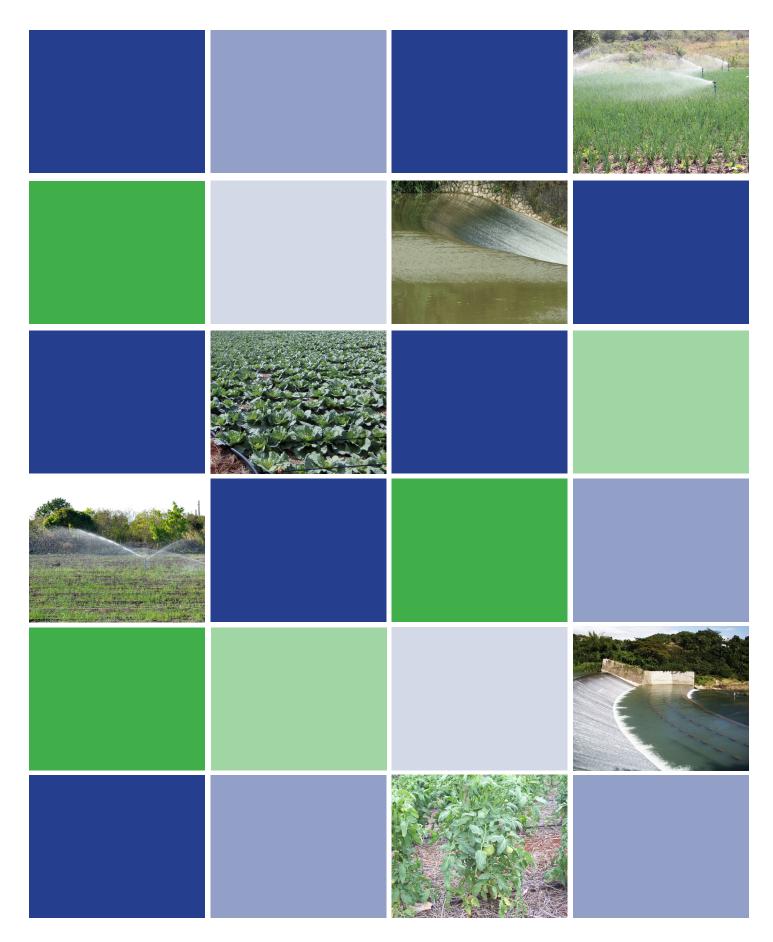
KPMG 6 Duke Street, Kingston Jamaica

### ATTORNEYS-AT-LAW

DunnCox 48 Duke Street, Kingston Jamaica Wentworth Charles & Company 20 <sup>1/2</sup> Duke Street, Kingston Jamaica Myers Fletcher & Gordon 21 East Street, Kingston Jamaica

# NOTES





National Irrigation Commission Limited - www.nicjamaica.com