



**KENYA FORESTRY RESEARCH INSTITUTE**

**(KEFRI)**

**ICT PROCEDURE**

**KEFRI/SOP/ICT/010**

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## **PROCEDURE 1: ICT REQUIREMENTS PLANNING**

### **1.0 Purpose**

To ensure effectiveness, efficiency and consistency in the planning of ICT requirements

### **1.1 Scope**

The procedure applies to ICT requirements planning at KEFRI

### **1.2 Reference**

- a) Current KEFRI Strategic Plan
- b) KEFRI ICT policy Guidelines (2017)
- c) KEFRI ICT Business Continuity Plan (2017)
- d) GOK ICT Standards 2016
- e) ISO 9001:2015 Standard
- f) ISO 14001:2015 Standard
- g) Service Delivery Charter

### **1.3 Terms, Definitions & Acronyms**

- a) DD TSS – Deputy Director Technical Support Service
- b) H-ICT – Head of Information Communication and Technology
- c) ICT – Information Communication and Technology
- d) KEFRI – Kenya Forestry Research Institute

### **1.4 Responsibility**

The DD TSS shall ensure this procedure is effectively adhered to.

## **2.0 STEPS**

- 2.1 DD TSS in liaison with H-ICT shall direct the various divisions, thematic areas and sections to submit their systems requirements three (3) months before the end of a financial year
- 2.2 Upon receipt, the H-ICT shall compile the requirements into proposed work plan and budget and submit to DDTSS.
- 2.3 DDTSS shall table the proposed work plan and budget before the Consultative Meeting for review, further recommendation and approval.
- 2.4 Upon approval of the work plan and budget, the H-ICT shall ensure preparation of the ICT procurement plan
- 2.5 Based on the approved budget and procurement plan, the HICT shall ensure that work plan for the year is prepared for implementation.

## **3.0 APPLICABLE RECORDS**

- a) ICT work plan
- b) ICT procurement plan
- c) ICT Approved budget

## PROCEDURE 2: SYSTEMS DEVELOPMENT & MANAGEMENT

### 1.0 Purpose

To ensure effectiveness, efficiency and consistency in the development and maintenance of information systems

### 1.1 Scope

The procedure applies to the development and maintenance of all Information Systems in KEFRI.

### 1.2 Reference

- a) Current KEFRI Strategic Plan
- b) KEFRI ICT policy Guidelines (2017)
- c) KEFRI ICT Business Continuity Plan (2017)
- d) GOK ICT Standards 2016
- e) ISO 9001:2015 Standard
- f) ISO 14001:2015 Standard
- g) ISO/IEC TR 15504-6:2013 Standard

### 1.3 Terms, Definitions & Acronyms

- a) DD TSS – Deputy Director Technical Support Service
- b) H-ICT – Head of Information Communication and Technology
- c) ICT – Information Communication and Technology
- d) KEFRI – Kenya Forestry Research Institute
- e) Database – an organized collection of data for one or more purposes, in digital form.
- f) End-user- refers to an individual, department, division, section, unit or Centre using Institute’s ICT equipment and applications.
- g) Senior User - represents the principal user within the project.
- h) Information System – software that helps to organize and analyze data.
- i) TOR – Terms of Reference
- j) SLA – Service Level Agreement

### 1.4 Responsibility

The H-ICT shall ensure this procedure is adhered to.

## 2.0 STEPS

- 2.1 The HICT shall receive a request from an end-user to provide an Information system or propose to an end-user that there is need for an Information system in the division, section, center or unit as per communication procedure.
- 2.2 H-ICT shall constitute project team comprising of the end-user and ICT team to carry out a System Preliminary Investigation.
- 2.3 The project team shall come up with a Preliminary Investigation report and forward the same to H-ICT and the Senior User for discussion, amendment and approval.

- 2.4 The project team shall recommend the most appropriate method of acquiring the database or information system.
- 2.5 For Systems to be developed in house, the project team shall develop a Terms of Reference and establish minimum (hardware or software) requirements in consultation with the user department
- 2.6 The H-ICT shall in liaison with the respective project team leader ensure development of the system through the System Development Life Cycle (Planning, Analysis, Design and Implementation) of the system.
- 2.7 For systems managed internally, the HICT shall ensure that emerging issues are handled by the respective ICT staff as per end-user/client support services procedure
- 2.8 For systems to be procured / developed externally, the H-ICT shall ensure adherence to the procurement procedure
- 2.9 For systems to be managed externally, the H-ICT shall ensure supervision of outsourced service provider as per the applicable SLA
- 2.10 The Systems developer in liaison with the systems Administrator and the senior user-department shall ensure that review and maintenance of the system is undertaken.

### **3.0 APPLICABLE RECORDS**

- a) Requirement proposals
- b) Preliminary investigation Report
- c) Minimum hardware and software requirements
- d) Systems TOR
- e) Change requests
- f) Service Level Agreement



**KEFRI ICT SYSTEMS DEVELOPMENT  
Preliminary investigation Report Format**

Instructions: This report format is to be followed by respective project teams before initiation of any an Information Communication & Technology (ICT) systems development.

<b>1. Contact Information for the Senior User of Proposed system</b>	
Name:	
Title:	
Department/Section/ Eco-Region/Center	
Mobile Phone:	
Email address:	
<b>2. Background.</b>	
Provide a brief description:	
<b>3. Problem</b>	
a) What problem does the current system have?  b) How will the proposed system be used by the institute/organisation	
<b>4. Anticipated Business Benefits</b>	
List the benefits that the division, section unit or centre will get from the proposed system (organize them in priority from most to least important).	
<b>5. Feasibility Analysis:</b>	
Make initial estimates of the costs associated with this proposed system (I.e., equipment, software licensing, consultants, etc.).	
<b>7. Recommendation</b>	
Present a clear recommendation that states whether to begin work on this project, conduct more analysis, or discontinue further work on this project.	

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## KEFRI ICT SYSTEMS DEVELOPMENT

### Minimum Hardware & Software Requirements Document

For

System Name : .....

Instructions: This form is to be completed by respective project teams before initiation of any an Information Communication & Technology (ICT) systems development. All sections completed should be based on information that is currently available.

<b>1. Contact Information for the Senior User of Proposed system</b>	
Name:	
Title:	
Department/Section /Eco-Region/Center	
Mobile Phone:	
Email address:	
<b>2. Background.</b>	
Provide a brief description:	
<b>3. Duration.</b>	
Enter Duration in months	
<b>4. Hardware Requirements :</b>	
Provide a brief description e.g.:	
<b>5. Software Requirements:</b>	
Provide a brief description e.g.: include use of tools, software and other multimedia techniques to leveraged on:	
<b>7. Budget</b>	
Provide a brief description e.g.: Amount and Cost Center	

**Revision History**

<b>Date</b>	<b>Version</b>	<b>Description</b>	<b>Author</b>

**Distribution List**

<b>Name</b>	<b>Title</b>



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## KEFRI ICT SYSTEMS DEVELOPMENT

### TERMS OF REFERENCE

For

System Name: .....

Instructions: This form is to be completed by respective project teams before initiation of any an Information Communication & Technology (ICT) systems development. All sections completed should be based on information that is currently available.

<b>1. Contact Information for the Senior User of Proposed system</b>	
Name:	
Title:	
Department/Section/ Eco-Region/Center	
Mobile Phone:	
Email address:	
<b>2. Background.</b>	
Provide a brief description:	
<b>3. Duration.</b>	
Enter Duration in months	
<b>4. Scope of Work:</b>	
Provide a brief description e.g.:	
<ul style="list-style-type: none"> <li>• Define requirements through user interviews, document analysis, requirements workshops, business processes' descriptions, user cases, scenarios, business analysis, task and workflow analysis</li> <li>• Develop functional requirements (Business Requirements Document), Use Cases, GUI(Graphical User Interface), Screen and Interface designs</li> <li>• Develop/Procure and Install the associated software and hardware requirements in accordance with Minimum hardware and software requirements</li> <li>• Liaise between the business units, technology teams and support teams</li> </ul>	

- Develop training material and conduct trainings and workshops on the deployed system.
- Provide best practices quality control and customer services
- Provide best practices project management services
- The system must have the ability to provide at least the following administrative reports [*Provide report type*] on demand and also be able to email them on set schedule to selected recipients.

### 5. Approach and Methodology

Provide a brief description e.g.: include use of tools, software and other multimedia techniques to leveraged on:

### 6. Deliverables

Tick all that apply:

- |  |  |
|--|--|
| <input type="checkbox"/> Project Initiation document                 | <input type="checkbox"/> Prototype, documentation report, and user manuals.            |
| <input type="checkbox"/> Cost Benefit Analysis Report                | <input type="checkbox"/> Defects and issues document, Interoperability Analysis report |
| <input type="checkbox"/> Software requirement specification document | <input type="checkbox"/> Acceptance Report, Deployment Issues                          |
| <input type="checkbox"/> Design document specification               |  |

### 7. Budget

Provide a brief description e.g.: Amount and associated Cost Center

### Revision History

Date	Version	Description	Author

### Document Approval History

Approver Name	Designation	Signature	Date

### Distribution List

Name	Title

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### **Change Request Form**

This form is divided into three sections.

Section 1 is intended for use by the individual submitting the change request.

Section 2 is intended for use by the Head ICT to document/communicate their initial impact analysis of the requested change.

Section 3 is intended for use by the Change Review Committee (CRC) to document their final decision regarding the requested change.]

1.) SUBMITTER - GENERAL INFORMATION			
CR#	[CR001]		
Type of CR	<input type="checkbox"/> Enhancement	<input type="checkbox"/> Defect	
Project/Program/Initiative			
Submitter Name	[John Doe]		
Brief Description of Request	[Enter a detailed description of the change being requested]		
Date Submitted	[mm/dd/yyyy]		
Date Required	[mm/dd/yyyy]		
Priority	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High <input type="checkbox"/> Mandatory
Reason for Change	[Enter a detailed description of why the change is being requested]		
ICT Systems Impacted	[List other ICT systems affected by this change]		
Assumptions and Notes	[Document assumptions or comments regarding the requested change]		
Comments	[Enter additional comments]		
Attachments or References	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	<b>Link:</b>		
Approval Signature	[Approval Signature]	<b>Date Signed</b>	[mm/dd/yyyy]

2.) HEAD ICT - INITIAL ANALYSIS			
Hour Impact	[#hrs]	[Enter the hour impact of the requested change]	
Duration Impact	[#dys]	[Enter the duration impact of the requested change]	
Schedule Impact	[WBS]	[Detail the impact this change may have on schedules]	
Cost Impact	[Cost]	[Detail the impact this change may have on cost]	
Comments	[Enter additional comments]		
Recommendations	[Enter recommendations regarding the requested change]		
Approval Signature	[Approval Signature]	<b>Date Signed</b>	[mm/dd/yyyy]

**3.) CHANGE REVIEW COMMITTEE - DECISION**

<b>Decision</b>	<input type="checkbox"/> Approved	<input type="checkbox"/> Approved with Conditions	<input type="checkbox"/> Rejected	<input type="checkbox"/> More Info
<b>Decision Date</b>	<i>[mm/dd/yyyy]</i>			
<b>Decision Explanation</b>	<i>[Document the CCB's decision]</i>			
<b>Conditions</b>	<i>[Document and conditions imposed by the CCB]</i>			
<b>Approval Signature</b>	<i>[Approval Signature]</i>		<b>Date Signed</b>	<i>[mm/dd/yyyy]</i>

## **PROCEDURE 3: DEVELOPMENT AND MANAGEMENT OF WEBSITES, DIGITAL REPOSITORIES AND PORTALS**

### **1.0 Purpose**

The purpose of this procedure is to ensure effectiveness, consistency and timeliness in Website, Digital Repositories and Portals Management.

### **1.1 Scope**

The Scope shall apply to developing, updating, uploading, archiving and management of the KEFRI's Website, Digital Repositories and Portals.

### **1.2 Reference**

- a) Current KEFRI Strategic Plan
- b) KEFRI ICT policy Guidelines (2017)
- c) KEFRI ICT Business Continuity Plan (2017)
- d) GOK ICT Standards 2016
- e) ISO 9001:2015 Standard
- f) ISO 14001:2015 Standard
- g) ISO/IEC TR 15504-6:2013 Standard
- h) Service Delivery Charter

### **1.3 Terms, Definitions & Acronyms**

- a) DD TSS – Deputy Director Technical Support Service
- b) H-ICT – Head of Information Communication and Technology
- c) ICT – Information Communication and Technology
- d) KEFRI – Kenya Forestry Research Institute
- e) Database – an organized collection of data for one or more purposes, in digital form.
- f) End-user- refers to an individual, department, division, section, unit or Centre using Institute's ICT equipment and applications.
- g) Senior User - represents the principal user within the project.
- h) Information System – software that helps to organize and analyze data.
- i) TOR – Terms of Reference
- j) SLA – Service Level Agreement
- k) Webmaster – A webmaster is a person responsible for creation and/or maintenance of one or many websites

### **1.4 Responsibility**

The H-ICT shall ensure this procedure is adhered to.

## **2.0 STEPS**

### **2.1 DEVELOPMENT OF WEBSITES**

- 2.1.1 An end-user shall submit request to the HICT for development of a website, Digital Repositories and/or Portals as per communication procedure.
- 2.1.2 H-ICT shall constitute project team comprising of the end-user and ICT team to develop a Terms of Reference and establish minimum (hardware or software) requirements.

2.1.3 The H-ICT shall in liaison with the respective project team leader ensure development of the website(s), Digital Repositories and Portals through the System Development Life Cycle (Planning, Analysis, Design and Implementation) of the system.

## **2.2 MANAGEMENT OF WEBSITES, DIGITAL REPOSITORIES AND PORTALS**

2.2.1 The H-ICT in liaison with the Head of Information shall receive information from the end user to submit their information for new web content and update through the website, Digital Repositories and Portals update request form.

2.2.2 Upon approval of the above, the H-ICT shall forward the approved content(s) to the Webmaster for appropriate action as per communication procedure.

2.2.3 Upon receipt, the Web Master shall format the approved content in the correct format and upload it to web server.

2.2.4 After uploading the information, the Web Masters shall send a notification to the end user to the effect that their information has been updated.

2.2.5 The webmaster shall archive information from the website, Digital Repositories and Portals.

2.2.6 When the website is down, the webmaster shall determine the cause of the problem and if it is internal the Webmaster shall carry out necessary action.

2.2.7 In the event the problem is external, the webmaster shall contact the respective service provider who shall issue a support ticket as per the SLA.

2.2.8 The Webmaster shall record the downtime in the Website, Digital Repositories and Portals, in down-time Form for quarterly review of the SLA with the ISP and/or internal infrastructure alignments with the HICT.

## **3.0 APPLICABLE RECORDS**

- a) Support Tickets –sample missing
- b) Systems TOR- Missing
- c) Minimum hardware and software requirements-Missing
- d) Website down-time form
- e) Websites' update request form
- f) Service Level Agreement

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### REQUEST TO ADD A DOCUMENT ON KEFRI WEBSITES AND DIGITAL REPOSITORIES

INSTRUCTIONS: Request for website/ repository services shall be submitted two working days prior to the publishing date

DATE	NAME OF THE PERSON REQUESTING	WEBSITE/ REPOSITORY	DOCUMENT TITLE/NAME	PUBLISH DATE	EXPIRY DATE

**KEFRI WEBSITES AND DIGITAL REPOSITORIES DOWNTIME MONITOR FORM**

DATE	WEBSITE/ REPOSITORY	FROM	TO	CAUSE OF DOWNTIME



**PROCEDURE 4: END-USER/CLIENT SUPPORT SERVICES****1.0 Purpose**

To ensure effectiveness, timeliness and consistency in undertaking end user support and handling of ICT Client Support services

**1.1 Scope**

This procedure shall apply to provision of guidance to end-users on operation and use of ICT equipment and applications within KEFRI

**1.2 Reference**

- a. Current KEFRI Strategic Plan
- b. KEFRI ICT policy Guidelines (2017)
- c. KEFRI ICT Business Continuity Plan (2017)
- d. GOK ICT Standards 2016
- e. ISO 9001:2015 Standard
- f. ISO 14001:2015 Standard
- g. Service Delivery Charter

**1.3 Terms, Definitions & Acronyms**

- a) DD TSS – Deputy Director Technical Support Service
- b) H-ICT – Head of Information Communication and Technology
- c) End-user- refers to an individual (staff or student), department, division, section or unit using Institute’s ICT equipment and applications.
- d) Helpdesk – A central call center for staff seeking ICT support
- e) Helpdesk Analyst – The person receiving ICT requests
- f) ICT – Information Communication and Technology
- g) KEFRI – Kenya Forestry Research Institute
- h) SLA – Service Level Agreement

**1.4 Responsibility**

The H-ICT shall ensure this procedure is adhered to.

**2.0 STEPS**

- 2.1 The Help Desk Analyst shall receive a support request from end user as per communication procedure
- 2.2 Upon receipt, the Help Desk Analyst shall create a ticket for the request
- 2.3 After creation of the ticket the Help Desk Analyst shall determine whether the request can be resolved off site and if it can be resolved renders the solution and updates the user support register
- 2.4 If the problem requires advanced level support the Help Desk Analyst shall assign/escalate it to the appropriate ICT technical staff and note the assignment (change of ownership) in the ticket.
- 2.5 Upon receipt of the request/ report, the ICT technical staff shall support the user on phone giving guidance on possible solutions to the problem/incident or visit the end –

user unit to diagnose the problem and where necessary train the user on how to solve such operational problems/incidents whenever they occur.

- 2.6 The ICT technical staff member will determine if a resolution can be reached, or whether the problem needs to be further escalated.
- 2.7 The Assignee will update the customer according to the response-time commitment grid until resolution can be achieved, resolve the matter and update the support register.
- 2.8 If the problem can be resolved without further escalation, the assignee will resolve the matter, update the support register and close the ticket.
- 2.9 Where the problem requires external expertise, the HICT shall ensure adherence to the control of procurement procedure as per the SLA.

### **3.0 APPLICABLE RECORDS**

- a) Support Tickets –Sample Missing
- b) Response-time commitment grids
- c) Service Level Agreement



## KEFRI ICT Response-time commitment grids

### 1.0 Response Times

Table 1.0 show the priority assigned to faults according to the perceived importance of the reported situation. The priority assignment is to refer to the initial response to the client as per Section 2.0 of this document. The support level refers to the *client* guide for support available as illustrated in Section 3.0 of this document.

**Table 1.0 - Response Priority**

Support Level	Business Critical	Business Critical	Non-Business Critical	Non-Business Critical	Request For Service
	Fatal	Impaired	Fatal	Impaired	
High	A	B	B	C	R
Medium	A	B	C	C	R
Low	B or C	C or D	C or D	D	R

Fatal	-	Total system inoperability.
Impaired	-	Partial system inoperability.
Business Critical	-	Unable to perform core business functions.
Non-Business Critical	-	Able to perform limited core business functions.

### 2.0 Priority Level Response Times

Table 2.0 shows the required initial response times for the individual priority ratings. All times indicated represent response time during specified working hours of 8.00 am to 5.00 pm Monday to Friday.

The indicated response time represents the maximum delay between a fault/request being reported to the *ICT Section* and an *ICT Section* representative contacting the client.

The purpose of this initial contact with client by *ICT Section* is to notify the client of the receipt of the fault/request from *client* and provide the client with details of the proposed action to be taken in respect of the particular fault/request.

The *ICT Section* representative must notify *the client* immediately upon escalation of faults/request initially referred to *ICT Section* by *the client*.

Escalated faults/requests will require response to the client by *ICT Section* in the same manner as for referred faults.

**Table 2.0 - Priority Level Response Times**

Priority Level	Response Time
A	30 Minutes
B	60 Minutes
C	90 Minutes
D	120 Minutes
R	90 Minutes

### 3.0 Support Available

This table shows the support available for each support level,

**Table 3.0 - Support Available**

Support Level	Support Available
Recommended	Full Internal Support Available Internally Conducted Training Courses Available High Priority External Support/Training Available
Supported	Full Internal Support Usually Available No Internally Conducted Training Available Medium Priority External Support/Training Available
Acknowledged	Limited Internal Support Available No Internally Conducted Training Available

	Low Priority External Support/Training Available
Discouraged	Product Not Recommended No Internally Conducted Training Available No Internal Support Available External Support/Training Available

For more information Please contact the ICT Section on:

Email: [ict@kefri.org](mailto:ict@kefri.org)

## **PROCEDURE 5: PREVENTIVE MAINTENANCE OF ICT EQUIPMENT**

### **1.0 Purpose**

To ensure effectiveness, timeliness, reliability and completeness in the preventive maintenance of ICT equipment

### **1.1 Scope**

This procedure applies to preventive maintenance of all ICT equipment at KEFRI

### **1.2 Reference**

- a) Current KEFRI Strategic Plan
- b) KEFRI ICT policy Guidelines (2017)
- c) KEFRI ICT Business Continuity Plan (2017)
- d) GOK ICT Standards 2016
- e) ISO 9001:2015 Standard
- f) ISO 14001:2015 Standard
- g) Service Delivery Charter

### **1.3 Terms, Definitions & Acronyms**

- a) DD TSS – Deputy Director Technical Support Service
- b) End-user- refers to an individual (staff or student), department, division, section or unit using Institute’s ICT equipment and applications.
- c) Helpdesk – A central call centre for staff seeking ICT support
- d) Helpdesk Analyst – The person receiving ICT requests
- e) H-ICT – Head of Information Communication and Technology
- f) ICT – Information Communication and Technology
- g) KEFRI – Kenya Forestry Research Institute
- h) OEM – Original Equipment Manufacturer

### **1.4 Responsibility**

The H-ICT shall ensure this procedure is adhered to.

## **2.0 STEPS**

### **2.1 PREVENTIVE MAINTENANCE OF ICT EQUIPMENT**

- 2.1.1 The HICT at the beginning of every financial year shall ensure engagement of required service providers in repair and Maintenance of ICT equipment as per the procurement procedure.
- 2.2 Preventive maintenance shall be carried out by outsourced service providers as per the procurement procedure
- 2.3 In addition to the procurement procedures, the maintenance shall be carried-out considering OEM requirements of applicable standards and regulations.

- 2.4 At least a week to the scheduled date, the H-ICT shall as per the communication procedure notify the affected end users of the service interruptions and intended maintenance schedule.
- 2.5 The H-ICT shall through respective team members perform ICT maintenance services in all centers, divisions and sections in accordance with best practices and OEM recommendations
- 2.6 Service Summary Reports from the preventive maintenance services shall be reviewed by HICT immediately after the exercise and recommendations implemented.

## **2.2 MANAGEMENT OF ICT NETWORK INFRASTRUCTURE**

- 2.2.1 The HICT shall through the respective teams ensure effective management of the ICT Network infrastructure.
- 2.2 ICT Network infrastructure refers to Area Networks (Local and Wide), Unified Communication systems, servers, cabling and active network equipment.
- 2.3 The HICT through respective teams shall plan, design, test, deploy and monitor operations of the ICT infrastructure.
- 2.4 At least a week to the scheduled date, the H-ICT shall as per the communication procedure notify the affected end users of the service interruptions and intended maintenance schedule.
- 2.5 The Network Administrator shall perform Bi-Annual Preventive Maintenance Visits to all Research programs in accordance to best practices and OEM recommendations.
- 2.6 Service Summary Report from the preventive maintenance exercises shall be reviewed by HICT within a week after the exercise and recommendations implemented.

## **3.0 APPLICABLE RECORDS**

- a) Service summary reports

## **PROCEDURE 6: ICT BUSINESS CONTINUITY AND CHANGE MANAGEMENT**

### **1.0 Purpose**

To ensure stability and continuity of ICT operations in KEFRI

### **1.1 Scope**

This procedure applies to Core IT Systems at KEFRI

### **1.2 Reference**

- a) Current KEFRI Strategic Plan
- b) KEFRI ICT policy Guidelines (2017)
- c) KEFRI ICT Business Continuity Plan (2017)
- d) GOK ICT Standards 2016
- e) ISO 9001:2015 Standard
- f) ISO 14001:2015 Standard
- g) ISO 31000:2015 Standard
- h) ISO/IEC TS 15504-8:2012 Standard
- i) ISO/IEC 27031:2011

### **1.3 Terms, Definitions & Acronyms**

- a) Business Continuity Plan (BCP) – comprises many elements which, collectively, define the approach to dealing with a break in business continuity, and which prescribes the steps an organization should take to recover lost business functions
- b) End-user- refers to an individual (staff or student), department, division, section or unit using Institute’s ICT equipment and applications.
- c) H-ICT – Head of Information Communication and Technology
- d) ICT – Information Communication and Technology
- e) IRBC - ICT Readiness for Business Continuity Program (IRBC)
- f) KEFRI – Kenya Forestry Research Institute
- g) Core IT Systems - An aggregation of several ICT systems upon which most user-accessible systems and services depend.

### **1.4 Responsibility**

The HICT shall ensure this procedure is effectively adhered to.

## **2.0 STEPS**

### **2.1 ICT BUSINESS CONTINUITY**

- 2.1.1 The HICT shall constitute a project team to create business continuity plans for the Institute’s Core Information Technology (IT) systems.
- 2.1.2 The HICT shall in liaison with the project team coordinate the implementation of the BCP.
- 2.1.3 The HICT shall ensure that all responsible officers are made aware of the ICT BCP and their responsibilities in the event of an adverse disruption to normal operations.
- 2.1.4 In the event of a disruption, the project team shall activate the BCP.



## **2.2. CHANGE MANAGEMENT**

- 2.2.1 Upon identifying or receiving a change request, the HICT shall constitute a Change Review team composed of representatives from areas to be affected to carry out a feasibility analysis.
- 2.2.2 The change review team shall come up with a feasibility analysis report and forward the same to H-ICT and the Senior User for discussion, amendment and approval
- 2.2.3 Upon approval, the change review team shall plan for the change request, assist in the scheduling of changes by reviewing the proposed implementation date for potential conflicts with other scheduled changes or critical business activities and communicate to the user within two (2) weeks.
- 2.2.4 The change review committee shall implement the change request. If the implementation of the change should fail or, the post implementation testing fails or, business case justification ceases to exist, the rollback plan should be implemented.
- 2.2.5 The change review committee shall document the change process.
- 2.2.6 The change review committee shall hold a post implementation review of changes to understand the problems that were encountered, and look for areas of improvement.

## **3 APPLICABLE RECORDS**

- a) Change requests-Missing
- b) Disaster planning and recovery records
- c) Feasibility analysis report

## PROCEDURE 7: ICT SECURITY INCIDENT MANAGEMENT

### 1.0 Purpose

To ensure consistence and effective approach to the management of ICT security incidents

### 1.1 Scope

This procedure applies to all ICT security incidents that occur within KEFRI's Core ICT systems

### 1.2 Reference

- a) Current KEFRI Strategic Plan
- b) KEFRI ICT policy Guidelines (2017)
- c) KEFRI ICT Business Continuity Plan (2017)
- d) GOK ICT Standards 2016
- e) ISO 9001:2015 Standard
- f) ISO 14001:2015 Standard
- g) ISO 27001:2013 Standard
- h) ISO/IEC TS 15504-8:2012 Standard
- i) ISO/IEC 27031:2011
- j) Service Delivery Charter

### 1.3 Terms, Definitions & Acronyms

- a) Business Continuity Plan (BCP) – comprises many elements which, collectively, define the approach to dealing with a break in business continuity, and which prescribes the steps an organization should take to recover lost business functions
- b) End-user- refers to an individual (staff or student), department, division, section or unit using Institute's ICT equipment and applications.
- c) H-ICT – Head of Information Communication and Technology
- d) ICT – Information Communication and Technology
- e) IRBC - ICT Readiness for Business Continuity Program (IRBC)
- f) KEFRI – Kenya Forestry Research Institute
- g) Core IT Systems - An aggregation of several ICT systems upon which most user-accessible systems and services depend.
- h) ICT Security Incident- A single or a series of unwanted events that have a significant probability of compromising business operations and threatening ICT security.

### 1.4 Responsibility

The HICT shall ensure this procedure is effectively adhered to.

## 2 STEPS

- 2.1 The process shall start with staff identifying an ICT security incident or weakness or receiving information on a security event or weakness and report the event or weakness to the respective HOD or H-ICT.
- 2.2 The HOD in consultation with H-ICT shall ensure that the event is assessed to establish whether or not it qualifies to be an ICT security incident

- 2.3 In case the reported ICT security event does not qualify as an ICT security incident, the HOD shall inform the reporter and maintain the records in the ICT Security Incident Report.
- 2.4 If the ICT security event is confirmed to be an incident, the H-ICT shall ensure that a corrective action is undertaken to resume the normal security level and maintain the records of the incident and action taken in the ICT Security Incident Report.
- 2.5 The H-ICT shall conduct an investigation and ensure a detailed ICT security analysis is undertaken. Where appropriate the ICT security incident shall be escalated to DD-TSS for further action or advice.
- 2.6 The H-ICT shall initiate the corrective action to resume the normal security level and document lessons learnt from the reported incident.
- 2.7 The H-ICT shall continuously monitor, evaluate ICT security incidents with a view of using the lessons learnt to enhance controls, limit frequency, cost or damages of future occurrences.

## **2 APPLICABLE RECORDS**

- a) ICT Security Incident Report

KEFRI/F/ICT/08



### KEFRI ICT Security Incident Report

Instructions: This form is to be completed as soon as possible following the detection or reporting of an Information Communication & Technology (ICT) security incident. All items completed should be based on information that is currently available. This form may be updated and modified if necessary.

1. Contact Information for this Incident	
Name:	
Title:	
Department/Division/Eco-Region/Center	
Mobile Phone:	
Email address:	
2. Incident Description.	
Provide a brief description:	
3. Impact / Potential Impact Check all of the following that apply to this incident.	
<input type="checkbox"/> Loss / Compromise of Data <input type="checkbox"/> Damage to Systems <input type="checkbox"/> System Downtime <input type="checkbox"/> Financial Loss <input type="checkbox"/> Other Organizations' Systems Affected <input type="checkbox"/> Damage to the Integrity or Delivery of Critical Goods, Services or Information <input type="checkbox"/> Violation of legislation / regulation <input type="checkbox"/> Unknown at this time	
Provide a brief description:	
4. Sensitivity of Data/Information Involved Check all of the following that apply to this incident.	
Sensitivity of Data	
<input type="checkbox"/> Public <input type="checkbox"/> Internal Use Only	<input type="checkbox"/> Restricted / Confidential (Privacy violation) <input type="checkbox"/> Unknown / Other – please describe:
Provide a brief description of data that was compromised:	
5. Who Else Has Been Notified?	

Provide Person and Title:

**6. What Steps Have Been Taken So Far?** Check all of the following that apply to this incident.

- |   |   |
|---|---|
| <input type="checkbox"/> No action taken                            | <input type="checkbox"/> Restored backup from tape            |
| <input type="checkbox"/> System Disconnected from network           | <input type="checkbox"/> Log files examined (saved & secured) |
| <input type="checkbox"/> Updated virus definitions & scanned system | <input type="checkbox"/> Other – please describe:             |

Provide a brief description:

### 7. Incident Details

Date and Time the Incident was discovered:

Has the incident been resolved?

Physical location of affected system(s):

Number of sites affected by the incident:

Approximate number of systems affected by the incident:

Approximate number of users affected by the incident:

Are non-KEFRI systems, such a business partners, affected by the incident?  
(Y or N – if Yes, please describe)

Please provide any additional information that you feel is important but has not been provided elsewhere on this form.

### Revision History

Date	Version	Description	Author

### Document Approval History

Approver Name	Designation	Signature	Date

Please submit this completed form to:

ict@kefri.org

## PROCEDURE 8: DATA BACKUP AND RESTORATION

### 1.0 Purpose

The purpose of this procedure is to ensure consistency, effectiveness and timeliness in data back up and restoration in KEFRI

### 1.1 Scope

This procedure shall apply to data back up and restoration of data stored in networked computers and servers in KEFRI

### 1.2 Reference

- a) KEFRI Strategic Plan 2013-2018
- b) KEFRI ICT policy Guidelines (2017)
- c) KEFRI ICT Business Continuity Plan (2017)
- d) GOK ICT Standards 2016
- e) ISO 9001:2015 Standard
- f) ISO 14001:2015 Standard
- g) Service Delivery Charter

### 1.3 Terms, Definitions & Acronyms

- a) DD TSS – Deputy Director Technical Support Service
- b) H-ICT – Head of Information Communication and Technology
- c) Helpdesk – A central call centre for staff seeking ICT support
- d) ICT – Information Communication and Technology
- e) KEFRI – Kenya Forestry Research Institute
- f) Back-Up Window - The duration when automated backup takes place.
- g) Database – an organized collection of data for one or more purposes, usually in digital form.
- h) SLA – Service Level Agreement

### 1.4 Responsibility

The DD TSS shall ensure this procedure is effectively adhered to.

## 2.0 STEPS

- 2.1 For systems to be backed up externally, the H-ICT shall ensure adherence to the procurement procedure and applicable SLA.
- 2.2 For Systems to be backed up in house, the System Administrator shall set up a Back-up Schedule where data shall automatically be backed up in the server at the end of every working day.
- 2.2 The System Administrator shall ensure all backups performed must be noted in the server backup log upon completion. The log shall include:
  - a) Server/ computer name.
  - b) Date and time of back-up.
  - c) Name of administrator performing the back-up.
  - d) Files backed up and/or skipped.
  - e) Software used to perform the back-up.

- f) Backup medium used and its label/name, and
  - g) Whether the back-up was successful or not.
- 2.3 The System Administrator shall restore data from a backup if there is an intrusion or attack or files have been corrupted, deleted, or modified or Information to be accessed is located on an archived backup.
- 2.4 In the event that an End User has a restore request, he/she shall fill a Data Recovery Request Form and submit it to the H-ICT.
- 2.5 Upon receipt, the H-ICT shall forward the Data Recovery Request Form to the System Administrator for recovery.
- 2.6 The System Administrator shall restore the data for the end user and record the recovery activity in the Back-Up and Restoration Logbook and the procedure shall be deemed complete.

### **3.0 APPLICABLE RECORDS**

- a) Data Recovery Request Form Missing
- b) Back-Up and Restoration Logbook-Missing
- c) Service Level Agreement

## **PROCEDURE 9: IDENTIFICATION AND ASSESSMENT OF QUALITY RISKS AND ENVIRONMENTAL ASPECTS**

### **1.0 Purpose**

To identify quality risks and environmental aspects associated with KEFRI's operations and assessment of their significance.

### **1.1 Scope**

This procedure shall be applicable to KEFRI and to all operations covered by the Integrated Management System.

### **1.2 Reference**

- a) ISO 9001:2015 Standard
- b) ISO 14001:2015 Standard
- c) ISO 31000:2009 Standard

### **1.3 Terms, Definitions & Acronyms**

- a) IMS - Integrated Management System
- b) KEFRI - Kenya Forestry Research Institute.
- c) HODs - Head of Divisions
- d) RD - Regional Director
- e) Risk - Effect of uncertainty
- f) Aspect - Activities that interact or can interact with the environment
- g) Significant aspect - is one that has effect on the environmental
- h) Impact - Effect of an aspect to the environment
- i) Likelihood - chance of something happening
- j) MR – Management Representative

### **1.4 Responsibility**

- a) MR shall ensure that this procedure is adhered to.
- b) Divisional heads shall be responsible for identifying and assessing their respective activities and associated risks.

## **2.0 STEPS**

2.1 To conduct quality risks and environmental impacts assessment, the following steps are to be completed:

- a) Identification of operational departmental processes and activities
- b) Identify quality risks and environmental aspects associated with these activities
- c) Determine the impact, likelihood and risk rating

### **2.2 Identification of departmental processes and activities**

2.2.1 Activities conducted at KEFRI shall be listed in order to ensure that all of them are assessed in the same manner



2.2.2 The activities are classified per division and maintained in a risk register

### **2.3 Identify quality risks and environmental aspects**

2.3.1 Quality risks and environmental aspects associated with each of the activities in clause 2.2 shall be identified

2.3.2 Environmental aspects can be either positive or negative

2.3.3 To identify environmental aspects, the following factors shall be considered where relevant:

- a) Water pollution
- b) Air pollution and noise
- c) Biodiversity loss
- d) Waste management and disposal
- e) Contamination of land,
- f) Natural resources use and depletion
- g) Applicable laws and regulations and
- h) Environmental impacts.

2.3.4 To identify quality risks, the following factors shall be considered where relevant:

- a) Timeliness
- b) Consistency in service delivery
- c) Customer satisfaction
- d) Business sustainability and continuity
- e) Applicable product standard requirements and statutory regulations
- f) Accuracy, courtesy, completeness and accessibility in service delivery

### **2.4 Identify impacts, likelihood and risk rating**

2.4.1 Once all quality risks and environmental aspects have been identified, the respective Heads of Divisions shall identify their impacts and likelihood of occurrence to determine risk rating (significance).

2.4.2 This risk assessment shall be based on:

- Impact (I)
- Likelihood (L)

2.4.3 Risk rating (Significance) shall be obtained by the multiplication of Impact (I) with Likelihood (L) as shown in the equation below:

<b>RISK RATING (significance) = IMPACT x LIKELIHOOD</b>
---

2.4.4 Risks and aspects shall be assessed using the risk matrix below:

Impact	Likelihood		
		1	2
1	1	2	3
2	2	4	6
3	3	6	9

**KEY****Likelihood**

- 1- Remote, likely to occur once in a year
- 2- Occasional, likely to occur once in a quarter
- 3- Frequent, likely to occur once in a week

**Impact**

- 1- Minor, unlikely to affect the environment or quality of service
- 2- Serious, very likely to affect the environment or quality of service
- 3- Critical, can have catastrophic effect to the environment or quality of service

**Risk rating (significance)**

- 1-2 Low risk**
- 3-5 Medium risk**
- 6-9 High risk**

**2.5 Classification of risks**

- 2.5.1 When the risk rating is low, the risk shall be acceptable and tolerated. This shall be classified as insignificant environmental aspects
- 2.5.2 When the risk rating is medium further controls and monitoring shall be required as per the risk register. This shall be classified as significant environmental aspects.
- 2.5.3 When the risk is high, immediate actions and more stringent controls shall be put in place to mitigate against the impact of such risks. This shall be classified as significant environmental aspects.

**2.6 Review & control process**

The quality risks and environmental aspects shall be reviewed every three years, or whenever there have been significant changes to KEFRI activities or services

**3.0 Applicable records**

- a) Risk register
- b) Aspect register

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**ASPECT REGISTER**

<b>Process</b>	<b>Activity</b>	<b>Aspect</b>	<b>Likelihood</b>	<b>Significance</b>	<b>Effects</b>	<b>Controls</b>

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**RISK REGISTER**

Process	Activity	Risk	Likelihood	Impact	Risk rating	Risk category	Control	Opportunity

## **PROCEDURE 10: EMERGENCY PREPAREDNESS AND RESPONSE PROCEDURE**

### **1.0 Purpose**

The Purpose of this procedure is to identify potential and actual emergency situations and accidents that can have an impact on the environment and how KEFRI will respond to them.

### **1.1 Scope**

This procedure covers actual and potential environmental emergencies and accidents emanating from KEFRI activities.

### **1.2 References**

- a) ISO 14001:2015 Environmental Management System
- b) ISO 14004:2016 Environmental Management System - General guidelines on principles system and support techniques
- c) Occupational Safety and Health Act - 2007
- d) Environmental Management and Co-ordination (Amendment) Act, 2015

### **1.3 Terms, Acronyms, and Definitions**

- a) Environmental emergency and accidents – any unexpected occurrence that could be harmful to the environment.
- b) OSHA - Occupational Safety and Health Act.
- c) EMCA – Environmental Management and Coordination Act.
- d) EOSHEPRAP – Environmental and Occupational Safety and Health Emergency Preparedness Response Action Plans.
- e) DD-HR- Deputy Director Human Resource
- f) KEFRI- Kenya Forestry Research Institute
- g) DDA – Deputy Director Administration
- h) RD – Regional Director

### **1.4 Responsibility**

The DDA/RD shall have the principal responsibility to ensure that this procedure is adhered to.

## **2.0 STEPS**

- 2.1 The Heads of administration shall update the list of foreseeable incidences and emergencies with a potential to cause negative environmental impact.
- 2.2 The section heads in consultation with Regional Directors shall assess emergency preparedness competence for persons working in areas prone to incidences and accidents as per Training and Competence Procedure
- 2.3 The section heads will forward the environmental emergency preparedness training needs through respective Regional Directors to the DD-HR as per Training and Competence Procedure
- 2.4 The section heads shall conduct various drills to test the effectiveness of the work instructions and response plans for forest fires and chemical spills and first aid and submit report to Regional Director for necessary action(s).

- 2.5 The respective section heads shall monitor and record occurrences of environmental accidents and emergencies in various workstations, recommend corrective measures using Environmental Emergencies and Accidents Occurrences form and submit to the MR through respective Regional Directors.
- 2.6 The section heads shall maintain an inventory of available personal protective equipment and first aid kits using the respective forms and advise the Management on the same.
- 2.7 DDA/RDs shall ensure that all fire-fighting equipment are serviced as per their schedule and kept at easily accessible points.
- 2.8 DDA/RSs/section heads shall maintain a fire duty rooster during the fire season
- 2.9 KEFRI shall annually review and where necessary revise its emergency preparedness and response procedure as need arises

### **3.0 Applicable records**

- a) Environmental emergencies and accidents occurrences form
- b) Inventory of available personal protective equipment and first aid kits form
- c) Maintenance schedule of fire-fighting equipment form
- d) Fire duty rooster

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### ENVIRONMENTAL EMERGENCIES AND ACCIDENTS OCURRENCES

Centre: .....

Incidences/accidents	Facility affected	Severity	Response	Remarks
Forest fire	Seed orchard	50%	Staff used fire beaters and water to control the fire	-Fire breaks should be cleaned before the fire season. -Conduct fire drills

KEFRI/F/ADM/18

**PERSONAL PROTECTIVE EQUIPMENT (PPE) INVENTORY FORM**

Centre:.....

Section: .....

<b>Item of PPE</b>	<b>Type</b>	<b>Quantity</b>	<b>Stored Location</b>
Head Protection			
Hearing Protection			
Eye Protection			
Respiratory Protective Equipment (RPE)			
Overalls			
Gloves			
Footwear			
Safety Harness			
Clothing			
Other (Specify)			





**FIRST AID KIT INVENTORY FORM**

Centre: .....

Section: .....

Item	Quantity	Used	Not used	Expiry date

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**CHEMICAL/OIL SPILL DRILL REPORT**

Submitted by:.....

Centre: .....

Drill conducted: ..... date::.....

1. Identify any barriers that interfere with alerting people who would be affected by the spill.
2. Describe any problems that prevent Material Safety Data Sheets (MSDS) from being used effectively.
3. Specify any difficulties in selecting and using spill control materials (absorbents, etc.)
4. Identify any problems related to emergency phone numbers, eyewash stations, emergency showers, and first-aid kits.
5. Discuss any obstacles to ventilating the area of the spill.
6. List any difficulties in selecting and using appropriate personal protective equipment.
7. Describe any problems with equipment shut-off procedures.
8. List any goals for improvement.
9. List of personnel who participated in the drill:

**Signature:**\_\_\_\_\_

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### FIRE DRILL REPORT

Submitted by:.....

Centre:.....

Drill conducted:..... date:.....

1. Were the Security and Fire Department notified? Yes ( ) No ( )  
If no, provide detail.
2. Was the Alarm heard in all areas? Yes ( ) No ( )  
If no, which areas did not sound?
3. Were the announcements clear and understood? Yes ( ) No ( )  
If no, provide details.
4. List any evacuation problems encountered.
5. Did the alarm system reset properly after the drill? Yes ( ) No ( )  
If no, provide details
6. Corrective Actions required
7. Approximate evacuation time from start of fire alarm until last person exited:  
\_\_\_\_\_minutes
8. List of personnel who participated in the drill:

**Signature:**\_\_\_\_\_

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**FIRST AID DRILL REPORT**

Submitted by:.....

Centre: .....

Drill conducted:..... Date: .....

1. Identify any barriers that interfere with alerting people.
2. Identify any problems related to accessing and utilizing first-aid kits.
3. Discuss any obstacles to accessing the trained first aider at the Centre.
4. Approximate response time to the type of injury : \_\_\_\_\_minutes
5. List any goals for improvement.
6. List of personnel who participated in the drill:

**Signature:**\_\_\_\_\_

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**FIRE-FIGHTING EQUIPMENT MAINTENANCE SCHEDULE**

Centre: \_\_\_\_\_

Section: \_\_\_\_\_

Year: \_\_\_\_\_

<b>Fire-fighting equipment</b>	<b>Maintenance date</b>	<b>Next maintenance due date</b>

**PROCEDURE 11: OCCUPATIONAL HEALTH AND SAFETY PROCEDURE****1.0 Purpose**

The Purpose of this procedure is to specify KEFRI process for identifying and preventing occupational health and safety incidences in execution of its activities.

**1.1 Scope**

This procedure is applicable to KEFRI in execution of the Quality and Environmental Management System. All employees, contractors, sub-contractors and other interested parties have to adhere to these specifications.

**1.2 Reference**

- a) ISO 9001:2015 Clause 7.1.3
- b) ISO 14001:2015 Clause 8.2
- c) Occupational Health and Safety Act, 2007
- d) Employment Act, 2007
- e) Work Injury Benefits Act, 2007
- f) Other legal requirements on work place safety.

**1.3 Terms, Definitions & Acronyms**

- a) IMS – Integrated Management System
- b) KEFRI - Kenya Forestry Research Institute.
- c) DDA - Deputy Director Administration
- d) RD - Regional Director
- e) OIC - Officer In Charge
- f) Workplace - A KEFRI Premise
- g) Workroom - Workstation or Office Space
- h) OSH – Occupational Safety and Health

**1.4 Principal Responsibility**

- 1.4.1 The DDA is responsible for ensuring compliance to the OSH requirements.
- 1.4.2 The RDs and OICs are responsible for compliance to the OSH requirements in the respective regions and sub centres.

**2 STEPS**

- 2.1 Every workplace shall have effective provision for sufficient and suitable Lighting.
- 2.2 Effective means shall be provided and maintained for draining off the wet floors in all premises.
- 2.3 Effective and suitable provision shall be made for securing and maintaining adequate ventilation of all workrooms.
- 2.4 The workplace shall not be so overcrowded as to cause risk of injury to the health of the persons employed therein.
- 2.5 The floor of every workroom shall be cleaned at least once in every week as per the procedure on janitorial services.

- 2.6 Accumulations of dirt and refuse shall be removed from the floors and benches of workrooms, staircases and passages.
- 2.7 All plant, machinery and equipment whether fixed or mobile shall only be used for work which they are designed for and be operated by a competent person.
- 2.8 All chains, ropes and lifting tackle shall be of good construction, sound material, adequate strength and free from defect.
- 2.9 Sufficient and suitable sanitary conveniences for the persons employed in the workplace shall be provided, maintained and kept clean.
- 2.10 Every refrigeration plant capable of being entered by an employee shall have all control valves situated outside the cold storage room and have all doors of cold storage room capable of being opened easily and quickly from the inside and outside.
- 2.11 In all KEFRI stores and warehouse, all goods, articles and substances shall be stored or stacked in such manner as will ensure their stability and prevent any interference with the adequate distribution of light, ventilation systems, the unobstructed use of passageways and unobstructed access to other fire extinguishing equipment.
- 2.12 Machinery, equipment, personal protective equipment, appliances and hand tools used in all workplaces shall comply with the prescribed safety and health standards and be appropriately installed, maintained and safe guarded.
- 2.13 All openings in floors shall be securely fenced.
- 2.14 There shall be safe means of access to every place at which any person has to work.
- 2.15 All highly inflammable substances shall be kept either in a fire-resisting store or in a safe place outside any occupied building.
- 2.16 Every workplace shall be provided with adequate means of escape conspicuously marked by a notice printed in **RED LETTERS**, properly maintained and kept free from obstruction.
- 2.17 All emergency exit doors shall be constructed to open outwards and shall not be locked or fastened.
- 2.18 Material safety data sheets shall be provided for all chemicals and other hazardous substances in use at the premises.
- 2.19 Adequate supply of drinking water at suitable points conveniently accessible to all persons employed.
- 2.20 Every workplace shall provide and maintain a readily accessible first-aid box.
- 2.21 There shall be a Safety and Health Committee whose chairperson and Secretary are duly appointed by the Director.
- 2.22 The committee shall conduct quarterly workplace inspections on health and safety requirements and also meet at least once every three months.
- 2.23 Inspection and testing of all firefighting appliances in every work place shall be carried out at least once every twelve months as per the emergency preparedness and response procure.
- 2.24 Every workplace shall have a fire assembly point which must be painted in green.
- 2.25 Every work place shall provide adequate and suitable facilities for washing which shall be conveniently accessible and shall be kept in a clean and orderly condition.
- 2.26 Every work place shall have suitable facilities for a person employed whose

work is done standing.

- 2.27 Every work place shall provide and conspicuously display means for extinguishing fire which should be free from any obstruction and readily accessible.
- 2.28 The section heads shall record incidents or accidents using incident form or accident form and forward the to the chairman of Health and Safety committee for necessary action(s).

### **3 APPLICABLE RECORDS**

- 3.3.1 Health and Safety Committee Minutes
- 3.3.2 Inspection Reports
- 3.3.3 Incident form
- 3.3.4 Accident form



KEFRI/F/ADM/16

Part A	Victims details
Name: _____ Personal number _____	
Department: : _____ Job title: _____	
Telephone number: _____ Accident Location: _____	
<b>When did the accident happen?</b>	
Date: _____ Time: _____	
<b>What happened?</b>	
<b>Description:</b>	
(Include details of any object, machine or substance involved)	
Was the accident/ work related? _____	
<b>Declaration:</b> The above report provides a true, accurate and complete account of the accident	
Name: _____ Date: _____ Sign: _____	
Part B	First aiders' comments
What first aid was administered to the victim?	
Name: _____ Date: _____ Sign: _____	

**ACCIDENT FORM**

KEFRI/F/ADM/17

**INCIDENT INVESTIGATION REPORT FORM**

This form is to be filled by health and safety representatives within 12 hours of any incident.

Date of Incident:	Time of Incident :
_____	_____
Place of Incident :	
Description of Incident (What happened?):	
What injury, if any, was caused:	
What property damage, if any, was caused:	
How was the incident arrested:	
Action taken to prevent recurrence:	
<b>Name:</b>	<b>Signature:</b>

KEFRI/F/ADM/17

**INCIDENT INVESTIGATION REPORT FORM**

This form is to be filled by health and safety representatives within 12 hours of any incident.

Date of Incident:	Time of Incident :
_____	_____
Place of Incident :	
Description of Incident (What happened?):	
What injury, if any, was caused:	
What property damage, if any, was caused:	
How was the incident arrested:	
Action taken to prevent recurrence:	
<b>Name:</b>	<b>Signature:</b>

## **PROCEDURE 12: COMPLIANCE TO LEGAL AND OTHER REQUIREMENTS**

### **1.0 Purpose**

The Purpose of this procedure is to ensure proper identification and evaluation of applicable legal and others requirements relating to Integrated Management System.

### **1.1. Scope**

This procedure shall be applicable to KEFRI and to all activities covered by the Integrated Management System.

### **1.2 Reference**

- a) ISO 9001:2015 Standard
- b) ISO 14001:2015 Standard
- c) All legal requirements as identified in the Legal Compliance Register.

### **1.3 Terms, Definitions & Acronyms**

- a) IMS – Integrated Management System
- b) KEFRI - Kenya Forestry Research Institute.
- c) MR - Management Representative
- d) RD – Regional Director

### **1.4. Principal Responsibility**

- 1.4.1 The MR shall be responsible for identifying and updating of IMS legal and other requirements.
- 1.4.2 Shall ensure the identified legal and other requirements are complied with as applicable.

## **STEPS**

### **2.1 General**

The MR shall manage compliance to applicable IMS legal and other requirements as detailed below:

#### **2.1.1 Identification of Requirements**

- 2.1.2 KEFRI through its MR shall identify applicable IMS legal and other requirements that the Institute subscribes to.
- 2.1.3 Applicable requirements shall be listed and tracked in the Legal Compliance register,

### **2.2 IMS Requirements Update**

- 2.2.1 The MR shall ensure updates of applicable existing and emerging IMS legal and other requirements.
- 2.2.2 The MR shall tracks these updates in the Legal Compliance register.

### **2.3 Compliance Review**

- 2.3.1 The MR shall be in charge of the compliance review to ensure that all KEFRI activities are undertaken in accordance to applicable IMS, legal and other requirements.
- 2.3.2 The review shall be done during internal audits as per the internal audit procedure.
- 2.3.3 The MR shall communicate as provided for in the Communications Procedure to concerned people pertinent IMS requirements based on the compliance review.

### **3 APPLICABLE RECORDS**

- 3.1.1 Legal Compliance Register

## **PROCEDURE 12: HANDLING AND DISPOSAL OF NON-HAZARDOUS SOLID WASTE**

### **1.0 Purpose**

To ensure that non-hazardous waste generated from KEFRI's operations is properly handled, segregated and disposed in a manner that minimizes environmental pollution.

### **1.1 Scope**

This procedure will apply to all KEFRI activities, which generate non-hazardous solid waste with significant environment impact.

### **1.2 References**

- a) ISO 14001: 2015 Standard
- b) ISO 9001:2015 Standard
- c) EMCA 1999: 2015 Environmental Management and Coordination Act Regulations on Solid Wastes
- d) PPAD 2015: The Public Procurement and Asset Disposal Act, 2015

### **1.3 Terms, acronyms and definitions**

- a) Waste receptacle – Temporary central waste holding facility within KEFRI premises.
- b) Re-use - Waste used with or without cleaning and/or repairing.
- c) ISO - International Organization for Standardization.
- d) GR – Goods Return
- e) DDA -Deputy Director Administration
- f) RD -Regional Director
- g) OiC – Officer in Charge
- h) HOD – Head of Division

### **1.4 Responsibility**

- 1.4.1 The DDA, RDs and OiCs shall have the principal responsibility of constructing receptacles and providing colour coded bins.
- 1.4.2 HODs shall ensure this procedure is adhered to in their respective sections
- 1.4.3 DDSCM shall ensure that waste is properly disposed off.

## **2.0 STEPS**

- 2.1 Categories of non-hazardous solid waste generated by KEFRI include plastics from seed packaging and from tree nursery potting operations, general plastics, used paper, glass ware and metal.

### **2.2 Waste Segregation**

2.2.1 All KEFRI staff shall segregate solid wastes according to colour coded waste bins as per the table below:

Category of Waste	Colour Code
Paper	Blue
Plastic	Yellow
Glass	White
Electronics (e-waste)	Black
- Computers/printers/scanners/UPS - Cartridges, tonners - Electric bulbs and tubes - Calculators	Dedicated rooms with compartments for each waste
Rubber and tyres	Dedicated room
Ceramics	Dedicated room
Organic	Green
Metal /cans	Grey
Used cooking oil	Black drums
Oil filters & oily used Spare parts	Black drums
Sanitary waste and condoms	Sanitary bins

2.2.2 All colour coded waste bins shall meet the following requirements:

- a) They must be in sound condition.
- b) They must be constructed of an appropriate material to prevent leakage.
- c) They must be closed except when adding or emptying waste materials from the container.
- d) They must be kept clean of any spilled material.
- e) They are handled and stored so as not to cause rupture or leakage.

2.2.3 Janitors shall collect, weigh and dispose the segregated solid wastes into the respective designated waste receptacles.

2.2.4 The janitors shall record the waste measurements in solid waste measurement form.

2.2.5 Heads of Administration shall monitor the wastes levels and establish trend analysis on quarterly basis.

### 2.3 Waste management

2.3.1 Ceramic waste shall be crashed and buried in designated areas.

2.3.2 Sanitary waste shall be disposed off through contracted service providers as per the procurement procedure.

2.3.3 Cooking oil produced at various catering outlets shall be decanted into securely sealed drums and collected by an approved waste contractor as per procurement procedure.

2.3.4 Organic waste shall be composted in a compost pit.

2.3.5 Plant materials such as non-viable seeds shall be disposed on recommendation and approval of the seed disposal committee. The disposal method shall be by composting.

2.3.6 The Heads of supplies shall ensure the quantities of oil, grease and fuel stored at any one time does not over expose the environment to risks (spills, fires, e.t.c) by ensuring that the stored quantities do not exceed the following amounts: Oil-20

litres, Petrol-100 litres, Diesel-180 litres, Parafin-15 litres, Grease-5 kg.

- 2.3.7 In case of oil or fuel leak or spills, emergency preparedness procedure shall apply.
- 2.3.8 Waste from the timber workshop shall be sold to interested parties as per the Enterprise procedure.
- 2.3.9 Workshop Manager in timber workshop shall minimize the wood waste generated by laminating waste timber pieces.
- 2.3.10 DDSCM shall contract waste disposal agents.

**NOTE:**

KEFRI staff shall not dispose off any waste on a public highway, street, road, and recreational area or in any public place except in designated public waste receptacles.

**3.0 Applicable records**

- a) Solid waste measurement form
- b) Non-viable seed disposal form



KEFRI/F/ADM/15



**SOLID WASTE MEASUREMENT FORM**

CENTRE: .....

CATEGORY OF WASTE: .....

DATE	RECEPTACLE NO.	CURRENT WEIGHT	REMARKS/ SIGNATURE

KEFRI/F/SM/14

**NON-VIABLE SEED DISPOSAL FORM**

Category of seed: ..... Centre: .....

Species name	Germination capacity	Quantity for disposal	Remarks

**Approved By:**

Ben E.N. Chikamai (PhD)

**Director KEFRI**

Signature

Date: 12<sup>th</sup> February 2018

**RISK AND OPPORTUNITIES REGISTER****ICT UNIT**

S.no	Process	Activity	Risk	Opportunity	Likelihood	Severity	Risk rating	Risk category	Controls	Responsibility	Timeframe
1	<b>Planning</b>	Development of Annual Work Plans	Misaligned Activities	None	1	2	2	Low	Effective Planning Framework	DD TSS/HICT	At the beginning of every financial year
		ICT Transformational Budget	Allocation of Inadequate Financial Resources	Revenue generation activities and engagement of development partners	2	2	4	Medium	Alternative Revenue Generation Initiatives	Resource Mobilization Officer, General Manager Enterprise	Continuous
2	<b>ICT Business Alignment</b>	ICT Service Provision	Failure to Achieve Efficiencies		1	3	3	Medium	Supervision	HICT	Continuous
			Denial of services and Computer Virus Attack	None	1	3	3	Medium	Protection of critical ICT systems and services by adopting for example a vulnerability assessment process, software patch management, end	HICT	Progresively/ Annually

									point protection (e.g. malware virus), Intrusion detection and prevention tools;		
									measures to protect the ICT systems from attacks from the Internet (i.e. cyber-attacks) or other external networks (e.g. traditional telecom connections or connections with trusted partners).	HICT	
			Information Disclosure	None	<b>1</b>	<b>2</b>	<b>2</b>	Low	The organisational framework for ICT risk is robust with clear responsibilities and a clear separation of tasks between information owners and management and control functions.	HICT	Quarterly
3	<b>Information Security</b>	Information Security	Information Loss or Error		<b>2</b>	<b>2</b>	<b>4</b>	Medium	policy that defines the roles and responsibilities for managing the integrity of the	HICT	Annually

							data in the ICT systems		
	Insufficient Infrastructure Capacity	Innovation and growth	1	2	2	Low	Capacity Building and Training	HICT	Continuous
	Loss of an ICT Infrastructure	CCTV Surveillance cameras	1	2	2	low	adequate physical security measures (e.g. CCTV, burglar alarm, security doors) to prevent unauthorised physical access to critical and sensitive ICT systems (e.g. data centres);	HICT	Continuous/p progressively
	Loss of an ICT Service		1	3	3	Medium	ICT system backup and recovery procedures for critical software and data, that ensure that these backups are stored in a secure and sufficiently remote location, so that an incident or disaster cannot destroy or corrupt these critical data;	HICT	Annually/Quarterly

								a documented incident management and escalation process, that also provides guidance on the different incident management and escalation roles and responsibilities, the members of the crisis committee(s) and the chain of command in case of emergency;	HICT	
								monitoring solutions for the timely detection of ICT availability or continuity incidents;	HICT	
								physical measures to both protect the institution's critical ICT infrastructure (e.g. data centres) from environmental risks (e.g. flooding and other natural disasters) and ensure an appropriate operating environment for ICT systems (e.g.	HICT	

									air conditioning);		
4	<b>Appropriate and timely ICT related training is not provided .</b>		Personal Privacy Intrusion	None	1	3	<b>3</b>	Medium	user and administrative activity logging to enable effective monitoring and the timely detection and response to unauthorised activity; to assist in or to conduct forensic investigations of security incidents. The institution should have in place logging policies that define appropriate types of logs to be maintained and their retention period;	HICT	Continuous/ Annually

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			Out-of-hours and lone working	None	2	2	4	Medium	adequate staff, resources and competences to monitor and manage the ICT risks from the outsourced services.	HICT	As Necessary
5	<b>Outsourcing of service providers</b>	Selection of Service Providers	Incompetent Service providers	None	1	3	3	Medium	Supplier Evaluation/ Due Diligence	HICT	Before Commencement of Project/Service
		Payment	Litigation and/ or payment of interest due to delayed Payments	None	2	3	6	High	Sufficient budgetary allocation, Alternative Revenue Generation initiatives	HICT	Annually
			External ICT Suppliers fail to deliver required agreed services.	None	1	3	3	Medium	monitoring and comparison of the received service levels with the contractually agreed upon service levels which should form part of the outsourcing contract or service level agreement (SLA); and	HICT	
									HICT		



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		Compliance to legal and statutory requirements	Not Meeting requirements e.g NEMA E-Waste Regulations	None	1	2	<b>2</b>	Low	awareness and information campaigns or initiatives to inform all levels in the institution on the safe use and protection of the institution's ICT systems and the main ICT security (and other) risks they should be aware of, in particular regarding the existing and evolving cyber threats (e.g. computer viruses, possible internal or external abuses or attacks, cyber-attacks) and their role in mitigating security breaches;	HICT	Annually
6	<b>Staffing</b>		Inadequate staffing	Recruitment	2	1	<b>2</b>	Low	Supervision and Oversight	HICT	Continuous
			Specialized staff	None	1	2	<b>2</b>	Low	Capacity Building	HICT	Continuous

7	<b>ICT Business Continuity</b>	Technological Advancements and ICT change	None	1	1	<b>1</b>	Low	documented processes for managing and controlling changes to ICT systems (e.g. configuration and patch management) and data (e.g. bug fixing or data corrections), ensuring the adequate involvement of ICT risk management for important ICT changes that may significantly impact the institution's risk profile or exposure;	HICT	Continuous
		System Compatibility	None	1	2	<b>2</b>	Low	a documented data architecture, data model and/or dictionary, that is validated with relevant business and IT stakeholders to support the needed data consistency across the ICT systems and to make sure that the data architecture, data	HICT	Continuous/ As Necessary

									model and/or dictionary remain aligned with business and risk management needs;		
		ICT strategy development and adequacy	None	1	2	<b>2</b>	Low	The institution's ICT strategy is commensurate with its overall strategy and risk appetite.	HICT	Continuous	
		ICT availability and continuity	None	1	2	<b>2</b>	Low	ICT performance and capacity planning and monitoring solutions for critical ICT systems and services with defined availability requirements, to detect important performance and capacity constraints in a timely manner;	HICT	Annually	

**RISK ASSESMENT MATRIX**

	<b>Likelihood</b>			
	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>Impact</b>	<b>1</b>	1	2	3
	<b>2</b>	2	4	6

3

3

6

9

**KEY****Likelihood****od**

- 1- Remote, likely to occur once in a year
- 2- Occasional, likely to occur once in a quarter
- 3- Frequent, likely to occur once in a week

**Impact**

- 1-Minor, unlikely to affect the environment or quality of service
- 2-Serious, very likely to affect the environment or quality of service
- 3-Critical, can have catastrophic effect to the environment or quality of service

**Risk rating****(significance)****1-2 Low risk/insignificant aspect****3-5 Medium risk/significant aspect****6-9 High risk/significant aspect**



## ENVIRONMENTAL ASPECTS REGISTER

### ICT Unit

Process name	Activities	Aspects (Interaction with the Environment)	Likelihood	Severity	Significance	Aspect Category	Environmental Impact	Controls	Responsibility	Timeframe
ICT Management	Direct various divisions, thematic areas and sections to submit system requirements	Use of computers, paper and laptops	1	2	2	Medium	Depletion of energy resource and conservation of resources (papers)	Only printing communication when necessary; Switching off computers when not in use; Printing documents double sided	DDTSS/HICT	Annually
	Compilation of requirements into a proposal and incorporation into the ICT budget and procurement plan	Use of computers, paper and laptops	1	2	2	Medium	Depletion of energy resource and conservation of resources (papers)	Only printing communication when necessary; Switching off computers when not in use; Printing documents double sided	DDTSS/HICT	Annually
	Preparation and execution of workplans	Use of computers, paper and laptops	1	2	2	Low	Depletion of energy resource and conservation of	Only printing communication when necessary;	DDTSS/HICT	Annually

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							resources (papers)	Switching off computers when not in use; Printing documents double sided		
Systems development and management	ICT shall ensure adherence to the procurement procedure	Use of computers and laptops	2	2	4	Medium	Depletion of energy resource and conservation of resources (papers)		DDTSS/HICT	Continou s
	Constitute technical teams	Use of computers and laptops	1	2	2	Medium	Depletion of energy resource and conservation of resources (papers)	Only printing communication when necessary; Switching off computers when not in use; Printing documents double sided	DDTSS/HICT	Annually
	Developing of TORs, minimum hardware and software requirements	Use of computers and laptops	2	2	4	Medium	Depletion of energy resource and conservation of resources (papers)	Only printing communication when necessary; Switching off computers when not in use; Printing documents double sided	DDTSS/HICT	Annually
	Systems development, implementation, piloting and go live through SDLC	Use of computers and laptops	2	2	4	Medium	Depletion of energy resource and conservation of resources (papers)	Only printing communication when necessary; Switching off computers	DDTSS/HICT	Continou s

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								when not in use; Printing documents double sided		
	Supervision of outsourced service providers	Use of computers and laptops	2	2	4	Low	Depletion of energy resource and conservation of resources (papers)		DDTSS/HICT	Continou s
	Attending to emerging issues of the system as need be	Use of computers and laptops	1	2	2	Low	Depletion of energy resource and conservation of resources (papers)		DDTSS/HICT	Continou s
End-user/client support services	Receive request from end users and create a ticket for the request	Use of computers and laptops	3	2	6	Low	Depletion of energy resource and conservation of resources (papers)	Only printing communication when necessary; Switching off computers when not in use; Printing documents double sided	DDTSS/HICT	Continou s
	Determining solution, resolved issue and update user support registre	Use of computers and laptops	3	1	3	Low	Depletion of energy resource and conservation of resources (papers)		DDTSS/HICT	Continou s
	Escalate ticket and notify requester of escalation	Use of computers and laptops	2	2	4	Low	Depletion of energy resource and conservation of resources	Only printing communication when necessary; Switching off	DDTSS/HICT	Continou s

							(papers)	computers when not in use; Printing documents double sided		
	Update the customer, resolve the matter and update the support register	Use of computers and laptops	2	2	4	Low	Depletion of energy resource and conservation of resources (papers)	Only printing communication when necessary; Switching off computers when not in use; Printing documents double sided	DDTSS/HICT	Continou s
	Adherence to the control of outsourced service procedures	Use of computers and laptops	2	2	4	High	Depletion of energy resource and conservation of resources (papers)		DDTSS/HICT	Continou s
Repair and maintenace of ICT equipment	Engagement of service providers as per the control of outsourced service procedures	Use of computers and laptops	2	2	4	Mediu m	Depletion of energy resource and conservation of resources (papers)		DDTSS/HICT	Continou s
	Carry out preventive maintenance	Use of blowers, can of compressed air, Spraydusters, penetrating oil and water-displacing spray.	2	2	4	High	Depletion of energy resource and Energy emission (Heat, Radiation, Vibration (noise)		DDTSS/HICT	Continou s



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	Considering OEM recommendations , requirements of applicable codes and legislations	Use of computers and laptops	3	2	6	Medium	Depletion of energy resource and conservation of resources (papers)		DDTSS/HICT	Continou s
	Performing quaterly maintenance exercises	Use of blowers, Spraydusters, penetrating oil and water-displacing spray.	2	2	4	Low	Depletion of energy resource and Energy emission (Heat, Radiation, Vibration (noise)		DDTSS/HICT	Quarterly
	Review of service summary reports from the preventive miantenance exercises and recommendations implentations	Use of computers and laptops	2	2	4	Low	Depletion of energy resource and conservation of resources (papers)	Only printing communication when necessary; Switching off computers when not in use; Printing documents double sided	DDTSS/HICT	Quarterly
IT security	Developing and implementation of ICT security plans	Use of computers and laptops	1	3	3	Low	Depletion of energy resource and conservation of resources (papers)	Only printing communication when necessary; Switching off computers when not in use; Printing documents double sided	DDTSS/HICT	Continou s
	Defending information from	Use of computers and laptops	3	3	9		Depletion of energy		DDTSS/HICT	Continou s

unauthorised access, use, disruption, modification, perusal, inspection, and destruction of data						resource and conservation of resources (papers)			
Review of current threats and evolving technologies	Use of computers and laptops	3	2	6		Depletion of energy resource and conservation of resources (papers)	Only printing communication when necessary; Switching off computers when not in use; Printing documents double sided	DDTSS/HICT	Continou s
Creating, executing and coordinating incidence response plans	Use of computers and laptops	1	3	3		Depletion of energy resource and conservation of resources (papers)		DDTSS/HICT	Continou s
Selection of team members, defining roles and repsonsibilities and lines of authorities in relation to incidence response life cycle management	Use of computers and laptops	1	3	3		Depletion of energy resource and conservation of resources (papers)	Only printing communication when necessary; Switching off computers when not in use; Printing documents double sided	DDTSS/HICT	Continou s
Implementing change management	Use of computers and laptops	2	2	4		Depletion of energy resource and		DDTSS/HICT	Continou s

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procedures and constitute a change review committee						conservation of resources (papers)			
Review, approve, allocate resources and give reasons to a change request	Use of computers and laptops	2	1	2		Depletion of energy resource and conservation of resources (papers)	Only printing communication when necessary; Switching off computers when not in use; Printing documents double sided	DDTSS/HICT	Continou s
Plan for change request, assist in scheduling of changes, review proposed implementation dates, communicate and document the change request results	Use of computers and laptops	2	2	4		Depletion of energy resource and conservation of resources (papers)	Only printing communication when necessary; Switching off computers when not in use; Printing documents double sided	DDTSS/HICT	Continou s
Hold post implementation review of changes, understand problems encountered and look for areas of improvement	Use of computers and laptops	1	2	2		Depletion of energy resource and conservation of resources (papers)		DDTSS/HICT	Continou s

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Management of ICT infrastructure	Plan, design, test, deploy and monitor operations of ICT infrastructure	Use of computers and laptops	1	3	3	Depletion of energy resource and conservation of resources (papers)	Only printing communication when necessary; Switching off computers when not in use; Printing documents double sided	DDTSS/HICT	Continou s
	Perform semi annual preventive maintenance visits	Use of blowers, Spraydusters, penetrating oil and water-displacing spray.	2	2	4	Depletion of energy resource and Energy emission (Heat, Radiation, Vibration (noise)		DDTSS/HICT	Bi-Annually
Disaster planning recovery	Carrying out disaster planning and recovery, risk management and off site data backup	Use of computers and laptops	1	3	3	Depletion of energy resource and conservation of resources (papers)		DDTSS/HICT	Continou s

	Define IT risk analysis scope, estimate risk, identify risk response options, accept risk, respond to discovered risk exposures and opportunity, communicate risk and perform peer review of risk analysis	Use of computers and laptops	3	3	9		Depletion of energy resource and conservation of resources (papers)		DDTSS/HICT	Continou s
Management of Websites, Digital Content/Repositories and Portalspeer review of risk analysis	Requesting information from the Heads of Departments/Sections/Divisions/Units to be included in the website	Use of computers and laptops	2	2	4		Depletion of energy resource and conservation of resources (papers)		DDTSS/HICT	Continou s
	Constitute technical teams	Use of computers and laptops	1	2	2		Depletion of energy resource and conservation of resources (papers)	Only printing communication when necessary; Switching off computers when not in use; Printing documents double sided	DDTSS/HICT	Continou s

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Developing of TORs, minimum hardware and software requirements	Use of computers and laptops	2	2	4		Depletion of energy resource and conservation of resources (papers)	Only printing communication when necessary; Switching off computers when not in use; Printing documents double sided	DDTSS/HICT	Annually
Systems development, implementation, piloting and go live through SDLC	Use of computers and laptops	2	2	4		Depletion of energy resource and conservation of resources (papers)	Only printing communication when necessary; Switching off computers when not in use; Printing documents double sided	DDTSS/HICT	Continou s
Supervision of outsourced service providers	Use of computers and laptops	2	2	4		Depletion of energy resource and conservation of resources (papers)		DDTSS/HICT	Continou s
Attending to emerging issues of the system as need be	Use of computers and laptops	1	2	2		Depletion of energy resource and conservation of resources (papers)		DDTSS/HICT	Continou s

**REGISTER OF INTERESTED PARTIES****ICT Unit**

<b>Stakeholder</b>	<b>Stakeholder Category (Internal/External)</b>	<b>Needs/Expectations</b>
GOK	External	Solving forestry related issues, innovative research products
Partners, Donors and Collaborators	External	Funding research, patents and training
Professional bodies	External	Adherence to standards and ethical practices, subscription fees
Institutions of higher learning	External	Research facilities, internships, attachments and faculty
Public	External	Forestry services and solutions, employment, training and CSR
Customers	External	Products, customers and corporate image
Service providers	External	Supplying goods and services
Employees	Internal	Fair remuneration, welfare and work environment
Farmers	External	Quality applications

**INTERNAL AND EXTERNAL ISSUES REGISTER****ICT Unit**

<b>No</b>	<b>Internal Issues</b>	<b>External Issues</b>
1	Funding	Funding
2	Organizational Culture	Competition
3	ICT Infrastructure	Legal requirements and framework
4	Staff Establishment	Emerging ICT Products
5	Institutional Policies and Procedures	Security and Emerging Security Threats
6	Governance and Leadership	Political environment
7	Ethics and Integrity	Natural factors
8	Availability of land for research activities	Social unrest
9	Infrastructural Development	Executive appointments
10	Transport Services	Restructuring of Public Institutions
11	Staff Compensation and Benefits	Fiscal and Monetary Policy
12	Knowledge Management	Societal Culture
13	Succession Planning and Mentorship	Government Policy and Regulation
14	Physical infrastructure	Corruption
15		Land for Research
16		International Treaties and Protocols
17		Community needs and expectations