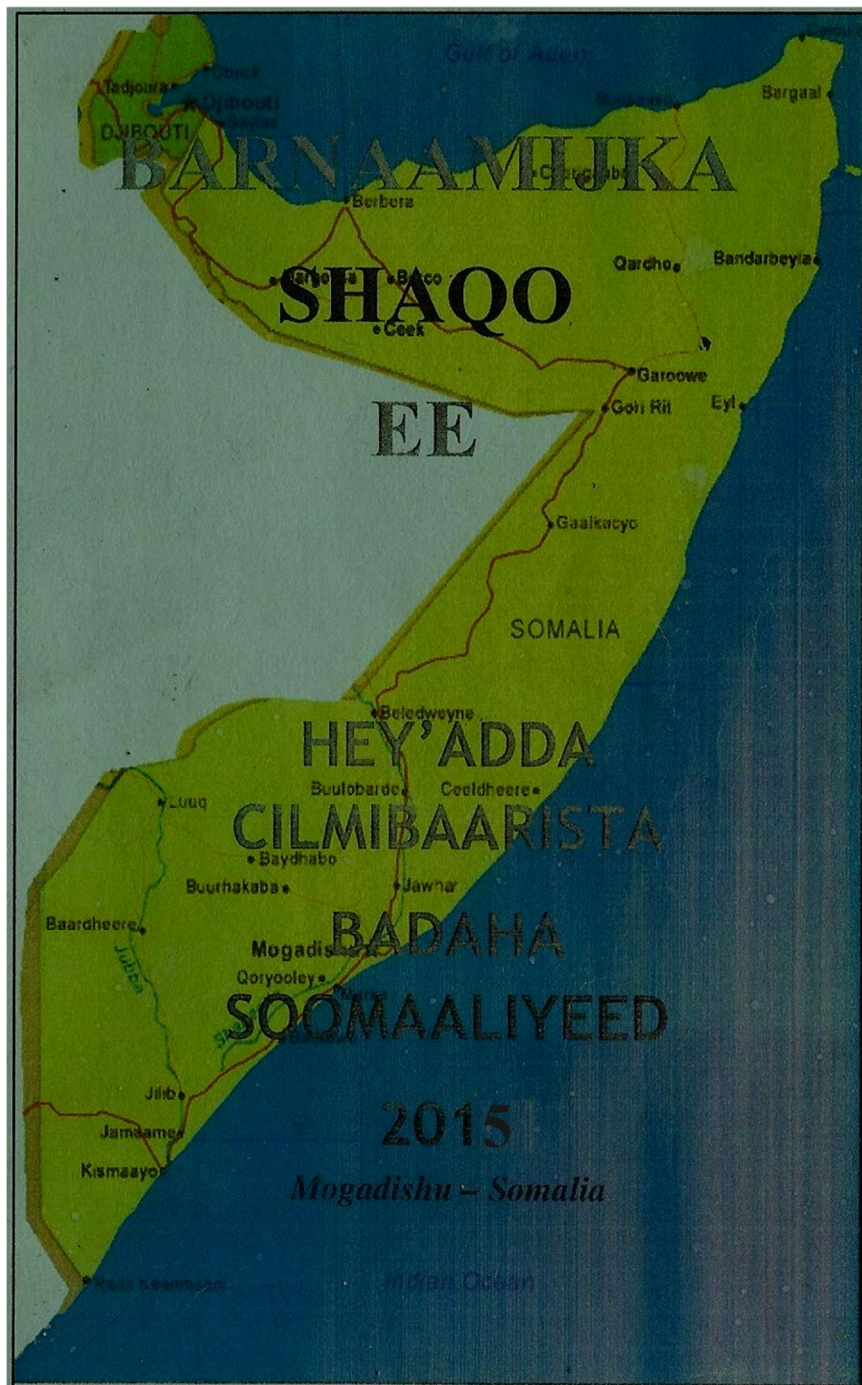


## CUT 4AAD: WAX SOO SAARK HEY'ADDA:

Si aan u helno documenti lagu hago howsha, waxaan degsanay Qorshe howleedka sanadka 2015 sawirkuna waa kan.



Buugga Qorshe – Howleedka HCBS EE 2015TA

## **WAX SOO SAARKA (JARANJARADA CILMIYEED)**

### **Diyaarin Maqaal:**

Markii aan mddo ku soo jirnay diyaarinta kaadarka xag casharo la qaato xag seminar gaaban xag tababarro loo aado dibadda, waxaan u gudubnay inaan ku dhaqaaqno wax soo saarkeenna, sidaas awgeed waxaa lagu laasimiyey Cilmibaare kasta inuu u diyaariyo hal maqaal (ugu yaraan) oo takhasus kiisa ah Majallada Juula – Jawaay, si ay ugu fududaato qorista warbixinada (Reports) iyo Kutubaha Cilmiyeysan, arrintaan way hirgashay.

### **Warbixinada (Reports):**

Warbixinnada waxay ka imaanaayeen intooda badan tababarrada dibadda looga qeybgalo oo warbixin laga doonayo ka qeybgalaha, taasoo lagu garan karo heerka qoraaleed ee qoraha warbixinta, ka sokow macnaha ay xambaarsan tahay, sidoo kale warbixinnada waxay ka yimaadaan cilmibaarisyada lagu fuliyo goobaha (field Research) oo u badan arrimaha bii'adda badda iyo wax soo saarka kalluunka iyo sicirkiisa ee lagu iibiyo Kawaanada Muqdisho iyo meelo kale oo warbixinnadu ka imaadaan. Intooda muhiimka ahna waxaan ku qornaa Majallada Juula – Jawaay hadeysan xambaarsaneyn warbixinnadu arrimo gaar ah.

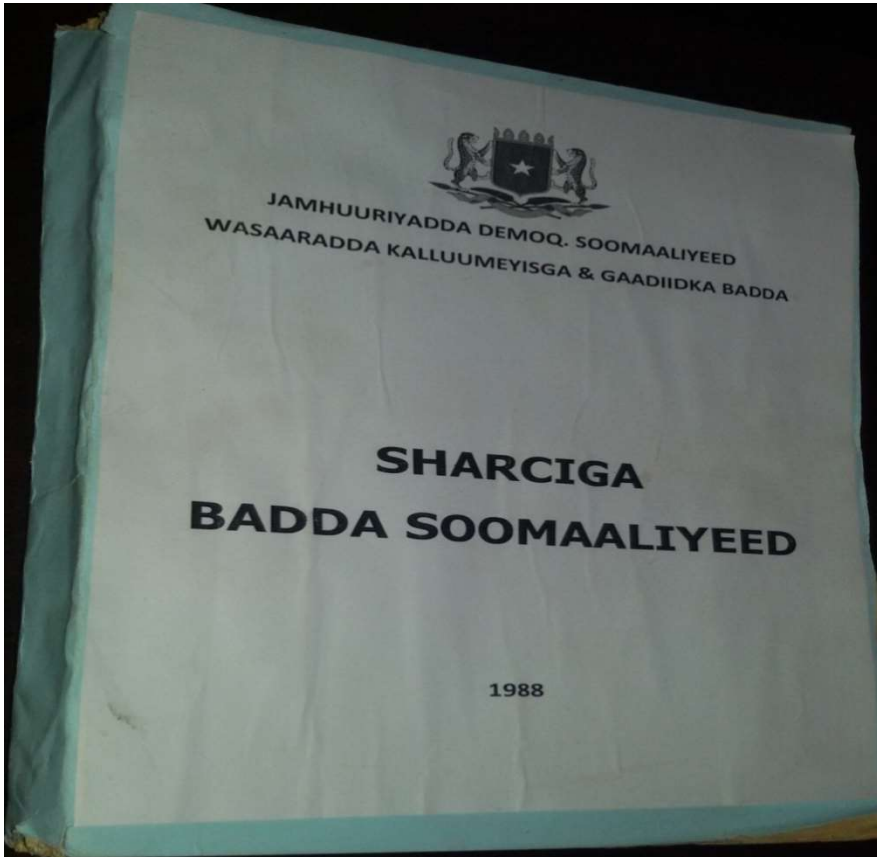
### **Qoraalada Kutubaha:**

Qoraalada waxay u kala baxaan kutubo hore (inta badan Qaanuun) oo dib loo daabacay qaarkoodna dib computerka loogu qoray ayagoo hore u ahaa far guri (makiinad) si looga faa'ideysto.

## **KUTUBAHA DIB LOO DAABACAY WAXAA KA MID AH:**

1. Sharciga badda ee rasmiga ah waqtigaan, Qaanuun L.5 ee 26 Janaayo 1989, kaas oo ku qornaa makiinad oon dib u daabacnay dirasadna ku sameynay waafajinay intiisa badan heshiiskii caalamiga ahaa ee UNCLOS. Dabadeedna waxaan u kala qeybinay xafiisyada muhiimka ah ee dowladda. SHARCIGAAN WUXUU KU QORAN YAHAY AFSOOMAALI WAXAANA LOO BAAHAN YAHAY IN AF INGIRIIS LOO BEDELO SI HEY'ADAHA CAALAMIGA AH AY UGA FAA'IDEYSAN KARAAN, KUWAAS OO SIDA BADAN KU MURMA JIRITAANKIISA.

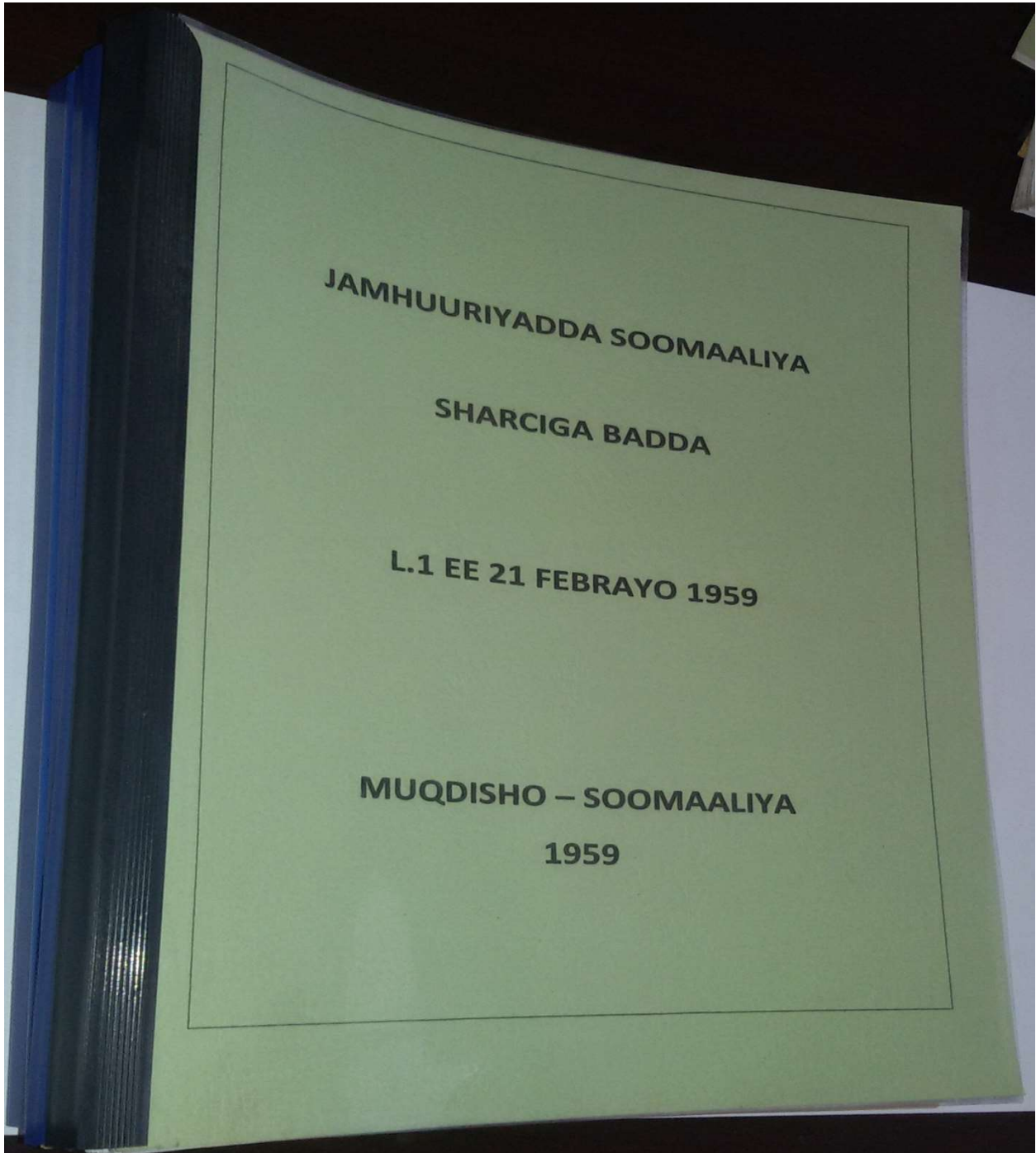
Sharcigii Badda Soomaaliye L.1 ee 26 Janaayo 1989 oo makiinad ku qoran.



Sharcigii Badda Soomaaliye L.1 ee 26 Janaayo 1989 oo HCBS computer KU QORTAY AYADOO WAAFAJISAY UNCLLOS.

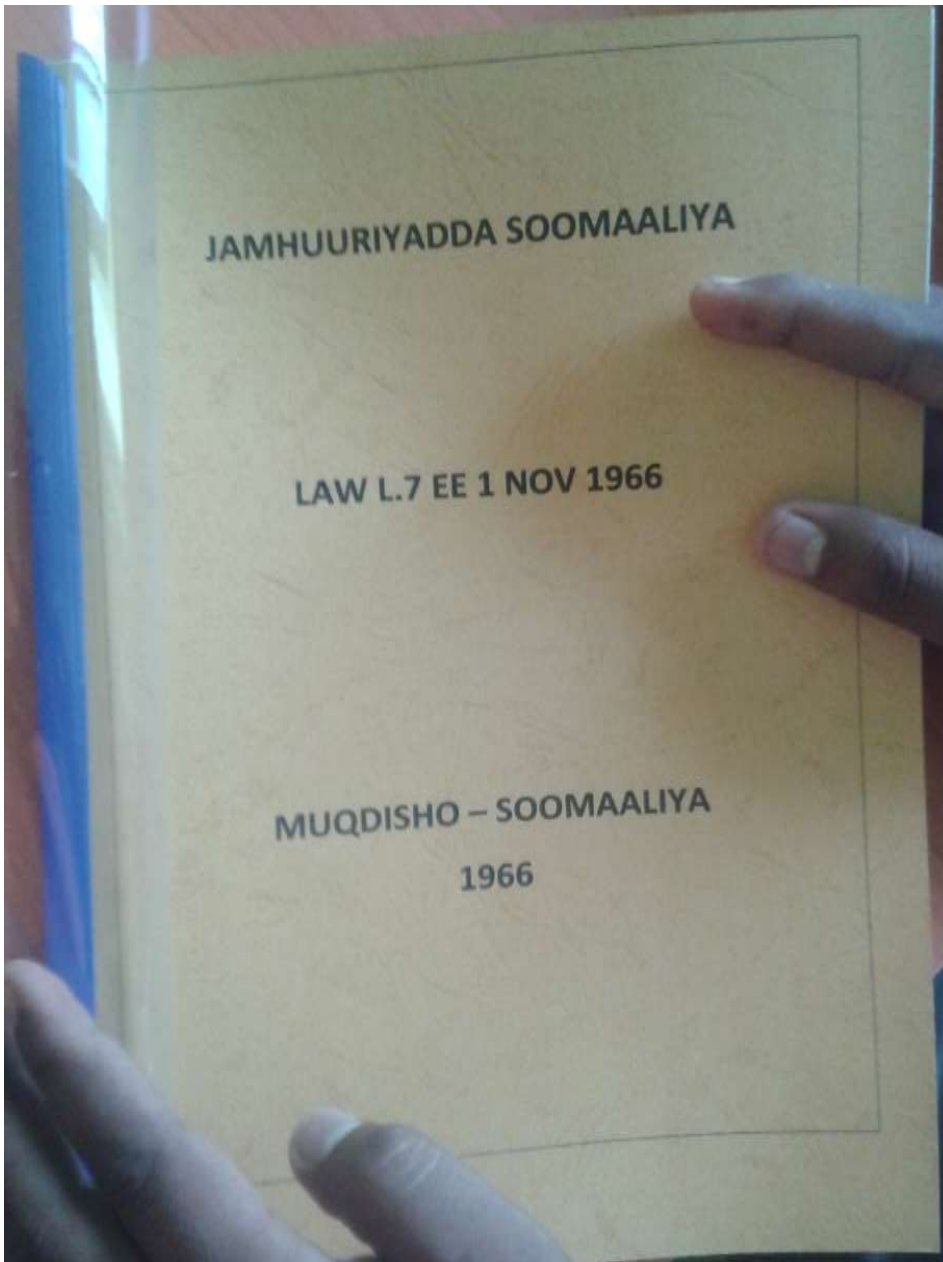


2. WAXAAN DAABACNAY SHARCI L.1 EE 21 FEB 1959



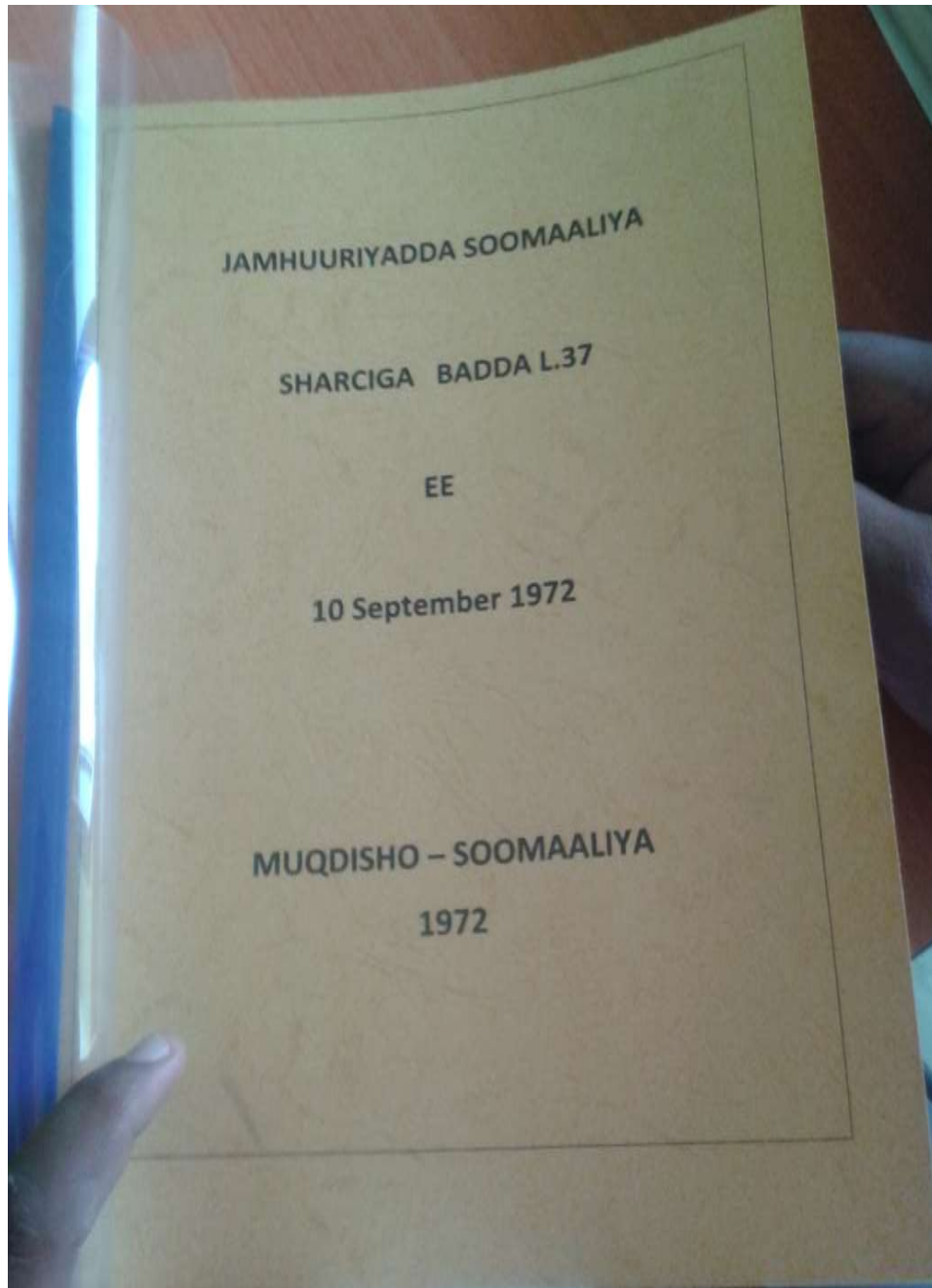
Sharcigii badda ee ugu horeeyey ee dalka

3. Waxaan kaloo daabacnay Sharci L.7 ee 1Nov 1966



Sharci L..7 ee 1 Nov 1966

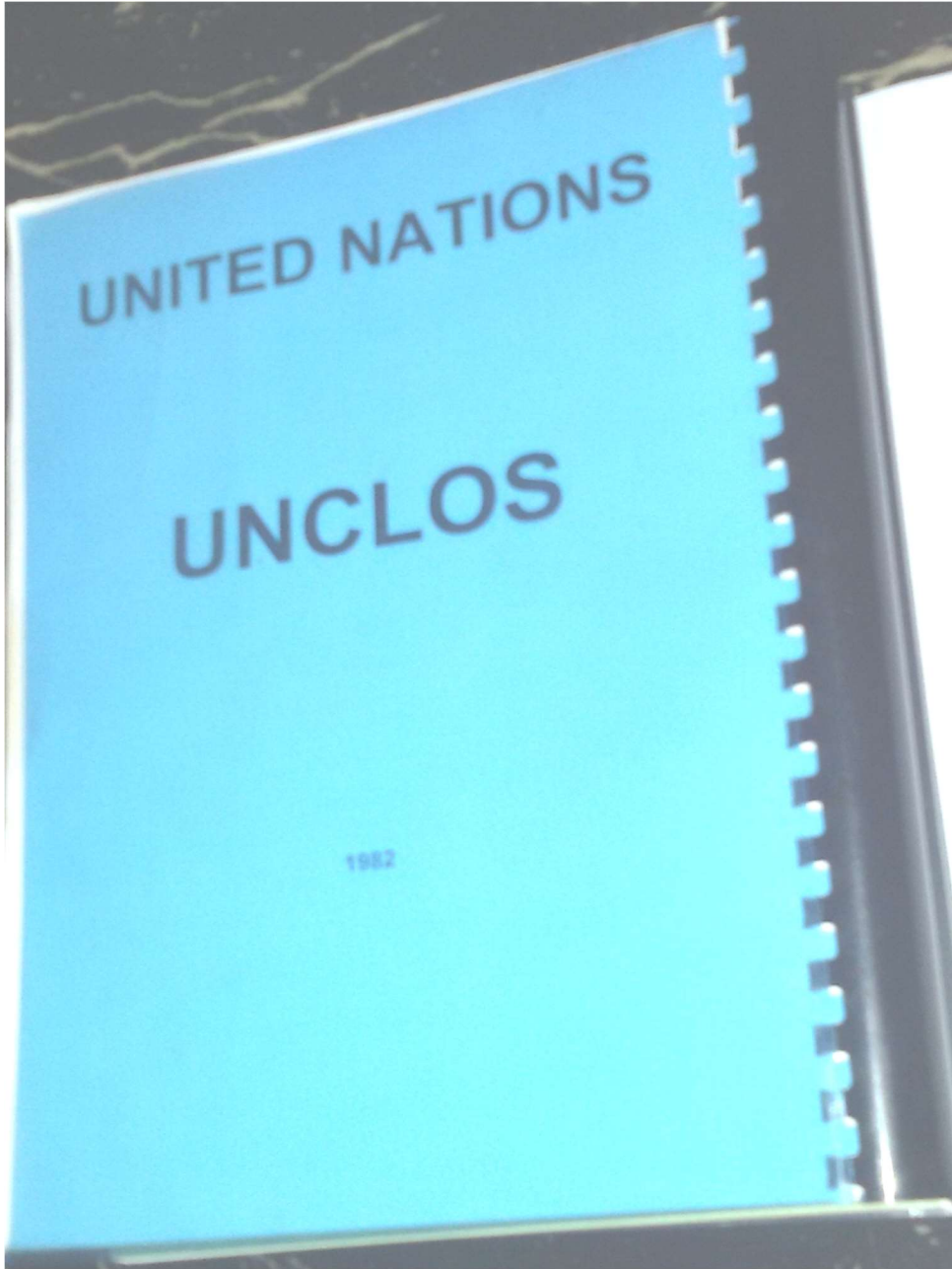
4. Waxaan kaloo daabacnay Sharci L.37 ee Sept 1972 kii



Sharci L..37 ee 10 Sept 1972

5. Waxaan kaloo daabacnay diraasayna ku sameynay Qawaaniinta Caalamiga ah waxaana ka mid ah:

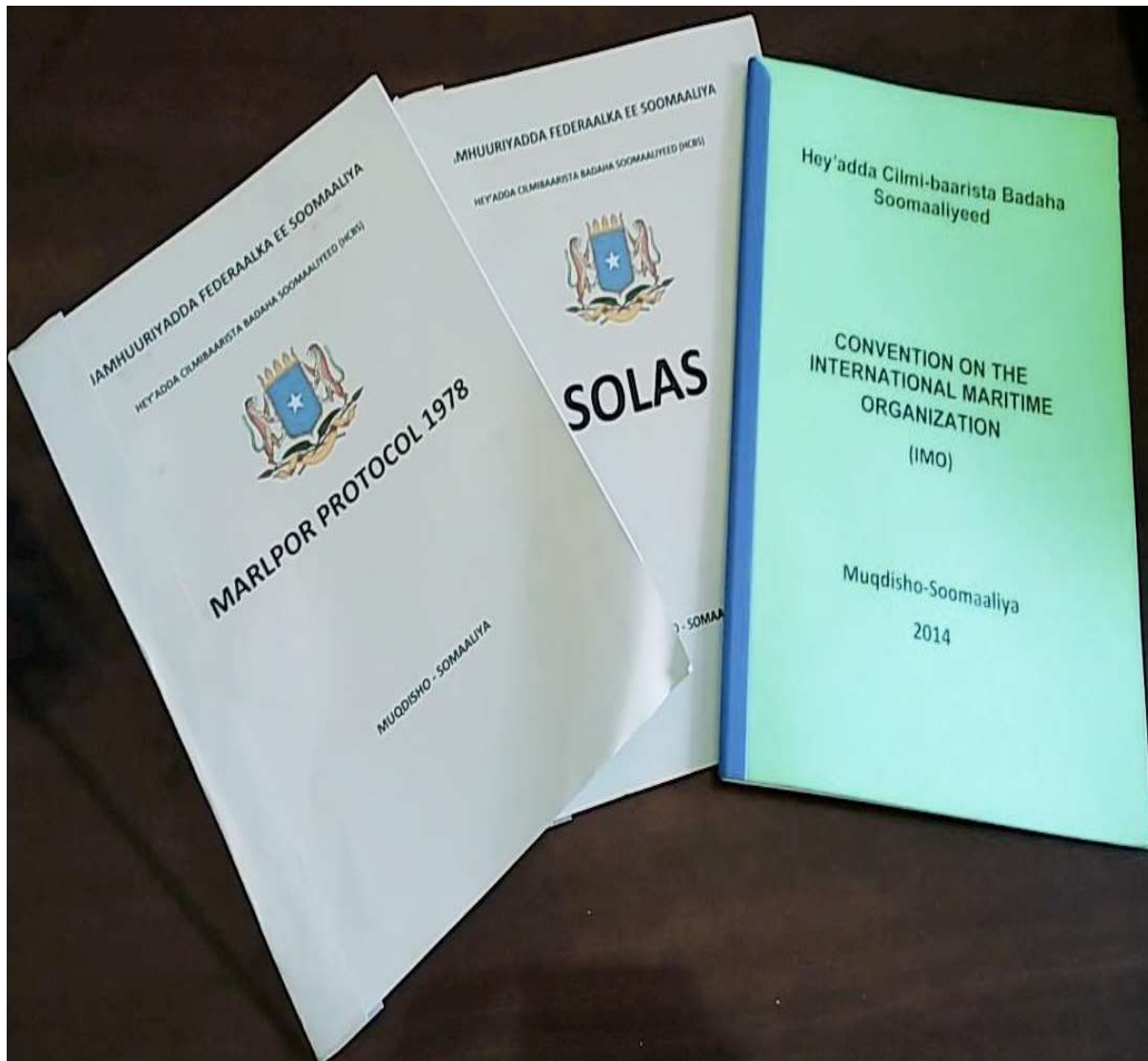
Heshiiskii Caalamiga ee Badaha UNCLOS EE 1982



Sharciga Caalamiga ah ee Badaha (UNCLOS)

WAXAAN KALOO DAABACNAY:

6. Heshiiskii (Xeerkii) lagu dhisay hey'adda caalamiga ah ee badaha IMO oo aad muhiim u ah.
7. Xeerkii wasakheynta badda MARPOL
8. Xeerka caalamiga ah ee badbaadada rakaabka iyo badeecada ee SOLAS





9. Heshiiskii London ee wasakheynta badda ka timaada dhulka
10. Heshiis Goboleedkii Jeddah 1982 ee ka ilaalinta wasakheynta bada cas iyo gacanka cadmeed oon xubin ka nahay
11. Heshiiskii Nairobi ee ka ilaalinta wasakheynta xeebaha galbeed ee Indian Ocean oon xubin ka nahay.
12. Heshiiskii Jebuuti **Code of Conduct** ee la dagaalanka burcad badeedda oon saxiixnay.
13. Waxaan daabacna **National Marine Ecosystem Diagnostic Analysis (MEDA)** by GEF and UNDP.
14. Warbixinno Caalami ah oo aad u muhiim ah.

Qawaaniintaan oo dhan waan ka faa'ideysannay marka daabacnay ka dib, waana kuwa ugu horeeya oo lagu maamulo badaha caalamka iyo kuweenaba, haddana waxay ku jiraan Maktabadda Hey'adda C.B.S.

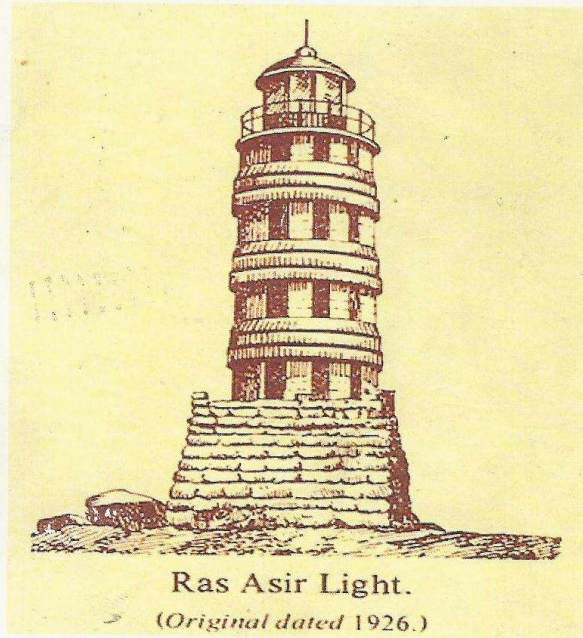
### **Kutubaha la alifay:**

1. ADM. GAAS. PROF FAARAX AXMED CUMAR: Topogarafiyada Xeebaha Dalka
2. ADM. GAAS. PROF FAARAX AXMED CUMAR: MIDNIMADA DALKA & ISMAAMUL GOBOLEEDYADA
3. ENG. CABAAS NUUR MAHDI: SOMALI MARINE STUDY
4. ENG. CABAAS NUUR MAHDI: BUUGA KALLUUMEYSTAHA
5. WAAXDA QAANUUNKA: WAXAY COMPUTER KU QOREEN WAAFAJIYEYNA UNCLOS SHARCI L.5 EE 26 JANAAYO 1989 WAXAYNA KA KOOBNAAYEEN SHARCI YAQAANADA KALA AH: Sacid Xasan, Cabdiraxiim Warsame Diiriye iyo Cabdinuur Cabduqaadir Max'ed oo ahaa madaxii waaxda.



Hey'adda Cilmibaarista Badaha Soomaaliyeed (HCBS)

# Tobogaraafiyada Xeebaha Dalka



Ras Asir Light.

(Original dated 1926.)

Qore: Adm Gaas Prof Faarax Axmed Cumar

Muqdisho – Soomaaliya

Sawirka garbadka sare

**MIDNIMADA DALKA  
&  
ISMAAMULA GOBOLEEDYADA**



**QORE: ADM. GAAS FAARAX AXMED CUMAR (FAARAX QARE)**

**MUQDISHO - SOOMAALIYA**

Sawirka garbadka sare



**SOMALI MARINE RESOURCE RESEARCH CENTER  
(SMRRC)**

# **Somali Marine Study**

**Prepared By:**

**Eng. Abass Nor Mahdi  
Researcher in the Center**

*Mogadishu – Somalia*

**2 0 1 4**

Sawirka garbadka sare



**JAMHUURIYADDA FEDERAALKA EE SOOMAALIYA**

**HAY'ADDA CILMI BAARISTA BADAHA  
SOOMAALIYEED (HCBS)**

**XOG URUURINTA WAX SOO SAARKA KHAYRAADKA  
NOOL EE BADDA**

**ISBEDELKA JAWIGA BADAHA IYO WSS  
ISKAASHATOYINKA KALLUUMAYSIGA EE  
GOBOLKA BANAADIR**

**W/D:|**

**WAAXDA CULUUMTA BADDA EE HCBS**

**Mogadishu-Somalia**

**July-2015**

Sawirka garbadka sare

## **Cilmibaarista Goobta (Field Research):**

Goobaha aan baarista ku sameynay waxaa ka mid ah:

1. **XEEBTA WAQOOYI EE CAASIMADDA ILAA CEEL-MACAAN (30KM BARIGA CAASIMADDA)**, waxaana kasoo kashifnay in darbiga dabiiciga ah ee badda celinaayay meela badan la jejebiyey oo la burburiyey oo halis ah in biyaha baddu ay barriga usoo gudbaan, gaar ahaan haddii Tsonami dhaco laga yaabo in xaafadaha bari ee magaalada ay biyo qarqiyaan. Sidoo kale waxaa aad loogu xadgudbay deegaan badeeka oo dhagax laga qodaayo, guryo laga dhisaayo geedihina laga guraayo, taasoo aad u qilaafsan qorshihii dalka ee badbaadinta deegaanka.



Burburinta ka jirta xeebta Caasimadda (dhanka Waqooyi)



Howl burburin ah oo ka socota xeebta waa badda ka hoos



Booyad dhiig ka qaadeysa Kawaan Xoolaha lagu qalo ee Kawaan Bari isla markaanna ku sii celineysa Badda

2. **XEEBTA KOONFUREED EE CAASIMADA ILAA KOONFURTA JAZIIRA (35KM), OON KU SOO ARAGNAY** Haan badda kasoo caarisay, sidoo kale meelo

badan waxaa la jajabshay darbigii dabiiciga ahaa oo badda celinaayay oo badiibaa soo gashay berriga ilaa 200M, gaar ahaan koonfurta Xalane, intaa waxaa la sii jira laga bilaabo warshadii patrolka sifeyn jirtay dhulka xeebaha waxaa ka taataagan rukumo iyo qoryo lagu muujinaayo milkiyad dhuleedka, arrintaanoo sii socota ilaa halka ugu danbeyso oo aan tagnay.

Wixii aan ku soo aragnay labada dhinac ee caasimada Waqooyi iyo Koonfur waxaa muujinaaya sawirada hoos ku yaala.



Biyihii badda oo soo galay berriga sida ka muuqata sawirka ka dib markii la burburiyey dhagaxii xeebta



Kormeer u kuur galid xaalada xeebaha oo ay hey'addu ku tagtay Jazeera taas oon ku soo aragnay haan weyn oo sun ah oo badda ka soo caarisay



Guddoomiyaha HCBS iyo guddoomiyaha Deg. Wadajir oo howl u kuur galid ah ka sameeyey xeebta Muqdisho ilaa godka haanta sunta ku jirto ee koonfurta Jaziira

3. **Waxaan Cilmibaaris ku sameynay qashinka xeebaha lagu soo aruuriyey** iyo bulaacadaha magaalada ka imaanaaya oo labaduba wasakheyn weyn ay u yeesheen biyaha badda caasimadda, sawiradooduna hoos ayay ku cad yihiin.
4. **Baaris lagu sameeyey badda Caasimadda,** laga soo bilaabo kawaanka gowraca ee waqooyiga caasimada ilaa dekedda cusub ee bartamaha caasimada, cilmibaaristaas



waxaa lagu baaraayey heerka nadiif ahaanta biyaha badda ee Caasimadda Sidaas awgeed afar meel oo xeebta ah



Xeebta Caasimadda oo dhibaata weyn ka jirta ka dib markii qashin fara badan lagu shubay



In ka badan 30 Bulaacad oo ka yimaada magaalada aya wasaq kala duwan ku shuba badda



Bulaacad ka mid ah kuwa badda caasimadda oo qashin nuuc walba lehna ku shubeysa



Caagag iyo qashin kale oo xeebta lagu soo daadiyey



Waa bulaacad kale oo wasaqda ay ku shubeysa



Neef dhintay oo badda lagu soo tuuray,

ayaan waxaan ka qaadnay carro iyo biyo, waxaana nooga soo baxay in meelaha qaarkood ay si aad ah u wasakheysan yihiin, bakteeriyada shubanka keentana ugu badan tahay sida: Moolka awa weeska ee dekada ku dhaw, dekada nafteeda waskheyn heer sara ah ayaan ku soo aragnay.

Markii natiijada barista ay walwal na gelisay waxaan mar labaad sameynay baaris laga sameeyey afar meel oo xeebta u jirto HAL KM oo kuwii hore ku beegan, natiijadaan danbe waxay xoojisay tii hore. Waxaa xusid mudan in lap ka lagu baaray biyahaan iyo caradaan hey'addu ay kireysatay oo lacag ku culus ay ku bixisay, sababtoo ah hey'addu ma haysato awood ay ku hesho Lapab, natiijadaan soo baxday waxaa hey'adda la qeybsaday aqoonyahanka iyo mas'uuliyiinta wasaaradaha iyo hey'adaha dowladda oo ka soo wada qeybgalay shir lagu soo bandhigay ee ka dhacay hoolka Wasaaradda Dekedaha iyo Gaadiika, Wasiirka Dekedaha iyo Gaadiidka Badda Mudane Nuur Faarax Xirsi uu goob joog ahaa.

Aqoonyahankii iyo mas'uuliyiintii goob joog ka ahaa bandhigaas amaan ballaaran ayay u soo jeediyeen hey'adda, wasiirkuna wuxuu go'aamiyey in golaha wasiirada la geeyo, dabadeed hey'addu waxay u sameysay bandhig golaha wasiirada ow goob joog ka ahaa R/W C. C. Sharmaarke oo ayaguna aad ugu riyaaqay Cilmibaaristaan hey'addana ku amaanay, dabadeed hey'addu waxay la xiriirtay mas'uuliyiinta Dowladda dhexe ee badaha iyo Gobolka Banaadir si wax looga qabto arrimaha deegaanka wax u dhimaaya ee aan soo sheegnay, laakiin waxba lagama qaban warbixinta soo socota ayaa si gaar ah uga hadleysa heerka wasakheynta ee badda Caasimadda

*Sawirada hoos ka muuqda ayaa arrintaan wax badan ka muujinaaya.*

## KOOXDA BAARAY BIYAHA CAASIMADDA



Cilmibaarayasaha ka tirsan Waaxda Bii'adda iyo Culumta badda oo ku guda jira howsha Cilmibaarista



Kooxda: Xasan Max'ed, Ing Cabaas, Cabdiraxmaan Diiriye, Xasan Dooyoow



Ceynad Carro ah oo laga qaadayo xeebta Caasimadda si loogu sameeyo cilmibaaris



Ceynad Biya ah oo sidoo kale laga qaadayo biyaha badda si loo baarro



Cilmibaarayaasha oo howshooda ku guda jira



Xasan Max'ed Xasan oo ku dhex jira Lapka ay howsha ku fulinaayeen



Cabdiraxmaan Diiriye oo baaraya ceynadi laga soo qaaday xeebta Caasimadda

## Natijada Baarista Biyaha Xeebta Caasimadda

| Parameter mg/L                        | SITE 1 RESULTS | SITE 2 RESULTS | SITE 3 RESULTS | EPA /WHO STANDARD |
|---------------------------------------|----------------|----------------|----------------|-------------------|
| pH                                    | 6.16           | 6.13           | 6.16           | 6.5 - 8.5         |
| Oil &grease                           |                |                |                | 5-10              |
| Dissolved Oxygen (DO)                 | 5.13           | 4.67           | 5.29           | 6 – 14            |
| Turbidity (NTU) ;                     | 2.3            | 1.7            | 14.8           | 2                 |
| Total Suspended Solids (TSS)          | 10.3           | 9.8            | 22.0           | 30                |
| Total Hardness as(CaCO <sub>3</sub> ) | 7230           | 7805           | 7640           | 6630              |
| COD                                   | 160            | 64             | 240            | 50                |
| Cd                                    | <0.02          | <0.02          | <0.02          | 0.05              |
| Cr                                    | <0.02          | <0.02          | <0.02          | 0.1               |
| Total Plate Count @ 37°C; cfu/mL      | 6700           | 260            | 7700           | 25 – 250          |
| Total Plate Count @ 22°C; cfu/mL      | 7500           | 350            | 8700           | 25 – 250          |
| Total Coliform count;                 | 110            | 12             | 368            | NIL               |

Natijada ka soo baxday Cilmibaaristi lagu sameeyey xeebta Muqdsiho

| Parameter mg/L                   | SITE 1 RESULTS <sup>2</sup> | SITE 2 RESULTS <sup>2</sup> | SITE 3 RESULTS <sup>2</sup> | SITE 4 RESULTS <sup>2</sup> | EPA /WHO STANDARD |
|----------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------|
| pH                               | 8.20                        | 8.19                        | 8.16                        | 8.07                        | 6.5 - 8.5         |
| Oil &grease                      | No                          | No                          | 4.43                        | 23.18                       | 5-10              |
| Dissolved Oxygen (DO)            | 4.16                        | 6.87                        | 6.29                        | 6.31                        | 6 – 14            |
| Total Suspended Solids (TSS)     | 8.58                        | 6.43                        | 6.43                        | 23.85                       | 30                |
| COD                              | 412                         | 47.10                       | 29.44                       | 14.72                       | 50                |
| BOD                              | 164.50                      | 20.50                       | 12.00                       | 6.50                        | 50                |
| Hg                               | <0.001                      | <0.001                      | <0.001                      | <0.001                      | 0.001             |
| Pb                               | <0.01                       | <0.01                       | <0.01                       | <0.01                       | 0.01              |
| Cd                               | <0.01                       | <0.01                       | <0.01                       | <0.01                       | 0.05              |
| Cr                               | <0.01                       | <0.01                       | <0.01                       | <0.01                       | 0.1               |
| Total Plate Count @ 37°C; cfu/mL | 230                         | 78                          | 6400                        | 240                         | 25 – 250          |
| Total Plate Count @ 22°C; cfu/mL | 310                         | 120                         | 7100                        | 390                         | 25 – 250          |
| Total Coliform                   | 30                          | 3                           | 245                         | 67                          | NIL               |

| Parameter mg/L                   | SITE 1 RESULTS | SITE 1 RESULTS2 | SITE 2 RESULTS | SITE 2 RESULTS2 | SITE 3 RESULTS | SITE 3 RESULTS2 | SITE 4 RESULTS2 | EPA /WHO STANDARD |
|----------------------------------|----------------|-----------------|----------------|-----------------|----------------|-----------------|-----------------|-------------------|
| pH                               | 6.16           | 8.20            | 6.13           | 8.19            | 6.16           | 8.16            | 8.07            | 6.5 - 8.5         |
| Oil &grease                      |                | No              |                | No              |                | 4.43            | 23.18           | 5-10              |
| Dissolved Oxygen (DO)            | 5.13           | 4.16            | 4.67           | 6.87            | 5.29           | 6.29            | 6.31            | 6 – 14            |
| Turbidity (NTU) ;                | 2.3            |                 | 1.7            |                 | 14.8           |                 |                 | 2                 |
| Total Suspended Solids (TSS)     | 10.3           | 8.58            | 9.8            | 6.43            | 22.0           | 6.43            | 23.85           | 30                |
| Total Hardness as(CaCO3)         | 7230           |                 | 7805           |                 | 7640           |                 |                 | 6630              |
| COD                              | 160            | 412             | 64             | 47.10           | 240            | 29.44           | 14.72           | 50                |
| BOD                              |                | 164.50          |                | 20.50           |                | 12.00           | 6.50            | 50                |
| Hg                               |                | <0.001          |                | <0.001          |                | <0.001          | <0.001          | 0.001             |
| Pb                               |                | <0.01           |                | <0.01           |                | <0.01           | <0.01           | 0.01              |
| Cd                               | <0.02          | <0.01           | <0.02          | <0.01           | <0.02          | <0.01           | <0.01           | 0.05              |
| Cr                               | <0.02          | <0.01           | <0.02          | <0.01           | <0.02          | <0.01           | <0.01           | 0.1               |
| Total Plate Count @ 37°C; cfu/mL | 6700           | 230             | 260            | 78              | 7700           | 6400            | 240             | 25 – 250          |
| Total Plate Count @ 22°C; cfu/mL | 7500           | 310             | 350            | 120             | 8700           | 7100            | 390             | 25 – 250          |
| Total Coliform                   | 110            | 30              | 12             | 3               | 368            | 245             | 67              | NIL               |

Natijadi oo faahfaahsan



Min Kawaanka Gowraca xoolaha Deg. C/Casiis/ Kaaraan ilaa Dekedda Cusub

**BANDHIGGII BAARISTA BIYAHA CAASIMADDA OO LAGU QABTAY HOOLKA WASAARADA D. & G. BADDA**



Xasan Max'ed oo soo bandhigaya Natijada ka soo baxday barista (hoolka Was. Dek. & Gaadiidka badda)



Qaar ka mid ah aqoonyahanka ku dhaqan Muqdsiho oo ka soo qeyb galay bandhigga Natijadii ka soo baxday Cilmibaaristi lagu sameeyey xeebta Caasimadda



Wasiirka Dek. & Gaadiidka Badda Mudane Nuur Faarax Xersi oo ka soo qeyb galay soo bandhigidda Natijada.