Coastal Zone —

Follows US OCZM

guidelines now in

resource inventory - land

use phase -

Barbados & Jamaica doing

some coastal planning —

Resources gp in Jamaica

rel. beach control authority

+ wetland resources dept

in Jamaica —

Phyllis Yawe bing

~~43-384~~

62-43384

9 Cascade Rd.

662-5466

J. S. Kenny

IMA-62-51021

x 351

Zaleena Chin. Yuen. Kee.
Public Information Officer.

Airport - Hotel(s)	35.00
Queens Park	73.30
Taxi to IMA	25.00
Lunch 8/16	46.0
Bkfst 8/17	6.0
8/17 Drinks w/ Doug Ledrick & Bruno	20.07
8/17 Dinner	28.00

Sat 18

	Tent in	6.00
	Dinner	70.00
	Taxi out	30.00
8/19	Bus w/ Ramsey	10.00
8/20	Bkfst w/ Doon	9.00
"	Ram Sing	15.00
8/21	Lunch	4.80
8/21	Meals & Bus	27.00
8/22	Bkfst -	5.70
8/22	Ram Sing	27.00
8/23	Bkfst	6.00
8/23	Lunch w/ Michael & Laura	19.00

DATA ACQUISITION

Doon - Sherry -

Guaracara River - near Texaco Refinery.

Stations in Gulf of P.

Fish Sampling.

COASTAL ZONE MANAG.

Clement Lewsey -

PLIPDECO -

Point Lisas Industrial

Development Corp.

West Coast

Hazel Mutonuh -

Avril Siung

Eugene Ramcharan

San Diego current

Survey paper * -

LEO I HEILEMAN
DATA ACQUISITION PROGRAMME
INSTITUTE OF MARINE AFFAIRS

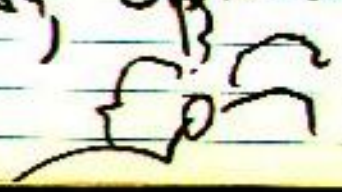
Cruz -

VAP — 14 miles

T - Boat?

---

also echinoderms,
crinoids, ophuroids



Fri. 17 Hy –

Mr. Hadley – Admin

Gen'l Oceanics # 2010

have 4 –

ca. $500 US

photo –

Samples to Caribiri

Send dope on

Andeaara meters

plus read-out info

esp. readout –

Send Doon. Salmon's

address in re fish kills

methodology on the
drogue studies —

Shale Mission —

NOS to send
Tide Gauge types
info. to Doon

Where were the
Trinidad gauges —

Can RSMAS identify
sponges, polychaetes — how
preserved — pubs on it?

Prod ductivity ?
Can sample plankton
but not identify
them,

Ask Bullis about
approach to stock
assessment for T&T
marine fisheries

Mr IAN LAMBIE
Member, Board of
Management
Customs Officer.

Prof Max Richards
Chmn, IMF Council

Prof. Henry Phelps
Chmn of Board

Both Engrs. AWI

Get copy of the compilation of marine laws to Legal Gp.

Lenny Bullo
Perm Sec. external Affairs

Tune of Lemon Tree

Trinidad Calypso (chorus)

Frank and Mary make
good music,

Come to Trinidad to play

All night long they sing
the love songs,

Sleep and make the love
(Cara knee) all day.

Scarlet ibis she is pretty

streak the Caroni sky with red

unless we stop ~~all the~~ pollution

Scarlet ibis will be dead.

Build new dams up in the
mountains
Bring the water to Port of
Spain
Good for drinking & for fountains
Make good use of heavy rain.

Island girls they play the
net-ball
Better than in wildest
dreams
Enter the big competitions
And beat all the other
Teams

Trinidad is lovely island,
Set in midst of lovely sea
We must look more
towards the ocean
That is where our
future be

Must learn to manage
sea resources
oysters, shrimp, and fishes
too.

The supply will be
depleated
And be gone unless we
do.

—

People like to use the
beaches
And to dive on Buca
reef
We must keep them all
protected
or their lifetime will
be brief

Everyone they love this
island
So with you we leave
this plea
Because your ocean is
important
Learn to wisely use the
sea.

Lush green hills and
shining waters
They are Trinidad to me
But for our children
and their children
We must turn unto
the sea

Hard to get a
nation in motion

when many people
say "who cares?"

One group worried
about your ocean

Institute of Marine
Affairs

Kattoo

~~Katt~~

Kalaloo

K bush + ocra
+ coconut milk -

---

what method do
you use for
Amonia?

To Leo + mtl
on standardization

Coprostanol paper
to Leo -

1/mo -

7 sta

Chaq cmm

P of S.

Sr P. 10, 20, 30 m
nispin bottles

Send hydrophotometer
dupe to Doon

T, ‰, Ph DO

Light pen - (secchi)

Turbidity -

Hydrocarbons

Pesticides

Heavy Metals - Pb Hg. Cu,
Cd,

Nitrates

Nitrites — wind speed

Phosphates — sea & swell

chlorides — tide

Ammonia

cyanide — air Temp.

Sed samples @ each

Legal

Carlaisle Williams

monitor for oil & grease

sulfides, phenols,

cod, ammonia pH, %o

DO Temp- on the

River.

---

current pole —

drogues & 3-pt fix

Send Tech Syllabus

pub to Mrs. Harris

+ pollution tech. trng. —

Trg & Ed -

Seashore biol, pollution, marine life - uses of the ocean for N.S + field trips & CG museum -

Proj for primary, junior & secondary -

Seminars for Teachers in soc. sci, geol, science

Seminar on how to run a field trip -

Mrs. Hannis + 5

Send any material
on ed & try to Mrs.
Harris —
Handbooks in preparation
on shells, fish,
& algae —

Cf 14 guides - Voss
to Mrs. Harris

Annette di Silva
Gn'l Broadcasting Unit
"Doon's Girl"

Lecture

Thurs 2:30

Mrs Glenda

Charles - Harris

~~Eng~~ Ed & Tog Pgm.

Nevil Palmer

Legal Pgm. -

Regular Sta -

~~Bo~~ Dragon's mouth

Mid - Gulf

Soldado pt. Lisas

~~[illegible]~~ Brighton

Pos

Now 1 per mo-

Limited by sample

analytical time - Caribiri

should add at Chagaramas

stn 1/hr for 24 hrs

1/week for one month

to get a feel for the

range of temporal

Techniques

Drogues
Current Pole

plans

ROME

offshore LS,

Gulf Stom. Energy

Storm Surge

Ortner's Pan

Lecture—

Mesa fish kill

Ceratium

Acoustics

Loop Current
Ifnita

Coprostanol

Harvey's hydrocarbons

Fee's diurnal temps

Duncan's waves

Ro-tap & Seives

Drying oven

balance -

Settling tube data

to Dean

USN Hydrographic

manual

Wave gauges -

Tom Van't Hoff
P.O. Box 154
Bonaire
phone 8224 off.
8684 home

Peter Samuels
Lands & Surveys Dept.
for datum & HT line

Legal
Carlisle Williams -
Looking @ pollution
laws of other countries

management of resources

from nat'l & int'l laws.

Pollution, conservation,

and shipping laws

Possible T&T tanker

fleet - possible LNG

tanker - arb. talking

of getting into a

merchant fleet -

effect of transport on

the environment -

Could satellite tie

T & T into the big

data documentation

net. check w/

Andy Remever on T

Nat'l Inst. of

Higher education

(Res. Sci. & Tech)

Send EPA's enabling

legislation - functional doc.

Town & Country
Planning

may have coastal
land use maps

---

may be the C & GS
gauge @ Communications
room @ Coast Guard

Don Marslak for
dupe film used in
your reef work to Π. Wood

Send Pennikamp &
Key Largo something
rules & regs to
Carlisle Williams

Carlyle
Williams

Legal Pgm.

Talk with Tom
Clingan on file-in-

For Cruz - Van

for water quality &

pollution and equip-

ment data too -

Possible candidates

for all experts to

Cruz

Plastic inflatable

pools 1-2' walls

5-6' diam -

Clement ~~Ko~~

Lewsey

CZM —

will be in DC

4 or 5 Sept — call

Knecht

Coastal Zone —

Follows US CZM guidelines now in resource inventory - land use phase -

Barbados & Jamaica doing some coastal planning —

Resources gp in Jamaica rel. beach control authority & wetland resources dept in Jamaica —

Education Mtl.

Would you write your name and address, and I will send some material to you —

MRS. FRANKA ALEXIS - JOHNSON

Dept. of Scie & Tech.

Ministry of Education

Young Street

St. Georges.

Clement will call
this week - for
Kneent's no.

Gemma wants to
know new search
changes for documentation
system

Cornell request

Nutunhu
moo too noo

7

4rd any curricula to

Mrs Charles - Harris -

80% can't swim

any slides or Teaching

material - Teaching aids

film list - NOTTY??

Any portable programs

for training -

Falmouth program?

Soldado

Pt. Lisas

Brighton

San Fernando

Tell Lankford

that no word from

T & T Gvt. to host Caribpol

workshop — would

cost 6-8 K (T & T)

Prem Mandal

Training programs for

pollution T & T's to us

and any portable ones

Cruz Lacey to D.S

for C.Z. _ not Miami

For HBS reports -

Interciencia w/ Proni

soap box

Rand McNally Atlas

Review

GCFI Coastal Zone paper

HBS ppts from col. Rpnts ? -

GLENDA CHARLES-HARRIS
Programme Supervisor
Education and Training

INSTITUTE OF MARINE AFFAIRS
P.O. BAG 135
ST. JAMES POST OFFICE
TRINIDAD & TOBAGO

TEL: 62-51021
EXT. 351, 491, 492, 493

DR. CLEMENT D. LEWSEY
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DOON RAMSAROOP BSc., PhD.

DATA ACQUISITION
PROGRAMME

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Hilltop Lane, Chaguaramas,
c/o P.O. Bag 135,
St. James P.O.
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TEL: 62-51021
Ext.: 351, 491, 492, 493.

3/20/84

Mervin Wms. – Commodore

Jack " – CG –

Shevon – Driver

Poon – 36-45' boat
needed – Pan Mim Fnd

Exchange of Staff
to get res. experience

10.3 M T/yr. –

Canoa – 120 ppl.

— Mike Dow —

Needs in S&T

for Dev. in Carib I.

nations — BOSTID

—

no esoteric research

res. on pollution, erosion, CZM

fisheries, EEZ, coastal

area reef planning —

Research Reports —

for Ministers —

Then sci. papers from them.

Occasional Papers reviewed

outside — HBS will do. —

Advisory Service Pubs —

New library — 25K ft²

Fleet of small boats

12' whaler

20 & 25 Mako — + others —

42' ev R/V Kanawa

4 Fellowships post-grad UWI

25K T&T — access to

IMF no contract —

Fosters coop. studies

Trains locals — possible recruit

Getting research done

Prof. Richards

Norbert Nasson

— New Dir. —

PhD Engrg. —

Word Processor

Xeroxing —

3 draftsmen

Photo. Lab. —

Need Shoreside Facil —

Needs bldg for apts. for visiting scientists —

Ed & Trng better q $

UN/ECLA — sessions May

Assoc of Island Mar. Labs

in Aug. —

~~Zaleenae~~

Zaleena Chin-Yuen-Kee

$ to get z to URI?

Rams — Shallow water

seismic reflection record interpretation

need an expert on it. —

They have the gear

Hoffman at Smithsonian to be here 2 wks — for sponge taxonomy.

Fisheries — pot, reef, shrimp, etc

Max Sturm — + almost PhD RSMAS

Ram- Coastal Swamps-

Gerry Levy - any nutrient regeneration work in your Big Dismal?

Ramcharan

~~Tabe~~

Tabebuia- Poui Poui

Caroni Swamp w/ sed. pblms

Care- ah- nee

nutrient regeneration-

now looking @ sedimentation in re flora & fauna recruitment

how far up does pollution go?

Tobago- Sand & gvl 100 ft (T&T)

Reef- -

Caroni -

Geol- Derek Hudson -

Rocky Boychu -

Dr. Adolf Ming - Chem. anal.

Nat'l Inst for Sci & Hydrom

Lieurrom

Gvl. all economists-

Mann Edwards- nutrient balance for the Gulf.

Peter Norman-

1-2 mos- on organic nat'l products-

Alchem auto analyzer
en route -
Ni - Si - Po4

Trace metal - and -
straight flame for Hg. -
Graphite furnace

Dissolved hydrocarbon Compol

Has a Waters HPLC -

Chicken vs. Human fecal
material = high coloform
Send Coprostanol Refs to
Adolf King, Canal Bank

Meeting w. Commodore
Merrin Wms, Director, T&T
Defense Forces whom I'd met
in 1972 as Commons and T&TCG -
"The barrier is not insurmountable"
lunch w/ him and his staff and
discussions on Venez/T&T/Granada
EEZ boundary pbms
To T&T Hqts base & CDP
Jack Wms, Commandant - TV w/
WI/Australia cricket,
Merrin Ladroix plus 4 from
Fisheries DN + 1 from Min of
Foreign Affairs. Imp'd in stock
assessment assistance

T&T CG wants to ~~recover~~ reactivate
C&GS tide station

Fish. Div. wants Pan Am Fndr
vessel. -

CG Backaway rpt. to Jack
Williams on coop. pollution
studies (Ed Canon)

Mervyn La Croix

Boris Fabres - white

Krishna Gooriesingh - long hair

Mrs. Sita Kurvilla - short "

Miss. Vishwanie Narajh - long "

Arthur Grey? MEA.

Elephant Ear - a mimosa

Adolf King to Mazatlan -
wants Copro stanol refs
from Geo Harvey -

---

22 March meeting with
Ministry Representatives (IMI*)

Projects cleared in advance -

Zaleena Chin Yuen Tee - Fish -

Guido Fenzi - 1st Secretary -

IMI* doesn't need pub. clearance -
they would check out anything
Ann of Mg - stock assessment as
major stumbling - others

must get permission to fish in T&T EEZ, but T&T doesn't know how much is there—

Oil spill paper by George Harvey to Door—

~~Who is Eugene?~~

Zakema
Ramcharan
Ferzi
Duncan
Door

Door will ask for the clearance—

US Embassy will get the request & fwd. it to External Affairs who then checks w/ Natl Security.

Drug traffic ↑ in T, so drug traffic high on priority list—

Illegal immigrants too—

Ferzi "U.S. grt supports this corrupt" — would like to see more of this coup. work"

Fisheries Division -

1) Stock Assessment #4
Entire stock - if too much,
2) do it on most heavily
fished & underutilized

3) Spanish mackerel — sizes
diminished overfishing?

a) Shrimp - not only T&T but
Venez too taking

b) snapper/croakers

c) Lobster - underutilized? where
are they? Quantity?

→ E coast demersals? Title
fish small fish

a) Tuna off Tobago - how
much rec. fish ~~p~~ feasible?
what game fish are there? How
many? — in ré tourist industry
what is game fish resource

a) Effect of trawlers on the
inshore artesanal fishery - a
real problem, they come in
close, almost wipe out the
pot fisheries, both T & Venez -
Small trawlers use finer meshes
q. the large ones - what
should T&T do on it?

Such rex as made are arbitrary —

10) Sand mining on Tobago at Plymouth — effects on it?

Possible impact on Turtle nesting areas —

Effect of mining of sand and gravel on Trin & Tobago

what alternative sites are possible? How much can be taken? monitoring.

11) Productivity of oil rigs for fishing —

12) Locating artificial reefs — tires & cars — where? what are criteria for location and formation —

13) Aquaculture — need advice on assessment of pond development

Dredging fresh water swamp for salt water mariculture —

14) Home aquaculture possibilities?

IMA w/ artfl reefs & aquaculture

15) Estab. management plan for Bucco Reef on Tobago —

Survey now in progress —

Development of a total management plan for Tobago.

? Dowridge - Min. of Finance

(16) Studies of coastal tourism as parks, beaches, launching ramps.

(17) Safe operational practices of artisanal fisheries - e.g. too large motors on small boats, need for safety gear, float plans, etc -

~~Desmond~~

Gulf coast @ low tide - boats can't get in - can dredging help? Gulf is a nursery area effects of dredging -

on mud flats offshore at fishing villages -

Desmond Ali CARIRI - Caribbean Industrial Research Institute.

(18) Fishery marketing practices, preservation, distribution pblms health aspects - primarily needed is a massive educational pgm

Materials Technology Div. of CIRIRI

Emi testing & pollution -

Economic importance of West Coast fisheries - how has development impacted the fisheries.

physical envi inventory p/as a socio-economic inventory - to be finished in mid-June.

Clemen

1) W. Coast under pressure for port facilities specialized, what is demand, can coast support them, level of the need? utilization of existing ports?

2) solid waste disposal in wetlands studies needed

Stock assessment

3) Coastal fisheries economic analysis

80 out of 100 species edible, but they eat only 4 or 5

4) mackerel red snapper & stone

$10 - Education program -

5 Land reclamation proposals need a national policy - study needed

- Chuck Nichols -

Photos

Queens Park Savannah
in AIY

Elephant Ears Tree

Kapok Tree -, House

Door -

Adolf King -

Desmond Mi - D. Dir CIRADY
and Zaleena - 43

House -

Savannah

Savannah

Granada 3/23/84

Mrs

Curtis Edwards - Neville

Sam - Fred Bird

Dr. Pitt -

Fresh stocks -
pollutants -
erosion -

Coastal erosion 1.4 - 2m/yr
over 25 yrs.

0.5 avg. for Caribbean.

1) NE beach was 120 yrs now
back to 2nd line of palms -

2) siting of 2 hotels & 1 nite club

3) Photos + dead corals, on 2 reefs,

2 major sewage outfalls
untreated @ hotels, spice [illegible]

Proposes 60 m setback -

Need to know why erosion -

Is there a tide gauge -?

St. Geo Regal w/ garbage disposal

1) Need a short-term yes or no

2) Need longer term studies -

Need to get Granadians to U.S. universities -

Environmental education gp -
want it for secondary

Need someone to introduce man sci into curriculum -

Alan Duncan's address

Secret Harbor sewage goes directly into the bay -

Sewage treatment suggested as one requirement for the granting of hotel building permits -

Roberto Ambros
Director, OAS
P.O. Box 123
St. George's, Granada

Mrs. Franka Alexis-Johnson
Dept. of Science & Technology
Ministry of Education
Young Street
St. George's, Granada

Anselm B. Clouden
Senior Crown Counsel
629 Archibald Ave.
St. George's, Granada

Dr. James De Vere Pitt

Gran- Mm Res Inst
Craig Hooper-
FRG lab on Caricom
abandoned-
ODU field lab?
for Mg. locals-
waste disposal
think em Jenny
between Caric & Gnda

Palm, mahogany,
Raja Pomeranian
nutmeg, hawana
mango, banyan

ODU forms to
Anselm for
HID fellowship

A very bumpy ride

Bifleed Chery
Fish / Conch
Mitsubishi -
stream loading

Nettles
Head H_2O rods

Laundramate in rivers!
drying on the bushes

Jim Findley
Fisheries officer
Min of Mg.

Pearls Airport

Div—
Reach w/ Anselm— Levera Bay at NE corner

Fish market— Grenville, E coast

Barrier reef S of Grenville

Lounderman - near St. David's

Airport & bldgs @ ?-

Cut & beach Great Anse Beach—

Education Mtl.

Would you write your name and address, and I will send some material to you —

MRS. FRANKA ALEXIS - JOHNSON

Dept. of Sciu & Tech.

Ministry of Education

Young Street

St. Georges.